

**Extra MSA Group**

# **Warrington Motorway Service Area, J11 M62**

**Addendum to Environmental Statement Part I**

Revision B B ~~22 August 2019~~ 7 January 2022



This Environmental Statement is prepared in association with:



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## Revision Record

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This document now constitutes part of an Addendum to the Environmental Statement originally submitted to Warrington Council in August 2018 to accompany the outline planning application for a 'New Concept' Motorway Service Area (MSA) at Junction 11 of the M62 Motorway. 'Other Information' in line with Regulation 25 of the EIA Regulations was also submitted during the course of the Local Authority's determination of the Planning Application, dated 20 January 2020 and 20 March 2020. This was in the main to address ongoing discussions with consultees such as Environmental Agency (EA), Natural England (NE) and Greater Manchester Ecology Unit (GMEU), as well as comments by Ramboll acting on behalf of Warrington Council in respect of the Landscape and Visual Assessment (LVIA).

In order to ensure the Addendum is understandable and to avoid extensive cross referencing, changes have been integrated within the original text of the ES and its technical papers to form a single Addendum to the ES. Wherever changes or additions have been made to the text of the original technical paper, the text has been underlined and anything that is no longer relevant or valid has been struck through (~~struck through~~) but retained within the text. A log is also included within the ES Part 1 Report Addendum (**Appendix 21**) and the appendices of each technical paper so that the text removed (i.e. the text struck through within the paper) is identified and a reason for its removal provided. This Addendum should however be read in conjunction with the original ES (August 2018) as not all the technical papers have been subject to change.

Following the submission of the outline planning application, Warrington Council have refused the Planning Application (Decision Notice dated 17 June 2021) and subsequently, the Applicant has submitted an appeal under Section 78 of the Town and Country Planning Act 1990 against the refusal by Warrington Borough Council for which an Inquiry will be held. All references to Application Proposals, Application Site, and Applicant should therefore be read as Appeal Proposals, Appeal Site and Appellant respectively. These references have not however been amended within the ES Part 1 and Part 2 Addendum documents.

As part of the Cumulative Assessment, HS2 is included as one of the projects assessed, as there 'might' be cumulative environmental effects when considered with the Application

Proposals. Since the submission of the planning application, additional information has been made available by the Secretary of State for Transport and HS2. The Applicant has also had ongoing discussions with HS2 due to the proximity of the Site to the HS2 proposals and HS2's requirement for land associated with the Application Proposals as shown through the Safeguarding Plans, most recently those plans relating to the Safeguarding Directions, dated 2020 (Appendix I4c), which are an update to the previous plans relating to the Safeguarding Directions, dated 2018 (Appendix I4b).

This Addendum to the ES is primarily to provide an update to the cumulative assessment in light of this additional information.

The cumulative assessment is a requirement of the Environmental Impact Assessment Regulations (2017) and is undertaken to identify whether there are likely to be any incremental effects from the combined influences of various projects coming forward, based on the information that is available at the time. Schedule 4 of the EIA Regulations states that an Environmental Statement must include a description of the likely significant effects of the development on the environment resulting from 'the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources' (Schedule 4 (5)(e)).

It is to be noted that it is not the role of an Environmental Statement to assess every theoretical possibility that may come forward, but to look at the reasonable likelihood of a development occurring. Assessment should be of the likely significant effects and be proportionate. It is the assessment of the accumulation of, and interrelationship between, effects which might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place. Thereby, assessing the likely residual effects as a result of the interrelationship between the proposed and cumulative sites at that point in time.

In light of the recent Integrated Rail Plan, published by the Department for Transport in November 2021, it is apparent that the Golborne Link, which is proposed to pass to the north/northeast of the Application Site, is the subject of further review as part of the 'Union Connectivity Review' looking at the faster and higher capacity connections from HS2 to Scotland. As confirmed within the Integrated Rail Plan, this includes consideration of

alternatives to the Golborne Link from the HS2 Line to the East Coast Mainline. The ‘Union Connectivity Review’ Final Report was published in November 2021. It concludes that there may be other alternative connections between HS2 and the West Coast Main line (rather than the Golborne Link) and that more work is required to better understand the case for and against these options.

Notwithstanding this further assessment, HS2 Ltd have confirmed that the Safeguarding Directions and associated plans (dated 2020 and 2021, **Appendix I4c**) remain in place and will be subject to periodic review by the Department for Transport. As such, the proposed HS2 development in proximity to the Application Site remains a consideration as part of the cumulative assessment, and this ES Addendum provides an update to this assessment to consider the most recent details published by HS2 (including those plans dated 2020 and 2021, **Appendix I4c**) and discussions undertaken direct with HS2.

It should however be noted that the cumulative assessment has limitations, given that the Golborne Link may no longer happen or be delayed until post 2040, and therefore at least 15 years beyond the assumed first operation of the Application Proposals. These limitations are fully set out within Section 6 (difficulties in Compilation and Assessment) and Section 9 (Interaction of Effects and Cumulative Impact) of this ES Part 1 Addendum, as well as Section 10 (Additive Impacts (Cumulative Impact and their Effects) within each of the Technical Paper Addendums within Part 2 of this ES Addendum).

The amendments to Section 9 of this Addendum to the ES Part 1 Report (Interaction of Effects and Cumulative Impact) provides a project description in respect of the HS2 proposals, supported by a series of plans, included at **Appendix I4a-I4f**, as well as an update as a result of the cumulative assessment undertaken within the ES Technical Papers within the ES Part 2.

The ES Addendum also provides updates on other matters as set out below:

- Policy and guidance references where relevant, most notably in relation to a newly published National Planning Policy Framework (2021).
- Due to the passage of time since the original environmental assessment the proposed phasing of the Proposed Development has been updated (Project Description, Section 2), however as this is not considered to have a significant effect on the assessment of the Planning Application Proposals when considered individually, the

environmental assessment of the Application Proposals has not been revised as a result of this.

- Whilst there are no amendments to the scheme proposals and therefore no amendments to the assessment of the likely environmental effects as a result of the Application Proposals when considered individually, these remain as set out within the original ES (August 2018). This is except for the Agricultural Land and Soils ES Technical Paper, where additional baseline work undertaken by Land Research Associates (Appendix 10.13 of Agricultural Land and Soils ES Technical Paper Addendum) has been undertaken and has therefore been incorporated into the environmental assessment and reported within the ES Technical Paper accordingly.
- Ecological baseline survey work has continued on the Site and as such the Addendum presents information from updated surveys for habitats and certain protected species during winter 2021, which includes updates to the Phase I Habitats Survey and mapping as well as updated information on badgers and wintering birds (Appendix 5.14, 5.15 and 5.16 of the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2). This information does not alter the environmental assessment or conclusions drawn within the original ES (August 2018).
- The earlier Biodiversity Net Gain (BNG) assessment has also been updated following the launch of the new 3.0 Biodiversity metric calculation (July 2021), which is to be read alongside, and in addition to the previous 2.0 metric Biodiversity metric calculation. This update uses information gathered from detailed habitat mapping and condition assessments by Aspect Ecology during December 2021 and additional design information including HS2 requirements within the site which are associated with the cumulative assessment. The update also utilises MORPH (BEACH 2017) river assessments, given these are now in wide currency for assessing development impacts as part of the v3.0 metric (Appendix 5.16 of the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2). This information does not alter the environmental assessment or overall conclusions drawn within the original ES (August 2018).
- 'Other information' submitted in line with Regulation 25 of the EIA Regulation 2017 during the course of the determination of the Planning Application (dated 17-01-2020 and 20-03-2020) that revised Technical Paper Appendices is also included for completeness, although this is not new information, for the purposes of this Addendum, the relevant appendices within the ES have been updated as follows:

- ES Technical Paper 3 – Water Resources, ES Part 2 – Appendix 3.3 – replaced by Revised Water Framework Directive Screening Assessment
- ES Technical Paper 5 – Ecology and Nature Conservation, ES Part I – Appendix 5.1 – Information to Support a Habitats Regulations Assessment - removed from ES as this document was submitted as a technical report out with the ES
- ES Technical Paper 5 – Ecology and Nature Conservation, ES Part I – Appendix 5.2 – replaced by Revised Water Framework Directive Screening Assessment

The technical papers that have been subject to amendment as part of the ES Addendum are as follows:

- Geology and Ground Conditions
- Traffic and Transportation
- Water Resources
- Ecology and Nature Conservation
- Agricultural Land and Soils
- Landscape and Visual Impact
- Cultural Heritage
- Noise and Vibration
- Air Quality
- Climate Change

Due to the limited additional information available for the cumulative assessment in respect of HS2, the technical papers that have not been subject to change as part of the ES Addendum are as follows:

- Socio Economic
- Waste

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**Appendices:**

- Appendix 1 – Glossary and Abbreviations
- Appendix 2 – National and Regional Context Plans
- Appendix 3 – Location Plan and Redline Plan
- Appendix 4 – Constraints Plan
- Appendix 5 – Parameter Plans
- Appendix 6 – Key Receptor Plans
- Appendix 7 – Means of Access Plan (Phase I Application Site)
- Appendix 8 – Indicative Masterplan
- Appendix 9 – Indicative Site Plan, Floor Plans, Elevations and Cross Sections
- Appendix 10 – Illustrative Details of Diverted Brook and Peatland Type Habitat
- Appendix 11 - Topographical Survey Plan
- Appendix 12 - Construction Environmental Management Plan Framework
- Appendix 13 - Alternative Sites Assessment
- Appendix 14 – Cumulative Developments Plan
- Appendix 14a – HS2 and Warrington MSA assumed programme for cumulative assessment

Appendix 14b - HS2 Safeguarding Plans – 2018

Appendix 14c - HS2 Safeguarding Plans (2020) and HS2 Map Book Plans (2021)

Appendix 14d – Series of plans for basis of cumulative assessment for HS2:

- ES Cumulative (Indicative) - HS2 Construction Phase – Parameter Plan
- ES Cumulative (Indicative) - HS2 Construction Phase – Indicative Site Plan
- ES Cumulative (Indicative) – HS2 Operation Phase - Parameter Plan
- ES Cumulative (Indicative) – HS2 Operation Phase - Indicative Site Plan
- ES Addendum Plans – Sketch 1 – Southern Access – Construction Indicative
- ES Addendum Plans – Sketch 2 – HS2 Northern Access (Indicative)
- ES Addendum Plans – Sketch 3 – HS2 Southern Access – Operational (Indicative)

Appendix 14e – Statement of Common Ground with HS2

Appendix 15 – Arboriculture Impact Assessment

Appendix 16 – Lighting Impact Assessment

Appendix 17 – Applicant’s Scoping Request Report

Appendix 18 – Council’s Scoping Opinion

Appendix 19 – Counsel’s Opinion on ‘Need’

Appendix 20 – Statement of Competent Experts

Appendix 21 – Table of Deleted Text

## I. Introduction

- 1.1. This Addendum and the original Environmental Statement (ES) has been prepared on behalf of Extra MSA Group (Extra) to accompany an outline planning application for a 'New Concept' Motorway Service Area (MSA) on land adjacent to Junction 11 of the M62 Motorway in Warrington.
- 1.2. The proposals are considered to be EIA Development and as such, in line with the Town and Country (Environmental Impact Assessment) Regulations 2017, are accompanied by an Environmental Statement (ES).
- 1.3. The ES is made up of three parts, this ES Part 1 Report, the ES Part 2 and the Non-Technical Summary and Addendums to these.
- 1.4. The original ES Part 1 Report and this ES Part 1 Report Addendum sets out the project description, the need for development and the alternatives considered. It includes an overview of the environmental impacts of the proposals with a summary of the mitigation measures proposed. It contains the methodology for assessing the significance of the environmental effects. It also includes an assessment of the interaction of effects and a summary of the cumulative impacts assessed as part of each of the technical areas. The Part 1 Report and this Addendum should be read in conjunction with the ES Part 2 and their Addendums, which contains each of the technical papers. A separately bound Non-Technical Summary and an Addendum to this is also included as part this ES.
- 1.5. A series of plans and illustrations are included within the text and appendices to help the reader understand the background to the proposals and the scheme. It also provides an understanding as to how the development fits within the planning framework. Part 1 is important in establishing the context for the development allowing readers to understand the objectives of the proposed development. It sets out the framework for how significance impacts have been assessed.

### Summary of Planning Application

- 1.6. The application site (the Site) is located in the North West of England, within the local authority area of Warrington. The national regional context is shown on the plans below and in **Appendix 2**.





Figure 1.2: Regional Context Plan

- 1.7. The Site is located to the northeast of the urban area of Warrington. The M62 Motorway corridor runs in an east/west direction to the north of Warrington. It is the west-east Trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and connects the three City Regions of Liverpool, Manchester and Leeds. The Site is located to the north of the M62 Motorway at Junction 11, within its north east quadrant and has direct access to Junction 11 via a spur to the motorway junction roundabout (Birchwood Way). The Site is shown in the plan below and in **Appendix 3**.



**Figure 1.3: Local Context Plan**

- 1.8. The planning application is to be submitted as an outline application and the Proposed Development is detailed below:

Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas, ecological mitigation, pumping station(s), substation(s), retaining structures and associated infrastructure and earthworks.

- 1.9. All matters, except for access to the Site will be reserved for consideration at a later date. The access proposals are shown on the plan in **Appendix 7**.
- 1.10. The Applicant, Extra MSA Group, is a leading specialist market sector developer, long term investment owner and experienced operator of high quality MSA properties across the

Strategic Road Network. They have a portfolio of predominantly 'New Concept' MSA properties with a stable, long-term income profile. They are the largest freehold investment owner in the UK, owning 18 MSA locations, including M40 Motorway Junction 2 Beaconsfield and M25 Motorway Cobham MSAs and a further MSA, Leeds Skelton Lake Services, currently being developed at Junction 45 of the M1 Motorway.

## Summary of Proposals

1.11. Extra MSA Group is proposing to develop the 15ha Site for a 'New Concept' Motorway Service Area (MSA).

1.12. The planning application will comprise the following:

- Facilities Building incorporating public facilities, retail uses, food and beverage uses, business lounge and associated staff, storage and management uses within the building thermal envelope
- Hotel and associated guest facilities, front of house, staff and storage uses
- Fuel Filling Station (FFS) incorporating facilities for the public, retail uses, food and beverage uses, and associated staff and storage areas
- Parking facilities for all vehicles with access roads and pedestrian and cycle access in a landscaped setting
- Soft landscaping areas and ecological areas
- Highway access from junction 11 of the M62 Motorway

1.13. The following table summarises the development areas accommodated within the Parameter Plans (Parameter Plans are at **Appendix 5**):

Land Use	Site Area ha (acres)
Facilities Building, Hotel, FFS, Parking Facilities for all Vehicles incorporating access roads and internal circulation (buildings are within this zone)	8.97ha
Soft Landscape Areas (including proposed and existing planting and ecological habitat and SUDS basins and children's play)	6.44ha
Highway works within the redline	1.4ha
<b>Gross Site Area (excluding highway works)</b>	<b>15.41 ha</b>
<b>Gross Site Area</b>	<b>16.81 ha</b>

**Table I.1: Development Areas**

- 1.14. The plans included in **Appendices 2, 3, 5, 7, 8** confirm the site location, site boundary, parameters for the proposals, access proposals and indicative masterplan.
- 1.15. The parameters plan with all the parameters shown on a single plan and indicative masterplan for the application site are shown in the Figures below (larger scale plans are also included in **Appendix 5 and 8** respectively).

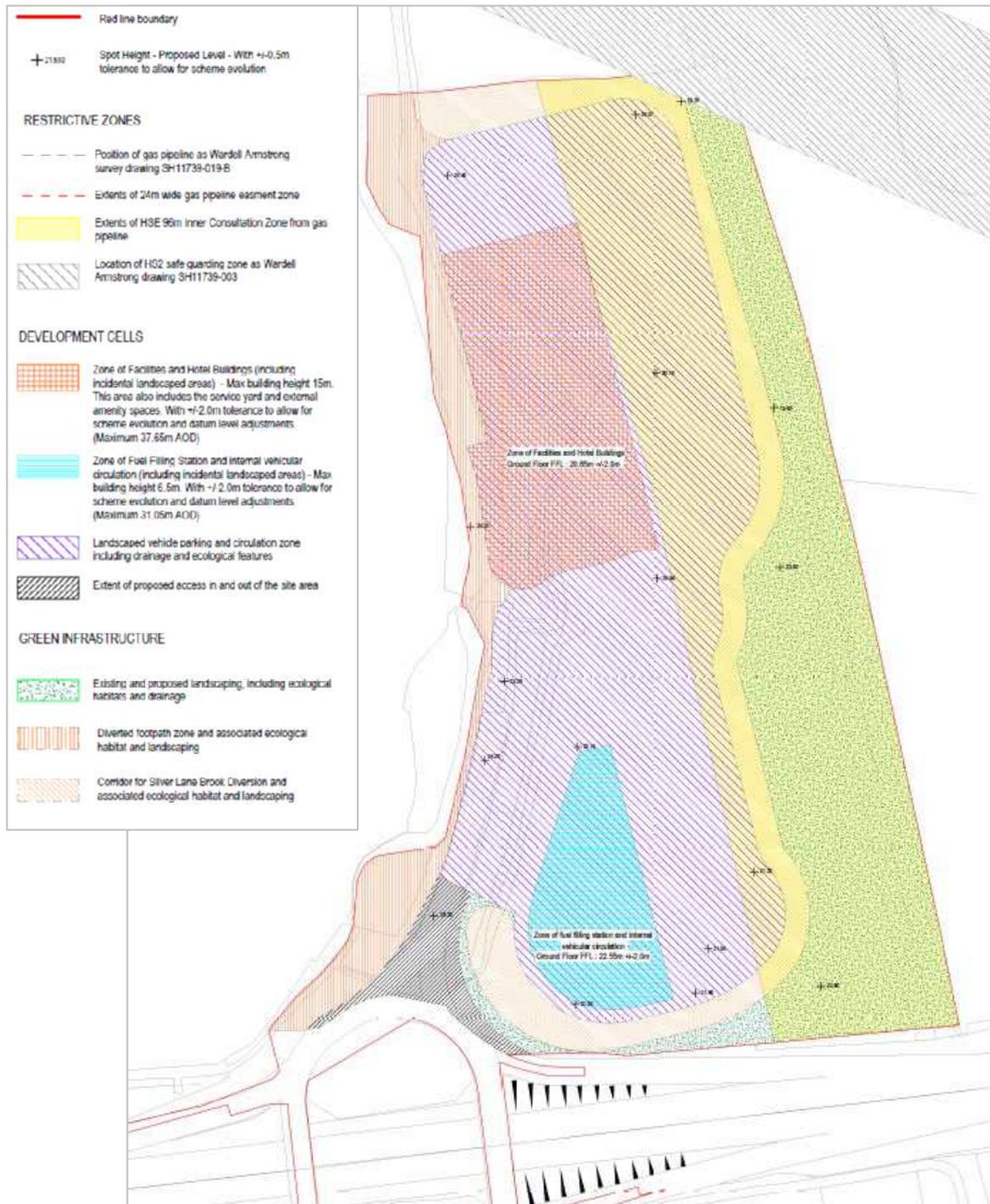


Figure I.4: Parameter Plan showing all Parameters on a single plan



Figure I.5: Indicative Site Layout Plan

## Environmental Impact Regulations, Screening and Scoping

- I.16. The proposals do not fall within Schedule 1 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as “the EIA Regulations”) where an Environmental Statement (ES) is mandatory. However, the proposals do fall within Part 10(p) of Schedule 2 of the EIA Regulations as a “Motorway Service Area” in excess of 0.5 hectares.
- I.17. Nevertheless, an Environmental Impact Assessment is not needed for every Schedule 2 project. The EIA Regulations and the PPG (Planning Practice Guidance) are clear that an Environmental Impact Assessment (EIA) is required for Schedule 2 projects only if they are likely to give rise to “significant effects on the environment”.
- I.18. Due to the scale, nature and surroundings, it is considered that there is a need to fully assess the environmental impacts of the Proposed Development. It is therefore considered that the

development falls within Schedule 2 of the Regulations and accordingly environmental assessment has been undertaken and an ES has been produced. On this basis, a Screening Opinion has not been sought from the Local Authority as the proposals are considered to be EIA development.

1.19. In accordance with Part 4, Regulation 15 (1) and (2) of the EIA Regulations, a Scoping Report was submitted to Warrington borough Council (WBC) on 20 December 2018 (**Appendix 17**). This considered the range of environmental issues against which the Proposals should be assessed as part of the Environmental Impact Assessment process. A Scoping Opinion was issued by WBC on 13 February 2019 (**Appendix 18**).

1.20. The Scoping response from WBC included responses from the following consultees:

- Highways England
- Historic England
- Natural England
- Environment Agency
- Greater Manchester Ecological Unit (GMEU)
- Environment and Transport at WBC
- Public Protection at WBC
- Flood Risk Team at WBC
- Cheshire Archaeology
- National Grid
- United Utilities
- Croft Parish Council
- Culcheth and Glazebury Parish Council
- Salford Council
- HS2

1.21. The consultant team has continued to liaise with these and other key consultees during the evolution of the proposals and through the process of environmental assessment and, where relevant, have continued to discuss and agree the scope of the ES through these discussions. In particular, this has included ongoing discussions with Natural England, the Environment Agency and GMEU. Reference to all these discussions is included within Section 3 of each of the Technical Papers contained within Part 2 of this ES and is summarised in the tables within

this section by technical area, and where relevant expanded within the following 'Consultation' Section of this report.

1.22. In the Scoping Opinion, WBC confirmed that the information submitted “sets out the likely effects of the Proposed Development in relation to the topic headings, receptors and consideration of likely significant effects.” It continued to confirm that, in general terms, the “EISR [Environmental Impact Scoping Report] adequately sets out how the EIA will assess the potential significant environmental effects.” It also confirmed that with regard to table 1.1 within the submitted Scoping Request Report (see **Appendix 17**), that “*certain matters are Scoped Out in table 1.2 and the reasons for this are set out. These are generally agreed with as set out in the individual consultation responses which you should have regard to.*”

1.23. The main points of the Scoping Opinion are summarised below in the table below:

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
<b>Warrington Council – Planning Officer (Scoping Opinion)</b>	Matters scoped in and out of ES – general agreement	Table 1.1 includes a summary of the matters to be scoped in to the EIA. Having regard to the matters identified in table 1.1, certain matters are Scoped Out in table 1.2 and the reasons for this are set out. These are generally agreed with as set out in the individual consultation responses which you should have regard to.	-
<b>Highways England</b>	Transport Assessment	HE want to see a robust Transport Statement submitted with the planning application and welcome working alongside developer to scope this out.	Traffic and Transport ES Technical Paper 2, ES Part 2
<b>WBC Highways</b>	Transport Assessment	A Transport Assessment (TA) will be required to accompany any planning application for the proposed development and this should address its potential implications on the transport network by means of a traffic model, capacity assessments, detailed analysis and an overview of potential impacts including accident analysis using STATS19 data and an overview of the highway design issues. The TA should also include an assessment of parking and servicing requirements and, importantly, demonstrate that the site is accessible by sustainable transport; particularly in respect of future employees. The information included within the Traffic and Transportation Section of the EIA Scoping Report provides a useful starting point for the scoping of the required TA.	Traffic and Transport ES Technical Paper 2, ES Part 2
	Transport Assessment	The EIA should consider the specific effects on all travellers (including cyclists) associated with the proposal and it is anticipated that the TA will form the basis for any issues including impacts on local traffic, change in journey times, change in travel patterns, road safety concerns and potential severance. A clear distinction will be required between the construction-related impacts, for which substantial detail will be required in terms of the import and export of material and the associated movements, and the operational impacts.	Traffic and Transport ES Technical Paper 2, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Traffic and Transport	Reference in the Traffic and Transportation Section is made to the IEMA Guidelines for the Environmental Assessment of Road Traffic and clarification is required as to whether this is representative of the latest advice. Clarification is also required as to how the suggested impact receptors detailed in Table 8.2 of the EIA Scoping Report have been derived.	Traffic and Transport ES Technical Paper 2, ES Part 2
<b>Environment Agency</b>	Flood Risk	Under the Environmental Permitting (England and Wales) Regulations 2016, a permit may be required from the Environment Agency for any proposed works or structures, in, under, over or within eight metres of the brook.	Noted and scheme evolved accordingly.
	Ecology and Biodiversity	As part of this development we do not wish to see culverting of watercourses. Engineered river channels are one of the most severe examples of the destruction of ecologically valuable habitat.  Culverts cause the loss of and adversely affect natural morphology, fisheries and wildlife habitat including substrate and they can create barriers to fish passage through increased water velocities, shallow depths and eroded culvert entrances.	Noted and scheme evolved accordingly.
	Ecology and Biodiversity	As part of any development of this area we would expect to see any appropriate ecological surveys undertaken at the appropriate time of year by a suitably qualified ecologist. Dependent on the results of these surveys we would expect to see appropriate mitigation and compensation. Due to the proximity of the development to the watercourse we would expect to see ecological surveys of the watercourse and its associated species. These should include water vole surveys because we have records of water vole on Holcroft Lane Brook, a river corridor survey of any watercourses affected by the development and an extended phase one habitat survey to pick up other interest features linked to the watercourse.	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Water Resources	Depending on what the applicant intends to do with this site a Water Framework Directive (WFD) assessment maybe required. The work done for other parts of the environmental impact assessment will contribute to the WFD section. WFD assessment must demonstrate that the proposed scheme does not (key requirements): <ul style="list-style-type: none"> <li>• Cause deterioration in the status of any water body through deterioration in the status of the Biological Quality Elements (BQEs) or</li> <li>• Compromise the ability of the water body to achieve its WFD status objectives</li> </ul> And should where possible <ul style="list-style-type: none"> <li>• Indicate how the proposed scheme contributes to the delivery of WFD objectives</li> </ul>	Water Resources ES Technical Paper 3, ES Part 2
	Water Resources - Ground Water	Published geological maps show that the Site is underlain by the Helsby Sandstone Formation principal aquifer at rockhead. This is overlain by superficial deposits with peat and glacial till shown to occur close to the surface. The site also lies within a groundwater source protection zone 3 for nearby public water supply abstractions. It will be essential to ensure that the development is carried out in such a manner as to protect and prevent pollution of groundwater and surface water.	Geology and Ground ES Technical Paper 1, ES Part 2 and Water Resources ES Technical Paper 3, ES Part 2
	Water Resources - Ground Water	The scoping report has recognised the need to assess the risks posed by the development to ground conditions and water resources, including groundwater. This assessment will need to address both existing contamination that may be present and the impacts that the future ongoing operation of the facility will have on the groundwater environment.	Geology and Ground ES Technical Paper 1, ES Part 2 and Water Resources ES Technical Paper 3, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Water Resources - Ground Water	<p>In order to demonstrate that the groundwater risks have been understood and appropriately addressed we recommend that the applicant provide a life-cycle feasibility assessment of the fuel storage and handling options for the location, taking account of its hydrogeological context. This should include consideration of:</p> <ul style="list-style-type: none"> <li>• fuel distribution and dispensing system designs (e.g. pressure/suction);</li> <li>• location and construction of proposed and/or existing fuel tanks(e.g. primary,</li> <li>• secondary and tertiary containment, above or below ground);</li> <li>• surface drainage and connections and spill retention;</li> <li>• associated control and monitoring systems.</li> </ul>	<p>Geology and Ground ES            Technical Paper 1, ES Part 2            and            Water Resources ES            Technical Paper 3, ES Part 2</p>
	Water Resources - Ground Water	<p>The application should refer to our groundwater protection guidance and position statement available at <a href="https://www.gov.uk/government/collections/groundwater-protection">https://www.gov.uk/government/collections/groundwater-protection</a> and <a href="https://www.gov.uk/government/publications/groundwater-protectionposition-statements">https://www.gov.uk/government/publications/groundwater-protectionposition-statements</a>.            Of particular relevance to this proposal are sections D and G of the position statements.</p> <p>In accordance with “The Environment Agency’s approach to groundwater protection” we will only support a development once we have received sufficient information to demonstrate that the risks to groundwater associated with it can be satisfactorily managed.</p>	<p>Geology and Ground ES            Technical Paper 1, ES Part 2            and            Water Resources ES            Technical Paper 3, ES Part 2</p>

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Ground	<p>The proposed development lies within 250m of Risley Landfill EPR/BV7877IR a former landfill site that accepted inert waste material and there may be a potential for landfill gas to be generated. Landfill gas consists of methane and carbon dioxide is produced as the waste in the landfill site degrades. Methane can present a risk of fire and explosion. Carbon dioxide can present a risk of asphyxiation or suffocation. The trace constituents of landfill gas can be toxic and can give rise to long and short term health risks as well as odour nuisance.</p> <p>The risks associated with landfill gas will depend on the controls in place to prevent uncontrolled release of landfill gas from the landfill site. Older landfill sites may have poorer controls in place and the level of risk may be higher or uncertain due to a lack of historical records of waste inputs or control measures.</p> <p>Under the conditions of the Environmental Permit for the landfill, the operator is required to monitor for sub-surface migration of landfill gas from the site. This environmental monitoring data from the site is available on our public register.</p> <p>You should be aware of the potential risk to the development from landfill gas and may wish to carry out a risk assessment to ensure that the potential risk is adequately addressed. The local authority's Environmental Health and Building Control departments would wish to ensure that any threats from landfill gas have been adequately addressed in the proposed development. This may include building construction techniques that minimise the possibility of landfill gas entering any enclosed structures on the site to be incorporated into the development.</p> <p>The following publications provide further advice on the risks from landfill gas and ways of managing these:</p> <ol style="list-style-type: none"> <li>1. Waste Management Paper No 27</li> <li>2. Environment Agency LFTGN03 'Guidance on the Management of Landfill Gas'</li> <li>3. Building Research Establishment guidance – BR 414 'Protective Measures for Housing on Gas-contaminated Land' 2001</li> <li>4. Building Research Establishment guidance – BR 212 'Construction of new buildings on gas-contaminated land' 1991</li> <li>5. CIRIA Guidance – C665 'Assessing risks posed by hazardous ground gases to buildings' 2007</li> </ol>	Geology and Ground ES Technical Paper 1, ES Part 2
	Waste	<p>If any controlled waste is to be removed off site, then the site operator must ensure a registered waste carrier is used to convey the waste material off site to a suitably permitted facility.</p> <p>If any waste is to be used on site, the applicant will be required to obtain the appropriate waste exemption or permit from us. We are unable to specify what exactly would be required if anything, due to the limited amount of information provided.</p>	Not relevant. None proposed to be removed or used on site. Waste ES Technical Paper 12, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
<b>Cheshire Archaeology Planning Advisory Service</b>	Cultural Heritage and Archaeology	<p>The covering letter submitted in support of the application by the applicant's agent confirms that the proposed EIA will contain a chapter which considers the effect of the development on archaeological and cultural heritage issues. This represents an appropriate approach which, if carried out by suitably-experienced organisation and informed by a consideration of the usual sources (Cheshire Historic Environment Record, historic maps, aerial photographs, readily-available secondary sources, etc.) will allow the impact of the development to be assessed. It will also assist in defining the need, if any, for further archaeological mitigation works. Such works might include evaluation trenching, watching brief, targeted excavation, and further analysis of deep, well preserved peat deposits.</p>	Archaeology and Cultural Heritage ES Technical Paper 9, ES Part 2
		<p>The covering letter makes reference to a separately-supplied link to further documentation, including a location map. This does not appear to be available on the Council's website but I assume that the development would be centred on the land immediately to the north-east of the Junction 11 roundabout which has previously been the subject of an application for an extension to the Risley landfill site. If this is the case, further detailed comment must await the submission of the EIA but it seems likely that any archaeological interest will focus on the eastern boundary of the medieval estate focussed on the moated site at Old Abbey Farm (fully excavated in the 1990s), the 19th-century farmstead that once occupied a plot within the proposed development area, and the potential for analysis of the surviving peat deposits (if they are of a depth to make such work worthwhile). I hope that these preliminary observations are helpful but please get in contact if you wish to discuss matters in more detail.</p>	Archaeology and Cultural Heritage ES Technical Paper 9, ES Part 2
<b>WBC – Environmental Protection Officer</b>	Air Quality	<p>Air quality is considered within the report and the suggested approach is acceptable. The applicant is proposing to consider if detailed AQ Assessment would be required using the relevant guidance documents for the planning application. This is also acceptable.</p> <p>The closest residential to the site has been identified as approx 300m away, therefore is unlikely to be affected by these proposals. By considering the extent of the Motorway Air Quality Management Area, a detailed air quality assessment would only be required if any relevant sensitive locations are within 50m of the site.</p> <p>Air quality is indicated as being fully considered within the full EIA planning application therefore no additional comments are necessary at this stage.</p>	Air Quality, Odour and Dust ES Technical Paper 8, ES Part 2
	Ground	<p>A preliminary risk assessment has been carried out and supplied with the application. It has identified potential sources of contamination and identified potential pathways to the end use receptors. It has also identified potential gas and groundwater issues that are associated with the onsite conditions, the peat present on site and the adjacent landfill site.</p> <p>The recommendations are for further detailed on site geotechnical investigation including an unexploded ordinance specialist desk study to be completed prior to redevelopment due to the proximity to the former ROF Risley site. It is considered likely that mitigation measures to protect the underlying aquifer would be required for any development on site.</p> <p>This information may be presented up front with any application or via a conditional route for subsequent discharge.</p>	Geology and Ground ES Technical Paper 1, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Noise	<p>The proposal is for consideration and assessment of ambient noise levels which are elevated due to the proximity to the motorway network. It is noted that the edge of the northern boundary is within the HS2 safeguarded area however reference to this has been made and consideration of effects on the proposed hotel are to be included in any noise assessment which points towards relevant standards for hotels and residential accommodation.</p> <p>Consideration for plant and equipment noise in the operational phase has been advised including relevant assessments to determine impacts on sensitive receptors.</p> <p>Consideration of construction impacts has also been detailed along with protocols to determine impacts on sensitive receptors.</p> <p>Construction hours are suggested which are slightly beyond our recommended limits, however, the distance to sensitive receptors is circa 300m so impacts would be lessened through natural attenuation over this distance.</p> <p>The proposals put forwards appear to be satisfactory. I have also had contact from acousticians to discuss these matters in more detail which I have been unable to respond to at the point of writing this memo.</p>	Noise and Vibration ES Technical Paper 7, ES Part 2
	Lighting and Odour	<p>Other smaller scale elements would be considered through the formal EIA application and supporting documents.</p> <p>These would recommend conditions relevant to specific elements of the site for consideration through the condition discharge process such as on site lighting and odour arising from catering elements of the proposal.</p> <p>These are not necessarily required up front with any application however these could be assessed as part of a submitted plans and drawings element to reduce conditional need.</p>	Lighting deal with in Lighting Assessment, appended at <b>Appendix 16</b>
Ecology (GMEU)	Ecology and Biodiversity	<p>The site is within 1km of parts of the Manchester Mosses Special Area of Conservation (SAC), in particular Holcroft Moss and Risley Moss. I would recommend that potential impacts on the special nature conservation interests of these sites are properly considered in the Environmental Statement. The potential of the development to cause:</p> <ul style="list-style-type: none"> <li>• Indirect hydrological changes and</li> <li>• Increases in diffuse air pollution arising from increased traffic generation</li> </ul> <p>will need to be Assessed.</p>	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Agricultural Land and Soils – Peat matters	<p>In terms of how the underlying substrate on the site (peat) is to be treated to facilitate the development an Assessment of potential options should be made. Excavating, storing and transporting peat carries risks of the peat drying, losing structure and losing integrity which could release carbon into the atmosphere. If it is to be translocated for use in bog and mire restoration schemes it will need to be excavated, stored and transported carefully. On the other hand retaining the peat in-situ but sealing it underneath metalised surfaces removes any potential for the peat to be restored to become 'active' and store more carbon in future.</p>	Project Description, Section 2. Agricultural Land and Soils ES Technical Paper 10, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Ecology and Biodiversity	<p>In addition to the above I would agree with the Scope of the Ecological Assessment as proposed by the applicant; that is, the following impacts need to be considered in the ES:</p> <ul style="list-style-type: none"> <li>• Direct Habitat loss and indirect lighting impacts to bats roosting, foraging and commuting habitats,</li> <li>• Loss of habitats of use to badgers,</li> <li>• Impacts to water vole foraging and burrowing habitat,</li> <li>• Impact on grass snake basking habitat,</li> <li>• Impacts on great crested newt terrestrial habitat,</li> <li>• Impacts on barn owl foraging habitat,</li> <li>• Impacts on wintering bird assemblages and</li> <li>• Impacts on breeding bird assemblages.</li> <li>• Impacts on habitat fragmentation</li> </ul>	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Ecology and Biodiversity	I would encourage the applicant to consider how this development could contribute to <b>Biodiversity Net Gain</b> (NPPF para. 170).	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
<b>WBC Flood Risk Team</b>	Water Resources	The Asset & Flood Risk Team have assessed the Environmental Impact Scoping Report and have no issues with the proposals for this development, in relation to surface water management as outlined in section 9.	Water Resources ES Technical Paper 3, ES Part 2
<b>Natural England</b>	Ecology and Biodiversity	<p><b>Impact Risk Zone</b> The development site triggers the Impact Risk Zone (Water supply) for both Holcroft Moss (approximately 890m east of the Site) and Risley Moss (approximately 1,075m south of the Site) Sites of Special Scientific Interest (SSSI's).</p> <p>Information on the SSSIs and their special interest features can be found at <a href="http://www.magic.gov.uk">www.magic.gov.uk</a>. The above sites are also designated at international level (also known as Natura 2000 sites) as Manchester Mosses Special Areas of Conservation (SAC). Natura 2000 network site conservation objectives are available on our internet site : <a href="http://publications.naturalengland.org.uk/category/6490068894089216">http://publications.naturalengland.org.uk/category/6490068894089216</a></p> <p>Large non-residential developments can have an impact on water supply mechanisms to designated sites, therefore the Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within this site and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.</p>	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Ecology and Biodiversity	Designated sites – as identified in the above paragraph, the Impact Risk Zones for Risley Moss SSSI and Holcroft Moss SSSI are triggered for this development site. These SSSI's form part of the internationally designated site Manchester Mosses SAC so the EIA will need to conduct a full assessment to ensure that development on this site would not lead to hydrological impacts on the designated site. Changes to air quality as a result of changes to traffic volume/flow should also be considered.	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Agricultural Land and Soils – Peat matters Ground Water Resources Ecology and Biodiversity	Peat – Natural England advise that development on peat should be avoided. It is an irreplaceable habitat with a high biodiversity value but also performs an important role in carbon storage and water catchment management.	Comments noted. Project Description, Section 2. Agricultural Land and Soils ES Technical Paper 10, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Ecology and Biodiversity	Ecological connectivity – Manchester Mosses SAC comprises of a fragmented cluster of sites therefore, connectivity between the sites is essential for them to function well. Connectivity of the sites should be considered when assessing the impacts of the development and should be strengthened through mitigation design. Ponds are an important habitat in this ecological network and should be retained, enhanced and created. We would like to see this development strive to achieve biodiversity net gain in line with the NPPF.	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	HS2	HS2 – HS2 is proposed in this area which will lead to further habitat fragmentation between the sites. We recommend that the in-combination effects are considered in the EIA.	Section 9, ES Part 1 – Cumulative Impact Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Ecology and Biodiversity	Natural England has identified that this proposal may be suitable from benefitting from our pre-application advice service due to the proximity to designated sites of nature conservation, potential for green infrastructure gains and the potential for biodiversity enhancements. Through early engagement with Natural England customers will receive high-level customer service to support an efficient planning application process and achieve development which is more sustainable. We request that you pass on our details and instruct the applicant to fill out a simple 'Request Form' and email it to <a href="mailto:consultations@naturalengland.org.uk">consultations@naturalengland.org.uk</a> so we can register interest and assign a local Natural England consultant.	Discussions progressed through DAS. Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Ecology and Biodiversity Agricultural Land and Soils – Peat matters	If there are European Protected Species on site, Natural England offers a separate Pre-submission Screening Service (PPS) for planning proposals that will require a mitigation licence. More about this service can be found <a href="https://www.gov.uk/pre-submission-screening-service-advice-on-planning-proposals-affecting-protected-species">https://www.gov.uk/pre-submission-screening-service-advice-on-planning-proposals-affecting-protected-species</a>	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2
	Ecology and Biodiversity Agricultural Land and Soils LVIA	Annex A to this letter provides Natural England's general advice on the scope of the Environmental Impact Assessment (EIA) for this development. Annex B offers additional, general planning advice, but we would like to draw your attention to the Environmental Enhancement section in particular.	Noted.
<b>Historic England</b>	Cultural Heritage and Archaeology	This development could, potentially, have an impact upon a number of designated heritage assets and their settings in the area around the site. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement (ES) to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.  The environmental scoping report included within the application considers how the proposed development would impact upon both designated and un-designated heritage assets and their setting as well as potential below-ground archaeology. The environmental scoping report provides a clear statement on how this impact would be appraised and potentially mitigated through consultation with the archaeological advisors at the Cheshire Archaeology Planning Advisory Service and conservation officers at Warrington Borough Council.	Archaeology and Cultural Heritage ES Technical Paper 9, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	Cultural Heritage and Archaeology LVIA Design	The cultural heritage appraisal is restricted to a buffer of 1 km around the development site, which under normal circumstances would not be acceptable to adequately appraise the direct and indirect impact of a development of this size on heritage assets. However, given the flat character of the location, this is acceptable. No designated heritage assets were found within the study area but there is the Grade II* Listed Building Holcroft Hall within 1.5km of the development site. The proposals do have the potential to impact upon this heritage asset, but we welcome the proposals to include appropriate screening to minimize any harm to the setting of the hall within the masterplan as well as restricting new building heights.	Archaeology and Cultural Heritage ES Technical Paper 9, ES Part 2
	Cultural Heritage and Archaeology LVIA	The assessment should also take account of the potential impact of associated activities such as construction, servicing and maintenance, and associated traffic that could impact upon perceptions, understanding and appreciation of the heritage assets in the area.	Archaeology and Cultural Heritage ES Technical Paper 9, ES Part 2 LVIA, ES Technical Paper 4, ES Part 2
Croft Parish Council	Green Belt	The proposal is sited in the green belt. The Parish Council opposes developments in the green belt.	Noted. Section 5: Plans and Policies and Planning Statement
	Need	The proposal is less than seven miles from an existing service station on the M62.	Noted. Section 3: Need; Section 4: alternatives Considered and <b>Appendix 13</b> Alternative Sites Assessment.
	LVIA	The photographs in the scoping document demonstrate the adverse visual impact of the development. Views over open countryside would be significantly curtailed.	LVIA, ES Technical Paper 4, ES Part 2
	Water Resources	There are concerns about the impact of this development on the water catchment / drainage area. The scoping exercise categorises the underlying sub-strata as 'principal aquifer'. Table XI, (the qualitative risk assessment) attributes a 'moderate to high' risk to property / environment against groundwater vulnerability.	Water Resources, ES Technical Paper 3, ES Part 2
	Water Resources	There are added concerns about the combined impact of HS2 and this proposal on this water catchment / drainage area.	Section 9: Cumulative Impacts Water Resources, ES Technical Paper 3, ES Part 2
Culcheth and Glazebury Parish Council	Water Resources	The proposal includes references to drainage. This is a major concern because of the run off from the landfill site and the area being a groundwater protection zone. This is currently mitigated with attenuation ponds to protect land to the North from flooding. The area in the proposal includes the Silver Lane Brook and the result of paving over an area of land next to this will impact on the Brook which flows to the North. It then flows into Willow Brook which travels Eastwards to join the Glaze Brook. Both are in a flood plain which includes extreme flood. 1. Drainage impacts should include land to the North up to and including watercourses in Culcheth	Geology and Ground, ES Technical Paper 1 and Water Resources, ES Technical Paper 3, ES Part 2
	Ecology and Biodiversity Water Resources	The land adjacent to the landfill site is shown as moss land on older maps. Moss land is an important carbon sink and has wider impacts on drainage. 2. Investigate the link to the Manchester Mosses.	Ecology and Nature Conservation ES Technical Paper 5, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
	LVIA Socio Economic	The Risley Landfill site has been restored and is now is in effect a country park including the area known as Silver Lane ponds 3. What would be the impact of the proposed development on this and the local footpaths?	LVIA, ES Technical Paper 4, ES Part 2
	HS2	Consultations on HS2 phase 2b are ongoing. The HS2 safeguarding area is shown on your plans. The problems encountered and created by HS2 will affect your proposals. 4. How will you respond to these problems?	Redline amended to remove HS2 Safeguarded area from within redline. HS" considered through Cumulative Assessment of Technical Paper and Section 9 of this ES Part I Report
	Traffic and Transport Noise Air Quality	5. Will the changes planned for the M62 'smart' motorway affect your proposals?	Traffic and Transport, ES Technical Paper 2, ES Part 2
<b>United Utilities</b>	Utilities	We would encourage potential developers to contact us at the appropriate time for pre-application discussions. Information for our pre-application services for both water and wastewater is available on our website.	Comments noted, and contact made with UU. See Utilities Statement within Climate Change ES Technical Paper 13, ES Part 2
<b>Urban Vision Partnership Ltd (Salford City Council)</b>	All Issues	No issues with the proposals for this development and would not request any information outside that to be proposed within the Scoping Report.	-
<b>National Grid (received after LPA's Scoping Opinion)</b>	Utilities Design	Reference to PADHI guidance Reference to other matters to consider when proposing development in vicinity of pipeline.	Noted and taken account of within scheme evolution. Discussions ongoing with Health and Safety Executive
<b>Cadent (received after LPA's Scoping Opinion)</b>	Utilities Design	Searches based on your enquiry have identified that there is apparatus in the vicinity of your enquiry which may be affected by the activities specified. Can you please inform Plant Protection, as soon as possible, the decision your authority is likely to make regarding this application. If the application is refused for any other reason than the presence of apparatus, we will not take any further action. Please let us know whether Plant Protection can provide you with technical or other information that may be of assistance to you in the determination of the application. As your proposed activity is in close proximity to National Grid's Transmission assets we have referred your enquiry/consultation to our Asset Protection team for further detailed assessment. We request that you do not commence work or take further action with regards to your proposal until you hear from us. We will endeavour to contact you within 21 days from the date of this response. Please contact us at <a href="mailto:assetprotection@nationalgrid.com">assetprotection@nationalgrid.com</a> if you have not had a response within this time frame.	Noted. See Utilities Statement within Climate Change ES Technical Paper 13, ES Part 2
	Utilities Ground	Advice on requirements before any work is carried out.	Noted See Utilities Statement within Climate Change ES Technical Paper 13, ES Part 2

Consultee	Issue	Details of Consultation Response	Comment / Where covered in ES
HS2	Redline	<p>We have identified that there is likely to be a conflict between the proposed development and Phase 2b of HS2.</p> <p>However, in order to determine the extent of the conflict, HS2 would require further time to understand the interface between the two schemes.</p> <p>In light of the above, please could we request an extension of time until 28 February before providing a formal response?</p>	<p>Redline amended to remove HS2 Safeguarded area from within redline.</p> <p>HS2 considered through Cumulative Assessment of Technical Paper and Section 9 of this ES Part 1 Report. Discussions ongoing with HS2.</p>
	HS2	<p>I can confirm that a small part of the proposed development falls within land safeguarded for Phase 2b of HS2.</p> <p>It is noted that the applicant is seeking to amend the red line boundary plan prior to submission, in order to avoid land safeguarded for Phase 2b of HS2.</p> <p>The applicant is to be made aware that part of the proposed development falls within land identified in the working draft Environmental Statement (WDES), as land potentially required for construction and environmental purposes (see maps CT-05-327 and CT-06-327 at: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746994/HS2_Phase_2b_WDES_Volume_2_MA05_Risley_to_Bamfurlong_map_book.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746994/HS2_Phase_2b_WDES_Volume_2_MA05_Risley_to_Bamfurlong_map_book.pdf</a>).</p> <p>Given the close proximity of the site to areas of interest for HS2, we would welcome further engagement with the applicant prior to the submission of a formal planning application. As it would enable the applicant and HS2 to further understand the construction and phasing programme and the WDES in that location.</p>	

**Table I.1: Summary of Scoping Responses**

I.24. These points, along with the comments raised by each of the consultees at Scoping Stage are addressed in more detail in each of the Technical Papers included within Part Two of this ES within Section 3 of each of the Technical Papers within Part 2 of this ES. This confirms scoping discussions/liaison with the following:

- Warrington Borough Council Development Management
- Highways England
- Warrington Council Highways
- Natural England
- Environment Agency
- Greater Manchester Ecological Unit
- Warrington Council Lead Local Flood Authority
- Warrington Council Public Protection
- Warrington Council Environmental Health
- Cheshire Archaeology Planning Advisory Service
- Historic England
- United Utilities
- Croft Parish Council
- Culcheth and Glazebury Parish Council

## Consultation and Stakeholder Engagement

- I.25. There has been a lot of consultation with key stakeholders with interest in the Proposed Development. This is set out fully within the Statement of Community Involvement submitted with the planning application.
- I.26. Public consultation is an imperative element of the planning and development process. Good pre-application engagement offers local communities the opportunity to get involved and help shape proposals so that the consequent application takes into consideration, where appropriate and possible, their opinions.
- I.27. The approach taken in this consultation builds on best practice and was informed by national and local policy guidance. Extra has undertaken an extensive programme of pre-application consultation and has sought to engage with the Local Planning Authority, Local Councillors and MPs, key stakeholders, statutory consultees, other developers, local community interest groups, local businesses and local residents prior to the submission of this outline planning application.
- I.28. This process has involved pre-application meetings with Warrington Borough Council and Statutory Consultees; briefing letters, emails and meetings for Local Councillors and MPs; meetings with key stakeholders and local interest groups; the creation of a website providing details of the development and the opportunity to comment online; and the provision of brochures and free post return comment cards to c11,000 homes and businesses in the surrounding area - with a follow up distribution to advertise a further event being sent to c5,000 households. In addition to this, advertorial space was purchased in the Warrington Guardian and a press release advertising the events were sent out and published in Place North West, Forecourt Trader and Business Insider. Three public consultation events were also held on i) 4th April at Croft Village Memorial Hall, ii) 6th April at Gorse Covert Primary School and on iii) 12th April at Pentahotel in Warrington. These events provided the community with the opportunity to view the proposals, discuss the scheme with Extra and their consultant team and comment on the development proposals.
- I.29. Over the course of the public consultation period, a total of 374 feedback forms were received via postal forms, the online portal and the three public consultation events. This report provides a summary of the issues raised and how the scheme has responded to these.

- I.30. This SCI demonstrates that Extra has involved the community and stakeholders in the development of the application proposals for the site at an early stage and in the formulation of the outline planning application proposals. Extra is keen to continue working with the Local Planning Authority, Local Councillors and MPs, key stakeholders, statutory consultees, local community interest groups, local businesses and local residents. This consultation process will therefore continue throughout the determination period of the outline planning application and beyond. Providing an opportunity to discuss the needs case and draft proposals for Warrington Services, as well getting feedback from Cllr Smith about which stakeholders and local groups would need to be engaged.
- I.31. Consultation continued through the application determination period. In respect of the environmental assessment, this was most notably with Warrington Council, the Environment Agency, Natural England, GMEU and Ramboll. 'Other Information' was submitted in line with Regulation 25 of the EIA Regulations on 20 January 2020 and 20 March 2020 as a result of these discussions to satisfy comments and resulted in no objections and a series of draft conditions suggested for any forthcoming planning permission to address any remaining matters.

## Approach to Environmental Statement

- I.32. All proposals for projects that are subject to the European Environmental Impact Assessment (EIA) Directive 2014/52/EU must be accompanied by an Environmental Assessment (ES). The legislation has been transposed into UK law through the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 which are the EIA Regulations for England only (referred to hereafter as 'the EIA Regulations').
- I.33. The ES has been undertaken to allow a robust and transparent assessment of the proposals. It has been prepared in the context of the EIA Regulations and accompanying legislation. The aim is to enable an objective assessment of the environmental impacts of the development.
- I.34. The consultant team has followed the approach outlined in Schedule 4 of the EIA Regulations for the assessment:
- Description of development
  - Description of the reasonable alternatives studied

- Description of the relevant aspects of the current state of the environment and likely evolution without the development
- Description of the aspects of the environment likely to be significantly affected by the development
- Description of the likely significant effects of the development on the environment
- Description of the forecasting methods or evidence, including details of any difficulties in compiling the required information
- Description of mitigation measures and any monitoring
- Where relevant a description of the expected adverse effects of the development on the environment from the vulnerability of development or risks of major accidents and/or disasters
- A non-technical summary

1.35. The ES is presented in two Parts. Part 1 (this report, the Addendum to the original Part 1 Report) as described above, provides the background and the summary analysis of environmental effects relating to the project and Part 2 (and its Addendum) contains the technical reports and the assessment of significant impacts. A separately bound non-technical summary and an Addendum to this is also provided.

## Environmental Statement Part 1

1.36. Part 1 of the ES and this Addendum to the ES sets out the project description, the need for development and alternatives considered. It includes an overview of the environmental impacts of the proposals with a summary of the mitigation measures proposed and any monitoring that will be necessary. It contains the methodology for assessing significant environmental impacts as set out and agreed with WBC during the Scoping stage. This Part 1 will also include an assessment of the interaction of effects and a summary of the cumulative impacts assessed as part of each of the technical areas.

1.37. This Part 1 contains a series of plans and illustrations to help the reader understand the background to the proposals and the scheme. It also provides an understanding as to how the development fits within the planning framework. Part 1 is important in establishing the context for the development allowing readers to understand the objectives of Extra MSA Group. It also sets out the framework for how significant impacts have been assessed.

- I.38. A Glossary and Abbreviations list is included at **Appendix I**.

## Environmental Statement Part 2

- I.39. The second part to the ES and the Addendum to this sets out the individual technical reports. Using the methodology outlined in Part 1, these reports have been compiled over many months and will describe the environmental impacts of the development. The EIA Regulations state these reports only need focus on the significant impacts, however they will also briefly assess the issues which are not considered significant and have been ‘Scoped Out’. Importantly, this part of the ES will outline the mitigation measures required to offset the environmental impacts. The technical chapters included within Part 2 are:

- Geology and Ground Conditions (and the Addendum to this Paper)
- Traffic and Transportation (and the Addendum to this Paper)
- Water Resources (and the Addendum to this Paper)
- Landscape (and the Addendum to this Paper)
- Ecology and Nature Conservation (and the Addendum to this Paper)
- Socio Economic
- Noise and Vibration (and the Addendum to this Paper)
- Air Quality, Odour and Dust (and the Addendum to this Paper)
- Archaeology and Cultural Heritage (and the Addendum to this Paper)
- Agricultural Land and Soils (and the Addendum to this Paper)
- Waste
- Climate Change (Energy and Sustainability) (and the Addendum to this Paper)

- I.40. The Addendums to Technical Papers provide an update to the cumulative assessment as a result in additional information being made available in respect of the HS2 development. HS2 is included as one of the projects assessed, as there ‘might’ be cumulative environmental effects when considered with the Application Proposals. Since the submission of the planning application, additional information has been made available by the Secretary of State for Transport and HS2. The Applicant has also had ongoing discussions with HS2 due to the proximity of the Site to the HS2 proposals and HS2’s requirement for land associated with the Application Proposals as shown through the Safeguarding Plans, most recently those plans

relating to the Safeguarding Directions, dated 2020 (Appendix 14c), which are an update to the previous plans relating to the Safeguarding Directions, dated 2018 (Appendix 14b).

1.41. This Addendum to the ES is primarily to provide an update to the cumulative assessment in light of this additional information.

1.42. The ES Addendum also provides updates on other matters as set out below:

- Policy and guidance references where relevant, most notably in relation to a newly published National Planning Policy Framework (2021).
- Whilst there are no amendments to the scheme proposals and therefore no amendments to the assessment of the likely environmental effects as a result of the Application Proposals when considered individually, which remain as set out within the original ES (August 2018); the exception is in respect of Agricultural Land and Soils where additional baseline work undertaken by Land Research Associates (Appendix 10.13 of Agricultural Land and Soils ES Technical Paper Addendum) has been undertaken and has therefore been incorporated into the environmental assessment and reported within the ES Technical Paper accordingly
- Ecological baseline survey work has continued on the site and as such the Addendum presents information from updated surveys for habitats and certain protected species during winter 2021/22, which includes updates to the Phase I Habitats Survey and mapping as well as updated information on badgers and wintering birds (Appendix 5.14, 5.15 and 5.16 of the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2). This information does not alter the environmental assessment or conclusions drawn within the original ES (August 2018).
- The earlier Biodiversity Net Gain (BNG) assessment has also been updated following the launch of the new 3.0 Biodiversity metric calculation (July 2021), which is to be read alongside, and in addition to the previous 2.0 metric Biodiversity metric calculation. This update uses information gathered from detailed habitat mapping and condition assessments by Aspect Ecology during December 2021 and additional design information including HS2 requirements within the site which are associated with the cumulative assessment. The update also utilises MORPH (BEACH 2017) river assessments, given these are now in wide currency for assessing development impacts as part of the v3.0 metric (Appendix 5.16 of the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2). This information does not

alter the environmental assessment or overall conclusions drawn within the original ES (August 2018).

- 'Other information' submitted in line with Regulation 25 of the EIA Regulation 2017 during the course of the determination of the Planning Application (dated 17-01-2020 and 20-03-2020) that revised Technical Paper Appendices is also included for completeness, although this is not new information for the purposes of this Addendum the relevant appendices within the ES have been updated as follows:
  - ES Technical Paper 3 – Water Resources, ES Part 2 – Appendix 3.3 – replaced by Revised Water Framework Directive Screening Assessment
  - ES Technical Paper 5 – Ecology and Nature Conservation, ES Part 1 – Appendix 5.1 – Information to Support a Habitats Regulations Assessment - removed from the ES and submitted as a technical report out with the ES
  - ES Technical Paper 5 – Ecology and Nature Conservation, ES Part 1 – Appendix 5.2 – replaced by Revised Water Framework Directive Screening Assessment

## Non-Technical Summary

- 1.43. A separately bound Non-Technical Summary of the ES and an Addendum to this is provided. This document is provided so that the public can understand the ES and its main findings.
- 1.44. As required by the EIA Regulations, it includes a description of development, an outline of the main alternatives studied, a description of the aspects of the environment likely to be significantly affected by the development and the likely significance of the effects, and the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

## Consultant Team

- 1.45. The applicants have taken professional advice from a competent development team and supplementary information has been prepared in support of this Environmental Statement and this Addendum by the following consultants:

- Environmental Assessment Co-ordination - Spawforths
- Planning - Spawforths
- Architects – Architecture 519
- Landscape Masterplanning - SLR
- Geology and Ground Conditions – Wardell Armstrong
- Traffic and Transportation – I-Transport
- Water Resources (Flood Risk and Drainage) – Wardell Armstrong
- Landscape and Visual Impact – Spawforths, SLR and FPCR
- Ecology and Nature Conservation – Wardell Armstrong and Aspect Ecology
- Agricultural Lane and Soils (including Peat) - Wardell Armstrong and Land Research Associates
- Socio Economic – Spawforths
- Noise and Vibration - Wardell Armstrong
- Air Quality and Dust – Wardell Armstrong
- Cultural Heritage and Archaeology – Wardell Armstrong
- Utilities – Wardell Armstrong
- Climate Change, Energy and Sustainability – Wardell Armstrong
- Waste – Wardell Armstrong

1.46. A statement confirming the relevant experience and qualifications of the development team that has produced the ES is provided at **Appendix 20** in line with the EIA Regulations (Part 5, Regulation 18(5b)).

## 2. Project Description

2.1. This section identifies the Site's location and context and describes the Proposed Development.

### Site Location and Context

2.2. The Site is located in the North West of England, within the local authority area of Warrington. The national regional context is shown on the plans below and in **Appendix 2**.



Figure 2.1: National Context Plan



Figure 2.2: Regional Context Plan

- 2.3. The Site is located to the northeast of the urban area of Warrington, approximately 8.5km (5 miles) from the centre of Warrington. The centre of Manchester is located approximately 17.5km (11 miles) to the east of the Site and the centre of Liverpool, approximately 32 km (20 miles) to the west.
  
- 2.4. The M62 Motorway corridor runs in an east/west direction to the north of Warrington. It is the west-east Trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and connects the three City Regions of Liverpool, Manchester and Leeds.

- 2.5. The Site is located to the north of the M62 Motorway at Junction 11, within its north east quadrant and has direct access to Junction 11 via a spur to the motorway junction roundabout (Birchwood Way). The M62 Motorway also provides access to the wider Strategic Road Network, with the M6 Motorway running north/south, approximately 4km (2.5 miles) to the west of the Site, and the M60 Motorway, which runs around Manchester, approximately 10km (6.1 miles) to the east of the Site.
- 2.6. Junction 11 of the M62 Motorway also provides access to the A574 Birchwood Way and the Birchwood area of Warrington, which is located to the south of the M62 Motorway corridor and consists of Birchwood Park (a business park) and beyond this, residential areas of Gorse Covert and Oakwood, which are suburbs to Warrington.
- 2.7. Immediately to the west of the Site is a former landfill site (Risley Landfill), where landfilling began in 1979, but which has now ceased, and the site restored and planted. There are a series of permissive footpath routes across the restored landfill site. To the east and north is arable farmland. A disused railway line crosses the farmland that is beyond the Site boundary, and arches to the east and north approximately 0.6km (0.4 miles) from the Site boundary.
- 2.8. To the east and north of the Application Site are agricultural fields. The settlement of Culcheth lies to the north west of the Site, with its centre approximately 2 km (1.2 miles) from the Site.
- 2.9. The local context is shown in the plans below and in **Appendix 3**



**Figure 2.3: Local Context Plan**



**Figure 2.4: Redline Site Boundary Plan**

- 2.10. The planning application redline encompasses the M62 J11 Motorway Roundabout, spur from the roundabout and the main part of the Site. The main part of the Site relates to an area of land of approximately 15.41 ha in extent, whilst the total land within the redline and therefore including highway works to M62 J11 Motorway Roundabout is 16.81 ha. The Site is greenfield and located within the Green Belt. It comprises agricultural land and rough grassland. The agricultural land within the Site comprises a large arable field (11.58 ha). A small triangular area of rough grassland is present to the west of the Site (approximately 1.0 ha), this land previously formed part of a larger agricultural field, the majority of which was incorporated into the Risley Landfill Site. The remnant field area was removed from agricultural use by the operation of the landfill site and is therefore considered to be non-agricultural. All other land within the Site is also non-agricultural comprising areas of restored landfill and hardstanding. The agricultural land is partially located over peat deposits, which are located predominantly to the south western section of the Site.

- 2.11. The M62 J11 Motorway roundabout and the spur from the roundabout junction into the Site is at a higher level to the rest of the Site. The roundabout is vegetated to its edges with grass, shrubs and trees. The M62 Motorway Corridor and Junction 11 is lit in the vicinity of the Site.
- 2.12. The Site is set at a lower level than the M62 Motorway Junction 11 and its associated slip roads, but is higher than the M62 Motorway itself. From the Motorway Junction and the spur from this, the land falls away sharply into the main part of the Site, which is set at a lower level and is relatively level across the remainder of the Site. The topography of the Site falls from 25m AOD in the southwest to approximately 19m AOD in the north east of the Site. The Topographical Survey is included at **Appendix 11**.
- 2.13. There are trees to the eastern, and part of the southern and south western boundaries. A post and rail fence marks the southern boundary. The Site is bounded to the east, north and part of the western boundary by a water course, which is a dry ditch and classed as a non-main river. To the western boundary is another water course, known as Silver Lane Brook that extends into part of the Site as a 'dog leg'. It is identified by the Environment Agency as a main river. The Site is within Flood Risk Zone 1 and as such at low risk of flooding.
- 2.14. A Public Right of Way (Footpath number 13) runs along the western boundary of the Site and leads north to Silver Lane Pools, and west around the adjacent restored landfill site, before heading north to Culcheth and east to Holcroft Lane. Footpath number 28 continues around the north of the restored landfill site, connecting to Footpath 14a to the western boundary, which connects to Footpath 25 to the southern boundary, before reconnecting with Footpath 13 adjacent to the Application Site. This also links to a footpath at the spur of the Junction 11 roundabout and around the roundabout, before linking to footpath 25 to the south eastern quadrant of the Junction 11 roundabout in Birchwood.
- 2.15. The HS2 Safeguarded Land corridor arcs around the north eastern corner of the Site and is located outside the Redline Site Boundary. See the Constraints Plan below and at **Appendix 4**.
- 2.16. A 50m Buffer Motorway Air Quality Management Area (MAQMA) runs along the Motorway corridor.



- 2.18. The Site lies within 5km of Manchester Mosses SAC and within 2km of Risley Moss SSSI and LNR and Holcroft Moss SSSI. Beyond the M62 Motorway, to the south of the Site is Pestfurlong Moss, a Local Wildlife Site. To the north west of the Site is Silver Lane Risley, which is also a Local Wildlife Site and incorporates the ponds to the north of the restored landfill site.
- 2.19. The Glazebrook Timberland Trail (located to the east of the Holcroft Moss SSSI) is a linear signposted recreation route following footpaths close to the Pennington and Glaze Brooks from Pennington Flash Country Par in Leigh, to the Manchester Ship Canal at Cadishead. The route passes the remnant mosslands of Chat Moss, an area of relict and active peat bogs some of which are of notable wildlife value and extends through areas rich in history including Little and Great Woolden Halls, the Liverpool to Manchester railway, Hope Carr Nature Reserve and Pennington Flash Country Park.

## Development Description

### The Development

- 2.20. The application will be an outline planning application as described below:

Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas, ecological mitigation, pumping station(s), substation(s), retaining structures and associated infrastructure and earthworks.

- 2.21. All matters, except for access to the Site will be reserved for consideration at a later date. The access proposals are shown on the plan in **Appendix 7**.

### Parameters and Scheme Design

- 2.22. During the evolution of the proposals for the outline element of the scheme, a number of parameters have been fixed and these have formed the basis of the environmental assessment.

2.23. The following table summarises the details of the Site proposals to be accommodated within the parameters:

Land Use	Site Area ha (acres) (rounded to the nearest two decimal place)	Maximum Floor Area (m <sup>2</sup> )	Maximum building height (m)
Facilities Building (Incorporating public facilities, retail uses, food and beverage uses, business lounge and associated staff, storage and management uses within the building thermal envelope)	NA	Max 5,000m <sup>2</sup> GIA	15m Max 37.65m AOD Max
Hotel Building (Incorporating guest facilities including front of house, associated staff and storage uses)	NA	Max 100 Bedrooms	15m Max 37.65m AOD Max
Fuel Filling Station (FFS) (Incorporating public facilities, retail uses, food and beverage uses, and associated staff and storage uses)	NA	Max 500sqm GIA	6.5m Max 31.15m AOD Max
Parking Facilities for all Vehicles incorporating access roads and internal circulation (buildings are within this zone)	8.97ha	-	-
Soft Landscape Areas (including proposed and existing planting and ecological habitat and SUDS basins and children's play)	6.44ha	-	-
Highway works within the redline	1.4ha		
<b>Gross Site Area (excluding highway works)</b>	<b>15.41 ha</b>	-	-
<b>Gross site Area</b>	<b>16.81 ha</b>	-	-

Table 2.1: Proposed Land Use and Areas on Site

2.24. The parameters have been fixed to include the following details:

- Development Cells Parameter – area of built development, distribution of land uses, Site access, maximum building heights\* and spot height levels\*\*
- Green Infrastructure Parameter – existing and proposed landscaping, including ecological habitats, drainage areas, corridor to accommodate the diverted Silver Lane Brook, zone for public right of way and diversion of this and spot height levels\*\*

- Restrictive Zones Parameter – gas pipeline location and associated zone of easement required by HSE guidance and, whilst outside the Site boundary, the HS2 Safeguarded zone is also identified

\* Finished ground floor levels for buildings and building heights are tested with a +2m tolerance to allow for scheme evolution at detailed design stage

\*\* Spot heights through the Site have a +/-0.5m tolerance

2.25. These are all combined into a single plan and shown on the following Parameters Plan below and separately on a series of Parameters Plans within each sub heading below. Larger scale plans can also be found at **Appendix 5**.

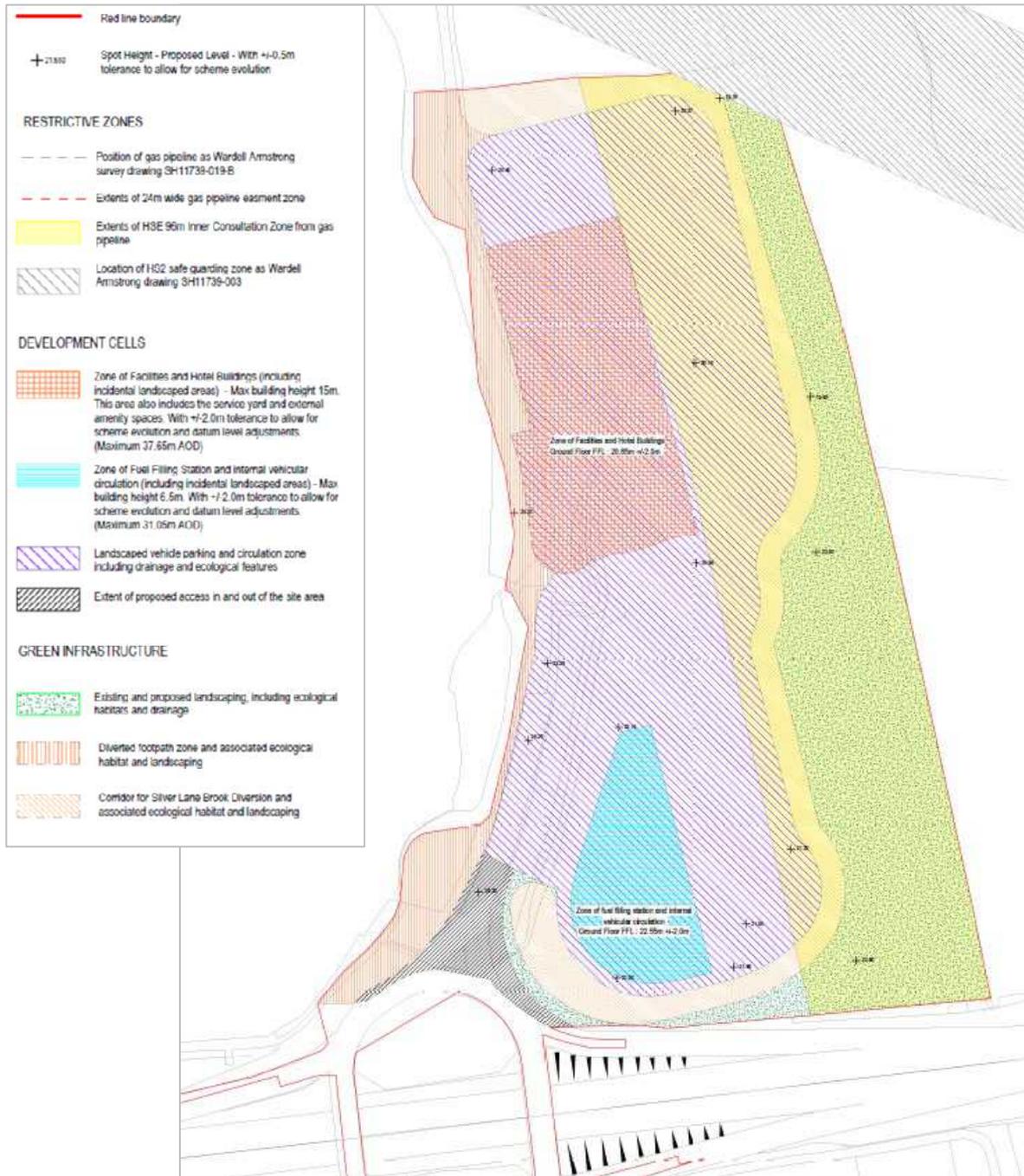


Figure 2.6: Parameters Plan showing all Parameters combined on a single plan

2.26. These Parameters are described in turn below:

### **Development Cells**

2.27. The Development Cells Parameter Plan below shows the zones for the built development. This includes the Facilities Building, the FFS and the vehicle parking with associated proposed building heights and finished ground levels. These are located within the body of the Site and surrounded by the Green Infrastructure (shown on a separate Parameter Plan).

The Development Cell Parameters incorporate the following detail:

- Zone of Facilities Building and Hotel, including incidental landscape areas, service yard and external amenity spaces. Max building height 15m with +2m tolerance to allow for scheme evolution (maximum 37.15m AOD).
- Zone of Fuel Filling Station and internal vehicular circulation, including incidental landscape areas. Max building height 6.5m with +2m tolerance (maximum AOD 31.15m AOD).
- Landscaped vehicle parking and circulation zone, including ecological and drainage features. The vehicle parking includes for parking for all types of vehicles and will be located around the Facilities Building and FFS. The parking areas will be landscaped to soften the expanse of hard surfaced areas. Surface water drainage will be provided and surface water storage will be accommodated within a mix of underground tanks/crates, small discrete basins and swales/filter drains split throughout the development area.
- Finished ground levels with +/-0.5m tolerance shown as a series of spot heights across the Site
- The extent of the proposed access to and from the Site. Access is from the roundabout junction for Junction 11 of the M62 Motorway and will replace the existing spur head from the roundabout with two lanes into and out of the Site. The access road will link to the internal circulate routes that will be accommodated within the zone for vehicle parking and internal vehicular circulation as shown on the Development Cells Parameter Plan.

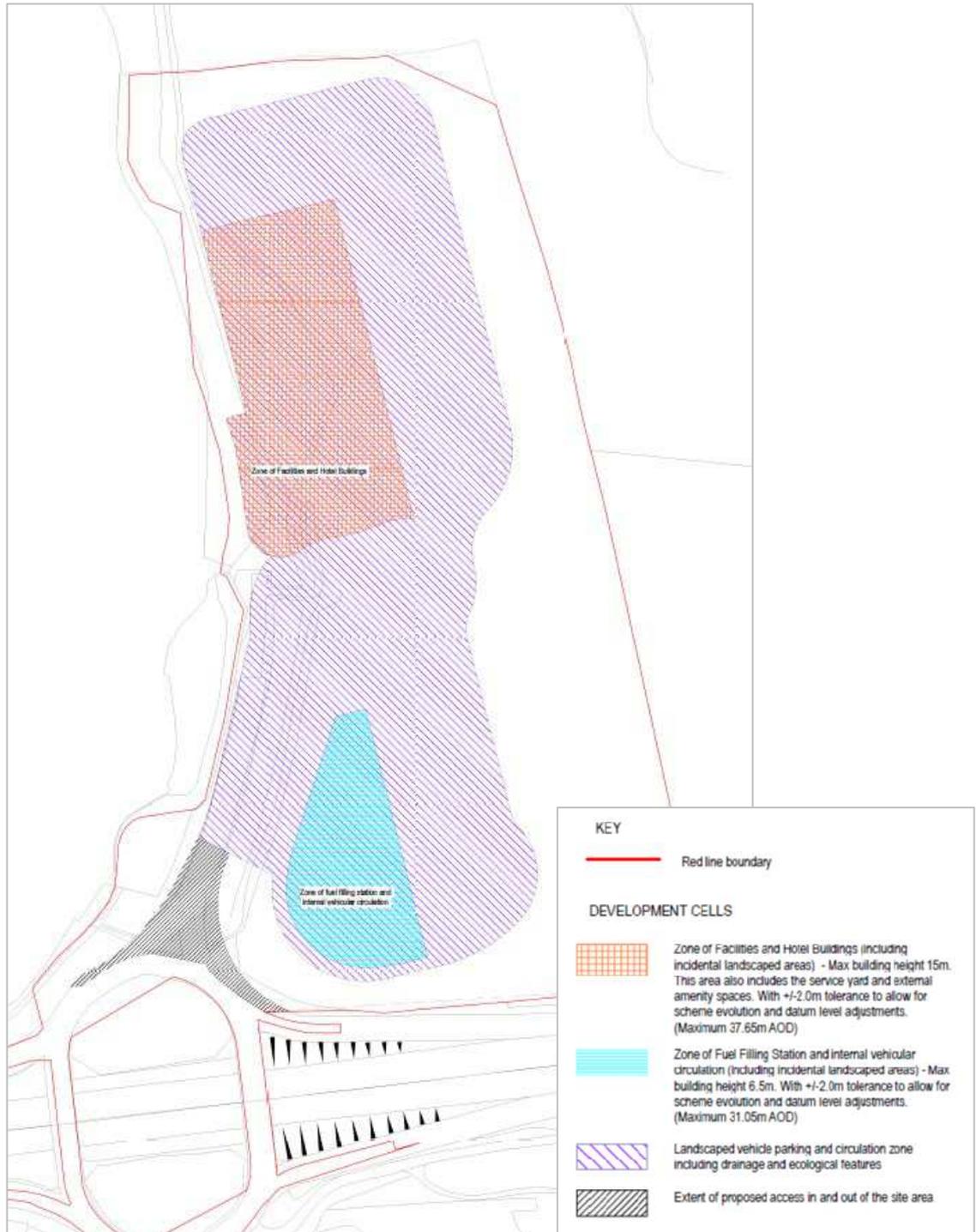


Figure 2.7: Parameter Plan – Development Cells

### **Green Infrastructure**

- 2.28. Green Infrastructure refers to the landscaping works outside the Development Cells area, with a purpose to maximize biodiversity enhancement.
- 2.29. The Green Infrastructure Parameter Plan below shows the zones for the Green Infrastructure within the Site. This includes existing and proposed landscaped areas, ecological habitats, drainage, corridor for the diversion of the brook and zone for the footpath diversion. These areas are located to the perimeters of the Site and are located to enclose the built development shown within the Development Cells Parameter.
- 2.30. The ecological habitats include the creation of a peat habitat area (as described in the section below). Landscape and ecological habitat areas within the area of existing and proposed landscaping zone will include all of the peatland type habitats which will develop within the peat habitat area as well as vegetation covering the bunds surrounding this and the habitats to the west along the easement corridor of the high pressure gas main. These habitats will include areas of new species rich grassland and gorse scrub mosaic – islands of gorse being located principally on the bunds rather than within the easement. In addition, the current line of mature birch trees which run along the length of the eastern and northern boundaries of the Site will be strengthened by new planting of silver birch if necessary or by allowing natural regeneration (depending on extent of grazing pressure from rabbits/deer). Older and decaying silver birch will be left in situ to provide nesting habitat for willow tit, a high value species known within the locality, which requires decaying willow/birch stems to excavate nesting chambers.
- 2.31. A new woodland will be planted at the southern end of this proposed landscaping zone. Tree species will be native, dominated by oak, birch and alder with Scot's pine. At the margins a gradation in vegetation height will be achieved by planting lower growing woody species such as hazel, rowan and gorse. Alder will be planted where the woodland abuts the proposed Brook diversion. A surrounding fringe of tall species rich grassland will also be seeded around the margins of the new woodland plantings.
- 2.32. Landscape and ecological habitat areas within the area of the diverted footpath zone will include the creation of new species rich neutral grassland habitat which will complement the habitats which are establishing on the restored landfill to the west. Additionally, new native broadleaved tree plantings and a woodland copse will be created, linking with the copse described at the southern end of the landscaping zone (above). The species rich grassland will

be flower rich and will be allowed to grow tall to set seed following a late summer/autumn cut. Areas of grassland adjacent to the new woodland copse will be left unmown for at least 3 years to allow for the development of a more 'tussocky' sward with encroaching scrub. This will enable a natural gradation of vegetation height from woodland, scrub to grassland. Grassland on either side of the footpath will be mown short.

- 2.33. As part of ecological enhancement, the Silver Lane Brook that currently runs south to north along the western boundary of the Site, is to be diverted within a corridor through the Site. This corridor runs between the existing/proposed landscape areas (including ecological habitat and drainage areas) and landscaped vehicle parking zones (included within the Development Cells Parameters). Whilst illustrative details for the brook diversion are included at Appendix I0, the exact location of the diverted brook within the corridor is to be determined at detailed design stage. The route of the diverted brook will be designed to maximize ecological gain, achieve a variety of ecological habitats and incorporate landscaping along its length. This will be achieved by designing the channel profile with varied bank treatments and angles to provide a diversity of aquatic habitats including shallow berms of dense marginal planting. There will be varied flow rates along the length of the Brook, in places faster flowing areas with gravel beds will be created as well as areas of sluggish flow with deep peaty sediments. The course of the re-aligned Brook will also take a more 'sinuous' route to maximize edge habitats and hence ecological benefit.
- 2.34. Although the detail of the diverted brook is subject to detail design, the corridor provided has been sized to meet the capacity requirements of the estimated upstream flow for a 1 in 100 year event with a 30% climate change allowance and including a 300mm freeboard.
- 2.35. The zone in which the Public Right of Way allows for diversion of this footpath within the Site, ensures the PROW does not deviate significantly from the location of the existing route.



Figure 2.8: Parameter Plan – Green Infrastructure

## Restrictive Zone

- 2.36. The exact location of the gas pipe has been determined by National Grid, as shown on the Parameter Plan. A 96m easement (The Health and Safety Executive (HSE) Inner Consultation Zone) from the location of the gas pipeline is provided in line with HSE Policy. This restricts buildings and uses with a sensitive end-use within this zone such as the Facilities Building and overnight HGV parking areas.
- 2.37. Whilst the Safeguarded area for HS2 is outside of the Site area, this is included within the Parameter Plan for completeness and to indicate its relationship to the Proposed Development.

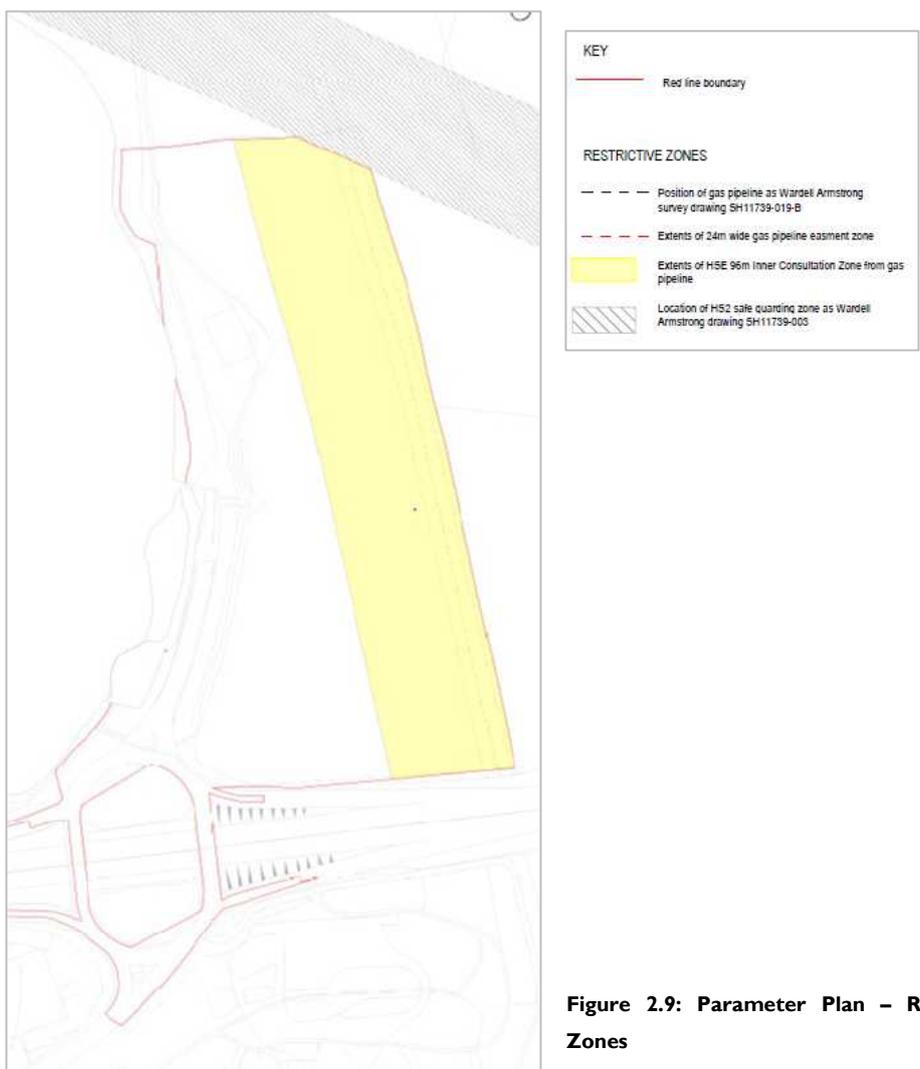


Figure 2.9: Parameter Plan – Restrictive Zones

## Peat Mitigation

2.38. Excluding the peaty (organic-rich clay loam) agricultural topsoils, there are approximately 45,300 m<sup>3</sup> of deeper Peat resources within the Site. The presence of this peat presents geotechnical constraints to the placement of structures sensitive to settlement, such as buildings, roads and car parks. Therefore, the development layout has been designed to take account of this and has been evolved through discussions with key consultees such as Natural England, the Greater Manchester Ecological Unit (GMEU) and the Environment Agency. Reference has also been made to the Peat Reuse hierarchy (as fully described in Agricultural Land and Soils Technical Paper, ES Part 2, and summarised in Table 2.2 below).

	Rank	Description
Most Preferred	1	<b>Avoidance</b> of (disturbance to) the peat resource.
	2	<b>Re-use onsite</b> for beneficial / ecological uses (e.g. peatland type habitat creation, site reinstatement).
	3	<b>Re-use off-site</b> for beneficial / ecological uses (habitat creation, restoration of existing peatland, erosion control).
Least Preferred	4	<b>Recycling (also referred to as 'other reuse off Site')</b> includes mixing with other materials to form a soil substitute or use in other relevant works (e.g. use as a horticultural medium, agricultural land improvement, blending).
	5	<b>Stabilisation.</b> Mixing with 'concrete' to form a solid / stable development platform
	6	<b>Disposal</b> (only to be considered after all other options have been explored and discounted).

**Table 2.2: Peat Reuse Hierarchy**

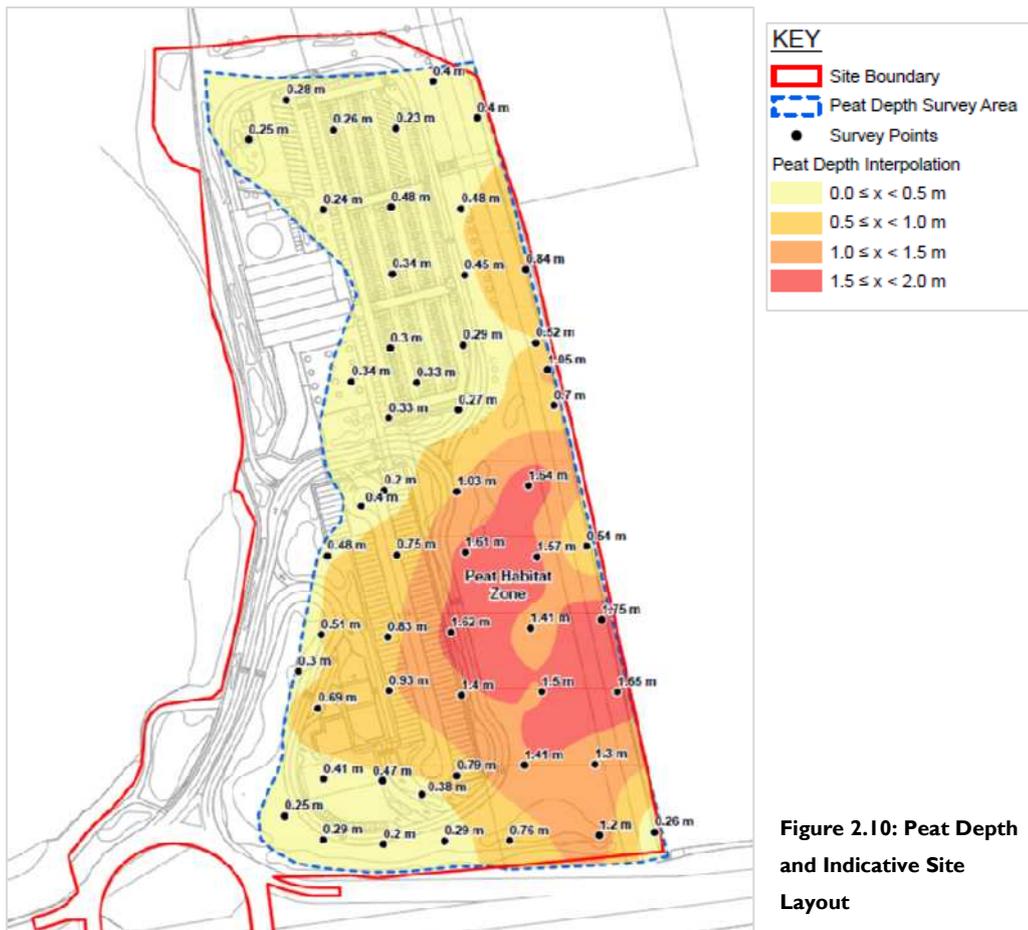
(Source: Scottish environmental Protection Agency (SEPA) Guidance document 'Developments on Peat and Off Site Uses of Waste Peat' with the addition of Rank 5 Option, stabilization and this is a technique of combining peat with 'concrete' to create a stable development platform has been successfully used on a range of developments.)

2.39. As can be seen, the hierarchy prioritises the avoidance of peat resources where possible, and then ranks options for the re-use of disturbed peat in terms of most to least beneficial. Through the iterative design and consultation process the Proposed Development has been designed to maximise the area of undisturbed (avoided) peat, with disturbed peat to be

retained within the Site for beneficial reuse in the creation of peatland type habitat. Therefore, all peat resources within the Site will be addressed through the Rank 1 and Rank 2 options of the hierarchy.

2.40. The area of undisturbed peat equates to approximately 51.1% (22,700 m<sup>3</sup>) of the peat on Site, including the deepest areas of peat to the south east as illustrated in Drawing SHI 1739/034: Peat Depth and Site Layout as shown below and at **Appendix 10** (also included at Appendix 10.5 of the Agricultural Land and Soils Technical Paper, ES Part 2).

2.41. The remaining 49.9% m<sup>3</sup> (22,600 m<sup>3</sup>) of peat lies within the development area. It is proposed to remove this resource and directly place it within the retained peat areas (Peat Habitat Zone, as shown in the Indicative Site Layout at Appendix 9 and Figure 2.10 and 2.13 below) to create a peatland type habitat. The agricultural topsoils would be removed prior to the peat removal / placement.



**Figure 2.10: Peat Depth and Indicative Site Layout**

- 2.42. Although the surface topography of the Peat Habitat Zone would be undulating, creating a range of habitat conditions (as described below), it can be thought of as a plateau at a constant height of 22.9 m AOD. Due to the sloping nature of the natural ground this would mean the layer of placed peat would vary in thickness being shallower to the south. The resulting total peat depths within the Peat Habitat Zone are illustrated in Drawing SHI I 1739/006: Peat Depth within the Peat Habitat Area (see **Appendix 10** and also Appendix 10.9 of the Agricultural Land and Soils Technical Paper, ES Part 2). The maximum and minimum total peat depths would be approximately 3.15m and 1.14m respectively. The average depth across the peat Habitat Zone would be approximately 1.9m.
- 2.43. As the placement of the peat would raise the surface of the Peat Habitat Zone above the height of the surrounding land a bund would be required to retain the upper (placed) layers of Peat within it.
- 2.44. Prior to the installation of the bund, the eastern and southern edge of the Peat Habitat Zone would be continuous with the wider peat basin to the south and east of Site. However, the retaining bund cannot be placed directly over the peat, as these soft deposits would be unable to support the weight of the structure. Therefore, a suitable foundation for any bund would be constructed by the excavation of a trench to the base of the peat deposits which would then be backfilled with a suitable material to allow the loads from the bund to be transferred to the underlying clay strata. The bund would be constructed from clay at a batter of 1 in 2.5; and would be impermeable to prevent the loss of water from the Peat Habitat Zone.
- 2.45. The foundation design and the nature of the fill is to be determined at detailed stage subject to consultation with Natural England. The fill may include a single compacted aggregate founded unit (which would be slowly permeable and allow the continued movement of water between the Peat Habitat Zone and the wider peat basin); a single impermeable clay founded unit (which would contain all water within the Peat Habitat Zone); or a combination of aggregate and clay founded units (to create variable hydrological regimes).
- 2.46. The northern and western edges of the Peat Habitat Zone would be created by sheet piling (required to stabilise the retained peat whilst the peat within the development area is removed). The sheet piling would stand proud of the retained peat to 22.9 m AOD (the top of the placed peat) and would be designed / installed to be as watertight possible to prevent the loss of water from the Peat Habitat Zone during the construction phase.

- 2.47. Once the southern and eastern sections of the bund and the sheet piling are installed, the peat from the development area would be dug out and placed directly within the Peat Habitat Zone. The direct transfer of the peat from the development area to the specially prepared Peat Habitat Zone would ensure no double handling of the resource and minimise the potential for damage to the peat, peat drying or carbon loss. The incorrect management of Peat during construction could result in damage through the impairment of function, quality and resilience, therefore the handling and placement of the peat would be undertaken in line with a Site specific Management Plan to be produced by a qualified soil scientist prior to construction. This will ensure that the quality of the peat is maintained and it remains in a condition suitable for reuse on Site to create peatland type habitat. All topsoil would be stripped in advance of these works so that peat is placed directly over peat with no mixing of mineral / agricultural soils.
- 2.48. The void created by the excavation of the development area peat would then be backfilled using suitable materials to create the development platform and the brook diversion. A retaining embankment to the Peat Habitat Zone (bund) would be created to northern and western sides of the sheet piling, this would have a batter of 1 in 2.5 and like the eastern and northern bunds this would be constructed from clay and would be finished with a layer of site-won organic-rich topsoil.
- 2.49. The recreation of an impermeable / low permeability barrier to the northern and western edges of the Peat Habitat Zone, as naturally occurs at the western edge of the existing peat basin, would ensure that water continues to be contained within the basin and that the peats within the Peat Habitat Zone were maintained in a wettened state.
- 2.50. Within the Peat Habitat Zone, a mosaic of habitats such as regenerating scrub, dry and wet heathland areas and bog pools, will be created as a peatland type habitat. This will be achieved through the creation of wet surface hollows and drier mounded areas which will become largely dry heath vegetation. By creating a diversity of topography and habitats, the area will be more resistant to seasonal change as well as climate change.
- 2.51. The Chat Moss Project are in the process of restoring Mosslands nearby and this provides an opportunity to source vegetation locally to aid restoration. Bare peat is vulnerable to wind and solar ablation and erosion and so quick revegetation will be imperative to stabilising the

surface layers of the placed peat. This can be achieved through plug planting, hydroseeding, or pre-planted coir matting and rolls.

2.52. Plant species and choice of planting process would be influenced by the finalised topography of the Peat Habitat Zone. Pre-planted coir matting and rolls establish most effectively when partially submerged whereas hydroseeding and plug planting are likely to be more effective in drier areas. The type of peatland like habitats likely to develop are:

- Scrub woodland (usually birch *Betula* spp.)
- Bare peat
- Impoverished vegetation dominated by species including purple moor grass *Molinia caerulea*, hare's-tail cottongrass *Eriophorum vaginatum* and heather *Calluna vulgaris*, and lacking significant cover of bog-mosses *Sphagnum* species

2.53. Other key species that can be targeted for re-introduction as part of the revegetation work include; cross-leaved heath *Erica tetralix*, round-leaved sundew *Drosera rotundifolia*, cranberry *Vaccinium oxycoccos*, bog asphodel *Narthecium ossifragum* and bog-rosemary *Andromeda polifolia*.

2.54. During the management phase, parts of the Peat Habitat Zone would be permitted to develop natural tree and scrub regeneration, with species such as birch *Betula* spp., willow *Salix* spp., and alder *Alnus glutinosa* likely to self-seed from surrounding habitat. This would attract species such as willow warbler *Phylloscopus trochilus*, stonechat *Saxicola rubicola* and reed bunting *Emberiza schoeniculus*.

2.55. In other areas, trees and scrub could be prevented from establishing, such as parts of the developing floristically diverse heathland and near to the proposed bog pools. This would benefit species of invertebrate that are reliant on open water.

2.56. The figure below provides an impression of the peatland type habitat which would be created.



Figure 2.11: Example of Peatland Type Habitat

### Scheme Design and Design Philosophy

- 2.57. The Parameters are fixed and set the context for the environmental assessment and the context in which the detailed design will be developed. At this stage, indicative details are provided to show how the scheme could be developed within the Parameters set. The indicative details are included at **Appendix 9** and a landscape masterplan at **Appendix 8**. The Site layout has been developed to provide the necessary services in a compact form to maximise soft landscape areas and ecological enhancement, and to assimilate the development into the landscape.
- 2.58. The location of different elements of the Proposed Development has been determined to minimise their visual impact from key vantage points. The Facilities Building is located at the base of the restored landfill slope so that it does not break the skyline when viewed from the east. The parking is to be located around these buildings in a landscaped setting so as to reduce their visual impact.
- 2.59. Whilst Indicative at this stage, it can be seen that the circulation has been developed to offer a logical and legible arrangement that separates HGV and car users at the earliest opportunity

and has been designed to maximise safety for Site users both in their vehicles and as pedestrians.

- 2.60. The location of the Facilities Building reduces the distance users will need to walk from their vehicles to the building to a minimum.
- 2.61. The indicative Facilities Building design has been developed in a way that references the local area. A sinuous wall, constructed in a manner reminiscent of peat stacks is a reference to the local peat moss land and the historic peat cutting that took place in the area. This wall guides people to the main entrance and the Hotel entrance and forms a key feature within the central space of the Facilities Building and the Hotel reception. Above this wall sit a series of simple linear pitched roof elements that as a cluster reflect the form and grouping of local farm buildings. Their fragmented form reduces the visual impact of the building at a distance. The selection of materials will also reference the local vernacular. The interaction of these linear forms and the sinuous wall beneath provides an interesting series of internal spaces that provide an efficient and commercial layout alongside a series of interesting views and protective and expansive spaces to provide for the various needs of the travelling public.
- 2.62. The design is based on the development of the 'new concept' Motorway Service Area, which offers travelers a break from their journey in a warm and welcoming environment. The building will be designed to create links with external amenity spaces and the wider area, particularly the adjacent Restored Risley landfill site.
- 2.63. The development will include a Facilities Building of up to 5,000m<sup>2</sup> GIA, with tenant units located around a central space. There will be a Hotel with up to 100 bedrooms, which will integrate with the Facilities Building. Car parking, HGV parking, Electric Charging Station (ECS) and a Fuel Filling Station are also located on-Site, with layouts developed to make the most of the on-Site opportunities. Integrating the building design with the landscaping proposals will be key. Landscaping buffers will be created to the extents of the Site and in key locations on-Site to screen elements where necessary.
- 2.64. Access to the Site will be taken from the existing Junction 11 of the M62 Motorway, via the existing spur from the roundabout at Junction 11.
- 2.65. The Facilities Building will be a maximum of 5,000m<sup>2</sup> and principally provide:

- A food court and ancillary retail, incorporating facilities for the sale and consumption of hot and cold food and beverages on and off the premises.
- Free toilet, hand washing facilities for all drivers and disabled visitors.
- Free showers and washing facilities for all HGV drivers.
- Staff areas including kitchen, catering storage, staff rooms, retail storage, refuse areas and office space. Some of these areas will be accommodated at first floor level.

2.66. Other complementary uses will include:

- Fuel Filling Station which will include a domestic forecourt and a HGV forecourt and a forecourt shop of a maximum of 500m<sup>2</sup>. Alternative new technology fuels will be considered (subject to availability and market demand, such as hydrogen to contribute to Low Carbon targets).
- Electric Charging Station (ECS)

2.67. Parking facilities for:

- 536 light vehicles
- 105 HGV spaces
- 1 abnormal load HGV space
- 16 coach spaces
- 15 car plus caravan / motorhome / vehicle plus trailer spaces
- 15 motorcycle spaces

2.68. Hotel:

- Up to 100 bedrooms with supporting ancillary uses.

2.69. Access and circulation roads and footpaths will be provided between the various on-Site facilities. Street lighting will be provided to ensure vehicular and pedestrian safety in-line with Highway Standards. The street lighting within the MSA development will conform to the obtrusive light limitations commensurate with the surrounding environmental zone.

2.70. Due to the presence of local skyglow, existing artificial urban and highway lighting bordering the Proposed Development, as prescribed by the Institutes of Lighting Professionals Guidance

Notes for the Reduction of Obtrusive Light 2011, it is professionally judged that this area is typical of an E2 / partial E3 zone. However, due to the rural nature of the location and areas of natural conditions, on a precautionary approach, the assessment threshold limits are based on E2 Zone classification (Low district brightness). The Lighting Assessment is included at **Appendix 16**.

- 2.71. Non-vehicular forms of connectivity will be provided within the Site, with links also being provided to the Public Rights of Way network that currently exists within the Site, thereby allowing linkages to the wider non-definitive and definitive footpath network and the permissive footpaths across the adjacent restored landfill site.
- 2.72. There will be amenity areas within the landscaping areas, providing picnic and a dog walking zone.
- 2.73. The Indicative Landscape Masterplan shows how the proposals could be developed within the context of the Parameters and how this sits within the wider context of the Site. A copy of the Wider Landscape Concept Masterplan and the Indicative Landscape Masterplan are shown below and attached at **Appendix 8**.



**Figure 2.12: Indicative wider Context Masterplan**



Figure 2.13: Indicative Landscape Masterplan

- 2.74. Other indicative details include an Indicative Site Plan (shown in the figure below), Floor Plans and Elevations, which are all included at **Appendix 9** and show how the proposals could be developed within the context of the Parameters:



**Figure 2.14: Indicative Site Plan**

## Infrastructure Arrangements and Ground Conditions

- 2.75. This section details service arrangements, drainage and flood risk, access and highways and ground conditions.

## Existing Services Arrangements

- 2.76. Plans have been requested from the relevant incumbent utility companies, to identify existing services in the vicinity of the Site. The results of this search are outlined below.

### Electricity – Electricity North West

- 2.77. 11kV underground cables are located within the south east of the Site, adjacent to the motorway junction. 11kV underground cables are also located adjacent to the Site's southern boundary and to the east of the Site, adjacent to the former landfill.
- 2.78. An electricity substation is located approximately 60m south west of the Site.

### Gas – National Grid Transmission

- 2.79. A National Gas Transmission pipeline is present within the east of the Site, on a north-south alignment. This pipeline has a total easement of 80ft in width. This is shown on the Parameter Plans at **Appendix 4**.
- 2.80. The pipeline is classified by HSE as a “major accident hazard pipeline”, with current consultation zones of 96m for the inner zone, 190m for the middle zone and 335m for the outer zone.
- 2.81. A medium pressure gas main is located approximately 200m south west of the Site, serving the commercial units in Birchwood Technology Park. Low pressure mains are located approximately 300m south of the Site, serving the existing residential properties. Both the Medium and Low Pressure gas mains are located on the opposite side of the M62 to the proposed development.

### Potable Water – United Utilities

- 2.82. There is no United Utilities potable water apparatus within the Site boundary.
- 2.83. A 160mm Ductile Iron (DI) potable water main is located approximately 250m south west of the Site, serving the commercial units in Birchwood Technology Park. A water main is also present approximately 300m south of the Site, serving the existing residential properties.

### Foul Sewerage – United Utilities

- 2.84. There are no United Utilities foul or surface water sewers located within the Site boundary.

2.85. Foul and surface water sewers are located approximately 300m south west of the Site, serving the commercial units in Birchwood Technology Park.

#### **Telecoms – BT and Virgin Media**

2.86. BT apparatus is located in the south west of the Site, adjacent to Junction 11 of the M62.

2.87. There are no Virgin Media assets located within the Site, or in the vicinity.

### **Proposed Services Arrangements**

2.88. The utility load requirements for the Site have been provided by the client and are understood to be based on other Motorway Service Areas operated by the Applicant. These loads are summarised in the table below:

<b>Load Schedule</b>				
<b>Building type</b>	<b>Electricity (kVA)</b>	<b>Gas Peak Hourly (kWh)</b>	<b>Potable Water Peak (l/s)</b>	<b>Peak Foul Discharge Rate (l/s)</b>
Motorway Service Area comprising of food outlets, fuel filling station and 100-bed Hotel	2,000	2,700	20	20.4

N.B.: According to the 'National Guidance Document on the Provision of Water for Firefighting – 3<sup>rd</sup> Edition (January 2007)', developments of this type should have a water supply capable of delivering a minimum of 20 to 35 litres per second through any single hydrant on the development. Further liaison with local statutory potable water suppliers and the local fire authority will be required in order to confirm the specific requirements for this Site.

#### **Electricity – Electricity North West**

2.89. Electricity North West Limited have provided an indicative cost for the provision of the new/modified connection, including any diversion/reinforcement works.

2.90. 11kV underground cables are located within the highway of the motorway junction in the South of the Site. Any diversion requirements for this apparatus will be established at the detailed design stage, following highways and access design for the proposed development.

#### **Potable Water – United Utilities**

2.91. United Utilities have confirmed the proposed development can connect to the 8inch water main located along Warrington Road approximately 1,800m east of the site boundary.

2.92. No potable water mains are located within the Site boundary, therefore it is not anticipated that there will be any diversion requirements.

#### **Foul Water – United Utilities**

- 2.93. United Utilities has confirmed the foul water flow from the proposed development will be allowed to drain freely into the nearest available public foul combined sewerage system located within a public highway, south of the M62.
- 2.94. Further network analyzing by United Utilities will be undertaken at the detailed design stage, when detailed information on discharge calculations is produced.
- 2.95. No foul sewers are located within the Site boundary, therefore it is not anticipated that there will be any diversion requirements.

#### **Gas – Cadent Gas**

- 2.96. Cadent Gas has confirmed that there is sufficient capacity in the medium pressure (LP) network to the east of the Site boundary. CG has suggested a point of connection from the 180mm medium pressure main located east of the Site in Warrington Road.
- 2.97. It is recommended to avoid diverting the Cadent High-Pressure gas apparatus that runs through the east of the Site. Further consultation with utilities providers will be required at the detailed design stage to confirm requirements once a masterplan is available.

#### **Telecoms – BT Openreach**

- 2.98. Further information received from BT Openreach indicates that BT Openreach is “working with government and industry to bring Superfast fibre to as many people as possible but don’t yet have a plan in this area yet”.
- 2.99. Existing underground BT infrastructure is located within the vicinity of the motorway junction/Site entrance. Any diversion requirements for this apparatus will be established at the detailed design stage.

#### **Drainage and Flood Risk**

- 2.100. The Government’s Flood Map for Planning and Long Term Flood Risk online map, shows the Site is within Flood Zone 1 (i.e. low probability of fluvial flooding).
- 2.101. The eastern and northern boundaries of the Site is defined by relatively straight drains. In the west of the Site there is a drain and a statutory main river. Although the Site is relatively flat, the predominant flow direction of the watercourse on-Site is towards the north. Other

surface water features in the vicinity of the Site comprise of an attenuation balancing pond and a series of drains associated with the Risley Landfill Site to the west of the Site.

- 2.102. The existing surface water runoff from the Site drains primarily through ground infiltration and overland flow to both the Silver Lane Brook to the west and the unnamed watercourse to the east. The Silver Lane Brook, after passing the north-west corner of the Site, runs north into Willow Brook which in turn runs eastward to Glaze Brook, which is approximately 1.4km east of the Site. The unnamed watercourse to the east discharges into the Silver Lane Brook.
- 2.103. Some agricultural land drainage has been installed but this is limited. There are no surface or foul water sewers crossing the site.
- 2.104. The greenfield flow from the existing Site has been estimated as 4.35 litres/second/hectare (l/s/ha) which equates to a discharge of 42.2 l/s.
- 2.105. A diversion of the Silver Lane Brook to the east of the development area is proposed. This offers opportunity to retain the open flow and create a more variable channel profile, and, as outlined in the 'Green Infrastructure' section above it also allows a distinct wildlife corridor, linking habitats within a biodiverse landscape to be created which will not restrict potential flood flows.
- 2.106. The proposed layout for the Site and the associated brook diversion have been developed to take account of flood risk and to include sufficient land to allow a robust surface water management strategy to be incorporated.
- 2.107. Following a review of suitable surface water drainage discharge options for the Site, it was concluded that an infiltration discharge was not suitable, and no surface water sewers exist near the Site. On this basis the surface water drainage strategy is based on a discharge to the diverted Silver Lane Brook at a greenfield runoff rate with surface water storage being provided for storm events that exceed this discharge rate. This controlled discharge will ensure the development's discharge replicates and reduces the greenfield peak discharge from the Site.
- 2.108. The surface water storage is sized to contain all storm events up to and including a 1 in 100 year storm event including an allowance of 20% for climate change. This storage is estimated to be 3900m<sup>3</sup>.

- 2.109. Due to the Silver Lane Brook being relatively flat and very shallow in depth, a pumped discharge to the Silver Lane Brook has been selected to serve the Site. The pumped outfall and surface water storage is through the development. The pump station design includes a standby pump and high-level overflow to take account of potential pump failure.
- 2.110. A gravity surface water drainage network throughout the development will transfer all surface water to storage systems and pumped outfall.
- 2.111. Good management procedures will be used to ensure good surface water quality is maintained and this will reduce any potential risks from fuel and oil spillages and the use of on-Site de-icing materials.
- 2.112. Surface water flows will be taken through on-Site treatment prior to discharge to the diverted Silver Lane Brook. This treatment consists of a mix of pre-treatment, using swales, channel drainage and gullies, followed by pavement treatment through petrol interceptors/forecourt interceptors. Surface water storage will be provided in below ground crate and tank systems which will be provided across the development. To reduce the risk to the surrounding water environment from a major on-Site incident, the drainage outfall to the brook will include a discharge shut down system. This will allow flows to be contained on Site should water quality be an issue and will allow treatment as appropriate.
- 2.113. Installed below ground tanks and interceptors will be appropriate constructed to minimise the potential risk of tank leakage. These will be below the car parking areas.
- 2.114. The MSA facility's operation and maintenance management team, will ensure all drainage systems are fully maintained and managed in accordance with best practice/guidance.
- 2.115. Foul water will be pumped to the nearest United Utility's foul drainage system. Foul flows will be collected from the development and discharge to the pump station. The pump station location will be confirmed at the next stage but will be located a minimum of 15m from any public areas.
- 2.116. A plan of the Key Receptors is included in **Appendix 6**.

## Access Arrangement and Highway Works

- 2.117. The Site is located to the north of the existing roundabout of Junction 11 of the M62 – a five arm roundabout which forms a junction between the M62 Motorway (off-slip roads) running east-west and the A574 Birchwood Way to the south. The northern arm of the roundabout is currently restricted to providing access to the former landfill site only. Silver Lane, a minor unadopted road, forms the fifth arm of the junction.
- 2.118. Access to the Site will be taken from a new connection to this northern arm of the roundabout. Vehicular access to the Site is proposed via a direct signal-controlled connection to the M62 Motorway Junction 11. It is proposed to signalise the motorway junction as part of the scheme.
- 2.119. The Site access arrangements and signalisation scheme are shown on Drawings ITM12377-SK-024 and ITM12377-SK-025 contained within Appendix 7.B of the Transport Assessment.
- 2.120. The proposed access arrangements have been designed taking account of a preliminary feasibility design (suitable for the purposes of planning) and cognisant of committed improvements at M62J11 and Birchwood Way which are being implemented by WBC and are due to be completed by January 2020 as part of its Warrington East Phase 3 scheme. They also take account of the changes resulting from the Smart Motorway Scheme which is due to be completed by Spring 2020.
- 2.121. The Site access arm will consist of two lanes in each direction. As the access road continues into the Site, the traffic will be carefully managed to allow safe and efficient circulation and ease of access to the relevant parking areas and FFS, whilst also considering non-vehicular access and circulation. A central reserve is proposed between the inbound and outbound carriageways.
- 2.122. At present no public transport services pass the Site. A number of public transport routes serve the Birchwood area to the south-west, with frequent peak and day-time bus services passing through the local area and around Birchwood Park, although there are limited evening and weekend services. Currently the nearest bus stops to the Site are c.1.5km away, located on Gorse Covert Road in the residential area to the south, with further stops located on Faraday Street, off Birchwood Way. Birchwood rail station is located c.3.5km to the south-west of the Site and provides direct services to Warrington town centre and Liverpool to the west, and Manchester to the east (serving a number of intermediate stops).

- 2.123. Existing cycle and pedestrian routes to the south of the motorway are largely segregated off-road routes, in keeping with the character of Birchwood. From the Site to the south, pedestrian and cycle connectivity are via a segregated path which runs parallel to Birchwood Way, which branches off through the wider area. To the north-west and west of the Site, a number of Public Rights of Way (PRoWs) are present, including footpath routes that run through the restored landfill site towards Culcheth. The PRoW to the western extent of the Site will, in part, be diverted within the zone indicated on the Parameter Plans (See **Appendix 5**)
- 2.124. A comprehensive Transport Assessment is appended to the Traffic and Transport Paper and its Addendum in the ES Part 2.
- 2.125. A plan of the Key Receptors is included in **Appendix 6**.
- 2.126. A Means of Access Plan is included in **Appendix 7**.

### **Ground Conditions**

- 2.127. Information relating to Ground Conditions and Contamination is taken from a Phase I Environmental Assessment (November 2018) and a Preliminary Site Investigation (2018), which are appended to the Ground Conditions and Contamination Technical Paper in Part 2 of this ES. Additionally, information on peat depth and peat characteristics is taken from a peat depth and soil survey undertaken in January 2019 on an approximate 50m grid. The resulting peat depth plan is contained as Drawing SH11739/018 (Peat Depth, see **Appendix 10** and also Appendix 10.4, Agricultural Land and Soils Technical Paper, ES Part 2); and a description of peat characteristics is presented in the Agricultural Land and Soils Technical Paper, ES Part 2; and briefly summarised below in Agricultural Land and Soils.
- 2.128. The Site is currently in agricultural use with some scrub grassland. Historical plans indicate this land use since prior to 1849. Farm buildings were previously located in the south central part of the Site (Pestfurlong Moss Farm, 1880s) but were relocated to the north in the 1960s.
- 2.129. The Site is located adjacent to Risley Landfill and the western edge of the Site was previously included within the Permit boundary. A sliver of land forming the western edge has been subject to a Partial Permit surrender by consolidated notice (ref: EPR/BV7877IR/S009) and the area within the original Permit boundary is now excluded. The surrender was effective from 7th August 2018.

- 2.130. It is considered that the Site may potentially have areas of made ground associated with the demolition of former farm buildings however, this was not identified within the preliminary site investigation carried out. The Site is underlain by peat deposits in the south and east and Glacial Till in the west and north. The peat deposits were found in varying thicknesses (0.30m to 1.75m bgl) with increasing thickness toward the south east. The Till deposits were observed in the north west of the Site to comprise cohesive deposits comprising sandy clay with a minor component of fine to coarse gravel with a generally rounded angularity. Lithologies were variable from igneous granite to sedimentary mudstone, shale and red sandstone. Solid strata comprise the Helsby Sandstone which is a Principal Aquifer.
- 2.131. It is not anticipated that there will be significant contamination on the Site based on historical and current use. Contamination risks may be presented by gas generation in the peat or through migration of Landfill gas and/or leachate from the adjacent landfill.
- 2.132. Sheet piled support will be installed to prevent the risk of movement of the pipeline. The installation of the piles will be carried out using methods agreed with the pipeline owner.
- 2.133. Cut and fill earthworks will be required at the Site to achieve the proposed ground levels. It has been estimated that up to 42,000m<sup>3</sup> of material will be exported from Site. This equates to 2,800 one-way HGV movements undertaken within a 6 month period, resulting in approximately 2 HGVs per hour.
- 2.134. It is anticipated that the importation of fill materials will be required to achieve the proposed levels and will largely be engineering fill. This equates to approximately 45,700m<sup>3</sup>, and as such approximately 3,047 HGVs in each direction over a 6 month period, results in approximately 2 HGVs per hour.
- 2.135. Other material brought to the Site associated with general construction deliveries will result in approximately 2 HGVs per hour.
- 2.136. Up to 300 staff will be on-Site during the construction phase. Assuming an average vehicle occupancy of 2.0 with no access by non-car modes (and as such a worst case assessment), this would result in 150 arrivals and departures per day and therefore 75 car/van arrivals in the AM peak hour and 75 car/van departures in the PM peak hour as a worst case.

- 2.137. The vehicle movements associated with the construction phases are assessed within the Traffic and Transport, Noise and Air Quality ES Technical Papers and their Addendums within Part 2 of this ES.
- 2.138. A plan of the Key Receptors is included in **Appendix 6**.

## Agricultural Land and Soils

- 2.139. The agricultural land within the Site comprises a large, roughly rectangular, field which available aerial imagery shows to have been in continuous arable use since at least 2005. Additionally, there is a small triangular area of rough grassland to the west of Silver Lane Brook, which is a remnant of a larger agricultural field which was removed by the development of the Risley Landfill Site. This remnant land was removed from agricultural use by the operation of the landfill site and is therefore considered to be non-agricultural. All other land within the Site is considered to be non-agricultural, being either hardstanding or areas of restored landfill, which are to be developed for amenity use.
- 2.140. It is noted from the historic mapping (Drawing SH11739/021 in Appendix 9.1 (Archaeological Desk Based Assessment) of the Archaeology and Cultural Heritage Technical Paper, ES Part 2) that the fields to the north and far west of the Site, where soils are underlain by clay, are evident on the earliest available mapping (Tithe map of 1838). Whereas field boundaries to the south and east of the Site are first evident in the 1894 Ordnance Survey mapping when Pestfurlong Moss Farm is also first identified. As fields in this area are also not identified in the 1849 OS mapping, this indicates that the drainage of the peat and conversion from moss habitat to agricultural land within the Site occurred sometime between 1849 and 1894. The land has therefore been in agricultural use for at least 125 years.
- 2.141. The most current and detailed published land quality data covering the Site and the wider WBC is the Provisional Agricultural Land Classification (ALC) mapping provided by Defra (1:250,000 scale). Drawing SH11739/14 Provisional Agricultural Land Classification (see Appendix 10.2, Agricultural Land and Soils Technical Paper, ES Part 2). The Provisional mapping is intended for strategic use as it does not identify variations in ALC grade of less than approximately 80ha and hence is not accurate at the field scale. It therefore cannot be used to accurately define the ALC grading of the Site, but instead provides a general indication of the predominant ALC grading within the wider area. The Provisional mapping identifies all

agricultural land within the Site as Grade 1 (excellent quality). The Site is shown as being immediately bordered by units of Provisional Grade 3 (good to moderate quality) land to the east; Grade 5 (very poor quality) land to the west; and Grade 2 (very good quality) land to the north and therefore can be considered to be in an area of transition between ALC Grades.

- 2.142. Therefore, to accurately define the ALC grading of the Application Site, a detailed soil survey was undertaken on the 8th and 9th January 2019 using a combination of augered soil cores and soil profile pits. Auger cores were taken using a 70 mm diameter hand-held Edelman auger, capable of sampling to a maximum depth of 120 cm; the soil profile pits were excavated, using a spade, to a depth sufficient to evaluate the full soil profile. Survey density was approximately one point per hectare of agricultural land, as per recommendations set out in standard survey and ALC guidance and methodology. A peat depth survey was also undertaken to determine the full depth of the peat profile across the Site.
- 2.143. The only limitation to agricultural land quality was identified as being soil wetness. The soil properties indicated that the Wetness Class would sit between Wetness Class II and IV, with a lower class assigned to soils with a higher water table, i.e. an increased proportion of the soil profile remains below the water table. Due to the fluctuating nature of the water table beneath peats, it is difficult to accurately determine the Wetness Class without long-term monitoring via permanent piezometers; and even where these data are available it is often inconclusive. Therefore, the entire Site was assigned a Wetness Class IV based on the high rainfall experienced in the area, coupled with the Site observations of ground conditions and vegetation growth; including small areas of standing water at the field margins, wet soil profiles and a notably wet area with rush-dominated vegetation growth in the centre of the Site.
- 2.144. Wetness predominantly limits the land quality to Grade 3a (10.11 ha), with a small area to the north, over mineral substrate (clays) limited to Subgrade 3b (1.47 ha), as shown in Drawing SHI 1739/031 (Agricultural Land Classification, see Appendix 10.3, Agricultural Land and Soils Technical Paper, ES Part 2).
- 2.145. An additional soil resource and agricultural quality survey was carried out in late August 2021 by Land Research Associates to update the baseline data, which also applied ALC based on wetness, albeit, applying different wetness classes across the Site. As a result, the slightly higher areas of the Site where peat depths are >1m were identified as Grade 2 (3.3ha) in the August 2021 survey, where a ground Wetness Class III was assigned. Grade 3a was identified

as 7ha and 3b as 1.4ha. The Land Research Associates report is presented as Appendix 10.13 within the Agricultural Land and Soils ES Technical Paper Addendum, ES Part 2.

- 2.146. Data from the Soil Survey of England and Wales Drawing SH11739/015 (Soil Associations, see Appendix 10.1, Agricultural Land and Soils Technical Paper, ES Part 2), show that Site is characterised by soils in the Turbary Moor association which are described as being found on lowland raised bog peats, variously modified from their original condition by drainage, peat cutting and reclamation for agriculture. This was confirmed by the soil survey which identified peat topsoils (defined as organic-rich clay loams) across the entire Site (due to the high organic matter content in the sample taken being 70.1% Loss on Ignition (LoI) (as reported in Appendix 10.7 of Agricultural Land and Soils ES Technical Paper and its Addendum, ES Part 2)). The topsoil depth averaged 0.36 m across the Site. Although identified as a peat, the lack of an active living (peat forming) layer means this topsoil can be treated as an organic-rich soil resource as opposed to a peat resource.
- 2.147. The organic-rich clay loams are either developed over deeper peat deposits or over clays. The peat is deepest (1.75 m bgl) towards the southeast of the Site, but thins out towards the north.
- 2.148. Where the peat extends below the topsoil, it is characterised by an increasing water content with depth together with an increasing content of fibres and wood remains, highlighting the reduced degradation of the deeper peat. The laboratory data also indicates the deeper peat has a high organic carbon content. As the peat is buried at depth beneath agricultural land it is not an actively forming peat bog nor does it support sensitive habitats or species.
- 2.149. The Site has undergone drainage, which has historically lowered the water table across the Site enabling the land to be cultivated, however its current efficiency is questionable due to the wet surface ground conditions in areas. From ongoing observations of the Site by Wardell Armstrong, further deterioration in site drainage as sections of plastic drainage pipe were evident on the land surface in some places in 2021. It is noted that the landowner / tenant farmer is unlikely to invest in costly land drainage repairs whilst the future of the site is being determined through planning. It is also noted that the Site does not benefit from high-quality arterial drainage.
- 2.150. ~~This~~ The historic and ongoing drainage and cultivation of the Site has resulted in the drying, shrinkage and wastage of the peat along with increased wind erosion. The peat erosion

coupled with the continued cultivation of the Site, continually incorporates the deeper organic-rich peat into the plough layer, enabling the accelerated degradation (loss) of the peat and continued loss of carbon to the atmosphere.

- 2.151. Where present (towards the north of the Site), the mineral subsoil is characterised by a slowly permeable clay, which has a strongly developed, coarse prismatic structure of very firm consistence, and evidence of gleying (periodic waterlogging).
- 2.152. It is anticipated that approximately 42,000m<sup>3</sup> of peat topsoil will be stripped (a full topsoil strip to a depth of 360mm will be undertaken across the full development area, including Peat Habitat Zone) to create the development area. This will minimise the possibility of peat and soil mixing and subsequently degradation and loss of these resources. The soils which lie beyond the development area (i.e. those solid beyond the pipeline easement, to the east of the Site, will remain in situ).
- 2.153. Soil management measures implemented through a Site Specific Soil Management Plan (or similar) to be produced by a qualified soil scientist prior to construction, will ensure that the quality of these soils is maintained and they remain in a condition suitable for reuse, either on or off Site. Maintenance of soil quality will also ensure that the soils are able to continue to effectively deliver a range of Ecosystem Services on replacement. The reuse of these soils within the Site will be maximised as far as is practicable.
- 2.154. The reuse of peat resources with reference to the Peat Reuse Hierarchy and peat management measures are discussed in the Peat Mitigation section above.
- 2.155. A more detailed description of the soils and agricultural land within the Site along with management measures is presented in the Agricultural Land and Soils Technical Paper and its Addendum, ES Part 2.
- 2.156. A plan of the Key Receptors is included in **Appendix 6**.

## Ecology and Landscape

### Ecology and Nature Conservation

- 2.157. A Site walkover was initially undertaken by two suitably qualified ecologists in January 2018 to consider likely constraints and survey requirements. Following this, a series of Wintering

Birds Surveys were undertaken during the period January – March 2018 and an update interim report produced for winter 2021. A single Bat Activity Survey (including transect and automated sampling) was undertaken during October 2018, with an additional survey being undertaken in May 2019 and a final survey planned for June 2019. The Extended Phase I Habitat Survey was undertaken during November 2018 and was updated during September 2021 and the Preliminary Ecological Appraisal (PEA) ~~has now been~~ compiled (2019) with an updated PEA produced (dated 2021). Other protected species surveys have been undertaken as follows:

- Bat Roost Survey (Trees assessed April/May 2019)
- Badger Survey (April 2019)
- Great Crested Newt Survey (April and May 2019)
- Water vole and Otter survey (April and May with final visit in June 2019)
- Breeding Birds Survey (Surveys during April, May and June 2019)
- Reptile Survey (May and June 2019)
- Invertebrate Survey (May 2019)

2.158. All survey reports and updates are appended to the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2. The purpose of the update to surveys was to check for any material changes to the habitats previously described and to consider whether any further updates are required covering specific receptors. The 2021 updates confirmed the findings of the previous surveys, with the habitats baseline being little changed from the earlier surveys. The findings are fully reported within the Addendum to the Ecology and Nature Conservation ES Technical Paper Addendum, ES Part 2.

2.159. The presence of the Manchester Mosses SAC is considered to be the key ecological receptor at this stage. However, the closest part of the conservation area lies >1 Km from the development area. Consequently, it is not considered that the treatment of peat and resultant effects on-site hydrology would lead to adverse effects to neighbouring peatland habitat and hence the qualifying features of the SAC, however this will be confirmed via liaison with Natural England and potentially as part of a Habitats Regulations Assessment.

2.160. In terms of protected species, the Site is dominated by arable farmland with little semi-natural habitat presence and consequently is of limited value to protected species. The observed bat and bird assemblages are of no higher than Local value with a relatively low species diversity recorded for both groups. Furthermore, no bat roosts are present. There are no badger

setts or signs of activity, no reptiles have been recorded to date and eDNA surveys for GCN have confirmed likely absence of breeding GCN from all ponds within 500m of the Application Site where these lie to the north of the M62.

- 2.161. The design proposals will include the development of a Landscape and Biodiversity Management Plan which will seek to complement the measures being developed for the adjacent Restored Risley landfill site. Habitat compensation, if required for ecological receptors to be impacted by the Proposed Development, will be included within the Site boundary and include a peatland type habitat with undulating topography comprising waterlogged hollows and dryer areas above the water table with heathland and acid grassland vegetation as well as marginal riverine habitats, tree lines, and woodland copses which are reflective of the landscape context of the Site. Much of this will be newly created habitat along realigned Silver Lane Brook to the east of the development and within the Peat Habitat Zone. In addition to the terrestrial habitats the river channel will include areas of variable flow, variable margins with areas of dense emergent aquatic vegetation and lines of alder and willow. Habitats will be designed to be suitable for water vole, kingfisher and fish as well as for foraging bats as well as providing a habitat corridor for birds such as willow tit, which are known to breed in the locality.
- 2.162. A plan of the Key Receptors is included in **Appendix 6**.

### Landscape and Visual Impact

- 2.163. The Site lies within the Mersey Valley National Character Area (NCA), as defined by Natural England, described as low-lying river valley landscape. The Site consists of a single agricultural field, rectangular in shape. The restored Risley Landfill rises immediately to the west, consisting of a single hill covered in rough grass and establishing trees. Natural pools valued for wildlife form part of a Local Wildlife Site to the north of the landfill site. There are agricultural fields immediately to the north and east, and to the southeast, south of the M62 Motorway. Culcheth village lies to the northwest, beyond an elevated section of disused railway line. To the south of the M62 Motorway are Birchwood Technology Park and the village of Gorse Covert. The motorway corridor is in-cut as it passes the Site, having wooded embankments. Risley Moss to the south of Gorse Covert and Holcroft Moss to the southeast are Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC). Risley Moss is also a European Site of International Importance and a Local Nature Reserve. There is a Site of Importance for Nature Conservation immediately to the south of Junction 11.

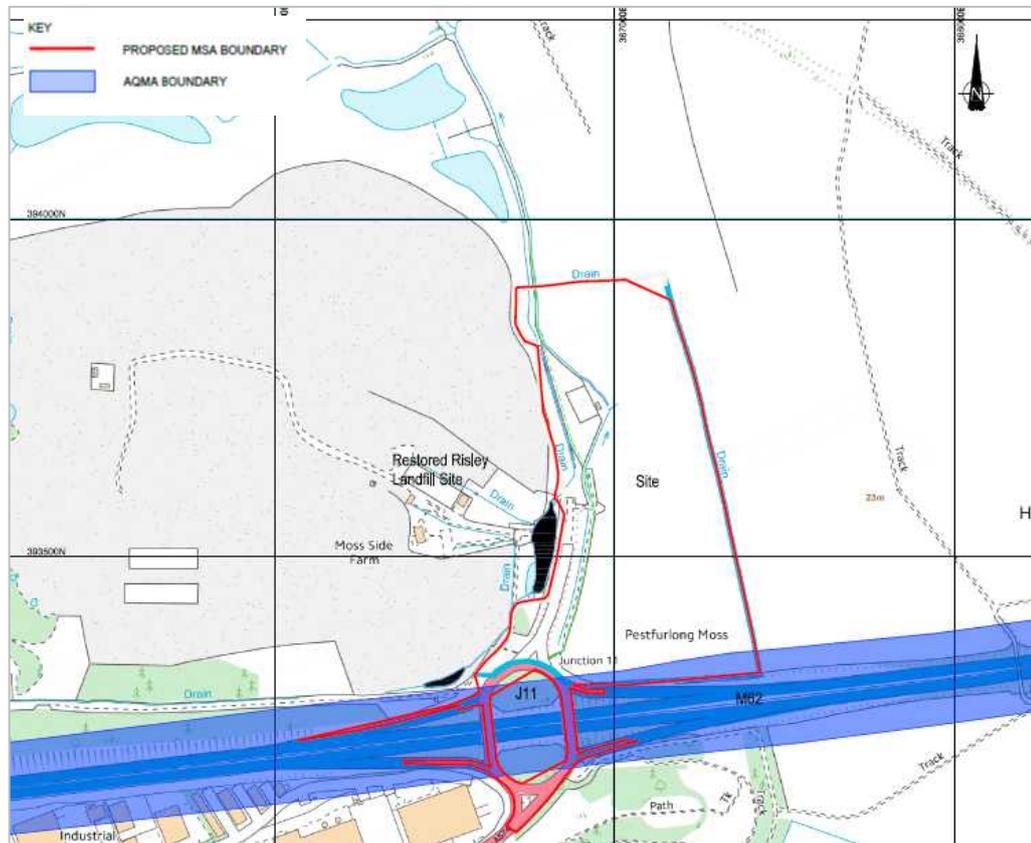
Public Rights of Way to the west of the Site, and crossing fields to the north are part of the Local Authority's Active Travel Greenway Network.

- 2.164. The Site is bounded by mixed species hedgerows of varying heights to the east and west, by a line of trees to the north and by vegetation bounding the M62 Motorway Junction 11 to the south. A drainage ditch borders the western Site edge.
- 2.165. The Landscape Masterplan (**Appendix 8**) shows the proposed MSA set within a landscape framework. Boundary hedgerows will be retained and managed, and planting including native tree and scrub planting will be established to the perimeter of car parking and amenity areas, within the car park areas and along the public right of way through the Site, reducing the visual impact of the scheme for walkers along this route. Native trees and scrub will also be established in groups along the brook, re-routed through flower-rich acid grassland, creating a substantial green infrastructure across the scheme which will mature to reduce visual impacts arising.
- 2.166. The overall concept for the landscape masterplan of the proposed MSA is to provide a safe and accessible environment which relates sympathetically to the adjacent Restored Risley landfill site and provides a degree of visual integration with its Green Belt setting.
- 2.167. The after uses and habitats within the landscape masterplan will aim to set the new buildings (Facilities Building, Hotel, service yard and Fuel filling Station), open parking areas and internal roadways, within a framework of mainly native woodland, trees and shrubs. There would be provision for cars and HGVs, caravans and other visitors, such as pedestrian and cycle links, with informal woodland walks and facilities for dog walkers, possible children's play area, seating and access to the PRoW and permissive footpaths.
- 2.168. A plan of the Key Receptors is included in **Appendix 6**.

## **Air Quality, Dust and Odour**

- 2.169. Warrington Borough Council (WBC) has declared an Air Quality Management Area (AQMA) for an area extending 50m from the roadside along the M62 Motorway. The southern boundary of the Site is therefore located just within the existing AQMA.

- 2.170. The main points to consider with the Proposed Development relate to nitrogen dioxide (NO<sub>2</sub>), dust and fine particulate matter (PM<sub>10</sub>) arising during the construction phase, and NO<sub>2</sub> and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) during the operational phase. In addition, there is the potential for odour impacts at the most sensitive parts of the Proposed Development (i.e. the Hotel and amenity space/picnic space) as a result of the restored Risley Landfill Site to the west.
- 2.171. Once operational, the Proposed Development is not expected to result in newly generated trips, other than perhaps a small number associated with deliveries and staff travel. Rather, the majority of trips to/from the Proposed Development will be transferred trips that are already on the highway network. This will lead to a redirection of traffic flows from the existing M62 Motorway carriageway along a new access road from Junction 11.
- 2.172. There are few existing sensitive receptors located in the vicinity of the Proposed Development or Junction 11 of the M62 Motorway. The closest sensitive receptor locations are the residential properties located approximately 0.3km to the south of the Site along Inglewood Close. The impact of vehicle emissions (NO<sub>2</sub>, and PM<sub>10</sub>) is considered at these areas. There are also industrial/commercial premises located less than 0.25km to the south west of the Site, however these are considered to be of a low sensitivity. It is not expected that there will be any impacts further afield, including within the Manchester Mosses Special Area of Conservation (SAC) and Holcroft Mosses Site of Special Scientific Interest (SSSI) which are located approximately 1km to the east.
- 2.173. A plan of the Motorway Air Quality Management Area (AQMA) is shown on the plan below.



**Figure 2.15: Air Quality Management Area (AQMA) Plan**

2.174. A plan of the Key Receptor Plan is included in **Appendix 6**.

## Noise and Vibration

2.175. The Proposed Development Site is located at the north-eastern side of junction 11 of the M62, therefore, the existing baseline noise environment is dominated by road traffic noise. Existing sensitive receptors are Franks Farm, located approximately 500m to the north of the Site, and dwellings off Inglewood Close, approximately 300m to the south of the Site. Noise at these receptors is considered through the ES assessment (see Noise and Vibration Technical Paper within the ES Part 2).

- 2.176. Land to the north of the Site boundary is allocated for the proposed HS2 line. Therefore, noise from HS2, and the M62 Motorway has been considered at proposed sensitive uses at the MSA (i.e. the Hotel, and some areas of the Facilities Building).
- 2.177. Vibration from the M62 Motorway is considered to be very unlikely to affect the Proposed Development Site. However, vibration from the future HS2 north of the Development Site boundary may affect proposed sensitive receptors (i.e. Hotel and Facilities Building) and this is considered within the Noise and Vibration Technical Paper in Part 2 of this ES.
- 2.178. A plan of the Key Receptors is included in **Appendix 6**.

### Cultural Heritage/Archaeology

- 2.179. The Cheshire Historic Environment Record (HER) has been consulted for non-designated heritage assets within the search area (taken as an area of approximately 1km radius from the Site boundary). The consultation revealed that there are two non-designated heritage assets recorded within the boundary of the Site. These comprise the findspot of a Roman coin (HER reference I4458) and the findspot of a copper alloy stud and a lead gaming piece (HER reference I4457). The finds appear to have been recovered through metal detecting.
- 2.180. The British Geological Survey records the solid geology of the Site as sandstone of the Helsby Sandstone Formation. Superficial geology is recorded as peat. This appears to have been referenced as moss land within historic documents and maps; the land within the Site, is located within an area known as Pestfurlong Moss which was gradually reclaimed for agricultural use from the at least the mid eighteenth century onwards. This saw a farmstead established within the boundary of the Site in 1849-1893. Now demolished, there remains a potential for the presence of below ground remains. The geology of the Site is also of archaeological potential in its own right, peat having the potential to include organic remains and evidence of a palaeoenvironmental nature which could inform on past environments. The findspots recorded by the HER are not receptors, having been removed from the Site but they are illustrative of the potential for other similar finds to remain within the Site.
- 2.181. On discussions with the Local Planning Authority Archaeologist, it has been highlighted that any necessary further fieldwork could be undertaken as a condition to consent. The further works may comprise a sectioning of the historic boundary between the Pestfurlong and Holcroft estates (WAI); a programme of boreholes/sampling suitable to collect deposits of a

palaeoenvironmental potential; and an archaeological watching brief or strip and record (whichever is appropriate) of Pestfurlong Moss farmstead (WA2). The scope and extent of such fieldwork would need to be agreed with the Local Planning Authority Archaeologist.

2.182. Historic England GIS datasets have been searched for designated heritage assets within 1km of the Site boundary, discretion informed by professional judgement being applied to this search area accordingly. There are no designated heritage assets within the boundary of the Site or within the 1km search area. The Grade II\* Listed Holcroft Hall is located 1.54km north-east of the Site which was included for assessment due to its Grade II\* status. With regards to impacts caused as a consequence of changes to a designated heritage asset's setting, it is considered that there would be no harm to Holcroft Hall from the Proposed Development.

2.183. A plan of the Key Receptors is included in **Appendix 6**.

## Construction

2.184. Construction working hours will be 07.00 hours to 18.00 hours Monday to Friday and 07.00 hours to 15.00 hours on Saturday with no working on Sundays or Bank Holidays, unless first agreed with the Local Planning Authority.

2.185. Construction access will be via the Site's access to the roundabout at Junction 11 of the M62 Motorway.

2.186. Initial phases of work will be Enabling Works across the Site. This work will include installation of the retaining structure required for gas pipe line (driven steel sheet piling). Access to the Site and the associated embankments and a development platform for the future development will be created. The Enabling works will therefore also include works associated with soil stripping, removal of peat to the Peat Habitat Zone to create a peatland type habitat area, cut and fill works, drainage and creation of the Silver Lane Brook Corridor to enable the diversion of this brook.

2.187. Associated ecological mitigation and landscape along the diverted brook's corridor will be undertaken. This will be the subject of a Landscape and Habitat Management Plan both for planting and longer term management and maintenance. Once created, this area will have restricted access, while the remainder of the Site is developed in order to allow its establishment and to manage any likely disturbance of this area.

- 2.188. The footpath diversion will also take place at this Enabling stage to ensure the continued route for users of the PROW.
- 2.189. The Site will be subject to earthworks to provide the development platforms. Cut and fill will be required as part of the work. As part of this work, the top soil will be stripped and stockpiled, avoiding unnecessary double-handling, ready for re-used in landscaped areas. Drainage during construction will be carefully managed and controlled across the Site.
- 2.190. It has been estimated that up to 42,000m<sup>3</sup> of material will be exported from Site. This equates to 2,800 one-way HGV movements undertaken within a 6 month period, resulting in approximately 2 HGVs per hour. It is anticipated that the importation of fill materials will be required to achieve the proposed levels and will largely be engineering fill. This equates to approximately 45,700m<sup>3</sup>, and as such approximately 3,047 HGVs in each direction over a 6 month period, results in approximately 2 HGVs per hour. Other material brought to the Site associated with general construction deliveries will result in approximately 2 HGVs per hour.
- 2.191. Up to 300 staff will be on-Site during the construction phase. Assuming an average vehicle occupancy of 2.0 with no access by non-car modes (and as such a worst case assessment), this would result in 150 arrivals and departures per day and therefore 75 car/van arrivals in the AM peak hour and 75 car/van departures in the PM peak hour as a worst case. Extra commits with its trading partners (Construction Companies) to make arrangement for the employment and training of staff learning their trade or profession.
- 2.192. The vehicle movements associated with the construction phases are assessed within the Traffic and Transport, Noise and Air Quality ES Technical Papers within Part 2 of this ES.
- 2.193. The approach with peat and the creation of the peatland type habitat area is set out within the Peat Mitigation, and Agricultural Land and Soils Sections above. There will be a strategy in place for managing imported and any exported material on-Site as well as a strategy for the movement of peat and creation of a peat habitat.
- 2.194. The buildings associated with the MSA (Facilities Building and Fuel Filling Station) will be constructed ahead of the parking areas, although some of the hard surfaced areas will be developed concurrently with the buildings. The proposed car parking areas will accommodate the stock piling of soils for re-use on Site, the storage of materials and the Site compounds. Initially a site compound may also be required at the Site entrance. The car parking areas will

be constructed as these areas become available and, as such, there will be a phased release of these areas for construction.

- 2.195. The remaining landscaping will be implemented across the Site towards the end of the construction phase. This will be the subject of a Landscape and Habitat Management Plan both for planting and longer term management and maintenance.
- 2.196. Standard construction plant and machinery will be utilized during construction, which is expected to include (but not limited to) the following:
- long-reach excavators
  - bulldozers
  - tippers
  - front-end loaders
  - scrapers
  - hydraulic excavators
  - backhoe loaders
  - craneage
- 2.197. A Construction Management Plan (CMP) will be produced prior to construction to set out the details for managing the construction phases of the development. A Framework for this is to be included within the Environmental Statement and will set out the statement of intent for the CMP.

## Operation

- 2.198. The MSA will be in 24 hour operation in accordance with the DFT Circular 02/2013 mandatory requirements. The Employees will work on a shift pattern to be determined by the Tenant Operators.
- 2.199. Extra commits with its trading partners (Tenant Operators) to make arrangement for the employment and training of staff learning their trade or profession. It is anticipated that the MSA will provide 228 gross FTE jobs, which is estimated could provide opportunities for in the order of 300 employees (on a full and part time basis).

- 2.200. The Site will be lit during the operational hours of darkness however, there will be careful consideration of areas to be lit, position of lighting, light distribution, with an appropriate control strategy for the operational lighting so that, when not required and subject to Health and Safety assessment, non-essential lighting is switched off at a pre-determined curfew time (suggested as 23:00 in accordance with ILP Guidance Notes) in order to further reduce the impact. A Lighting Assessment is included as part of the Environmental Statement to inform the ecology and landscape and visual impact assessments (**Appendix I6**).
- 2.201. During operational phase, the main potential for the generation of both noise and emissions (associated with air quality) will likely be associated with road traffic accessing the Site. The main pollutants of interest are nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM<sub>10</sub>).
- 2.202. The proposed development will comprise a complementary range of restaurant, fast food, ancillary retail, leisure and other ancillary commercial uses, within respective Units of the Facilities Building, together with the Fuel Filling Station and Hotel that will generate commercial waste. The operational commercial wastes would comprise of non-hazardous waste and small quantities of hazardous waste. Within the service yard for the Facilities Building and Hotel, there will be a Waste Compactor and appropriate separation of different waste materials for recycling.
- 2.203. There will be a system for monitoring the use of the Fuel Filling Station forecourt. The interceptors will be linked back to a control point to warn of any issues associated with spillage immediately.
- 2.204. Average annual water usage at other similar Extra MSA sites is in the region of 17,000m<sup>3</sup> and it is anticipated that the annual water usage at the Warrington MSA would be similar.
- 2.205. Benchmark data suggests that the main Facilities Building and Hotel within the development will consume a total of approximately 3,722MWh of energy every year, resulting in approximately 777tCO<sub>2</sub> of emissions. The energy hierarchy will be followed to reduce these figures as far as is practical. Energy use will be reduced through passive design and system efficiencies will be maximised to further reduce consumption. Low and zero carbon technologies are currently being investigated with a view to providing 10% of the building's energy needs if practical solutions are available (see Climate Change ES Technical Paper 13, ES Part 2). Overall, the development is targeting a significant reduction in energy consumption beyond what is required by national Building Regulations.

## Decommissioning

- 2.206. Decommissioning of the Proposed Development is not relevant to this project, given the proposed end use.

## Phasing

- 2.207. Following submission of an outline application, its determination and subsequent approval of reserved matters and condition discharge submissions, it is anticipated that development could commence on Site in ~~Quarter 4 2021~~ Quarter 3 2023, taking ~~12 to 24~~ 12 to 24 months ~~or so~~, before the opening of the MSA in ~~Q4 2022~~ by Quarter 3 2025.
- 2.208. As set out within the Construction Section above, initial phases of work will be Enabling Works across the site, to create the access to the Site and a development platform for the future development. The Enabling works will include works associated with soil stripping, removal of peat to the Peat Habitat Zone to create a peatland type habitat area, cut and fill works, drainage and creation of the Silver Lane Brook Corridor to enable the diversion of this brook. The footpath diversion will also take place at this stage to ensure the continued route for users of the PROW.
- 2.209. Strategic landscape planting and establishment of ecological areas will be early works within the Site.
- 2.210. Works associated with the vehicle parking, internal access roads, Facilities Building, Hotel and FFS will follow, with soft landscaping around these areas.

## 3. The Need for Development

- 3.1. The need for the Development of the Site can be categorized into needs in respect of safety on the strategic highway network, regeneration and economic. Together these needs justify the Site's redevelopment as an MSA. These are detailed further below.

### Highway Safety Need

#### Background and Policy Context

- 3.2. The Alternative Sites Assessment (**Appendix 13**) sets out the 'Need' for the Proposed Development, however it is summarised below.
- 3.3. The Strategic Road Network plays a key role in the safe and efficient movement of goods, supplies and people around the United Kingdom; it is critical to the performance of the economy and is essential in helping to facilitate planned economic growth.
- 3.4. The need to keep the Strategic Road Network flowing, supporting economic connectivity and mitigating the cost of delay is fundamental to national economic performance. The impact and costs of delays resulting from accidents on the Strategic Road Network can be significant and widespread. The social impact of accidents on the Strategic Road Network is also substantial.
- 3.5. Driver fatigue is a recognised cause of road accidents and it is estimated that 20% of accidents on the Strategic Road Network are fatigue related. Rule 91 of the Highway Code advises that in order to minimise risks, journeys should be planned to incorporate sufficient breaks. The Rule advises that the most effective ways to counter tiredness are to stop in a safe place, drink caffeinated coffee and take a short nap. Government advice is that motorists should stop and take a break of at least 15 minutes every two hours. Drivers of many commercial and public service vehicles are also subject to a regime of statutory breaks and other vehicle time restrictions.
- 3.6. The UK's network of Motorway Service Areas therefore perform an essential road safety function in ensuring the safety and welfare of drivers and their passengers and underpin the safe and efficient operation of the M6, M62 and M60 in the North West of England and other Motorways throughout the country. MSAs create opportunities and facilities for motorists

and commercial drivers and their passengers to take breaks, refresh and relax in safe and convenient locations on the Strategic Road Network.

Department for Transport (DfT) Circular 02/2013

- 3.7. Government Policy relating to the Strategic Road Network is contained within Department for Transport (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'. This re-enforces that a well-functioning Strategic Road Network enables growth by providing for safe and reliable journeys. It recognises that it has a key role in enabling and sustaining economic prosperity and productivity, whilst also helping to support environmental and social aims and contributing to wider sustainability objectives and improved accessibility to key economic and social services.
- 3.8. Annex B sets out policy on the provision, standards and signage for roadside facilities on the Strategic Road Network. It is clear that the purpose of an MSA is to ensure the safety of drivers on the strategic road network.
- 3.9. Highways England's objective and clear recommendation set out at paragraphs B5 and B6 is that the maximum distance between motorway services areas should be no more than 28 miles which is typically 30 minutes travelling time. This distance can also be shorter, subject to compliance with the design requirements of the Design Manual for Roads and Bridges. This requirement or "need", to ensure driver safety through the provision of an MSA at maximum intervals of 30mins leads directly to the recommendation of the Highways Agency that there should not be a gap of more than 28 miles between MSAs.
- 3.10. In order to meet the Government's objective of ensuring the safety and welfare of road users, there is a need to provide an MSA on those stretches of the strategic road network where there is an existing gap between MSAs of more than 28 miles. Paragraph B8 confirms that in determining applications for new MSAs, Local Planning Authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their own specific merits.
- 3.11. The Circular does not include provision for traffic flows to form part of a weighting process to evaluate the importance of a gap. A gap either exists or it does not; flows and route choices are irrelevant.

National Planning Policy Framework (NPPF 2019)

- 3.12. Paragraph 82 of the NPPF (2019) relates to “building a strong, competitive economy”. It notes that that planning decisions should “*recognise and address the specific locational requirements of different sectors*”.
- 3.13. In relation to “promoting sustainable transport”, Paragraph 102 requires that “*transport issues should be considered from the earliest stages of development proposals*”, including the environmental impacts of traffic and transport infrastructure, and opportunities to promote walking, cycling and public transport use. Paragraph 103 notes that “*significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes*”.
- 3.14. The NPPF (2019) states in paragraph 104(e) that “*Planning policies should:-*
- e) Provide for any large-scale transport facilities that need to be located in the area (42), and the infrastructure and wider development required to support their operation, expansion, and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a national significant infrastructure project and any relevant national policy standards*”.
- 3.15. Footnote 42 states that “*Policies for large scale facilities should, where necessary, be developed through collaboration between strategic policy-making authorities and other relevant bodies. Examples of such facilities include ports, airports, interchanges for rail freight, public transport projects and roadside services. The primary function of roadside services should be to support the safety and welfare of the road user (and most such proposals are unlikely to be national significant infrastructure projects)*”.
- 3.16. Paragraph 107 requires that planning decisions “*should recognise the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance*”.
- 3.17. It is clear that within the NPPF (2019), the starting point for the consideration of an MSA is paragraph 104(e) footnote 42 which provides that “The primary function of roadside services should be to support the safety and welfare of the road user” and that this point is reinforced in Annex B of Circular 02/2013. The Circular guidance is a material consideration in the determination of MSA applications by virtue of paragraph 6 of the NPPF (2019): “*other*

*statements of government policy may be material when preparing plans or deciding applications*". In establishing the need for an MSA above, it is also clear that such an MSA should contribute towards sustainable development (paragraph 7) but that planning decisions should recognise the "specific locational requirements" of sectors such as MSA (paragraph 82); and that operational issues such as lorry parking are also important (paragraph 107).

#### Leading Counsel Opinion

- 3.18. Extra MSA Group has obtained Leading Counsel's Opinion on the interpretation of need based on the NPPF (2019) and Circular 02/2013. Counsel advised (14<sup>th</sup> May 2019 – paragraph 11) that *"The 2013 Circular was a deliberate departure from previous policy in that the Government decided to make clear that once a gap of more than 28 miles has been identified, the need for an MSA will be established (i.e. the absence of an MSA in such a situation frustrates the Government's objective of supporting the safety and welfare of the road user). The local planning authority in such a situation should not concern itself with the merits of spacing beyond asking itself whether (a) the proposed MSA will help ensure that the maximum distance of 28 miles is not breached, and (b) that the new facility will not breach the requirements set out in the Design Manual for Roads and Bridges. For the purposes of applying the policy on "need" as set out in the Circular, it is not permissible to take a graduated approach to need by reference to the number of drivers using a particular stretch of the strategic road network or any other considerations such as route choice or the nature of the journeys. The existence of the requisite gap is conclusive evidence of need, and in the particular circumstances of this case it removes any necessity to debate how many drivers will choose a particular route (for example M6 South – M62 East, in preference to any other route."* A copy of the full advice is included in **Appendix 19**.

#### Highways England: The strategic road network Planning for the future (September 2015)

- 3.19. The Highways England: The strategic road network: Planning for the future (September 2015) document confirms the approach that Highways England takes to engaging in the planning system in relation to the whole Strategic Road Network, comprising of motorways and all-purpose trunk roads in England. It confirms that the Document is written in the context of the NPPF and Circular 02/2013. The Document confirms that *"the Strategic Road Network (SRN) is arguably the biggest and single most important piece of infrastructure in the country and is the core of our national transport system"*. It also confirms that *"operating an effective and efficient SRN makes a significant contribution to the delivery of sustainable economic growth. Efficient and reliable connections enhance the UK's image and reputation as a good place to invest. By enabling*

*the efficient movement of people and goods the SRN helps create the conditions for growth through enabling businesses to:-*

- *Access the skills and ideas they need to perform and grow;*
- *Access their suppliers and control their costs;*
- *Serve the customers and reach out to new markets; and*
- *Create effective collaborations and partnerships.*

*The SRN is therefore essential to the growth, well-being and balance of the county's economy".*

3.20. The Document has a section relating to "Roadside facilities, including Motorway Service Areas". It confirms that "new and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation, which together set the framework within which local planning authorities should consider the planning proposals for such developments". As confirmed earlier, this legislation and regulation relates to the NPPF and Circular 02/2013 (as well as the Town and Country Planning Development Management (Procedure) Order (England) 2015). In light of the above the Highways England 2015 Document supports the importance of public safety considerations and the contribution of the SRN to the national economy and re-affirms the role and relevance of both the NPPF and Circular 02/2013.

### **Establishing the Need**

3.21. The Highways Agency produced a national report in January 2010 titled: "Spatial Planning Framework Review of Strategic Road Network Service Areas". The 2010 Study was commissioned to assess the provision of service areas on the Strategic Road Network in England (paragraph 1.1). The purpose of the Study was to "encapsulate the results of the MSA study which provides a gap study of those MSAs located in each region". Paragraph 1.3 confirmed that this Study comprised the following:--

*"Identification of the location of MSAs along the Motorway Network;*

*Determination of the separation of MSAs;*

*Identification of any gaps in provision; and*

*Recommendations to address provision issues along the Motorway Network”.*

- 3.22. It is recognised that this Study pre-dated Circular 02/2013 as it used a requirement of 40 miles or greater to identify a “gap”. This distance has now been superseded by the Circular 02/2013 requirement that “the maximum distance between motorway service areas should be no more than 28 miles”. The conclusions of the 2010 Study can therefore be considered extremely robust as the maximum size of the gap has subsequently been reduced.
- 3.23. Figure 4.1 of the Alternative Sites Assessment (**Appendix 13**) provides the National map identifying the MSA gaps on the strategic highway network. Paragraph 5.4 of the Study confirmed that “in the North West, Charnock Richard and the terminus of the M58 to the terminus of the M67 are both routes further than 40 miles long with no MSA provision. There are a further nine routes above the 28 miles threshold”.
- 3.24. These gaps still remain on the network in the North West and as such the public safety need identified in 2010 has not been met. Given the more recent publication of Circular Guidance 02/2013, which reduced the maximum gap requirement, the further nine routes mentioned as being above the 28 mile threshold now also display a public safety need that must be met.
- 3.25. The M6 / M62 / M60 Motorways are amongst the busiest and most important in the UK. The M62 has daily traffic flows of circa 115,000 vehicles in the vicinity of Junction 11 (24 hours AADT 2016). It is the west-east trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and it also connects the two City Regions of Liverpool and Manchester. The area around Greater Manchester, Warrington and St Helens accommodates a convergence of other significant Motorway and major road networks (M6 / M58 / M60 / M62) that also make connections from the east to the west; north to south; and to the orbital around Manchester.
- 3.26. There are six existing MSAs located on the Strategic Road Network in and around the North West of England. These are listed in the table below:

<b>Motorway</b>	<b>MSA</b>	<b>Location</b>
M6	Charnock Richard	On-line between J27 and J28
M62	Birch Services	On-line between J18 and J19
M62	Burtonwood Services	Off line at J8

Motorway	MSA	Location
M61	Rivington Services	On-line between J6 and J8
M6	Knutsford Services	On-line between J18 and J19
M56	Chester Services	Off line at J14

**Table 3.1: Existing MSA locations in and around the North West Region**

- 3.27. Based upon the gapping parameters contained within Circular 02/2013, **FOUR** defined policy gaps exist in the provision of MSA facilities on the Strategic Road Network within the North West Region where spacing between existing MSAs is greater than the maximum limit of 28 miles or a maximum travelling time of 30 minutes. These gaps are set out in the table below:

From	To	Current Route	Current Distance
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles

**Table 3.2: Existing gaps of greater than 28 miles between MSAs in the North West Region**

- 3.28. The distances set out above are clearly in excess of the 28 mile maximum distance and importantly the travelling time over these distances is significantly in excess of the 30 minute maximum time (given the often congested nature of the M6, M62 and M60 Motorways) set out in Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'.
- 3.29. Therefore in accordance with Circular 02/2013, there is a need fully supported by Policy, for an additional MSA to serve this identified gapping.
- 3.30. The nature of the specific need within the North West region has been considered by Leading Counsel, instructed by Extra MSA Group. Counsel advised in paragraph 10 that *"It can be seen from the above that the existence of Burtonwood Services and Lymm Services do not address the identified gaps, for the simple reason that some drivers will take a journey whereby despite the existence of these two MSAs they will drive for more than 28 miles (and significantly longer than 30 minutes) before they encounter an MSA. How many such drivers there will be is irrelevant for the purposes of applying the Government policy on need – as paragraph B8 of the Circular makes explicit,*

*once such a gap is shown to exist, it is not necessary to have regard to other considerations in determining whether a need exists (i.e. the existence of the gap is in and of itself conclusive evidence of need for planning purposes.”* A copy of the full advice is included in **Appendix 19**.

- 3.31. As part of their pre application discussions, Extra MSA Group has consulted with Highways England. Highways England confirmed at this time that based upon current distances between existing MSA facilities, it would have “no objection in principle to the proposed development of a new MSA at M62 J11 (“Warrington Services”) on the grounds of spacing”. A letter dated 11<sup>th</sup> June 2019 from Julie Prince (Senior Policy Advisor) at Highways England to Warrington Borough Council confirming this gapping conclusion is enclosed at Appendix 2 of the Alternative Sites Assessment included at **Appendix 13**.

### Summary

- 3.32. In summary, there is a strategic need fully supported by policy, for a new MSA to serve the identified gapping between M58 Terminus and M62 Birch Services; M6 Charnock Richard and M62 Birch Services; M58 Terminus and M67 Terminus; and M6 Charnock Richard and M67 Terminus. This is based on Government policy in Circular 02/2013 which sets out the maximum acceptable distances between facilities. The need has also been supported as recently as 11<sup>th</sup> June 2019 by Highways England.

### Economic and Regeneration Need

- 3.33. Extra MSA Group are investing circa £75 million to deliver the development, which will create a significant number of short-term jobs in the economy. This is all private sector investment and equates to approximately £8 million per annum into the Warrington local economy.
- 3.34. The MSA will also bring approximately £1.05 million in annual Business Rate Revenue. Under the Business Rate Retention Scheme, up to 50% of rates collected can be retained by the Council, thereby helping to ensure ongoing public services are maintained. It is also estimated that the construction phase of the development has the potential to generate £28.4 million in cumulative GVA (Gross Value Added) for Warrington and the North West economy. With the operation phase generating £39 million in cumulative GVA for Warrington and the North West economy over a ten year period. This will have a substantial positive impact on Warrington and the Regional economy.

- 3.35. There will also be substantial job creation. There will be 300 construction workers on the Site over the phased build period. This equates to 97 Full Time Equivalent (FTE) jobs during the construction stage. In addition to this, there will be 15 FTE job opportunities for supply chain network and maintenance sectors within Warrington and 32 FTEs within a wider catchment area.
- 3.36. Once operational, the M62 J11 MSA will support 228 FTE employees and a further 75 FTE employees supported through the supply chain. Whilst some of these new jobs may be filled by people outside of Warrington, it is estimated that there will be at least 137 (net) new jobs within Warrington.
- 3.37. In reality, these positions will be filled by a mix of “full time” and part time” roles, meaning that the actual number of individuals receiving the benefits of employment at the development may be significantly higher than these estimates. These jobs will be working on shifts on a 24/7 basis. Based on evidence from other MSAs operated by the MSA Extra Group, leading national and popular tenant operating companies will be accommodated on long-term leases; this will ensure that the operational jobs will be roles that will persist for at least 50 years, providing a longer-term major benefit to the local labour market within the Area and Warrington.
- 3.38. Extra MSA are fully committed to supporting apprenticeships. Independent research by Consultants along with experience from Extra MSA indicates that the development will generate 16 – 17 new apprenticeships. Extra MSA also fully support local school / educational visits and engagement as part of both the construction and operational phases of the development and are engaging with various Bodies such as Warrington & Co to facilitate this.
- 3.39. Extra MSA Group have produced an Employment and Training Charter (Appendix 6.3 of Socio Economic ES Technical Paper, ES Part 2) to ensure that construction of the development delivers real and lasting positive social and economic benefits, such as promoting employment and training opportunities which are readily accessible to the local communities within the Area and Warrington. Extra MSA Group will expect the main contractor to endorse this commitment to support local employment opportunities by signing up to the Charters which are outlined in more detail in the Employment and Training Charter report.
- 3.40. Businesses within the supply chain and their employees will generate spend within the local economy which has a multiplier effect as further rounds of additional spend occur. The

development will form part of a strategic 'gateway' for the Borough. When operational the development will act as a catalyst for the wider regeneration and economic development contributing to the area achieving its economic potential by attracting new investors and occupiers to Warrington.

- 3.41. Motorway Service Areas are a key component of this national infrastructure network and are essential for the welfare and safety of users. The Warrington MSA Junction 11 M62 development will help address the 'need' for a Motorway Service Area on this section of the M58, M6, M62, M60, M62 and M67 Motorway Network.
- 3.42. The availability of attractive, easy to access and convenient opportunities to stop on the motorway network can contribute to combating driver fatigue ("falling asleep at the wheel") which, according to research by The Royal Society for the Prevention of Accidents (2001), "is a major cause of road accidents, accounting for up to 20% of accidents on motorways and monotonous roads in Britain." The development will encourage road users to take breaks more frequently and therefore reduce opportunities for road traffic accidents to take place as a result of fatigue and tiredness and keep traffic flowing.
- 3.43. Accidents on the motorway network result in congestion and delay which in turn has an economic impact on all 'users' of the motorway. Whilst delays are primarily a result of demand exceeding capacity, accidents on the network are also a contributing factor and can take many hours to resolve, depending upon their severity. A recent government report 'Review of Investigation and Closure Procedures for Motorway Incidents – preliminary Report' (May 2011) found that the economic costs of disruption caused by incidents is high and the study estimated that for a "three lane carriageway closure, on a busy motorway, the economic impact can be more than £500,000".
- 3.44. The provision of convenient and accessible Motorway Service Areas, where drivers can take a rest break when needed, plays a key role in the efficient and safe running of the national road network. Drivers of commercial vehicles are subject to strict working hours requirements. Rest breaks must be taken regularly. The logistics industry is therefore heavily reliant on MSAs as places where drivers can take a rest break, have a shower, and a meal. MSAs are the 'ultimate refuge' for many drivers, who struggling with mechanical problems will try to reach the next MSA where they can safely stop and call for help.

- 3.45. The development will assist in the safe and efficient use of the Region's Strategic Road Network. The development will encourage road users to take breaks more frequently and therefore reduce opportunities for road traffic accidents to take place as a result of fatigue and tiredness and keep traffic flowing whilst reducing journey times and therefore has the potential to increase regional and local economic activity and efficiency. The scheme can deliver improvement to the national economy and more jobs may become available, which would increase economic activity.

## Summary

- 3.46. The site lies within the area of identified highway safety need in respect of the provision of an MSA.
- 3.47. The site adjoins the M62 Motorway and has safe and convenient access from M62 Junction 11. Provision of an MSA in this location can be designed to be compatible with neighbouring land uses.
- 3.48. Junction 11 has been shown, through the Alternative Sites Assessment (**Appendix 13**), to be the optimal location in which to provide a bespoke MSA to meet the needs of motorists in a sustainable and accessible location that is central to the identified gaps in provision.
- 3.49. The MSA will also bring significant investment to the area, as well as result in significant job creation and a significant increase in GVA.
- 3.50. A safe Motorway network will also in turn help facilitate economic growth and as such by addressing the highway safety need for an MSA in this location, economic growth will ensue.

## 4. Alternative Development Options

- 4.1. Paragraph 2, Schedule 4 of the EIA Regulations states the need for inclusion of the following details:

*“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”*

- 4.2. Section 3 has explained why a ‘need’, fully supported by policy, exists for a new MSA to serve the identified gapping on the Strategic Highway Network in the North West. As such, the most appropriate location for the MSA needs to be identified. This is addressed fully within the Alternative Site Assessment attached at **Appendix 13** and summarised below.

- 4.3. The applicant is a successful and experienced motorway service area operator. As such the consideration of alternative development options for the preferred site are limited. The following development options have however been considered in formulating the proposals for the application site and are considered in more detail in the sub sections below:

- Do Nothing
- Compliance with the Development Plan
- Preferred Option – Motorway Service Area
- Preferred Option – Motorway Service Area Design Evolution

- 4.4. These are described in more detail below:

### Alternative Sites Assessment

#### Meeting the Need for a New MSA

- 4.5. As identified in Section 3, a ‘need’ has been established for an MSA in the locality to meet four identified gaps on the Strategic Highway Network in the North West. Therefore, the most appropriate location for the MSA has to be identified. In respect of this, paragraph B8 of Circular 02/2013 states that “In determining applications for new or improved sites, local

planning authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons”.

4.6. The Alternative Sites Assessment (**Appendix 13**) therefore considers the general locations where the identified need could be best met. It first identifies an area of search. The Figure below shows the current gaps on the network:

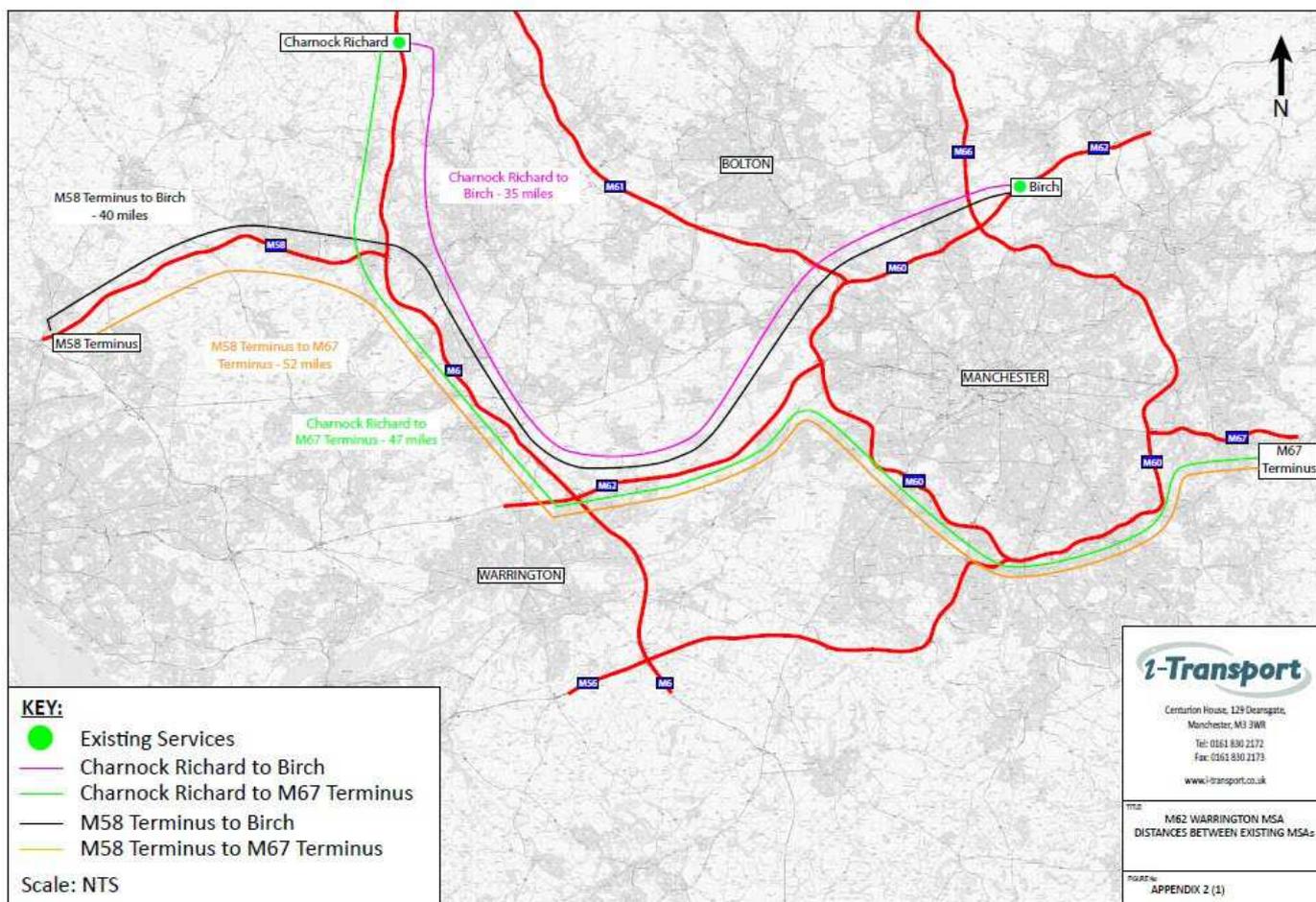
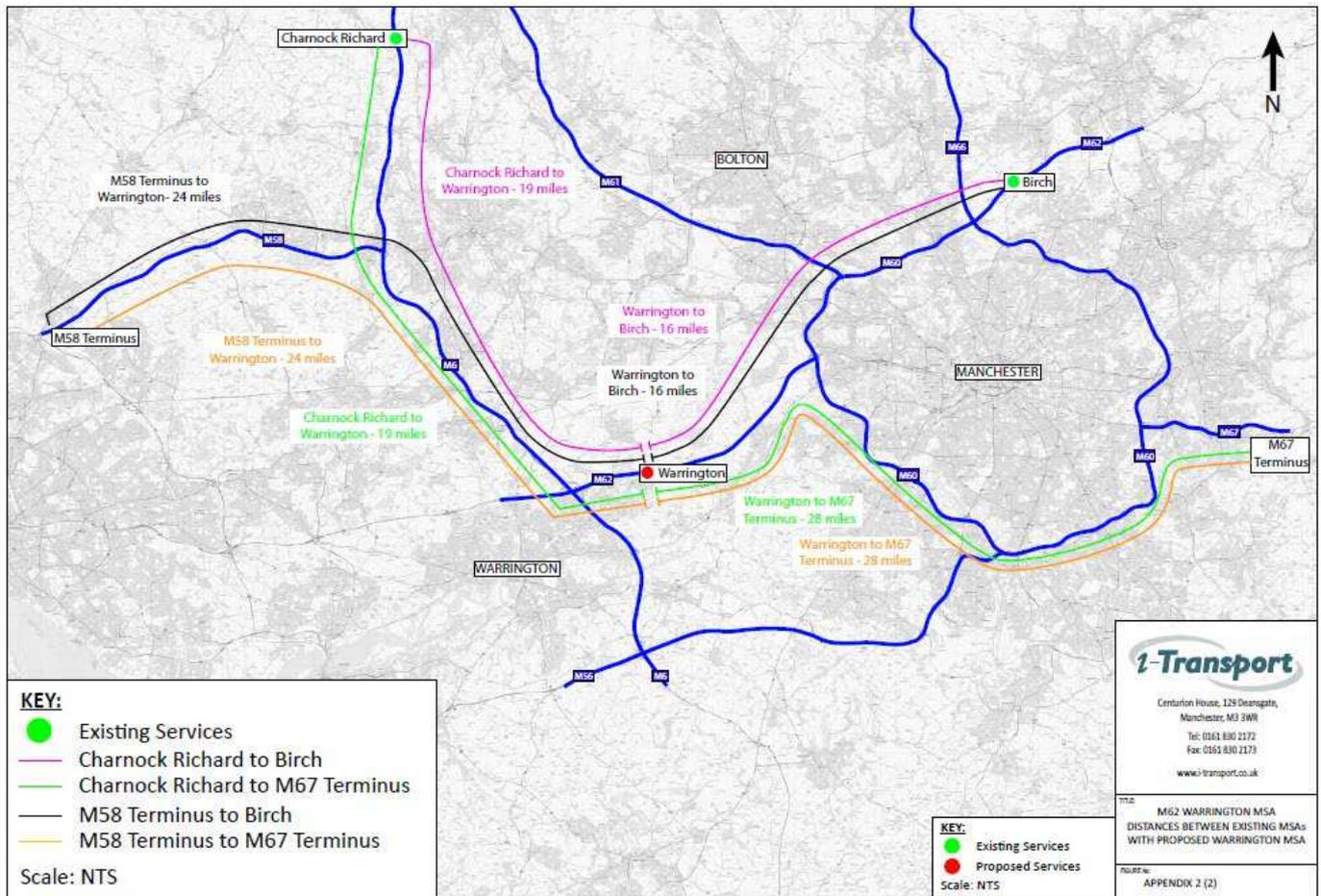


Figure 4.1: Distances between Existing MSA

4.7. The Figure below illustrates that the introduction of a new MSA at either Junction 11 of the M62 or on line to the east of the junction (defined as the Optimal Search Area) would reduce all **FOUR** of the established gaps on the corridors of the Strategic Road Network to policy compliant distances.



**Figure 4.2: Distances between existing MSA and the Optimal Search Area**

4.8. The table below shows that the introduction of a new MSA at either Junction 11 of the M62 or on line to the east of the junction (defined as the Optimal Search Area) would reduce all **FOUR** of the established gaps on the corridors of the Strategic Road Network to policy compliant distances. An MSA within the area identified at and to the east of Junction 11 of the M62 would achieve the following:

From	To	Current Route	Current Distance	New Route	Proposed Distance (range)
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles	M58/M6/M62	24 – 28 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles	M6/M62	19 – 23 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles	M62/M60/M62	25 - 28 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles	M62/M60/M67	25 - 28 miles

**Table 4.1: Existing gaps of greater than 28 miles between MSAs in the North West Region**

- 4.9. The ASA shows that **outside** of this Optimal Search Area, all **FOUR** gaps could not be satisfied. As such the ASA focuses its assessment upon the Optimal Search Area and hence other areas within the M62 / M6 corridors to the west; M62 corridor to the east; and the M60 corridor to the north and south of M62 Junction 12 have been excluded from the initial area of search for the purposes of this Alternative Sites Assessment.
- 4.10. In undertaking this Alternative Sites Assessment, the advantages and constraints of both on-line and off-line (Junction) locations within the Optimal Search Area have been considered in order to robustly identify the most appropriate location in which to site an MSA to meet the acknowledged need. This Assessment has been undertaken within the context of both paragraphs B13 to B15 of Circular 02/2013 which gives preference to on-line locations subject to all other factors being equal, and the requirements of NPPF (2019) in relation to sustainable development principles.
- 4.11. In order to assess the potential alternative sites, the following four stage methodology was adopted:

**Stage I** considers the ability of the identified locations to meet the policy defined need having regard to the maximum distances between MSAs set out in Circular 02/2013.

**Stage 2** considers whether there are any key planning or environmental constraints that could prevent the development of any of these sites unless no other sites are available.

**Stage 3** considers whether there are any other planning, highways, engineering safety, operational or environmental constraints that would preclude development on any of these sites having regard to the list of criteria set out in Circular 02/2013.

**Stage 4** draws together all of the above information and identifies a preferred location for a new MSA to meet the identified policy need. This is the site that best meets the need with the least development constraints.

4.12. Based upon the analysis undertaken in Sections 6 and 7 of the ASA, the following sites have been considered as part of this assessment:

On-Line Locations:

- Section of the M62 east of Junction 11 (Site 1).

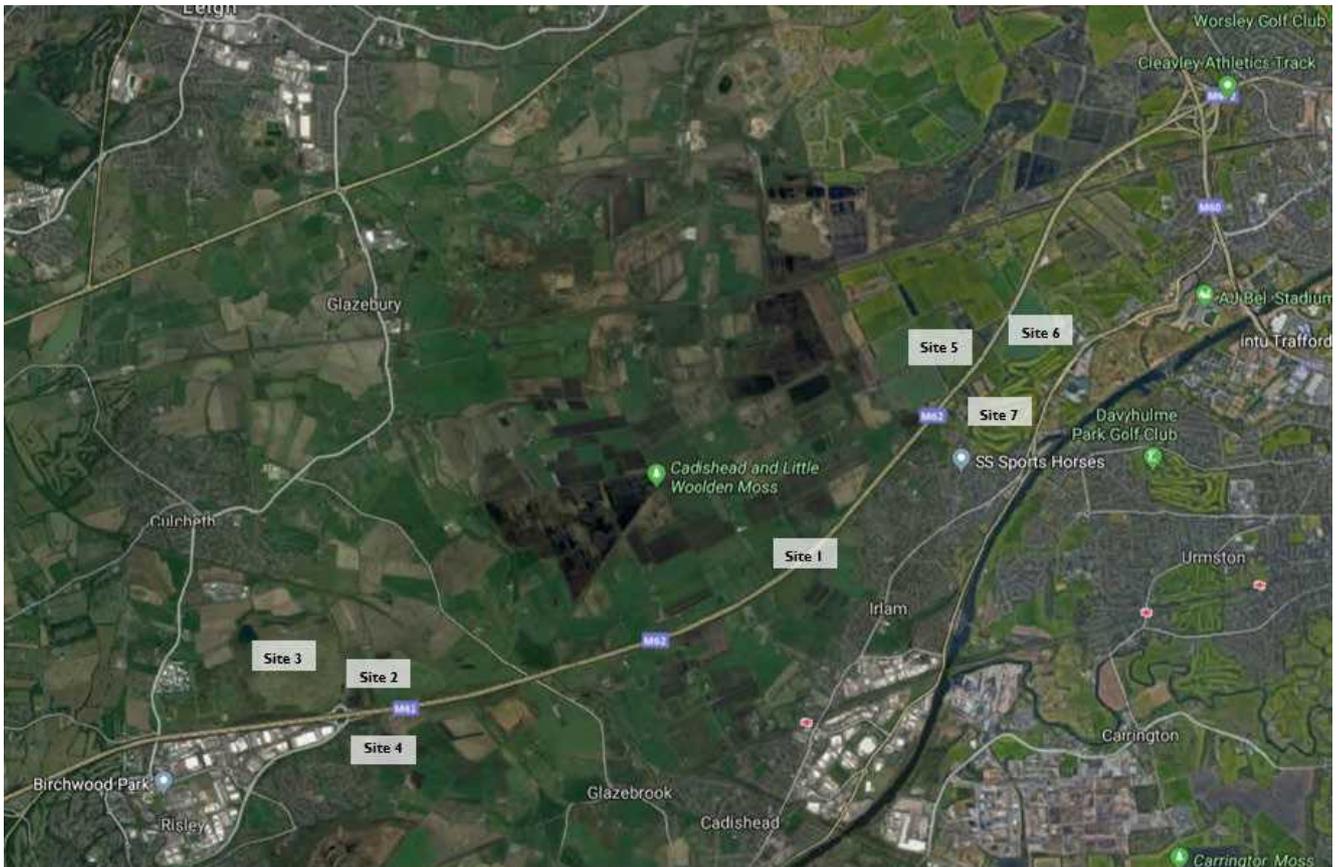
Existing Junction Locations:

- Junction 11 North East Quadrant (Site 2)
- Junction 11 North West Quadrant (Site 3)
- Junction 11 South East Quadrant (Site 4)

Potential new Junction locations:-

- Junction 11A Northern Quadrant (Site 5)
- Junction 11A South East Quadrant (Site 6)
- Junction 11A South West Quadrant (Site 7)

4.13. These sites are shown on the map below:



**Figure 4.3: Sites Considered within the Alternative Sites Assessment**

- 4.14. The ASA (**Appendix 13**) sets out the conclusions of the stage 2 and 3 Assessment in full with those highlighted in green being the best to meet the criteria. This is summarised below.
- 4.15. All the Sites (Sites 1 – 7) are within the Green Belt in the currently adopted Local Plans (Warrington and Salford). In this regard all the Sites are subject to the same “very special circumstances” test and there are no non-Green Belt alternatives that could meet the identified need. It is therefore clear that to meet the need for an MSA in the Optimum Search Area, a Green Belt site will need to be developed.
- 4.16. Site 1 is the only on-line opportunity for an MSA within the Optimal Search Area. Whilst it has the potential to accommodate an MSA, there is no evidence that it is capable of being brought forward to meet the currently identified need. It is within multiple ownerships and is not backed by a MSA Developer, and hence it is unlikely to be deliverable in the short term.

- 4.17. All other sites are off-line opportunities. Sites 3 and 4 are ruled out due to environmental constraints and hence cannot accommodate an MSA.
- 4.18. Sites 5, 6 and 7 have the potential to accommodate an MSA but a new M62 Junction 11A will be required to facilitate their delivery. There is considerable uncertainty associated with the delivery of such a new motorway junction, the potential for which has been identified in the Greater Manchester Spatial Framework (GMSF) and within the North West Quadrant Study, but which is unlikely to be open for public use until the medium term. There is no evidence that these sites can come forward any earlier to meet the currently identified need. In addition Site 6 is further constrained by also being in the draft Salford Local Plan and GMSF as an employment allocation as a strategic extension to Port Salford.
- 4.19. In this context, the Assessment identifies the application site (land within the NE Quadrant of Junction 11 (Site 2)) is the most sequentially preferable location upon which to site a new MSA having regard to the specific locational requirements to meet the identified need along with the consideration of planning, engineering, safety, operational and environmental factors. The Assessment also shows that of the Sites identified, it has the least Green Belt impact, being classified as having a “weak” contribution with the emerging Warrington Local Plan evidence base.
- 4.20. Given that a suitable site (Site 2) has been identified, it is not necessary at this stage to revisit any of the sites that were provisionally set aside as part of the Stage 2 assessment. It is also unnecessary to undertake a further search for locations outside of the Optimal Search Area.
- 4.21. The plan below incorporates a new MSA strategically and optimally located at M62 Junction 11 and demonstrates beyond doubt that the FOUR unmet gaps on the M6 / M62 / M60 / M67 / M58 within the North West Region will be fully addressed by a new MSA at M62 J11.
- 4.22. As is shown in the table below, the 40 mile non-compliant gap between M58 Terminus and Birch Services will be reduced to 24 miles; the 35 mile non-compliant gap from Charnock Richards Services to Birch Services will be reduced to 19 miles; the 52 mile non-compliant gap between M58 Terminus and M67 Terminus will be reduced to 16 miles; the 47 mile non-compliant gap from Charnock Richards Services to M67 Terminus will be reduced to 28 miles. All of these distances are below or comply with the 28 mile maximum.

From	To	Current Route	Current Distance	New Route	Proposed Distance
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles	M58/M6/M62	24 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles	M6/M62	19 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles	M62/M60/M62	16 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles	M62/M60/M67	28 miles

**Table 4.2: Policy compliant MSA Provision in the North West Region**

- 4.23. Following the identification of a ‘preferred site’, MSA Extra have now progressed site investigations and detailed design works in order to inform the layout, scale, form and boundaries of any future scheme, along with any necessary mitigation measures. Viability and land ownerships issues are key factors that may prevent the preferred site from coming forward. The Developer has secured an option from the landowner to bring the preferred site forward. Following design work, the Developer considers that a commercially and operationally viable MSA can be delivered on the preferred site. Should it ultimately prove not to be the case, then it would be necessary to revisit alternative options as the public safety ‘need’ would still remain unmet.

## Do Nothing

- 4.24. Having identified the preferred site for the MSA, alternative uses of the Site were also considered. To do nothing with the Site would mean the Site was retained as existing and therefore as an agricultural field.
- 4.25. The new development would provide significant inward investment to an area identified as a strategic economic and regeneration area (approximately £75 million capital investment). There would be substantial job creation (97 FTE at construction stage, with an anticipated 300 workers on Site; 228 FTE operation jobs with a further 75 FTE jobs supported through the supply chain). It would also bring substantial cumulative GVA for construction and operational

phases of around £28.4m and £39m (for a 10 year period) into the Region. The Development would also generate £1.05 million in annual Business Rates.

- 4.26. In addition to this, Highways Agency guidance points to a deficiency in MSA facilities within this area and the existing planning policy context is supportive of a scheme. As set out in Section 3 (The Need for Development) above and more fully in the Alternative Sites Assessment at **Appendix 13** there is a strategic need fully supported by policy, for a new MSA to serve the gapping between M58 Terminus and M62 Birch Services; M6 Charnock Richard and M62 Birch Services; M58 Terminus and M67 Terminus; and M6 Charnock Richard and M67 Terminus. This is based on Government policy in Circular 02/2013 which sets out the maximum acceptable distances between facilities. The Site adjoins the M62 Motorway and has safe and convenient access from M62 J11 and lies within this area of identified need. It has been shown that this is the best option to address the four gaps on the strategic highway network. To do nothing would not enable this deficiency to be addressed in this suitable location.
- 4.27. There are also a series of other benefits resulting from the Proposed Development that would not be realised without the Proposed Development. These are detailed below.
- 4.28. There is currently significant construction work underway on Birchwood Way to improve vehicle movements between Birchwood and the motorway and to provide greater capacity for local business park users and local residents. The M62 J11 MSA will deliver improvements to Junction 11 of the M62 in the form of signalisation of the junction to deliver greater capacity for vehicles on the junction to ensure that there is no net impact from the MSA on the local road network. These works will complement the current Birchwood Way improvements (Phases 2 and 3) to support current public sector funding in the form of Growth Deal initiatives.
- 4.29. As part of the Junction 11 signalisation improvements, pedestrian improvements will be delivered to provide controlled pedestrian crossings and enhanced footways through this junction. In addition to these controlled crossings, the existing footway on the overbridge is proposed to be extended northwards to provide a footway connection from the MSA to the existing walking and cycling network to the south of the M62 motorway.
- 4.30. Extra MSA support the opportunities for employees to walk or cycle to work and hence Extra MSA will make a financial contribution towards the upgrading of the existing Public Right of Way network to the north of the site (connecting to Culcheth) and also to existing pedestrian links along Silver Lane south of the motorway. The improvements both at the motorway

junction and on the Public Rights of Way north and south of the motorway will benefit local residents from Culcheth seeking to access Birchwood Employment Park and also those from Gorse Covet seeking to access the Risley 4 restoration site.

- 4.31. Extra MSA will deliver upgrades to the current public footpath that runs through the site, as part of the site development scheme. The surface treatment of the footpath will be enhanced and way marking and signing will be upgraded. This on site upgrade will complement the financial contributions made to enhance the linked off-site footpaths to the north and south.
- 4.32. Extra MSA are committed to operating a bespoke staff minibuss service between the site and Birchwood Station which will help reduce private car journeys by staff and widen the opportunities for potential employees who do not have access to a private car. Additional Travel Plan measures will include encouragement for employees to cycle to work through secure cycle parking at the MSA; participation in the Cycle 2 Work scheme; implementation of a Bicycle User group; support for the Bikeright! Cycle training scheme; and provision of lights, helmets, and hi visibility bibs for staff who commit to cycling to work.
- 4.33. Birchwood Park is a thriving employment hub. It will benefit from the current road improvements to Birchwood Way and also from the Junction 11 improvements delivered as part of the MSA scheme. The MSA will also deliver dedicated HGV parking areas as an integral part of the MSA proposal. The MSA is however delivering additional lorry parking beyond the level required within the Circular guidance (Circular 02/2013) to help to address a current lorry parking issue. Birchwood Park Forum indicated that some areas of Birchwood Park suffer from inconsiderate lorry parking which adversely affects access and circulation within the Employment Park. The emerging draft Local Plan also indicates that additional lorry parking may be required in the Warrington area to address existing problems. Extra MSA are therefore providing additional lorry parking at the MSA (beyond that required by the Circular guidance) to provide an opportunity for lorry drivers to wait in a dedicated area and to benefit from the MSA facilities rather than to clog up existing roads within Birchwood Park and at other facilities.
- 4.34. Extra MSA will deliver upgrades to the current public footpath that runs through the site, as part of the site development scheme. The surface treatment of the footpath will be enhanced and way marking and signing will be upgraded. This on site upgrade will complement the financial contributions made to enhance the linked off-site footpaths to the north and south.

- 4.35. There will be other environmental benefits of the proposals, including a diversion to the Silver Lane Brook, providing ecological enhancement to this brook and its corridor. Creation of a peatland type habitat. There will be landscape planting enhancement, including woodland planting, which in turn creates and enhances ecological habitats. These will be subject to long term management.
- 4.36. To do nothing would not enable these benefits to be realized, which also have benefits for the wider community and Warrington.

### **Compliance with the Development Plan**

- 4.37. The Planning Statement submitted in support of the Planning Application fully considers the Proposed Development in the context of planning policy and sets out the justification for the Proposed Development.
- 4.38. With regards to compliance with the Development Plan, the Planning Statement concludes that, it is considered that whilst there is a need to assess compliance with individual policies (set out in full in the Planning Statement and summarised in Section 5 'Plans and Policies' of this ES Part I Report), case law identifies that the test of compliance should be in the context of whether the application proposals are in accordance with the development plan "as a whole". The Judgement (CO/774/2015 EWHC 2489 (Admin) (2015)) sets out in paragraph 30, the basis on which a decision maker may consider the issue, stating "that is not just in relation to one policy but against the development plan as a whole". This is reconfirmed in paragraph 31 "to determine whether a proposal is in accordance with the plan the decision maker needs to have regard to all of the relevant policies and not just one".
- 4.39. In considering the compliance of the Proposed Development with the Policy requirements of the Core Strategy it is concluded that the only non-compliance is in respect of one aspect of Policy CC2. In this regard however, it is considered that this non-compliance does not render the application proposals non-compliant as a whole with the Development Plan as the application proposals support the general thrust of the Policy requirements to support employment development.
- 4.40. Whilst the site is in Green Belt, the policies state that development proposals within the Green Belt will be approved / supported where they accord with national policy i.e. for 'appropriate development' or where 'very special circumstances' are demonstrated for 'inappropriate'

development. The ‘very special circumstances’ case, as set out in Section 9 of the Planning Statement, concludes that the Proposed Development does meet this test. As indicated above, when taken as a whole, the proposals will deliver economic development in a sustainable location which is the principle tenet that underpins the Core Strategy. The Application proposals therefore comply with the Development Plan “as a whole” and hence there is a Section 38(6) presumption in their favour and also, they benefit from support from NPPF (19) paragraph 11(c) relating to approving development proposals that accord with the Development Plan without delay.

- 4.41. Section 38 provides that development that accords with the Development Plan should go ahead unless material considerations indicate otherwise. The Applicant considers that the application proposals comply with the Development Plan for the reasons set out above.

### **Preferred Option – Motorway Service Area**

- 4.42. As identified through Section 3, the need for an MSA in this location has been identified. As identified throughout Section 4, the Site is the preferred location for an MSA to meet the need and that, with the “very special circumstances” shown, the development is considered to comply with the Development Plan “as a whole”. The Developer has therefore progressed site investigations, environmental assessment and detailed design works in order to inform the layout, scale, form and boundaries of the proposed MSA scheme on the application site, along with any necessary mitigation measures required to minimise and manage any likely environmental impacts.

The Section below (Preferred Option - Design Evolution) identifies the evolution of the proposals and how environmental matters were considered in respect of the Preferred Option of an MSA.

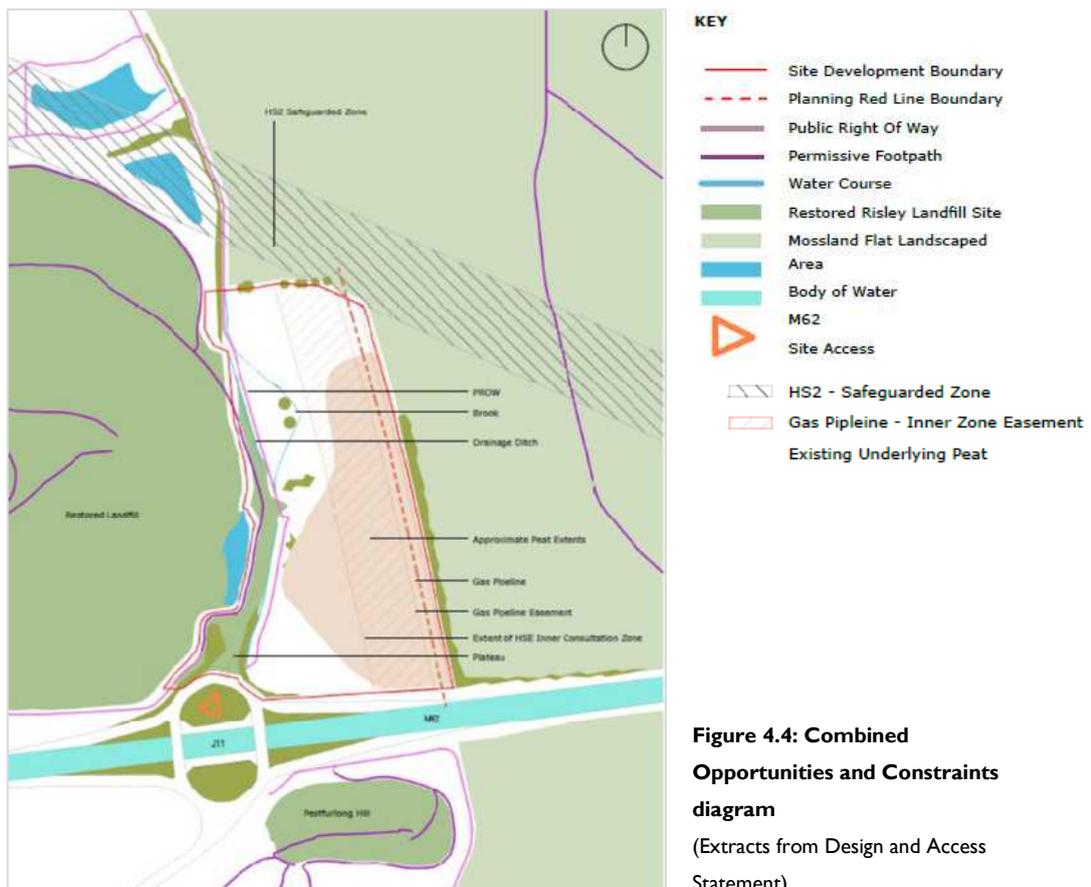
### **Preferred Option – Design Evolution**

- 4.43. Following the confirmation of the preferred use for the Site, the proposals have evolved, with consideration of the technical constraints and environmental impacts being key to the design evolution. This has been heavily influenced by the environmental assessment as well as key consultee, community and stakeholder engagement as detailed within the Introductory Section of this report.

4.44. A number of physical site constraints have also influenced the scheme design. A Constraints Plan at **Appendix 4** identifies the constraints that have influenced the design layout. These influences have included a high pressure gas main to the eastern extent of the Site, which has associated inner, middle and outer PADHI Zones; Silver Lane Brook; peat beneath part of the Site; PROW; access to the Site and associated existing ground levels.

4.45. A number of opportunities have also influenced the scheme design. These include a relatively level main Site area; opportunity to create a peatland type habitat within the Site; adjacent restored landfill site with ability to screen views of the Proposed Development; opportunities to divert Silver Lane Brook to create an enhanced ecological habitat along its new corridor; existing tree belts to sections of the Site boundary and opportunities to enhance these; opportunity to connect to the wider PROW network and permissive footpaths on adjacent sites and enhance these connections.

4.46. These opportunities and constraints are shown on the diagram below:



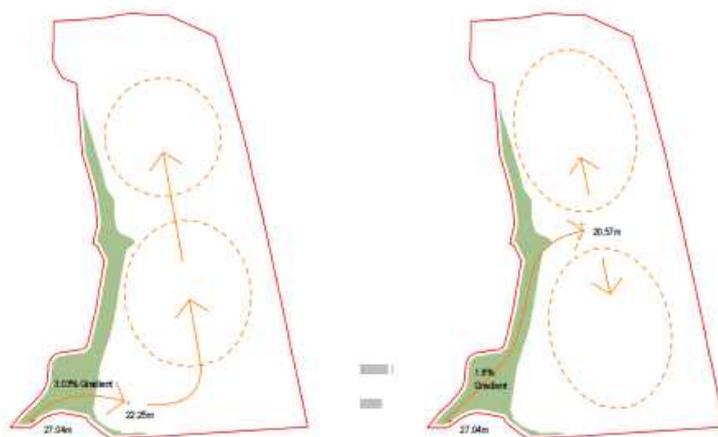
4.47. In considering these opportunities and constraints, the outcome of discussions with key consultees (in particular NE, EA and GMEU), along with the operational requirements of the MSA, a series of design principles were established for the design of the Site (as set out within the Design and Access Statement submitted to support the Planning Application).

- Embrace all viable opportunities to enhance the ecological value of the site.
- Enhance Silver Lane Brook as an ecological habitat as part of a site wide strategy to enhance biodiversity
- Retain peat on site and create peat a peat habitat zone
- Enhance the pedestrian linkages across the site improving the local PROW network, in particular strengthening the green link between Birchwood Country Park and Culcheth Linear Park.
- Enhance the planting across the whole site
- Avoid adverse impact on the existing drainage arrangements and supporting slope of the restored landfill site
- Comply with the easements related to the gas pipeline
- Allow for a clear view of the facility building entrance from the site entrance plateau to aid user orientation
- Position the Facilities Building to minimise the impact of noise from the M62 and HS2 on users of linked external amenity areas.
- Minimise visibility of the HGV parking and service yard from general users
- Minimise visibility of the MSA, in particular the HGV parking and service yard from Pestfurlong Hill and the restored landfill site
- Prioritise pedestrian safety by minimising road crossing
- Provide varied amenity spaces for users including south facing sheltered areas for sitting, play areas and space for exercise and dog walking.
- Minimise the distance that both car and HGV users need to walk to reach the Facilities Building

4.48. The Proposed Development is in outline, with only means of access being detailed at this stage, and all other matters reserved for consideration at a later date. As set out within Section 2 (Project Description), there are however a series of Parameters that have been influenced through scheme evolution that set the context of the proposals, the environmental assessment

and future development of the Site. Whilst the details of the Proposals are indicative they have been heavily influenced through scheme evolution. This is set out below.

4.49. As such considerations for Site access were considered as shown on the diagrams below. To gain access to the main development plateau, a graded approach is required from the roundabout at Junction 11. Attempting to access the plateau at the southern end of the Site would require a steep route, the loss of significant trees adjacent to the roundabout. To maintain consistent access in all conditions a gradient of less than 1 in 50 / 2% is required. By bringing the access route to the middle of the western boundary of the Site a shallower gradient can be achieved and two distinct areas of the Site can be immediately accessed. This access route is the preferred option chosen for development.



**Figure 4.5: Site access options – southern access option and central access option**  
(Extracts from Design and Access Statement)

4.50. Disposition of functions was also considered. The MSA has four main components: The facilities building, car parking, HGV parking and a fuel filling station. The location of these components on the site has been influenced by the presence of the gas main. The fuel filling station, facilities building and HGV parking all must fall outside of the 96m 'inner zone'.

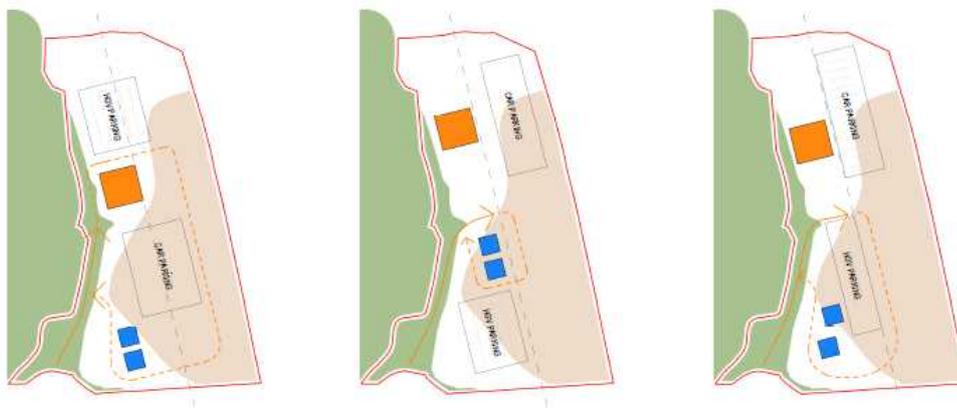
4.51. Three site arrangement options have been considered:

- Option A places the facilities building centrally, with parking for HGV's to the north and cars to the south, meaning that access to the facilities is enhanced for the HGV drivers. However the car park extends across a significant portion of the peat on site. Following consultation with natural England it was concluded

that with this arrangement the peat would need to be moved off site which was not desirable instead solutions were sought that would enable all of the peat to be retained on site within a peat habitat zone.

- Option B places the facilities building and parking at the northern end of the site with the fuel filling station located centrally. This arrangement minimises the volume of peat affected by the development. It also places the facilities building in the quietest location on site but leaves the HGV drivers a considerable distance from the facility building.
- Option C places the facilities building further south, making it more visible on entry to the site, and the HGV parking further north, reducing the distance between the HGV parking and the facilities building. It also minimises the volume of peat affected by the development. This approach is preferred providing the best solution for the retention of all of the peat on site and a functional arrangement for all MSA users.

4.52. These are shown on the diagrams below:



**Figure 4.6: Functional Disposition – Options A, B and C**

(Extracts from Design and Access Statement)

4.53. In terms of vehicular circulation, three circulation options have been considered for the site:

- Option A has a single entry and exit point to the HGV parking at its southern end meaning that the HGV parking can be most effectively screened from the amenity building and car parking. However the route for HGV's is circuitous.

- Option B provides access to HGV parking at its northern end reducing the distance driven by parking HGV's and removing them from a portion of the primary loop road.
- Option C provides egress from the HGV parking via a bypass to the HGV fuel filling area enabling it to link up to the main loop road beyond the Fuel Filling Stations minimising HGV use of the loop road and potential conflict with cars.

4.54. These are illustrated on the diagrams below:



**Figure 4.7: Circulation – Option A, B and C**

(Extracts from Design and Access Statement)

4.55. The requirement to locate the facilities building, HGV parking and Fuel Filling Station to the west of the site, outside of the gas pipeline 'inner zone' and the need to construct access routes from the motorway junction to the main development plateau will impact the Silver Lane Brook. Currently channelised, the brook flows northward mainly following the base of the landfill slope diverting into the heart of the Site following the edge of a now half buried field.

4.56. Two options for the diversion of the brook were considered, one maintained most of its present course along the base of the slope, requiring significant elements of culverting. The second diverted the brook around the edge of the Site. The latter option has been selected as it provides an opportunity to create a significantly enhanced habitat. The new course will enable a wider channel to be created with varying flows, and in combination with the area set aside for the gas pipeline, will create a wide habitat belt encircling the Site enhancing biodiversity and creating an attractive feature.

4.57. These are shown on the diagrams below.



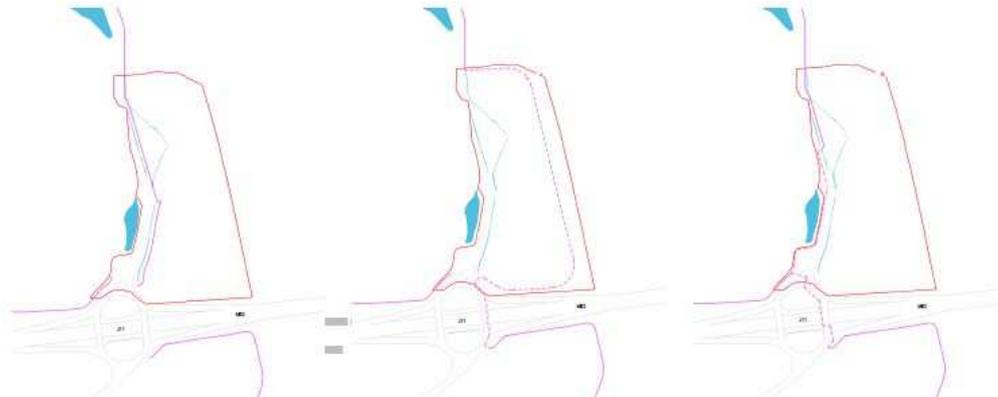
**Figure 4.8: Brook diversion Options – Existing Location; Culverted; Diverted**

(Extracts from Design and Access Statement)

4.58. The present Public Right of Way along the western edge of the Site drops into the Site at its south west corner via a set of steps. It then proceeds north along the base of the landfill slope until it exits the Site at the north east corner. A number of broad options were considered for the PROW:

- Option A - If the PROW position was to be retained in its present position users would have to cross the vehicular circulation numerous times.
- Option B - An option to divert the path along the brook diversion corridor was considered. This would mean that pedestrians approaching from the south heading toward Culcheth would not have to cross any of the site circulation, but they would still have to use the steps and then have a longer route than at present.
- Option C - An alternative option routing the PROW along the western edge of the site would mean pedestrians approaching from the east, looking to turn North would not have to cross traffic. Those from the south would only cross the road once, at a lighted crossing point and the new route could be graded to remove the need for steps thereby enhancing access for all.

4.59. These are shown on the diagrams below.



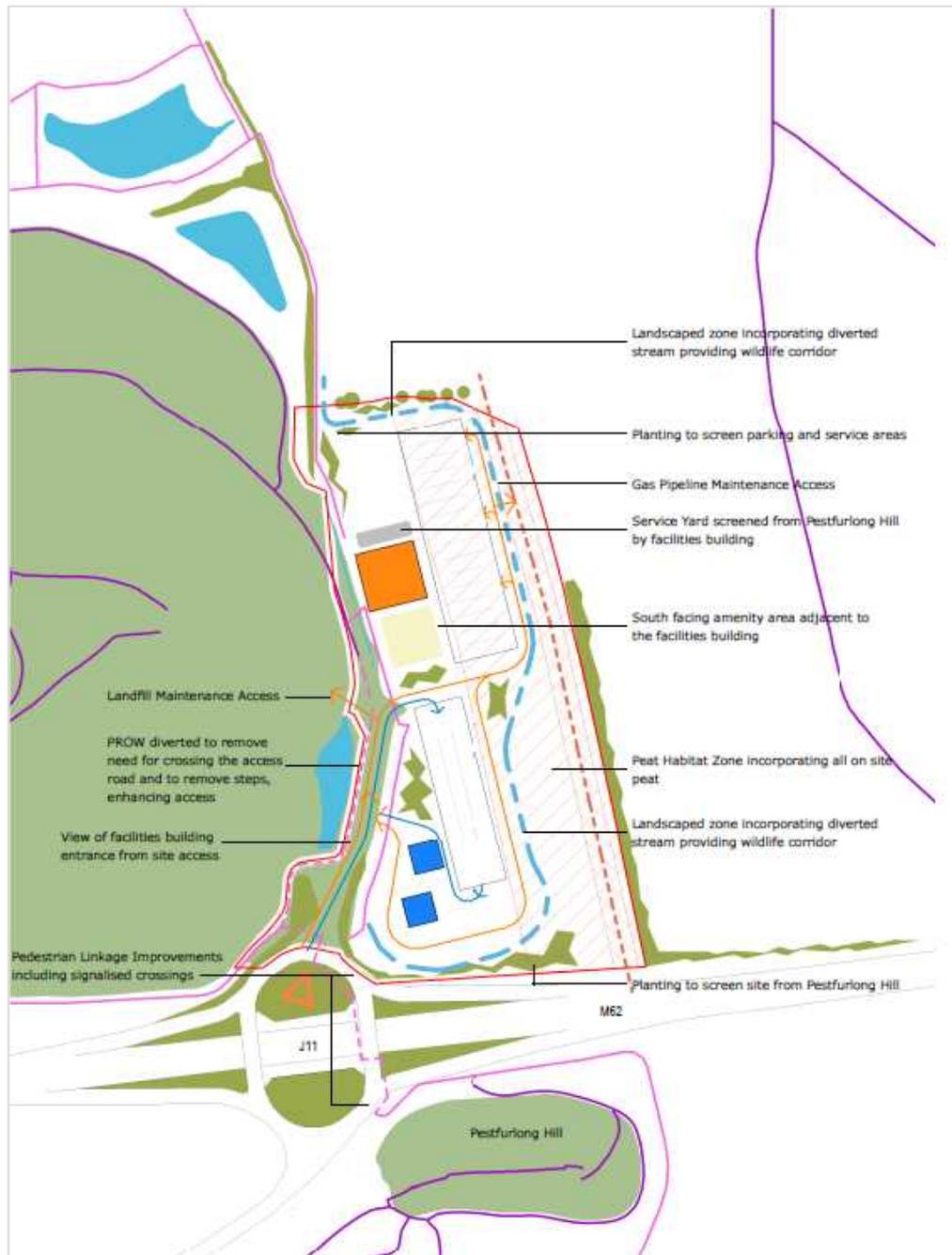
**Figure 4.9: PROW Options – Option A, B and C**  
(Extracts from Design and Access Statement)

4.60. The concept Masterplan therefore evolved to incorporate the following key elements:

- Vehicular access into the site is via the existing access point from the north of the Junction 11 roundabout.
- Existing public rights of way through the site are enhanced through footpath improvements and the creation of an accessible route opening up the footpath links to a wider range of users. This is achieved through an on-site diversion of the footpath creating a more direct link from Silver Lane to the footpaths north of the site with a high quality path removing the current steps, at the south-west corner of the site.
- The strategic green link, which connects Culcheth, Birchwood and Pestfurlong Hill is strengthened. This is to be achieved through the footpath improvements alongside the creation of safe signalised crossing points at Junction 11.
- The impact of the High Pressure Gas Pipeline is taken into account. A 12m Easement zone is retained to provide for maintenance and repair of the pipeline with an access route constructed across the diverted brook to provide access when required for statutory undertakers. This clear area will form part of a wildlife corridor running around the site and offers the potential for creating an element of grassland habitat.
- The Facilities Building, HGV parking, fuel filling station and play areas are all located outside the 96m inner zone.
- The facilities building is visible on site entry and the entrance clearly apparent to visitors.

- The external amenity space responds to the orientation of the site. The external amenity space is located to the south of the facilities building. Here it will receive maximum sunshine whilst being shielded from service areas to the north.
- The HGV parking is to be screened from view as far as possible.
- Dense planting to the edges of the area will screen it from all directions.
- Pedestrian safety is prioritised. Clear pedestrian routes with defined crossing points are located to minimize crossing of the busier elements of the internal vehicular network. All accessible parking bays are located so that there is no crossing required to reach the facilities building for these users.
- Landscaping is to be used to break down areas of parking and circulation. Parking areas and roads have been designed to allow for significant planting between them to soften their impact and create an attractive environment for users.
- The Silver Lane Brook is to be enhanced. The diversion of the brook allows for the creation of varying habitat areas and the creation of a substantial wildlife corridor around the edge of the site.
- A peat habitat zone is to be created at the south east corner of the site - leaving the deepest areas of peat in situ, removing the topsoil above it and augmenting the peat with other peat from the site to establish a sustainable peat habitat.
- The service yard is screened from view as far as possible. By placing the service yard to the north of the facilities building it is screened from Pestfurlong Hill. Dense planting to the edges of the area will screen it from other directions.
- A vehicular access point is retained to the former landfill site to allow for occasional maintenance access. This is provided via a spur from the HGV loop road on the western edge of the site.
- The design will embrace all viable opportunities to enhance the ecological value of the site.

4.61. This is illustrated on the diagram below and is reflected through the Parameter Plans (detailed in Section 2 – Project Description and included at **Appendix 5**):



**Figure 4.10: Site Concept Masterplan**  
 (Extract from Design and Access Statement)

4.62. The following sub sections summarise the environmental matters and considerations that have influenced the scheme design to date:

### **Agricultural Land and Soils (including Peat Matters)**

- 4.63. The soil survey identified the presence of 45,300 m<sup>3</sup> of peat on Site. As described previously, the upper topsoil layer is considered to be an organic-rich topsoil resource as opposed to a peat resource; and will be managed as a soil resource. However, the deeper peat (below the topsoil layer), which is currently stable and therefore a carbon store; should be considered a valuable and irreplaceable resource. (It is noted that these deep peats are not an irreplaceable habitat, as defined in the NPPF (2019), as the site does not support any peatland habitats and the arable farmland and smaller areas of neutral grassland and riparian habitat within the Site are widespread, common and typical of lowland farmland). Therefore, specific handling of this peat, in order to prevent the degradation and subsequent loss of carbon is required.
- 4.64. As described in the Project Description, the management of peat in a construction site is usually considered by means of a Peat Reuse hierarchy. The hierarchy prioritises the avoidance of peat resources where possible, and then ranks options for the re-use of disturbed peat in terms of most to least beneficial, Table 2.2. The hierarchy used for the Proposed Development is based upon that presented in Scottish Environmental Protection Agency (SEPA) guidance document 'Developments on Peat and Off-Site Uses of Waste Peat', with the addition of the Rank 5 option, stabilisation, as this technique of combining peat with 'concrete' to create a stable development platform has been successfully used on a range of developments.
- 4.65. As shown in Table 3-1, the consideration of alternative options for the reuse of peat has been undertaken in consultation with Natural England (NE), Greater Manchester Ecological Unit (GMEU) and the Environment Agency (EA).
- 4.66. The various alternatives considered for the reuse of peat within the site are discussed by rank.
- 4.67. As explained in Table 6-1, the Rank 6 option (disposal) should only be considered once all other options have been explored and discounted; the disposal of the peat resources present within the Site has therefore never been considered as a viable option.
- 4.68. During the early stages of the iterative design process the use of stabilisation techniques (Rank 5 option) was considered for a portion of the peat resource. Preliminary geotechnical trials using peat samples from the Site in a range of mixes using a variety of cement binder percentages from 5% to 20% with other additives such as pulverized fuel ash or sand; showed that this technique could be successfully used to create a stable development platform within the Site.

However, as the stabilisation (mixing of peat with other materials) could not be reversed, it was considered that this option was not suitable.

- 4.69. Early stages of the iterative design process also considered that the Rank 4 option, recycling would form part of the peat reuse strategy for the Site and would be fully investigated at reserved matters. To this end, initial discussions regarding the potential use of the peat as a soil improver on the adjacent former landfill site were undertaken, however this is discounted as the current nutrient poor status of the soils within the landfill site is resulting in the development of a desirable species rich flora, which would be hindered by the introduction of nutrient rich peats. The recycling option was also considered not desirable by NE.
- 4.70. The Rank 3 option, beneficial reuse off-Site, was discussed with GMEU in March 2019 and information regarding known peatland restoration sites within the locale, in which peat could be beneficially re-used (i.e. potential receptor sites) was exchanged. However, in June 2019 (Table 3-1) Natural England advised that relocating the peat would be undesirable and that in their opinion there were no local peatland sites where it would be feasible or desirable to relocate peat. The option of working with local peatland sites was therefore also discounted. But, as Natural England had stated that the most desirable mitigation (if the development was to go ahead) would be wetland creation on a neighbouring parcel of land, this option was investigated at some length. An options appraisal of six parcels of land close to the Site was undertaken; including land within the neighbouring former landfill site; two similar areas of agricultural land over deep peat to the east and south east of the Site which could potentially be suitable for peat habitat restoration; and three areas to the north, north east and west of the Site which could potentially be underlain by clay deposits allowing for the creation / excavation of specially prepared peat receptor areas (water retentive peat basins within clays).
- 4.71. The options appraisal and further work on the nature of the superficial geology of the potential sites, showed that none of the six identified options was suitable. The landfill was discounted due to issues such as potential disturbance to the landfill cap, surcharging issues and the accentuation of landfill settlement. It was determined that the restoration of peat areas would be hindered by the presence of HS2 if this came forward, and that the impacts to local hydrology of blocking drainage could not be determined. Finally, from British Geological Survey (BGS) survey records the superficial geology is highly variable across short distances with significant deposits of sands and gravels interbedded with the clays, and from the desk based data, the three identified 'peat basin' sites appeared to be unsuitable for this purpose.

- 4.72. Therefore, through the iterative design and consultation process the Proposed Development was reviewed and redesigned such that all peat resources would be retained within the Site. An initial design to place a proportion of the excavated peat into the base of a SuDS pond (whilst allowing sufficient freeboard for SuDS capacity) was discussed with Natural England, but discounted due to NE's concern over the potential effects of runoff from the Proposed Development (potential contamination etc.).
- 4.73. Consequently, the layout was redesigned, shifting all built development further to the west and creating a Peat Habitat Zone (Appendix 10.5: Drawing SH11739/034: Peat Depth and Site Layout). This design change maximised the area of undisturbed (avoided) Peat, whilst allowing for all disturbed Peat to be retained within the Site for beneficial reuse in the creation of peatland type habitat (Project Description; ES Part One Report, Section 2). Therefore, all Peat resources within the Site will be addressed through the Rank 1 and Rank 2 options of the hierarchy.

#### **Ecology and Nature Conservation**

- 4.74. The final layout of the Proposed Development has been heavily influenced by the location of several areas of sub-surface peat deposits this is due to engineering considerations, as well as to minimize the extent of required peat movements to ensure that the capacity of the subsurface deposits to store sequestered carbon is not compromised by exposure to the air.
- 4.75. The location and characteristics of the peat deposits are discussed in Paper 10 Agricultural Land and Soils. The final design sought to avoid much of the sub surface areas of deep peat deposits to the east and southeast of the Site and in total an estimated 22,700m<sup>3</sup> will be retained, undisturbed. Despite this it is estimated that approximately 22,600m<sup>3</sup> of peat will require excavation to allow the creation of a stable development platform.
- 4.76. Several options have been considered during scheme evolution to maximise the beneficial use of the excavated peat These have included:
- Relocating the majority of disturbed peat into the base of SuDS ponds and at selected locations along the re-aligned Brook corridor.
  - Donation of peat to a range of nearby degraded peatland sites within the Manchester Mosses Special Area of Conservation (SAC) or other sites requiring
  - reinstatement / restoration

- Export of surplus peat for reuse (recycling) elsewhere through an appropriate soil recycling contractor; and
- Identifying a Peatland Habitat Zone (PHZ) on site to relocate excavated peat into, to be managed as a peatland type habitat.

- 4.77. Given the apparent lack of availability of conservation sites involved in peatland restoration projects, the option of retaining the majority of the peat into a PHZ has been selected. This is considered preferable to export of peat for recycling given that a use is available on site, where a conservation benefit can be derived. The retention of peat in situ and development of a biodiverse peatland type habitat accords with the recommendations provided by Natural England in the preliminary DAS discussions.
- 4.78. The proposals for developing the PHZ are fully described within the Agricultural Land and Soils (Paper 10), however, in summary the peat will be excavated and retained within a bunded area to the south and east of the main development platform. The horizons of peaty agricultural soil will be removed so that the relocated peat will form a continuous layer with retained deep peat deposits beneath the PHZ. At all times during relocation, the peat will be maintained in a wetted state, and water levels maintained at or close to peat surface, which will both prevent drying and oxidation leading to carbon release.
- 4.79. The construction of the bunds retaining the PHZ is further discussed in Technical Paper 1 Geology and Ground Conditions, however the exact design will be finalized following further consultation with Natural England and other relevant consultees during detailed design stages. Rather than creating a single bunded PHZ, it may be preferable to create a number of smaller bunded areas, each with slightly differing hydrological regimes and peat depths relative to subsurface water accessibility; however all will be rainwater fed and will have varied surface topography. The raised sections will be drier in general terms and are expected to support a heath/acid grassland community with boggy hollows perhaps supporting sphagnum mosses around open pools. A full description of the objectives for the establishment of vegetation in the PHZ areas is provided as Appendix 5.10 Framework Habitat Management Plan.
- 4.80. The Development will necessitate the diversion of the Silver Lane Brook, which currently follows a fairly straight path along the western boundary of the Site, various options regarding the design and location of the realigned Brook have been considered, and these are outlined in detail in the Water Resources Technical Paper (3). The following objectives and final design has

been selected in order to maximise the ecological benefits and hence contributing towards net biodiversity gain as required by NPPF19:

- Design the channel profile with varied bank treatments and angles to provide a greater diversity of aquatic habitats, to include shallow berms, areas of dense marginal planting, alder and willow tree plantings.
- Design the realigned section with range of features of conservation benefit including in channel features and diverse marginal habitats. These will include riffles, areas of slow/static flow, deep peaty sediment;
- Design the route the realigned section of Brook to follow a more natural 'sinuous' form (where possible);
- Include specific mitigation features for aquatic and terrestrial invertebrates (including dragonflies and damselflies), as well as enhancements for fish, kingfisher and other 'Priority' species such as water vole;
- Create a wildlife corridor - linking habitats within the biodiverse landscaped areas on Site and Silver Lane Local Wildlife Site to the north and west;
- Marshy (acid) grassland: habitats will be established especially in the margins of the brook and within the easement of the HPGM.

4.81. The realigned corridor of the Brook will lie immediately adjacent to the PHZ and will therefore in time develop a complimentary habitat system along the entire length of the eastern side of the Development. This will contribute significantly towards Natural England's Wetland Network Model, a developing project seeking to map potential wetland linkages and 'stepping stones' across the Cheshire and Greater Manchester region.

#### **Geology and Ground Conditions**

4.82. Following completion of the Phase I Environmental Assessment and Preliminary Site investigation, a constraints plan was produced to inform the layout.

4.83. The location and depth of the Peat deposits was considered during the layout options for the development and wherever possible the location of the buildings were kept outside of the areas of deeper Peat deposits. The Peat deposits were identified during the preliminary geotechnical work as being not suitable for supporting foundations and issues relating to differential settlement were also highlighted.

- 4.84. Throughout the design process a series of iterations and proposed levels and layouts were tested through modeling to determine the optimum layout resulting in minimal import/export of material (See Agricultural Land and soils Paper 10). At scoping stage, it was expected that a cut/fill balance would be achieved but this has not been possible and there will be a deficit of material on Site to achieve the development platform. Some import of material will be necessary.

## **Water Resources**

### ***River Diversion***

- 4.85. To facilitate the development while ensuring required environmental and sustainable opportunities for the Site were achieved, consideration of how the development fitted into the Site constraints was undertaken.
- 4.86. Due to a National Grid high pressure gas main running along the eastern boundary, creating a development exclusion zone, the Silver Lane Brook meandering into the northwestern part of the Site and the aim of minimising removal of the southeastern peat area, the available area for development was significantly constrained.
- 4.87. To allow the development to fit around these constraints, a number of options were considered and these included looking at diverting the gas main away from the development, culverting the brook to the western boundary and diverting the brook to the eastern side of the Site.
- 4.88. The diversion of the gas main was discounted due to limited land available to move the gas main to and the extensive work that would be required to move a high pressure gas main.
- 4.89. Culverting of the brook was investigated but considered to have a negative effect on ecology and biodiversity due to direct loss of aquatic and marginal habitats and the potential to increase flood risk upstream by constraining flows.
- 4.90. Treatment and removal of the extensive area of peat to the southeastern end of the Site was investigated but discounted from a sustainable and environmental perspective benefit (see Technical Paper 10 Agricultural Land and Soils).
- 4.91. On the basis that the gas main could not be feasibly moved, culverting of the brook was not favoured due to the adverse environmental effects and retaining of the peat to the south-

eastern end of the Site was preferred, the alternative option considered was to divert the brook through the Proposed Development.

- 4.92. Diversion of the brook to the east of the development was investigated and it was considered that it did allow the opportunity to retain an open flowing channel which could be designed to have a more variable channel profile than the existing brook, thereby allowing a greater diversity of aquatic habitats and areas of dense marginal planting to be incorporated. The diversion also allowed the potential opportunity to vary the flow using riffles, areas of slow/static flow, gravel beds and deep peaty sediment to be included. These variations and enhancements were seen as a means of creating a wildlife corridor, linking habitats within a biodiverse landscape.
- 4.93. On the above basis the diversion of the brook was taken forward into the development layout design.

#### ***Discharge Options***

- 4.94. As detailed in Appendix 9.1 (Flood Risk and Drainage Strategy) of the Water Resources ES Technical Paper, ES Part 2, the Site drains, via infiltration and surface flow, to the Silver Lane Brook to the west and an unnamed watercourse to the east, which also connects to the brook. Flows from the Site are unrestricted and drain freely into the surrounding water environment.
- 4.95. A review of the drainage discharge options to serve the Proposed Development was completed.
- 4.96. The use of an infiltration discharge was discounted due to groundwater protection requirements and the ground conditions not being considered suitable for a reliable long-term infiltration capacity.
- 4.97. There were no surface water sewers in the area and therefore, this option of discharge was also discounted.
- 4.98. As the Site naturally drains to the two watercourses, to the east and west boundaries, it was considered that a surface water discharge to these would be feasible. Following discussions with Warrington Borough Council as Lead Local Flood Authority, it was agreed that the surface water runoff from the Proposed Development could be discharged at greenfield runoff rate,  $Q_{bar}$ , to the diverted Silver Lane Brook.

- 4.99. The general fall of the Site is from south to north and the brook is relatively flat and very shallow in depth.
- 4.100. An initial gravity discharge design of the surface water drainage system to serve the Development Proposals identified that the Site would require significant raising to allow the drainage to function with sufficient pipe cover. On this basis an alternative option of pumping the surface water drainage to the brook was considered. By using a pumped discharge, it was identified that the Site could be significantly lowered thereby significantly reducing the Site raising requirements. The pumped discharge option was still based on discharging at greenfield,  $Q_{bar}$ , runoff rate and providing the same level of surface water storage as required by the gravity discharge option.
- 4.101. The comparison of the two options identified that the pumped discharge option provided significant environmental benefits in terms of reducing material import and earthworks requirements compared to the gravity option. On this basis, the pumped surface water discharge option was selected as the preferred option. This discharge would be to the diverted Silver Lane Brook.

#### ***Drainage Design Evolution***

- 4.102. As detailed above and within Appendix 9.1 (Flood Risk and Drainage Strategy) Water Resources ES Technical Paper, ES Part 2, the Proposed Development's surface water drainage design aims to mimic and reduce this existing runoff characteristic by restricting discharge to the existing greenfield runoff rate,  $Q_{bar}$ , for all storm events up to and including the 1 in 100 year storm event with a 20% climate change allowance. To mitigate for storm events that are above the greenfield runoff rate, surface water storage is provided in the development proposals.
- 4.103. Initial drainage designs looked at providing the surface water storage in the form of a dry basin to the northeast end of the Proposed Development. However, to allow the environmental and sustainable approach of retaining the peat to the southeast, this area of land was now required to be used as part of the parking area to serve the Development Proposals. To compensate for the loss of the dry basin, it was agreed that the surface water storage requirements would be provided using a mix of tank/crate storage, smaller discrete dry basins and swales.
- 4.104. Within the proposed surface water drainage design, water treatment is being provided. This would consist of using a mix of swales, channel drainage (rills), gullies, filter drains/catchpits and

discrete dry basins as well as using Class I petrol interceptors. These would ensure water quality to the brook is maintained to a high level. To ensure groundwater protection, consideration of lining/sealing of the drainage systems to minimise infiltration where required would be given.

- 4.105. Appropriate management and maintenance of the surface water drainage systems will be undertaken to ensure that the drainage systems operate and mitigate on and off site flood risk and water quality requirements satisfactorily and in accordance with UK Legislation.

### **Landscape and Visual Impact**

- 4.106. Consistent features during indicative scheme evolution have been as follows:
- The Indicative Landscape Masterplan (Figure 4.14) shows the proposed MSA set within a landscape framework. Boundary vegetation will be retained and managed where feasible, and planting including native tree and scrub planting will be established to the perimeter of parking and amenity areas.
  - The overall concept for the Indicative Landscape Masterplan of the proposed MSA is to provide a safe and accessible environment which relates sympathetically to the adjacent Restored Risley landfill site and provides a degree of visual integration with its Green Belt setting.
  - The Indicative Site Plan has been developed to provide the necessary services in a compact form to maximise soft landscape areas and ecological enhancement, and to assimilate the development into the landscape.
  - The location of different elements has been determined to minimise their visual impact from key vantage points. The indicative Facilities Building is located at the base of the restored landfill slope so that it does not break the skyline when viewed from the east. The HGV parking has been located to the south of the Facilities Building.
  - Perimeter vegetation will establish to screen the HGV parking from the external amenity areas located to the south and east of the indicative Facilities Building.
  - The indicative Facilities Building design has been developed in a way that references the local area. A sinuous wall is a reference to the local peat moss land and the historic peat cutting that took place in the area. A series of simple linear pitched roof elements as a cluster reflect the form and grouping of local farm buildings.

Their fragmented form reduces the visual impact of the building at a distance. The selection of materials will also reference the local vernacular.

- The indicative Facilities Building will be designed to create strong links with external amenity spaces and the wider area, particularly the adjacent Restored Risley landfill site.
- Links will be provided to the Public Rights of Way network that currently exists within the Site, thereby allowing linkages to the wider non-definitive and definitive footpath network and the permissive footpaths across the adjacent restored landfill site.
- Tree and scrub vegetation buffers will be planted to the perimeters of the Site and within the Site to screen elements where necessary. New mainly native woodland, trees and scrub planting to enhance the existing green infrastructure, both within and on the perimeters of the Site has also been a constant feature for reasons of biodiversity, screening and amenity.
- Retention of established and establishing vegetation (tall hedgerows and woodland belts) to the Site perimeters and within the Site has been a constant feature as the scheme has evolved to maintain linear wildlife corridors which also have a screening function.
- The Framework Ecological Management Plan (see Ecology Technical Paper, Appendix I5, ES Part I) proposes a formal programme of management of existing and newly-created habitats to be set out within an Ecological Management and Mitigation Plan.
- There will be amenity areas within the landscaping areas. It was decided at an early stage to create an open green space along the eastern Site edge, incorporating the gas main easement and re-routed brook. Discussion with the project ecologist has led to proposals for new habitats for wildlife within this corridor and other green open spaces, including species rich grassland, mixed native species hedgerows to act as linear corridors for wildlife, ecological ponds and SUDs features.
- It was decided at an early stage to create a channel for the diverted Silver Lane Brook and the associated ecological mitigation and landscape along the diverted brook's corridor. This will be the subject of an Ecological Management and Mitigation Plan for longer term management and maintenance.

- Tree and hedgerow planting to the proposed MSA Site circulation areas to aid integration of the development into the landscape and reduce visual impact features within the Indicative Landscape Masterplan.
- It was proposed at an early stage that the entrance to the Site take the form of combined ingress and exit lanes within a wooded corridor with grass verges.
- The proposed MSA will be operational 24-hours of the day and night. The lighting designers have proposed design and specification of lighting to circulation areas which will reduce visual impact on longer distance receptors. The Lighting Assessment states “Due to the presence of local skyglow, existing artificial urban and highway lighting bordering the Proposed Development, it is considered that this area is typical of an E2 / partial E3 zone. However, due to the rural nature of the location and areas of natural conditions, on a precautionary approach the thresholds are based on E2 Zone classification (Low district brightness).”
- As part of cut and fill earthworks to provide development platforms, top soil will be stripped and stockpiled, avoiding unnecessary double-handling, ready for re-use in landscaped areas.

### **Traffic and Transport**

- 4.107. Alternative Locations for the proposed MSA are considered in the ‘Alternative Sites Assessment’ which is included within the suite of planning application documents and Appendix 13 of the ES Part I Report.
- 4.108. Various alternative arrangements to the proposed signalisation of M62J11 have been considered and these are detailed within Section 7.0 of the Transport Assessment (Appendix 2.1 to this Technical Paper).
- 4.109. Option 1 – provision of two lanes from A574 Birchwood Way to M62 (west) – assumed the capacity of the Birchwood Way arm would be improved by retaining the give-way control at the junction, and amending the lane destination markings such that the left turn to the westbound on-slip would be possible from both the nearside and offside lanes. Currently the westbound on-slip can only be accessed from the nearside lane, with the offside lane being used by vehicles turning right (onto the eastbound on-slip) or ahead (to the northern Birchwood Way cul-de-sac). The restriction of left-turners to use only the nearside lane is shown to lead to capacity issues during the PM peak hours in the future year scenarios. However, preliminary

modelling has shown that if the offside lane were to be allocated to be used for all turning movements (i.e. left, ahead and right), this would enable the junction to operate within capacity with the Proposed Development in place. There are two lanes on the westbound on-slip on exit from the roundabout, and under this potential alternative arrangement, two lanes could be used by left-turners, leading to the improvement in capacity. The nearside lane would retain its designation as left-turn only, meaning that no conflicting traffic movements would be introduced.

- 4.110. Option 1 has however been discounted on road safety grounds following without prejudice discussions with a road safety auditor. Those discussions highlighted concerns that conflicts may occur on the circulatory carriageway under this arrangement as a consequence of unfamiliar lane markings.
- 4.111. Option 2 considered widening A574 Birchwood Way to provide three lanes on entry to M62 J11. The results of preliminary modelling show a worsening in operational performance in the AM peak hours. This option has therefore not been progressed.
- 4.112. Option 3 considered providing a left-turn bypass lane from A574 Birchwood Way to M62 (west). In terms of deliverability, this option requires land beyond the highway boundary not in the applicant's control. It is also considered that a Departure from Standard(s) would be needed, either in respect of the achievable exit taper length or the reduction taper length (or both), irrespective of whether land outside the highway boundary could be acquired. The process to agree necessary Departures from Standard with Highways England cannot be guaranteed. The currently proposed signal-controlled arrangement does not require any Departures from Standard. Option 3 was therefore discounted.
- 4.113. Option 4 – a variation to the proposed signal-controlled arrangement, whereby the A574 Birchwood Way provides a three lane approach to the junction – has also been considered. The results of preliminary capacity testing do not however compare favourably to the proposed signal arrangement and as such, Option 4 has been discounted.
- 4.114. Option 5 considered providing a left-turn bypass lane from A574 Birchwood Way to M62 (west) as part of the signal-controlled arrangement. This option suffers the same deliverability issues as Option 3 above and has been discounted.

- 4.115. Option 6 – implementing signal control at the Birchwood Way entry to the roundabout only has the potential to reduce queuing on the critical Birchwood Way arm of the junction. It does not however achieve an improved environment for pedestrians to cross M62 J11 which WBC has indicated is a key issue as part of pre-application discussions. Option 6 has also therefore been discounted.
- 4.116. On balance, it is considered that the introduction of traffic signal control at Junction 11 is the preferred arrangement. Signalising the junction would lead to an improved appreciation by drivers that both lanes of the Birchwood Way approach can be used to turn left to the westbound on-slip, whilst also enabling the provision of controlled pedestrian crossing points that will improve the environment for non-motorised users passing through the junction, including staff travelling to/from the Proposed Development. This will, in turn, increase the attractiveness of journeys to/from the Proposed Development by non-car modes for staff.

## 5. Plans and Policies

- 5.1. Section 38 of the Planning and Compulsory Act 2004, states that applications should be determined in accordance with the development plan unless material considerations indicate otherwise.
- 5.2. Consideration will also be necessary to the appropriate weight to be afforded to the development plan following the publication of the National Planning Policy Framework (hereafter referred to as 'The Framework' or NPPF<sup>1921</sup>). This is also considered in the context of the National Planning Practice Guidance (hereafter referred to as 'PPG').
- 5.3. This section identifies the planning policies and other material considerations which are relevant to this proposal and have been considered alongside each of the technical areas in Part 2 of this ES and its Addendum.
- 5.4. This section identifies the planning policies and other material considerations which are relevant to this proposal.

### National Transport Policy

#### **Department for Transport Circular 02/2013: The Strategic Road Network and the Delivery of Sustainable Development, September 2013**

- 5.5. National Transport Policy relating to the Strategic Road Network is contained within Department for Transport (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'. The document was published on 10<sup>th</sup> September 2013 and replaces the previous DfT circulars on the issue (02/2007 and 01/2008).
- 5.6. Paragraph 8 of this document confirms that a well-functioning strategic road network enables growth by providing for safe and reliable journeys. Paragraph 7 also outlines that the Strategic Road Network plays a key role in enabling and sustaining economic prosperity and productivity, while also helping to support environmental and social aims and contributing to wider sustainability objectives and improved accessibility to key economic and social services.
- 5.7. Annex B of the Circular specifically relates to roadside facilities for road users on Motorways in England and sets out policy on the provision, standards and signage of roadside facilities on

the Strategic Road Network. The Circular confirms that all such proposals will be considered in the context of the National Planning Policy Framework and, in particular, the statement that it includes regarding the primary function of roadside facilities being to support the safety and welfare of the road user.

- 5.8. In relation to spacing, paragraph B4 outlines that MSAs perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Paragraph B4 also confirms that motorists should stop and take a break of at least 15 minutes every two hours. Commercial and public service drivers are also required to take statutory breaks and are subject to working time limits and these MSA facilities assist in compliance with such requirements.
- 5.9. Paragraphs B5 and B6 set out that MSAs should be located at a maximum of 30 minutes travelling time. This can typically be a maximum distance of 28 miles, but on similarly busy and congested sections of the Strategic Road Network, is an average of 15 to 20 miles. This distance can also be shorter, subject to compliance with the design requirements of the Design Manual for Roads and Bridges.
- 5.10. Paragraph B8 confirms that in determining applications for new MSAs, Local Planning Authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their own specific merits.
- 5.11. In terms of location, Paragraph B13 sets out that locations between junctions (On-line) should be considered first, followed by sites sharing a common boundary with the highway at a junction with the Strategic Road Network.
- 5.12. The Circular also contains detailed guidance on signing, parking charges, picnic areas, parking provision, access to the Strategic Road Network, retail activities, hotels, conference centres and business centres, coach interchanges, park and ride and park and share, facilities for low emission vehicles, driver and tourist information and on site power generation and other sustainability measures. Schedule I sets out parking requirements.
- 5.13. Circular 02/2013 is discussed in further detail within the supporting Transport Assessment and Alternative Sites Assessment.

## National Policy Statement for the National Networks, December 2014

- 5.14. Paragraph 1.4 of the National Planning Statement (NPS) confirms that *“this NPS may also be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 or any successor legislation. Whether, and to what extent, this NPS is a material consideration, will be judged on a case by case basis.”*
- 5.15. The NPS sets out the Government’s decision making framework for delivering nationally significant infrastructure projects (NSIPs) on the national road, rail and strategic rail freight networks in England. The NPS establishes the need for the development of our national networks at a strategic level to support economic growth and regeneration, and to improve the user experience. It also provides the policy framework by which proposals will be decided. It includes policies on safety, environmental protections and design quality, amongst other things. The NPS sets out a strong and compelling case for development of the national strategic road network to sustain and drive economic growth, improve quality of life and crucially safety, and deliver better environmental performance
- 5.16. The NPS makes no specific mention of MSAs, which is expected given that they are not generally considered to be national significant infrastructure projects (Footnote 42 of the NPPF (19)). However it does illustrate the importance of the strategic road network to the economy and the need to improve safety and the efficiency of the network.

## Planning Policy Context

- 5.17. Section 38 of the Planning and Compulsory Purchase Act 2004, states that applications should be determined with the Development Plan unless material considerations indicate otherwise.
- 5.18. The National Planning Policy Framework (NPPF (~~1921~~)) is a material consideration in the determination of applications and this establishes at paragraph ~~213219~~, that weight should be given to relevant policies in existing Development Plans according to their degree of consistency with The Framework (the closer the policies in the plan to the policies in NPPF (~~1921~~), the greater the weight that may be given).

## Statutory Development Plan

- 5.19. The statutory Development Plan for the consideration of this application comprises:

- Adopted Local Plan Core Strategy (July 2014) (CS)

5.20. The High Court Challenge to the adoption of parts of the Warrington Local Plan Core Strategy was heard on 3 and 4 February 2015 with judgement given on 19 February by Mr Justice Stewart. The Judge ruled in favour of the Council on six of the nine issues that the claimant challenged on. The outcome resulted in the removal of elements of the housing policies from the Local Plan

5.21. The parts of the Plan which have been overturned are:

- The housing target of 10,500 new homes (equating to 500 per year) between 2006 and 2027; and
- References to 1,100 new homes at the Omega Strategic Proposal.

5.22. Not all of the Local Plan Core Strategy has been overturned. All other policies within the plan remain unaltered.

### **Site Specific Allocation**

5.23. The adopted Core Strategy (2014) Proposals Map currently identifies the Site as Green Belt land.

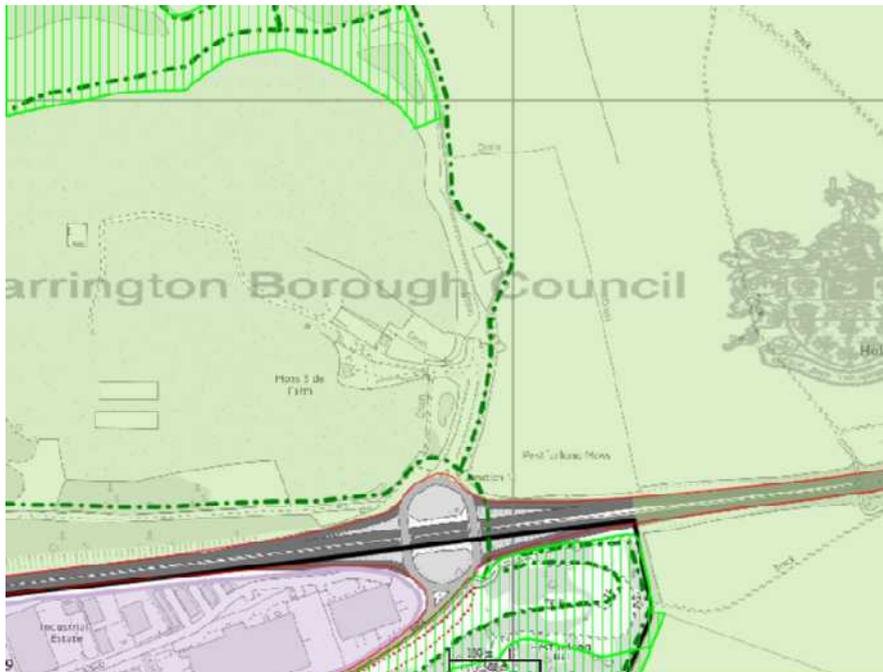


Figure 5.1 – Extract from the Warrington Local Plan: Core Strategy Proposals Map

- 5.24. The adopted Proposals Map identifies that the Site is located within the Green Belt, which is illustrated by the green wash. It also identifies that there is a public right of way (PROW) running along the western edge of the site, which is shown by the dark green dashed line. Further to the south of the site and on the opposite side of the M62 is Gorse Green Mounds Local Wildlife Site, which is identified by the light green hatching.

### **The Warrington Local Plan Core Strategy**

- 5.25. The Warrington Local Plan Core Strategy was adopted in July 2014 and provides the spatial context from which more detailed policies and site allocations should follow. Nevertheless, it should be noted that in October 2016 Warrington Council agreed to carry out a comprehensive review of the Local Plan Core Strategy in response to results of the High Court Challenge and the emerging evidence which set out the Borough's growth ambitions as well as its housing and employment needs to reflect these aspirations. The revised evidence base and the commitment of the Council to review their Core Strategy are material considerations in the context of this application, but the Core Strategy remains the statutory development plan in the context of Section 38 of the Act until such time as it is replaced.

5.26. The Core Strategy sets out the problems, issues and challenges facing Warrington in particular the high levels of deprivation in some parts of the borough. The Core Strategy highlights that the 2010 Indices of Multiple Deprivation (IMD) identifies that there are 11 Warrington Super Output Areas (SOAs) which fall into the 10% most deprived nationally - a figure which has not changed from 2007.

5.27. The Core Strategy also recognises that Warrington has a strong and resilient economy and it is a highly performing location on a national basis. The Vision states:

*“The town continues to be a key economic driver for the surrounding area and its pivotal location within the 'Atlantic Gateway' is an advantage to residents and businesses and gives them unrivalled access to both the Manchester and Liverpool conurbations and national transport infrastructure...*

*Those who live and work within the borough enjoy access to an extensive network of Green Infrastructure, which is effective in fulfilling a wide range of functions at the heart of which is supporting a diverse range of flora and fauna and protecting against the impacts of climate change...*

&

*The borough is home to a highly skilled workforce that serves the local economy well and the town continues to be a focus for employment for a wide area - reinforced by the development of significant sites in and immediately surrounding the borough.”*

5.28. The Core Strategy's Key Diagram identifies that the Site is located on the edge of the urban area and within close proximity to an 'Existing Employment Location' (Birchwood) (illustrated by the light purple).



Figure 5.2 – Extract from the Warrington Local Plan: Core Strategy Key Diagram

- 5.23. In line with the Strategic Vision, the strategic objectives include supporting growth in the local and sub-regional economy, maintaining the permanence of the Green Belt, securing high quality design and minimizing the impact on the environment.
- 5.24. **Policy CS1: Overall Spatial Strategy – Delivering Sustainable Development** sets out that development proposals that are sustainable will be welcomed and approved without delay. It goes on to say that in order to be sustainable, a development must accord with national and local planning policy, taking into account other material considerations, and must have regard to a number of principles. These principles include providing for recognised and identified development needs, the protection of the Green Belt and the character of the countryside, the need to sustain and enhance the borough’s built heritage, biodiversity and geodiversity, the need to safeguard environmental standards, public safety, residential amenity, the delivery of high standards of design and construction, and the need to improve equality of access and opportunity.

- 5.25. **Policy CS2: Overall Spatial Strategy - Quantity and Distribution of Development** set out the principles behind the distribution of development within the borough. The policy is principally concerned with the distribution of housing and employment uses (principally Use Classes B1, B2 & B8). However the policy raises a number of principles that are applicable to the current proposal. This includes the acknowledgment that development within the Green Belt will only be allowed where it is considered to be appropriate in accordance with national policy. The policy goes on to stress that the re-use of previously developed land within defined settlements will be prioritised and the defined centres, primarily Warrington Town Centre, will maintain their role and status by being the focus for further office, retail and leisure development investment, and by strictly controlling inappropriate out of centre retail developments. Nevertheless, it seeks to focus major warehousing and distribution developments away from areas sensitive to heavy vehicle movements, with direct access to the Primary Road Network.
- 5.26. **Policy CS 4: Overall Spatial Strategy – Transport** importantly recognises Warrington’s role as a regional transport gateway/interchange. It goes on to state that the Council will support improvements to Warrington’s Transport Network that look to integrate with transport networks both within and outside Warrington to enhance the sustainability of cross boundary travel; strengthen public and sustainable transport links between recognised areas for business, general industrial and storage/distribution uses; reduce the impact of traffic on air quality and reduce carbon emissions to help tackle climate change. It goes on to state that early consultation with the Highways Agency will be necessary for any proposal that may affect the Strategic Road Network and efforts should be concentrated on tackling the most congested parts of the Strategic Road Network, notably the M6, M56, and M62.
- 5.27. **Policy CS 5: Overall Spatial Strategy – Green Belt** seeks to maintain the general extent of the Green Belt to at least 2032, in recognition of four of its purposes. Nevertheless, it goes on to state that development proposals within the Green Belt will be approved where they accord with relevant national policy.
- 5.28. **Policy CS 6: Overall Spatial Strategy – Strategic Green Links** seeks to maximise the environmental and socio-economic benefits from those Strategic Green Links which connect the borough to the wider sub-region. It goes on to state that the Council is committed to supporting wider initiatives which seek to connect the Borough’s Strategic Green Links with employment areas, residential communities, and Green Infrastructure Assets.

5.29. The Core Strategy also contains various general policies that relate to a range of planning issues, these include:

<b>Policy</b>	<b>Summary</b>
Policy PV 1 Development in Existing Employment Areas	The policy states that sustainable development within other areas (outside of existing employment areas) will be supported.
Policy PV 3 Strengthening the Borough's Workforce	The policy states that Council will support developments which assist in strengthening the boroughs workforce and enhancing training opportunities for its residents by maximising the social benefits from proposals which contribute to the Council's "Closing the Gap" agenda by securing local employment opportunities associated with the construction and subsequent operation of new development (amongst other things).
Policy PV 4 Retail Development within the Town Centre and Primary Shopping Area	The policy confirms that the focus of new retail development in the borough is the Primary Shopping Area within Warrington Town Centre as defined on the Policies Map. For retail development outside of the centre, it is necessary to demonstrate that no suitable sites are available in more sequentially preferable locations to that proposed and there would be no adverse impacts on the Primary Shopping Area and wider Town Centre.
Policy PV 5 Enhancing the Town Centre Economy	The policy states that proposals for all main town centre uses which are proposed outside the Town Centre will need to provide justification in the form of sequential and impact tests.
Policy PV 7 - Promoting the Visitor Economy	The policy states that the Council will support proposals which sustain and enhance Warrington's visitor and tourism economy.
Policy SN 4 Hierarchy of Centres	The policy states that the provision for retailing within the borough will be based on the need to safeguard and enhance the vitality and viability of the hierarchy of centres.

<p>Policy SN 5 New Retail and Leisure Development Within Defined Centres</p>	<p>The policy requires that where retail or leisure uses are proposed outside of a defined centre, it is necessary to demonstrate that there are no suitable sites available within the centre or in edge of centre locations through applying a sequential approach. Where there are no suitable, available or viable sites within a defined centre, the proposal must demonstrate that there are no significant adverse impacts on that centre(s).</p>
<p>Policy SN 7 Enhancing Health and Well-being</p>	<p>The policy requires that all proposals in North Warrington address health and wellbeing inequalities through a number of different initiatives such as employment and training, maximizing opportunities for exercise and active lifestyles and deterring crime and increasing resilience to climate change.</p>
<p>Policy QE 1 Decentralised Energy Networks and Low Carbon Development</p>	<p>The policy seeks to encourage proposals that maximise opportunities for the use of decentralised renewable and low carbon energy.</p>
<p>Policy QE 3 Green Infrastructure</p>	<p>The policy seeks to develop and adopt an integrated approach to the provision, care and management of the borough's Green Infrastructure. This will involve protecting and enhancing the functionality and quality of existing provision and securing new provision where possible.</p>
<p>Policy QE 4 Flood Risk</p>	<p>The policy states that the Council will only support development proposals where the risk of flooding has been fully assessed and justified by an agreed Flood Risk Assessment. The policy goes on to state a preference for the use of Sustainable Drainage Systems.</p>
<p>Policy QE 5 Biodiversity and Geodiversity</p>	<p>The policy seeks to protect and where possible enhance sites of recognised nature and geological value. It goes on to say that development proposals affecting protected sites, wildlife corridors, key habitats or priority species (as identified in Local Biodiversity Action Plans) should be accompanied by information proportionate to their nature conservation value.</p>
<p>Policy QE 6 Environment and Amenity Protection</p>	<p>The policy states that the Council will only support development which would not lead to an adverse impact on the environment or amenity of future occupiers or those currently occupying adjoining or nearby properties, or does not have an unacceptable impact on the surrounding area. It goes on to state the consideration will be given to a number of matters including quality</p>

	of water bodies, groundwater resources, land quality, air quality, noise and vibration levels, light pollution, amongst other matters.
Policy QE 7 Ensuring a High Quality Place	The policy states that the Council will look positively upon proposals that are designed to be sustainable, durable, and adaptable and energy efficient; create inclusive, accessible and safe environments; and are visually attractive as a result of good architecture and the inclusion of appropriate public space, amongst other things.
Policy QE 8 Historic Environment	The policy seeks to protect the fabric and setting of heritage assets.
Policy MP 1 General Transport Principles	The policy states that the Council will support proposals where they mitigate the impact of development or improve the performance of Warrington's Transport Network, including the Strategic Road Network, by delivering site specific infrastructure which will support the proposed level of development.
Policy MP 3 Active Travel	The policy requires high priority to be given to the needs and safety of pedestrians and cyclists in new development. It goes on to state that new development should contribute to enhancing and developing integrated networks of continuous, attractive and safe routes for walking and cycling including improvements to roads, Rights of Way and the Greenway Network.
Policy MP 4 Public Transport	The policy states that the Council will aim to secure improvements to public transport infrastructure and services (including bus, rail and taxi / private hire) in partnership with operators and delivery partners.
Policy MP 5 Freight Transport	The policy states that proposals for freight related development will be supported where they achieve a reduction in road traffic kilometres through their location and/or where they reduce the impact of freight traffic on local or inappropriate route. It goes on to state that proposals should demonstrate that they would not have an adverse impact in terms of heavy goods vehicles using local or residential roads or congested central areas as well as unacceptable problems of noise, vibration, lighting, emissions, or other pollution for neighbouring occupiers.

Policy MP 6 Transport Infrastructure	The policy states that the Council will support priorities and improvements set out in the Local Transport Plan and other delivery documents by ensuring development will not prejudice the implementation of proposed transport schemes and projects that require land beyond the limits of the public highway.
Policy MP 7 Transport Assessments and Travel Plans	The policy requires that all developments demonstrate they will not harm highway safety and identify any significant effects on the transport network. It goes onto state that proposals which would prejudice the primary function of the Strategic Road Network will not be allowed unless improvements are designed and carried out. Finally it says that all major developments need to be accompanied by a Transport Assessment and Travel Plan.
Policy MP8 – Waste	The policy states that the Council will promote sustainable waste management in accordance with the waste hierarchy and encourage waste minimisation in new developments, the use of recycled materials, the sustainable transportation of waste and the preparation of site waste management plans
Policy MP 10 Infrastructure	The policy seeks to ensure that Warrington’s future growth is supported and enhanced through the timely delivery of necessary transport, utility, social and environmental infrastructure. It will seek to ensure that development maximises the benefits of existing infrastructure and minimises the need for new provision.
Policy CC 2 Protecting the Countryside	The policy states that development proposals in the countryside which accord with Green Belt policies set out in national planning policy subject to a number of considerations.

**Table 5.1: Core Strategy Planning Policy**

### **National Planning Policy Framework (NPPF 1921), February 2019 July 2021**

5.29. The new National Planning Policy Framework was adopted in ~~February 2019~~ July 2021, superseding the previous version published in July 2018 and subsequently February 2019. The National Planning Policy Framework (NPPF 1921) is a key material consideration as the statement of national policy and should therefore be taken into account and given appropriate weight when assessing this application.

5.30. Adopted as an expression of national planning policy, The Framework sets out the presumption in favour of sustainable development and the Government’s key objective to help build a strong, responsive and competitive economy. Where relevant policies are out of date, it states planning permission should be granted.

5.31. In summary, the key elements of the NPPF (1921) relevant to the proposals are:

Section 2: Achieving sustainable development  
Section 4: Decision-making  
Section 6: Building a strong, competitive economy  
Section 9: Promoting sustainable transport  
Section 13: Protecting Green Belt land.

5.32. **Section 2: Achieving Sustainable Development** sets out the three dimensions of sustainable development: economic, social, and environmental:

*“**an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*

***an social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering ~~a~~ well-designed, beautiful and safe ~~built environment~~places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being;*

***an environmental objective** – to contribute to protecting and ~~enhancing~~ our natural, built and historic environment; including making effective use of land, helping to ~~improving~~ biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”*

- 5.36. Paragraph 8 explains that the planning system should play an active role in guiding development to sustainable solutions and in doing so should take local circumstances into account, to reflect the character, needs, and opportunities of each area. Paragraph 10 states that “*at the heart of the Framework is a presumption in favour of sustainable development*”, while Paragraph 11 sets out what this means in relation to decision taking:

*Approving development proposals that accord with an up-to-date development plan without delay; or*

*Where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*

*the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*

*any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole*

- 5.29. Footnote 67 sets out specific policies which indicate where development should be restricted, including Green Belt and therefore prevents the operation of the titled balance.
- 5.30. **Section 4: Decision** states in paragraph 38 that “*Local planning authorities should approach decisions on proposed development in a positive and creative way*”, and that “*decision makers at every level should seek to approve applications for sustainable development where possible*”. This includes working proactively with Applicants to “*secure developments that improve the economic, social, and environmental conditions of the area*”.
- 5.31. In determining applications, paragraph 47 requires that “*applications for planning permission be determined in accordance with the development plan, unless material considerations indicate otherwise*”. Paragraph 11 confirms that in assessing and determining development proposals, “*Plans and decisions should apply a presumption in favour of sustainable development*”.
- 5.32. **Section 6: Building a Strong, Competitive Economy** stresses that planning decisions should help create the conditions in which businesses can invest, expand and adapt. It also places significant weight at paragraph 8081 on the need to support economic growth and

productivity. Paragraph ~~8081~~ states that “this is particularly the case in areas with high levels of productivity, which should be able to capitalise on their performance and potential”.

5.33. Paragraph ~~8283~~ also notes that planning decisions should “recognise and address the specific locational requirements of different sectors”.

5.34. **Section 9: Promoting Sustainable Transport** requires in Paragraph ~~102104~~ that “transport issues should be considered from the earliest stages of development proposals”, including the environmental impacts of traffic and transport infrastructure, and opportunities to promote walking, cycling and public transport use.

5.35. Paragraph ~~104106~~ (e) requires planning policies to “provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion, and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements”. Specifically, paragraph ~~107109~~ requires that planning decisions “should recognise the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance”.

5.36. Footnote ~~10814~~ confirms that the primary function of roadside facilities for motorists should be to support the safety and welfare of the road user and “most such proposals are unlikely to be nationally significant infrastructure projects”.

5.37. In relation to development in general, safe and suitable access should be achieved and opportunities for sustainable modes of transport should be explored. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

5.38. **Section 13: Protecting Green Belt Land** notes that the fundamental aim of Green Belt policy is “to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence”.

5.39. Paragraph ~~134138~~ outlines the five purposes which the Green Belt serves. These are:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns merging into one another;

- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

- 5.25. Paragraph ~~143~~147 states that by definition, inappropriate development is harmful to the Green Belt and should “*not be approved except in very special circumstances*”. Paragraph ~~144~~148 advises that local planning authorities should give substantial weight to any harm to the Green Belt. It notes that “*very special circumstances*” will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations”.
- 5.26. **Section 15: Conserving and Enhancing the Natural Environment** seeks to protect and enhance “*valued landscapes*”; minimise impacts upon biodiversity; prevent new development from contributing to unacceptable levels of pollution; and remediate despoiled, degraded, derelict and contaminated land.
- 5.27. Paragraph ~~174~~179 seeks to promote the conservation, restoration, and re-creation of priority habitats and, and identify and pursue measurable net gains for biodiversity. Paragraphs ~~175-182~~ 180-187 set out the principles that should be applied when determining planning applications, including biodiversity, noise, and land stability.
- 5.28. **Section 16 Conserving and enhancing the historic environment** set out the position with regard to heritage assets. Paragraph ~~189~~194 outlines that the applicant should sufficiently describe the significance of any heritage asset affected, including any contribution made by their setting as part of a planning application. It notes that the heritage assets should be assessed using heritage expertise where necessary. Paragraph ~~190~~195 and paragraph ~~192~~197 relate to the approach local planning authorities should take when identifying and assessing the significance of heritage assets and the contribution of new development to the local character and distinctiveness of the heritage asset. Paragraph ~~193~~199 attaches great weight to the asset’s conservation when considering the impact of development on the significance of the designated heritage asset. It notes the “*more important the asset, the greater the weight should be*”. Paragraph ~~194~~200 indicates that any harm to, or loss of, the significance of a designated heritage asset should require clear and convincing justification. Substantial harm to or loss of Grade II listed Buildings should be exceptional and to registered battlefields, wholly exceptional. Paragraph ~~195~~201 outlines the approach to take where harm is considered to be substantial. Paragraph

~~196~~202 states, “Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.”

5.29. **Annex 1: Implementation** sets out weight should be attached to Local Authorities’ Local Plans since the publication of the new NPPF (~~192~~1). Paragraph ~~213~~~~219~~ of the Framework states that “Existing policies should not be considered out-of-date simply because they were adopted or made prior to the publication of this Framework. Due weight should be given to them, according to their degree of consistency with this Framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given).”

5.30. Other elements of the NPPF (~~192~~1) relevant to the proposals are:

Section 7: Ensuring the vitality of town centres  
Section 8: Promoting healthy and safe communities  
Section 11: Making effective use of land  
Section 12: Achieving well-designed places  
Section 14: Meeting the challenge of climate change, flooding and coastal change

5.31. The NPPF (~~192~~1) is a key material consideration as the statement of national policy and should be taken into account and given appropriate weight when assessing this application.

### **National Planning Practice Guidance (PPG)**

5.40. The National Planning Practice Guidance (PPG) provides guidance to support the policies within NPPF (~~192~~1), and in that sense does not provide additional policy but rather more detailed consideration of how policies within The Framework should be approached and met. The guidance covers all relevant planning policy areas under separate topics and will be updated online as and when required.

### **Other Relevant Policies**

#### **Written Ministerial Statement – Road Haulage Update, May 2018**

5.41. The Transport Minister Jesse Norman in the Ministerial Statement states that the government is focused on “improving the situation for business-as-usual lorry parking”. In the Statement he

confirmed that he has “written with Planning Minister Dominic Raab to local planning authorities to draw their attention to the survey results, which show a strategic national need for more lorry parking and highlight shortages in specific areas”.

### **Emerging Local Policy – Preferred Development Option Consultation. September 2017**

- 5.42. Warrington Council consulted on their Local Plan Preferred Development Option Regulation 18 documents in September 2017.
- 5.43. This preferred development option sets out the Borough’s growth ambitions as well as the housing and employment needs to reflect this aspiration. To achieve the growth ambitions and meet the need over the 20 year plan, the Council recognises that land will need to be released from the Green Belt to deliver at least 9,000 homes and 252 ha of new employment space. This is underpinned by a range of evidence which provides a robust case for housing need and economic growth to be aligned. The Council believes planning for this level of growth provides a unique opportunity for Warrington to make the transition from a New Town into a New City.
- 5.44. The Preferred Development Options Document confirms that Warrington has significant ambitions for economic growth, as reflected in the Warrington Means Business regeneration programme, updated in December 2016 and in the scale of development proposed as part of the Cheshire and Warrington Devolution bid. The devolution bid figure has now been embedded in the Cheshire and Warrington Local Enterprise Partnership’s (LEP) Strategic Economic Plan (SEP). The LEP has undertaken further work in preparing the SEP, working closely with the Council, to analyse the job growth figures across Cheshire and Warrington as a whole and specifically in respect of Warrington. The LEP and the Council are confident the level of growth proposed is achievable with the interventions set out in the SEP and the scale of public and private sector investment the LEP is seeking to secure. The Council is therefore making the positive decision to plan for this level of growth.

### **Proposed Submission Version Local Plan, April 2019**

- 5.45. The Council consulted on their next stage of their Local Plan, the Proposed Submission Version Local Plan from April 2019, for a period of 8 weeks. The Council will then review all of the representations made during the consultation prior to submitting the Plan for ‘Examination in Public’ to be carried out by an independent Inspector.

5.46. The Council anticipate the earliest date for the Examination in Public will be early 2020. Following the Examination in Public, the Inspector will issue a report setting out their recommendations, including any required modifications to the Plan. The Council must carry out a final consultation on any Main Modifications before formally adopting the Plan. It is anticipated the Local Plan will be adopted during 2020.

5.47. The Local Plan and its supporting evidence base confirms the following:

- The Council has updated its evidence base relating to housing, employment and retail needs to ensure the Plan is based on up to date evidence, meets the requirements of the NPPF (2019) and associated Planning Policy Guidance;
- The Council's updated Economic Development Needs Assessment (2019) has re-confirmed the scale of employment land that the Council needs to plan for. The Plan makes provision to meet the full requirement of 362ha of employment land between 2017 and 2037. This means there is a requirement for provision of around 213ha of employment land through Green Belt release;
- The Proposed Submission Version Local Plan proposes a minimum housing requirement of 945 homes per annum, which equates to 18,900 new homes. Around 7,000 of these homes through release of Green Belt land.
- Draft Policy INFI sets out the Council's objective of improving the safety and efficiency of the transport network including the Strategic Road Network, by delivering site specific infrastructure which will support the proposed level of development.

5.48. The adopted Core Strategy remains the statutory development plan until such time as the new Local Plan is adopted.

### **Publication Draft Local Plan, 2021**

5.49. Warrington Council undertook consultation on the Publication Draft of the Local Plan during 2021 with Submission expected during 2022.

5.50. In summary this proposed a reduction in housing with the removal of some residential allocations and some employment allocations. There are proposals for 580ha of land to be removed from the Green Belt.

## Local Plan Evidence Base & Other Material Information

### Atlantic Gateway – Strategic Plan, January 2018

- 5.51. The Atlantic Gateway (AG) is seeking to create a growth corridor within the North of England, which would cover the areas of Cheshire and Warrington, Greater Manchester and the Liverpool City Region. It broadly follows the Manchester Ship Canal and the M62/M56 Corridor which serve to connect the three LEP areas within the Atlantic Gateway. As such, Warrington is clearly both geographically and strategically at the heart of the initiative.
- 5.52. The AG is focused on infrastructure and the two high growth sectors of science and innovation and logistics. The aim is to accelerate growth by investment in infrastructure, especially transport. Fundamentally, Atlantic Gateway can be defined as a series of projects across the North West area that have regional, national and international significance
- 5.53. The AG identifies that the transport network in Cheshire and Warrington is strategically important to the growth of the North and the Atlantic Gateway.
- 5.54. One of the key areas that the Atlantic Gateway is focused on is the logistics sector, which it identifies as being world-class and a major driver of success for many of the area's key sectors. It acknowledges that an increasing number of businesses are choosing to locate in the Atlantic Gateway area due to its global and local connectivity, its skilled workforce and access to consumer markets. It identifies that Liverpool2 is a game-changer for the North's logistics sector and the surrounding rail and road links will provide UK-wide access.
- 5.55. It is considered that the proposed MSA would complement these proposals, especially in light of the potential increase in use of M62 for the transportation of freight associated with the Liverpool2 and Superport proposals.

### Cheshire and Warrington Local Enterprise Partnership Strategic Economic Plan, July 2017

- 5.56. The Cheshire and Warrington Local Enterprise Partnership's (LEP) refreshed Strategic Economic Plan confirms the revised growth ambitions for the Cheshire and Warrington sub-region, which is to grow the economy's GVA by £50 billion per annum by 2040 and create 120,000 jobs (net additional). The Strategic Economic Plan sets a target of 31,000 jobs to be created in Warrington between 2015 and 2040.

### **Northern Powerhouse, November 2016**

5.57. The Northern Powerhouse strategy explains how the Government will work with local stakeholders to address key barriers to productivity in the region. The Government will invest in transport infrastructure to improve connections between and within the North's towns, cities and counties; work with local areas to raise education and skills levels across the North; ensure the North is an excellent place to start and grow a business; and ensure the Northern Powerhouse is recognised worldwide as an excellent opportunity for trade and investment.

### **The Northern Powerhouse Independent Economic Review, June 2016**

5.58. The Independent Economic Review (IER) focused on five clearly defined but interrelated work-streams which sought to understand the scale, nature and causes of the Northern England's 'performance gap', distinctive sectoral strengths and capabilities, and future growth prospects.

5.59. The IER identified that the 5 factors driving the 'productivity gap' were the skills gap; technology gap; investment gap, poor connectivity and transport, lack of agglomeration; and low enterprise rates. In contrast, it also identifies Northern England's four 'prime capabilities' are advanced manufacturing, health innovation, energy and digital. Crucially these 'prime capabilities' are supported by three 'enabling' capabilities which will play a critical role in supporting the growth and development of the 'Prime' capabilities. Together, the 'prime' and 'enabling' capabilities combine to create a complementary and distinctive offer for the North of England. The 'enabling capabilities' are:

- Financial and professional services;
- Logistics
- Education (primary higher education).

5.60. Clearly, Freight and Logistics are a key enabling capability to achieving transformational economic growth within Northern England and therefore the proposed MSA by providing lorry parking has an important role in supporting the objectives of IER.

### **Warrington Borough Council Green Belt Assessment Final Report (2016) & Additional Site Assessments of Call for Sites Responses and SHLAA Green Belt Sites, May 2017**

5.61. More recent updates to the Green belt evidence base do not change the earlier reports relevant to the Site. The Green Belt Review has been produced to inform the findings of the Local Plan

Review. The study was made in the context of the significant employment and housing land need identified within the new local evidence base.

- 5.62. The Review identified that the Application Site as falling within General Area 2, which encompassed as a much larger piece of land stretching from the northern boundary of the M62 to the southern and eastern edge of Culcheth. The General Area 2 was identified as making a ‘Moderate’ contribution towards the purposes of the Green Belt.
- 5.63. The Assessment went on to split the General Areas into a number of potential development parcels based on their proximity to built-up areas. The Application Site was identified as falling within Parcel WR14, which was identified as making a ‘Weak’ contribution to the Green Belt purposes.



**Figure 5.3: Extract from Warrington Green Belt Review**

- 5.64. The Green Belt Assessment made the following comments in respect to Parcel WR14:

Green Belt Purpose	Green Belt Review Commentary in respect to Parcel WRI4
a) to check the unrestricted sprawl of large built-up areas	<p><b>“Weak contribution:</b> The M62 forms a durable boundary between the parcel and the built up area. This is a permanent boundary that is durable enough to prevent sprawl into the parcel in the long term. The parcel is only connected to the urban area along this southern boundary and therefore the parcel is poorly connected to the built up area. Overall the parcel makes a weaker contribution to checking unrestricted sprawl.”</p>
b) to prevent neighbouring towns merging into one another	<p><b>“Weak contribution:</b> The parcel forms a less essential gap between the Warrington urban area and Culcheth. Development of the parcel would result in both the actual and perceived gap being reduced although it would not result in the towns merging. Overall, the parcel makes a weak contribution to preventing towns from merging.”</p>
c) to assist in safeguarding the countryside from encroachment	<p><b>“Moderate contribution:</b> The boundary between the parcel and the settlement is durable. The boundary is the M62 which could prevent encroachment into the parcel in the long term. The boundaries between the parcel and the countryside are less durable. To the west is Birchwood Way which is durable however the northern and eastern boundaries are tree lined which are natural, non-durable boundaries that would not prevent encroachment beyond the parcel if the parcel were developed. The existing land use is agricultural. The parcel is well connected to the countryside along three boundaries. The parcel is flat with no built form and no vegetation and there are open long line views thus it supports a strong degree of openness. The parcel has beneficial uses as it provides access to the countryside. Overall, the parcel makes a moderate contribution to safeguarding from encroachment.”</p>
d) to preserve the setting and special character of historic towns	<p><b>“No contribution:</b> Warrington is a historic town however the parcel is not within 250m of the Warrington Town Centre Conservation Areas. The parcel does not cross an important viewpoint of the Parish Church.”</p>

Green Belt Purpose	Green Belt Review Commentary in respect to Parcel WRI4
e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land	<p><b>“Moderate contribution:</b> The Mid Mersey Housing Market Area has 2.08% brownfield urban capacity for potential development, therefore the parcel makes a moderate contribution to this purpose.”</p>
Overall Conclusions	<p>“The parcel makes a moderate contribution to two purposes, a weak contribution to two purposes and no contribution to one purpose. <b>In line with the methodology, the parcel has been judged to make a weak overall contribution.</b> The parcel makes a moderate contribution to safeguarding from encroachment as it supports a strong degree of openness and has non-durable boundaries between the parcel and the countryside but has durable boundaries between the parcel and the settlement. The parcel performs weakly in terms of preventing sprawl and preventing neighbouring towns from merging.”</p>

Table 5.2: Green Belt Assessment

### The UK Industrial Strategy, November 2017

- 5.65. The UK Government has produced an Industrial Strategy that focusses on five foundations of productivity. These five foundations “*Ideas, People, Infrastructure, Business Environment and Places*”. It promotes Local Industrial Strategies to meet local economic needs and priorities. It identifies the need to build on the strengths of the economy for longer term growth with shorter term benefits. It stresses the importance of logistics in positioning the UK at the forefront in the world economy. It also highlights the north-south divide with educational attainment in the northwest well below that of the south-east.

### Relevant Local Supplementary Planning Documents

- 5.66. Warrington Borough Council has produced a number of Supplementary Planning Documents some of which are considered relevant to this application:
- Standards for Parking in New Development SPD (March 2015) – this SPD sets out the Council’s parking standards policy.

- Environmental Protection SPD (May 2013) – this SPD sets out the approach in respect to environmental protection including, amongst other things, contaminated land, air quality, light pollution, noise and vibration.
- Design and Construction SPD (October 2010 – amended February 2016) – this SPD sets out the approach to design and construction.
- Planning Obligations SPD (January 2017)

## 6. Methodology and Approach

### Introduction

- 6.1. This section sets out the approach and methodology for assessing the environmental effects of this development. The ES has been undertaken to facilitate the assessment of the proposed development by identifying existing baseline conditions and comparing the significant environmental effects of the proposal with appropriate legislative limits and guidelines.

### Relevant Legislation and Guidance for Preparing and ES

- 6.2. All proposals for projects that are subject to the European Environmental Impact Assessment (EIA) Directive 2014/52/EU must be accompanied by an Environmental Assessment (ES). The legislation has been transposed into UK law through the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 which are the EIA Regulations for England only (hereafter referred to as 'the EIA Regulations').
- 6.3. The ES has been prepared in the context of relevant legislation and guidance. Under the EIA Regulations, a planning application must be accompanied by an ES in certain circumstances. The proposals fall under Schedule 2 of the Regulations where an ES is required to be prepared where a development may have significant effects on the environment due to:-
- Size/scale of the environmental effects
  - Sensitivity/vulnerability of the site/location concerned
  - Nature/complexity of the environmental effects
- 6.4. In preparing the ES, the Study Team have taken account of guidance in the Town and Country Planning Act 1990 (Section 62), the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and Planning Practice Guidance.

### Study Team's Approach

- 6.5. The Study Team is aware of the legislative and guidance framework above. The Team has undertaken the approach outlined in Schedule 4 of the EIA Regulations for the assessment of the environmental effects of the proposal. This comprises:-

- Description of development
- Description of the reasonable alternatives studied
- Description of the relevant aspects of the current state of the environment and likely evolution without the development
- Description of the aspects of the environment likely to be significantly affected by the development
- Description of the likely significant effects of the development on the environment
- Description of the forecasting methods or evidence, including details of any difficulties in compiling the required information
- Description of mitigation measures and any monitoring
- Where relevant a description of the expected adverse effects of the development on the environment from the vulnerability of development or risks of major accidents and/or disasters
- A non-technical summary

6.6. As far as possible a common methodology was used as the basis for all technical papers; the importance of the receptor; the significance of effect; and confidence level. All technical papers conclude with an assessment of impacts and mitigation measures summarising the significance of effects in a tabular format.

### Study Area

6.7. The Study Area, unless otherwise defined in the Technical Chapters, has comprised the application site. In several cases, however, there has been a need to look at wider areas, e.g. the immediate locality, or the District as a whole when considering certain impacts.

### Difficulties in Compilation and Assessment

6.8. In line with Paragraph 8 of Schedule 4 of EIA Regulations this section identifies the difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information for the environmental assessment.

6.9. This relates to the cumulative assessment. ~~of HS2, due to the limited information that is available, the cumulative assessment is limited and as such high level and qualitative. This is~~

detailed within Section 9: Cumulative Assessment. Ordinarily, projects that are not committed development (i.e. those that do not have the benefit of planning permission), or not reasonably foreseeable, would not be included within the cumulative assessment. However, in this instance, given the national significance of the HS2 proposals, and the location of the potential future HS2 railway line proposed to the land immediately to the north, but outside of, the Proposed Development, and related HS2 construction and HS2 operational maintenance access, which would be partly within the Application Site, HS2 will form part of the cumulative assessment. This ES Addendum provides an update to the Cumulative Assessment which is based on the published information that is available to date and discussions that have been ongoing between the Applicant and HS2 since the submission of the Planning Application (details of these HS2 proposals are set out within Section 9 of this ES Part I Report – Interaction of Effects and Cumulative Impact and **Appendix I 4a-e**).

- 6.10. The ES Addendum is based upon the published information for the HS2 project and as such any assessment undertaken is based on the information that is available at this time and in some instances can therefore only be a high level qualitative assessment. To date HS2 have published a series of Safeguarded Plans identifying land requirements associated with the construction and operation of HS2 and a working draft environmental statement. This level of information is considered sufficient for the cumulative assessment despite the likelihood that further details around the design and construction may be contained within the publication of the HS2 Environmental Statement as part of the Bill to Parliament, anticipated during 2022.
- 6.11. For the HS2 development, there is no traffic data publically available for the construction or operational phases of the HS2 development. As such, first principles assumptions have been made as to the likely construction traffic associated with the HS2 construction phase within the vicinity of the Site, taking account of published information for Phase I of HS2 between London and the West Midlands. This enables a quantitative cumulative assessment to be undertaken, which builds on the qualitative cumulative assessment undertaken as part of the original ES (dated, August 2018). This data has therefore been utilised for the traffic, noise and air quality cumulative assessments.
- 6.12. The operational phase of the development is expected to consist of the occasional light vehicle in the vicinity of the Site, such as a small van, for maintenance purposes, which would not be material to the operational traffic for the Application Proposals and as such, does not lead to any further assessment.

## Study Process

6.13. The Scoping Report set out the methodology that will be applied to the assessment within all the technical reports. The EIA Regulations stipulate that an ES should, where possible, identify, describe and assess the likely significant effects of the development on the environment. The methodology has three stages to identify the significant effects:

- Receptors
- Environmental Impacts
- Significant Effects

## Receptors

6.14. The significance of an effect is relative to the sensitivity or quantity of a receptor. Receptors are set out in accordance with the magnitude of their importance. Some receptors are given relatively high levels of importance through legislation, such as designated conservation sites or world heritage sites. Determining the importance of other receptors can be more subjective. To maintain consistency in how receptors are considered, this Environmental Statement assesses each one in relation to the following hierarchy:

- International
- National
- Regional
- County
- Borough/District
- Local/Neighbourhood

6.15. Each environmental topic area within this Environmental Statement has outlined the relevant receptors and how they fit within the above hierarchy. The Environmental Statement provides an opportunity for consultees to have an input into the designation of each receptor. A plan of the Key Receptors is included as **Appendix 6**.

## Environmental Impacts

6.16. This Environmental Statement adopts the standard approach of assessing the impacts of the relevant area of the proposals. These impacts have been developed giving due regard to the following, taking account of the environmental protection objectives established at Union or Member state level which are relevant to the project (including 92/43/EEC (Habitats Directive) and 2009/147/EC (Birds Directive)):

- Beneficial and adverse effects
- Short, medium and long term effects
- Direct and indirect effects
- Secondary effects
- Permanent and temporary impacts
- Cumulative impacts

6.17. Each of the impacts assessed is categorised as being:

- Neutral
- Negligible
- Minor
- Moderate
- High
- Substantial

6.18. These impacts are classified as being either positive or negative.

## Significant Effects

6.19. Once the receptors and impacts have been established they need to be assessed against each other to provide the likely significant effects. Each of these will be considered in relation to the following:

- Extent and magnitude of the effect
- Effect duration (whether short, medium or long term)
- Effect nature (whether direct or indirect, reversible or irreversible)
- Whether the effect occurs in isolation, is cumulative or interactive

- Performance against environmental quality standards or other relevant pollution control thresholds
- Sensitivity of the receptor
- Compatibility with environmental policies

6.20. In order to define the magnitude of the effect the matrix below (table 6.1) has been developed. An effect will be categorised as being either:

- Substantial This **will** have a **significant** influence on decision making
- High This **may** have a **significant** influence on decision making
- Moderate This **will** have a **slight** influence on decision making
- Minor This **may** have a **slight** influence on decision making
- Negligible This **will not** have an influence on decision making
- Neutral This **will not** have **any** influence on the environment.

6.21. The interaction or cumulative impact or nature of these effects is also important. In isolation the lower categories may not have a significant influence on decision making however in combination with a number of other effects, the significance may be increased.

		Sensitivity Value of Receptor						
		International	National	Regional	County	Borough	Local	
Magnitude of Effect	Positive	Substantial	Substantial Benefit	Substantial Benefit	Substantial Benefit	High Benefit	Moderate Benefit	Moderate Benefit
		High	Substantial Benefit	Substantial Benefit	High Benefit	Moderate Benefit	Moderate Benefit	Minor Benefit
		Moderate	Substantial Benefit	High Benefit	High Benefit	Moderate Benefit	Minor Benefit	Minor Benefit
		Minor	Moderate Benefit	Moderate Benefit	Moderate Benefit	Minor Benefit	Minor Benefit	Minor Benefit
	Negative Impacts	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
		Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
		Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
		Minor	Moderate Adverse	Moderate Adverse	Moderate Adverse	Minor Adverse	Minor Adverse	Minor Adverse
		Moderate	Substantial Adverse	High Adverse	High Adverse	Moderate Adverse	Minor Adverse	Minor Adverse
		High	Substantial Adverse	Substantial Adverse	High Adverse	Moderate Adverse	Moderate Adverse	Minor Adverse
Substantial	Substantial Adverse	Substantial Adverse	Substantial Adverse	High Adverse	Moderate Adverse	Moderate Adverse		

Significance Matrix

Table 6.1 Significance Matrix

## Impact Prediction Confidence

6.22. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

**Table 6.2: Confidence Levels for Assessment**

## 7. Summary of Environmental Impacts

- 7.1. This section provides a summary of the environmental impact of the proposals. As highlighted in the earlier parts of this ES Addendum there are a series of Part 2 technical reports and their Addendums which accompany this Part 1 document which have been produced across a range of topics and should be referenced to understand the impact of the proposals. Providing all the necessary ES information in one composite document was considered to be too lengthy and as a result this Part 1 document provides a summary of the environmental impact, key mitigation measures and an appraisal of cumulative and interaction of effects.
- 7.2. All key receptors associated with each of the technical areas are identified on the plan within **Appendix 6**.
- 7.3. **Table 7.1** below provides a summary of the environmental impact across all of the topic areas. The table is structured to consider the nature of the impact, the mitigation measures to be employed where appropriate and the resulting residual impact. It should be noted however that the ES should be read as a whole and the Part 2 of the ES and its Addendum should be consulted for a detailed review of specific environmental effects.

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Geology and Ground Conditions</b>			
<b>Construction Phase</b>			
Introduction of additional contamination into soil, during construction phase as a result of accidental spillages ie. fuels.	Minor Adverse	Good practice during construction, bunded storage and spill control.	Negligible
Impacts on site and/or adjacent properties and infrastructure (including HP gas main) from unstable ground, slopes and/or excavations during construction.	Moderate Adverse	Good construction practice and design	Negligible
Impacts on construction workers as a result of ground gas on site.	Minor Adverse	Further SI and gas assessment. Good site practice and toolbox talk if necessary.	Negligible
Impacts on the site, surrounding area and/or construction workers as a result of the treatment of peat on site.	Moderate Adverse	Good construction practice and design	Negligible
Impacts dependent on method selected			

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Geology and Ground Conditions</b>			
<b>Operational Phase</b>			
Potential impact on soil/ground as a result of leakage from proposed fuel tanks and associated pipework or accidental spillage/leakage from vehicles (site users and delivery vehicles) during the operational phase.	Minor Adverse	Installation in accordance with guidance, on site monitoring, investigation in the event of an issue. Hardstanding cover. Fuel interceptors.	Negligible
Impacts both on site and on adjacent sites (including HP gas main) as a result of unstable ground or instability created from Peat Treatment or potential changes to topography	Moderate Adverse	Good construction practice and design	Negligible
Impacts on future users of the site as a result of ground gas.	Minor Adverse	Protection measures will be incorporated where necessary	Negligible

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**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Traffic and Transportation Technical Paper</b>			
<b>Construction Phase</b>			
Driver Delay	Negligible	None Required	Negligible
Pedestrian Delay	Negligible	None Required	Negligible
Pedestrian Amenity	Negligible	None Required	Negligible
Fear and Intimidation	Negligible	None Required	Negligible
Severance	Negligible	None Required	Negligible
Accidents and Road Safety	Negligible	None Required	Negligible
Public Transport Users	Negligible	None Required	Negligible

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Traffic and Transportation Technical Paper</b>			
<b>Operational Phase</b>			
Driver Delay	Negligible	None Required	Negligible
Pedestrian Delay	Negligible	None Required	Negligible
Pedestrian Amenity	Negligible	None Required	Negligible
Fear and Intimidation	Negligible	None Required	Negligible
Severance	Negligible	None Required	Negligible
Accidents and Road Safety at M62 J11	High Adverse*	None Required	High Adverse*
Accidents and Road Safety at Birchwood Way/Daten Avenue/Moss Gate junction	Negligible	None Required	Negligible
Accidents and Road Safety on M6 Motorway and M62 Motorway between existing services	Minor to Moderate Positive	None Required	Minor to Moderate Positive
Public Transport Users	Negligible	None Required	Negligible

\* two of the observed accidents informing this significance of effect involved drivers under the influence of alcohol. When these accidents are excluded from this analysis, this gives an accident rate of 1.00 accident per annum which is lower than the DMRB default of 1.23. In these circumstances the impact of the MSA on Accidents and Road Safety will be negligible based on Table 2.5.

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Water Resources</b>			
<b>Construction Phase</b>			
Earthworks including excavations: Excavation and sequential removal of the 1 topsoil and superficial deposits has the potential to reduce the pathway to the underlying groundwater (perched in peat and Till) and finally the bedrock aquifers therefore increasing the vulnerability of the aquifer groundwater to potential contamination/oil spills during construction.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Earthworks including excavations: Mobilisation of sediment, which could enter watercourse and waterbodies causing increased erosion altering deposition. This may also result in harm to aquatic flora and fauna.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Dewatering of excavations: Release of sediment and silt laden water from the discharge of water removed from excavations to watercourse and / or ground, which could cause a degradation in water quality.	Negligible	Good practice: measures in a CMP.	Negligible
Dewatering of excavations: Pumping of groundwater may cause a localised drawdown of the watertable and cause water in the surrounding area to be drawn into the excavations. May cause offsite contaminated groundwater to be draw into the Site	Minor, Negative	Good practise: measures in a CMP.	Minor, Adverse
Use of machinery and storage of chemicals onsite: Accidental spills or leakage of fuel and oil from machinery and storage onsite during the construction phase could affect the underlying groundwater and enter surface water watercourses and waterbodies and lead to a degradation of water quality.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Soil stripping and vegetation removal: Soil stripping reduces soil moisture storage capacity and may increases runoff and may lead to flooding.	Negligible	Good practice: measures in a CMP.	Negligible
Soil compaction: Compaction due to use of heavy machinery reduces infiltration, increases runoff and shortens the rainfall–runoff response and may lead to flooding.	Negligible	Good practice: measures in a CMP.	Negligible
Construction of impermeable surfaces such as roads/pavements: Reduction in recharge to the underlying aquifers therefore locally reducing groundwater levels. This will also increase runoff to surface water drains/ponds and may lead to flooding.	Minor, Negative	Good practice: good drainage design and SuDS.	Minor, Adverse
Construction of subsurface infrastructure such as foundations: Impede shallow groundwater flow which can cause groundwater mounding on the upgradient side and reducing groundwater levels on the downgradient side.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Use of cement and concrete: Accidental spills or leakage of fuel and oil from machinery and storage onsite during the construction phase could affect the underlying groundwater and enter surface water watercourses and waterbodies and lead to a degradation of water quality.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Use of cement and concrete: Leaching of cement / concrete into groundwater causing a degradation of water quality	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Removal of peat: The removal of peat could disrupt the hydraulic connection of adjacent peat leading to the remaining peat drying out.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Gas pipeline – retaining wall in peat: The retaining wall within the peat could disrupt the hydraulic connection of adjacent peat leading to the peat to the east of the Site drying out.	Minor, Negative	Good practice: measures in a CMP.	Minor, Adverse
Working in proximity to the water environment associated with the river diversion: Temporary disruptions and restriction to the watercourse channel to surface water flows, which may lead to flooding during periods high and prolonged rainfall.	Minor, Negative	Good practice: good design.	Minor, Adverse
Working in proximity to the water environment associated with watercourse crossing: Disruption/blockage of watercourse flow from watercourse crossing, which may lead to flooding.	Negligible	Good practice: good design.	Negligible

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Water Resources</b>			
<b>Operational Phase</b>			
Use of Motorised Vehicles and the storage of fuel and chemicals: Pollution from leaks or spills, which may cause a degradation in water quality	Minor, Negative	Good practise: petrol interceptors, maintenance schedule and emergency response plan.	Minor, Adverse
De-icing of roads, walkways and parking areas: The use of de-icing salts may cause the release of sodium chloride and anti-caking agents into the water environment may cause changes to water chemistry such as salination.	Minor, Negative	Good practise: follow measures for the use of de-icing and storage of salts onsite in British Standard: BS 3247:2011+A1:2016 Specification for salt for spreading on highways for winter maintenance and Highways Agency Trunk Road Maintenance Manual: Volume 2 – Routine and Winter Maintenance Code.	Minor, Adverse
Proximity to the water environment associated with watercourse crossing: Disruption/blockage of watercourse flow from watercourse crossing, which may lead to flooding	Negligible	Good practice: good design and maintenance schedule.	Negligible
Proximity to the water environment associated with river diversion: Changes to water flow speeds and water depth, may causes changes to the river upstream and downstream of the diversion, such as flooding and erosion.	Negligible	Good practice: good design.	Negligible
Peat used in habitat enhancement: The peat that is used on the Silver Lane Brook river diversion may encourage biodiversity in aquatic flora and fauna.	Minor, Positive	Consideration of planting of peatland flora in areas where natural regeneration may fail to establish.	Minor, Benefit
Creation of new drainage regime in developed areas of the Site: The creation of a new drainage regime may alter the amount of runoff within the surface water catchments, thereby altering the flow rates and volumes within the watercourses in these catchments. An increase in flow rates may lead to a corresponding increase in flood risk.	Negligible	Good practice: good drainage design and SuDS.	Negligible

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>ES Landscape Technical Paper</b>			
<b>Construction Phase</b>			
<i>Landscape Receptors:</i>			
National Character Area NCA 60. Mersey Valley	Negligible	No further mitigation proposed	Remains Negligible
LCT 2: Mossland Landscape 2B - Holcroft & Glazebrook Moss	Negligible to Minor Adverse	No further mitigation proposed	Remains Negligible to Minor Adverse
Salford Rural Mosslands Sub Area 2 LCA	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
The Application Site	Minor Adverse	Retention and enhancement of existing vegetation where feasible and early establishment of proposed vegetation. Security fencing rather than hoardings is also proposed to these more rural boundaries.	Remains Minor Adverse
Existing Built Form – Settlements	Negligible to Minor Adverse	No further mitigation proposed	Remains Negligible to Minor Adverse
Existing Built Form – Other Types of Development	Negligible	No further mitigation proposed	Remains Negligible
Landform/Topography	Negligible	Timely completion of excavations and early removal of stock piles for re-use to complete development platforms. Where possible the construction works will avoid placing stockpiled materials, equipment etc. on areas of the site which are at a higher elevation as well as those areas close to sensitive visual receptors	Remains Negligible
Vegetation including grassland, woodland and hedgerows	Minor Adverse	Appropriate protection (to BS5837: 2005 - Trees in relation to construction) is to be afforded to the trees and hedgerows to be retained within the site (and at any other points where existing trees and hedgerows are in close proximity to the development). Planting of proposed new trees, woodland and hedgerows within the scheme.	Remains Minor Adverse
Access	Minor Adverse	PRoW Footpath No. 13 will require appropriate segregation from construction areas and activities.	Remains Minor Adverse
Communication	Negligible	No further mitigation proposed	Remains Negligible
Land Use Pattern	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Surrounding farmland	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Water Bodies and Drainage Systems	Minor Adverse	Early management and maintenance of all new water bodies, in accordance with Landscape and Ecological Management Plan	Remains Minor Adverse
Recreation and The Wider Green Space Network	Minor Adverse	Early management and maintenance of all new landscape, in accordance with Landscape and Ecological Management Plan	Remains Minor Adverse
Lighting	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Landscape Condition	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Cultural Heritage/Historic Designations	Moderate Adverse	No further mitigation proposed	The author deems that significance is reduced to Negligible. This is supported following assessment of photomontage Photoviewpoint VPD.
Environmental Designations	Moderate Adverse	Regular and ongoing monitoring of positive and negative effects on surrounding areas. Liaison and agreement with relevant authorities.	Remains Moderate Adverse
<i>Key Representative Visual Receptors:</i>			
VPI (R1 Residential) (R5 Recreational)	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
VP4 (R2 Recreational)	Moderate Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Moderate Adverse
VP6 (R3 Recreational)	Moderate Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Minor Adverse
VP7 (R4 Recreational)	Moderate Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Minor Adverse
VPI0 (R6 Recreational)	Moderate Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Moderate Adverse
VPI4 (R7 Recreational)	Moderate Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Moderate Adverse
VPI6 (R8 Places of Work)	Minor Adverse	Construction stage planting of screening vegetation both within Site and on Site perimeters.	Remains Minor Adverse
VPI7 (R10 Transport)	Negligible	No further mitigation proposed	Remains Negligible
<i>Construction Related Impacts:</i>			

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
Temporary Visual Impact of HGV movements during Construction	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
Temporary Visual Impact of Storage of Site Materials, Equipment, Temporary Site Structures during Construction	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
Temporary Visual Impact of Topsoil and Subsoil Heaps	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
Temporary Visual Impact of General Building Works during Construction	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
Temporary Visual Effect of Hoardings at Street Level during Construction	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse
Temporary Visual Impact of Site Lighting during Construction	Minor Adverse	Construction stage planting of screening vegetation both within Site and on boundary with PRoW.	Remains Minor Adverse

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>ES Landscape Technical Paper Title</b>			
<b>Operational Phase</b>			
<i>Landscape Receptors:</i>			
National Character Area NCA 60. Mersey Valley	Negligible	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Remains Negligible
LCT 2: Mossland Landscape 2B - Holcroft & Glazebrook Moss	Minor Adverse to Negligible	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Remains Minor Adverse to Negligible
Salford Rural Mosslands Sub Area 2 LCA	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Remains Minor Adverse
The Application Site	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Reduces further as vegetation, particularly woodland, within the Site establishes to increase screening of views into the Site.
Existing Built Form – Settlements	Minor Adverse to Negligible	No further mitigation proposed	Minor Adverse to Negligible
Existing Built Form – Other Types of Development	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Landform/Topography	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting to integrate new landform into the surrounding landscape character	Reduces further as vegetation, particularly woodland within the Site establishes
Vegetation including grassland, woodland and hedgerows	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Reduces further as vegetation, particularly woodland within the Site establishes.
Access	Minor Adverse	No further mitigation proposed	Remains Minor Adverse
Communication	Negligible	No further mitigation proposed	The new road layout will be assimilated into the existing Communication network.
Land Use Pattern	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	Remains Minor Adverse
Surrounding farmland	Minor Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	The adverse effect will reduce further as woodland on the perimeter and within the Site establishes.
Water Bodies and Drainage Systems	Minor Benefit	Continuing management and maintenance of all new water bodies, in accordance with Landscape and Ecological Management Plan	Remains Minor Benefit
Recreation and The Wider Green Space Network	Minor Benefit	Continuing management and maintenance of all new landscape, in accordance with Landscape and Ecological Management Plan	Remains Minor Benefit
Lighting	Minor Adverse	Detailed design of lighting scheme to avoid excessive light spill into adjacent areas	Remains Minor Adverse
Landscape Condition	Minor Adverse	Continuing management and maintenance of all new landscape, in accordance with Landscape and Ecological Management Plan	The adverse effect will reduce further with continuing establishment and management of all new landscape.
Cultural Heritage/Historic Designations	Negligible to Moderate Adverse	Appropriate maintenance and management of new and existing woodland, tree groups, individual trees, hedgerows and groundcover planting.	The author deems that significance is reduced to Negligible. This is supported following assessment of photomontage Photoviewpoint VPD.
Environmental Designations	Negligible to Minor Adverse	Regular and ongoing monitoring of positive and negative effects on surrounding areas. Continuing liaison with relevant authorities.	Remains Negligible to Minor Adverse

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<i>Key Representative Visual Receptors:</i>			
VP1 (R1 Residential) (R5 Recreational)	Minor Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	The adverse effect will reduce further as vegetation establishes to the eastern site perimeter.
VP4 (R2 Recreational)	Moderate Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	Reduction to Minor Adverse effect as proposed tree planting to the west of the Facilities Building establishes to screen view of the building from this PRoW into the Site (see Photomontage Photoviewpoint VP4 (15 Years)).
VP6 (R3 Recreational)	Minor Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	Reduction of adverse effect as proposed woodland vegetation planted to the southern Site boundary establishes to screen views from this PRoW into the Site (see Photomontage Photoviewpoint VP6 (15 Years)).
VP7 (R4 Recreational)	Minor Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	Reduction of adverse effect as proposed woodland vegetation planted to the northern Site edge establishes to screen views from this PRoW into the Site (see Photomontage Photoviewpoint VP7 (15 Years)).
VP10 (R6 Recreational)	Moderate Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	Reduction to Minor Adverse effect as proposed woodland vegetation planted to the west of the Facilities Building, Service Yard and northern car park establishes to screen views from this PRoW into the Site (see Photomontage Photoviewpoint VP10 (15 Years)).
VP14 (R7 Recreational)	Moderate Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	Reduction to Minor Adverse effect as proposed woodland vegetation planted to the southern site perimeter establishes to screen views from this PRoW into the Site (see Photomontage Photoviewpoint VP4 (15 Years)).
VP16 (R8 Places of Work)	Minor Adverse	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	The adverse effect will reduce further as vegetation establishes to the northern site perimeter.
VP17 (R10 Transport)	Negligible	Continuing management and maintenance of all new vegetation, in accordance with Landscape and Ecological Management Plan	The adverse effect will reduce further as vegetation establishes to the southern site perimeter.

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>ES Part 2 – Ecology and Nature Conservation – Warrington MSA, J11 M62</b>			
<b>Construction Phase</b>			
Indirect localised hydrological modifications to Manchester Mosses (Astley and Bedford Mosses, Risley Moss and Holcroft Moss) SAC	Neutral	None	Neutral
Indirect localised hydrological modifications to Silver Lane LWS	Negligible	None	Neutral
Loss of vegetated Habitat (including section of Silver Lane Brook)	Minor Adverse	Creation of a wildlife corridor and re-alignment of Silver Lane Brook	Minor Benefit
Loss of trees and impacts to adjacent RPA's	Minor Adverse	Use of geocell/cell web and no dig methods to prevent damage within the RPA's of adjacent trees.	Minor Adverse
Loss and disturbance of bird breeding habitat	Minor Adverse	Time initial site clearance operations outside bird breeding season.	Minor Adverse
Loss and disturbance of wintering bird habitat	Minor Adverse	ECoW will monitor site works for to ensure no critical disturbance to wintering birds	Minor Adverse
Disturbance of Bat foraging habitat	Minor Adverse	CEMP controls regarding working times – no night time working allowed.	Neutral
Terrestrial and aquatic invertebrates	Minor Adverse	None	Minor Adverse
Incidental spread of Himalayan balsam	Minor Adverse	Removal measures to be included in CEMP	Neutral

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>ES Part 2 – Ecology and Nature Conservation – Warrington MSA, J11 M62</b>			
<b>Operational Phase</b>			
Air quality impacts leading to increased Nitrogen deposition to Manchester Mosses SAC	Negligible	None	Neutral
Accidental pollution and /or sediment transfer to Silver Lane LWS.	Minor	Measures included in drainage design for Development including fuel interceptors and SuDS	Neutral
Inundation and exceedance of surface water drainage network during extreme rainfall event, leading to erosion damage to habitats	Minor	Measures included in drainage design for Development including SuDS	Neutral
Disturbance to habitats including Silver Lane LWS by recreational users.	Minor	Signage improvements and clearly defined path network.	Neutral
Disturbance, of breeding and wintering bird assemblages on habitats adjacent to site.	Minor	Screening provided by landscape plantings	Neutral
Disturbance/displacement of foraging and commuting bats via vehicle movements and site lighting.	Minor	Screening provided by landscape plantings	Neutral
Loss of invertebrate populations through accidental pollution and / or sediment transfer	Minor Adverse (TBC)	Sediment and pollutant transfer controls in CEMP	Minor Adverse

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**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

<b>Nature of Impact</b>	<b>Significance of Impact</b>	<b>Mitigation / Enhancement Measures</b>	<b>Residual Impact</b>
<b>Socio-Economic</b>			
<b>Construction Phase</b>			
Population – Permanent increase in population within the Study Area.	Negligible	None Required	<b>Negligible</b>
Population - Future changes	Negligible	None Required	<b>Negligible</b>
Migration - Less out migration and more temporary in migration for employment opportunities in the Study Area	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Economy - Creation of £28.4 m net additional GVA within Warrington Area and the North West through construction of the scheme	High - Moderate Beneficial	None Required	<b>High - Moderate Beneficial</b>
Employment - Creation of 97 gross direct full-time-equivalent jobs – temporary construction within the Study Area and Warrington	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Employment - Creation of 15 FTE indirect / induced jobs – temporary construction within the Study Area and Warrington	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Employment – Direct employee training and skills development opportunities through Employment and Training Charters	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Employment - Creation of 8 construction apprentices within the Study Area	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Employment - Creation of 4 professional services apprentices within the Study Area	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Employment - Increase of the general employment provision and opportunities within the Study Area and Warrington	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Economy - Increased expenditure on local services and facilities within the Study Area and Warrington (impact on existing facilities)	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Increased opportunities to use sustainable transport methods across the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Increased demand for retail and leisure services within the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Disruption on definitive public bridleways and public rights of way	<b>Minor Adverse</b>	Provision of a Construction Environmental Management Plan	<b>Negligible</b>
Education – Increased demand on education services	Negligible	None Required	<b>Negligible</b>
Education, Skills & Training – Employment and Training Charters	Minor Beneficial	None Required	<b>Minor Beneficial</b>
Education, Skills & Training – Employee training, increased skills training, mentoring	Minor Beneficial	None Required	<b>Minor Beneficial</b>

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
and employability programmes and apprenticeships within the Study Area and Warrington			
Health & Wellbeing – Increased demand on health services	Negligible	None Required	Negligible
Health & Wellbeing - Impact on members of the public during the construction period – Noise	Minor Adverse	Provision of a Construction Environmental Management Plan	Negligible
Health & Wellbeing- Impact on workers during the construction period – Noise	Minor Adverse	Provision of a Construction Environmental Management Plan	Negligible
Health & Wellbeing - Impact on members of the public during the construction period – Air Quality	Minor Adverse	Series of mitigation measures as identified within the Air Quality Paper – Wheel washing etc	Negligible
Health & Wellbeing - Impact on workers during the construction period – Air Quality	Minor Adverse	Provision of a Construction Environmental Management Plan	Negligible
Crime - Increased opportunity for vandalism, crime and anti-social behaviour	Minor Adverse	Construction Management Strategy to include on site management and security	Negligible
Deprivation – local economic growth, increased employment opportunities and jobs, training, mentoring and apprenticeships opportunities within the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Image - Impact on members of the public during construction – visual	Minor Negative	Provision of a Construction Environmental Management Plan.	Negligible
Image - development seen as positive for the local economy and attract potential future investors and occupiers to the Study Area and Warrington	High Positive	None Required	Moderate / Minor Beneficial

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Socio-Economic</b>			
<b>Operational Phase</b>			
Population – Permanent increase in population within the Study Area.	Negligible	None Required	Negligible
Population - Future changes	Negligible	None Required	Negligible

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

<b>Nature of Impact</b>	<b>Significance of Impact</b>	<b>Mitigation / Enhancement Measures</b>	<b>Residual Impact</b>
Migration – Increase in temporary migration within the Study Area	Moderate Beneficial	None Required	Moderate Beneficial
Migration – Increase in temporary migration within Warrington	Minor Beneficial	None Required	Minor Beneficial
Migration – Increase in temporary migration within Cheshire	Minor Beneficial	None Required	Minor Beneficial
Increased opportunities to use sustainable transport methods across the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Address need for an MSA on Region Strategic Road Network	Substantial - High Beneficial	None Required	Substantial - High Beneficial
Improve road safety and help reduce road accidents on Region Strategic Road Network	Substantial – High Beneficial	None Required	Substantial - High Beneficial
Economy – Increased economic activity through safe and efficient Region’s Strategic Road Network	High - Moderate Beneficial	None Required	High - Moderate Beneficial
Economy – The development will generate approximately £1.05m in Annual Business Rates with 50% to be retained.	Moderate Beneficial	None Required	Moderate Beneficial
Economy - Enhance the locational appeal and attractiveness of the Study Area to investors and future occupiers.	Minor Beneficial	None Required	Minor Beneficial
Economy - Enhance the locational appeal and attractiveness of Warrington	Moderate Beneficial	None Required	Moderate Beneficial
Economy - Creation of £39m net additional GVA within Warrington and Cheshire through operation of scheme	High - Moderate Beneficial	None Required	High - Moderate Beneficial
Employment - Creation of 228 gross direct long-term accessible FTE jobs –within the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Employment – Direct employee training and skills development opportunities through Employment and Training Charters	Local / Borough	None Required	Minor Beneficial
Employment – Creation of 4 - 5 hospitality apprentices within the Study Area	Local / Neighbourhood	None Required	Minor Beneficial
Employment - Creation of 45 indirect /induced long term accessible FTE jobs – within the Study Area and Warrington	Local / Borough	None Required	Minor Beneficial
Employment - Increase of the general employment provision and opportunities within the Study Area and Warrington	Local / Borough	None Required	Minor Beneficial
Economy - Increased additional spend on local services and facilities within the Study Area and Warrington (impact on existing facilities)	Local / Neighbourhood	None Required	Minor Beneficial

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
Provision of landscaped amenity spaces and pedestrian and cycle links in the Study Area	Minor Beneficial	None Required	Minor Beneficial
Provision of links and enhance connections to wider local green network in the Study Area	Minor Beneficial	None Required	Minor Beneficial
Education – Increased demand on education services	Negligible	None Required	Negligible
Education, Skills & Training – Employment and Training Charters	Minor Beneficial	None Required	Minor Beneficial
Education, Skills & Training – Employee training, increased skills training, mentoring and employability programmes and apprenticeships within the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Health & Wellbeing – Increased demand on health services in the Study Area	Negligible	None Required	Negligible
Health & Wellbeing - Provision of walking and cycling routes and enhancing green infrastructure links for members of the local community reducing health deprivation in the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Crime – Reduced crime rates and crime related deprivation in the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Crime - Potential increase in crime on the site	Minor Adverse	The scheme has been designed to ensure maximum overlooking of users of the development, those using the walking and cycling routes and outdoor landscaped amenity areas, thus reducing opportunities for anti-social behaviour and criminal activity. The development will be monitored by a CCTV system combined with 24-hour on-site security.	Negligible
Deprivation – Improved levels of income and employment deprivation domain, education, skills and training deprivation domain, health deprivation and disability, and crime domain indices in the Study Area and Warrington	Minor Beneficial	None Required	Minor Beneficial
Image - Improved image of the Study Area and Warrington	Moderate Beneficial	None Required	Moderate Beneficial
Image - Improved image of Warrington	Moderate Beneficial	None Required	Moderate Beneficial
Image - Improved image of Cheshire	Moderate Beneficial	None Required	Moderate Beneficial

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
*Warrington MSA, J11 M62*

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Noise and Vibration</b>			
<b>Construction Phase</b>			
Change in baseline noise levels at existing sensitive receptor locations due to construction phase traffic	Negligible	None required	Negligible
Noise levels at existing sensitive receptor location due to construction phase activities	Minor Adverse	Best working practices	Negligible to Minor Adverse
Vibration at existing sensitive receptor location due to construction phase activities	Minor Adverse	Best working practices	Negligible to Minor Adverse

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Noise and Vibration</b>			
<b>Operational Phase</b>			
Change in noise at existing sensitive receptor locations due to operational phase traffic	Negligible	None required	Negligible
Noise from the operational phase of the proposed development from proposed sources of noise	Minor adverse to Negligible (brief periods of Moderate Adverse)	None required	Minor adverse to Negligible (brief periods of Moderate Adverse)
Noise from operational phase at Hotel	Moderate Adverse	Hotel glazing and ventilation	Negligible

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
*Warrington MSA, J11 M62*

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Air Quality, Dust and Odour</b>			
<b>Construction Phase</b>			
Change in baseline air quality at existing sensitive receptor locations due to construction phase traffic	Negligible	Ensure all vehicles switch off engines when stationary	Negligible
Change in baseline dust levels at existing sensitive receptor location due to construction phase activities	Minor Adverse	Various construction site management measures as part of the DMP	Negligible
Odour at locations where construction workers will be present, due to Restored Risley Landfill Site	Negligible	None required	Negligible

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Air Quality, Dust and Odour</b>			
<b>Operational Phase</b>			
Air quality at existing sensitive receptor locations due to operational phase traffic	Negligible	Various measures within the Travel Plan	Negligible
Odour at proposed sensitive receptor locations due to Restored Risley Landfill Site	Negligible	None required	Negligible

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**TABLE 9.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Technical Paper 9: Archaeology and Cultural Heritage</b>			
<b>Construction Phase</b>			
Construction impacts to Palaeoenvironmental deposits	Minor - Moderate Adverse	Palaeoenvironmental sampling to evaluate and characterise deposits, if present	Moderate Adverse
Construction impacts to stone revetted bank along Silver Lane Brook (potential historic boundary between Holcroft and Pestfurlong estates) (WA1)	Minor Adverse	Sectioning to evaluate and record the potential for and state of preservation of remains, if any	Minor Adverse
Construction impacts to buried remains of Pestfurlong Moss Farm (WA2)	Minor Adverse	Archaeological watching brief or strip and record (whichever is appropriate and agreed) potentially after a trial trench evaluation to evaluate the presence/ absence and condition	Minor Adverse
Construction impacts to buried remains of field boundaries relating to the Tith map of 1838	Minor Adverse	None required*	Minor Adverse
Construction impacts to enclosure (LiDAR)	Minor Adverse	None required*	Minor Adverse
Construction impacts to unknown buried remains	Minor Adverse	Palaeoenvironmental sampling to evaluate and characterise deposits, if present	Minor Adverse
Construction impacts to Historic Landscape (19th century fieldscapes)	Minor Adverse	None required*	Minor Adverse

\*These impacts would not be mitigated. This is either due to the lack of importance of the receptor and/ or as a consequence of the targeting of archaeological mitigation on other assets as highlighted by discussions with Mark Leah, Development Management Archaeologist for Cheshire.

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Technical Paper 9: Archaeology and Cultural Heritage</b>			
<b>Operational Phase</b>			
Effect to the setting of Holcroft Hall which would affect its heritage significance	Neutral	None required *	Neutral

**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Agricultural Land and Soils</b>			
<b>Construction Phase</b>			
i) Loss of all agricultural land within the Site either to built development or permanent change of land use to non-agricultural	Moderate to Minor Adverse	Not applicable	Moderate to Minor Adverse
ii) Creation of a high value ecosystem	Minor Benefit	Not applicable	Minor Benefit
2) Loss of soil resource	<del>Substantial High</del> to Moderate Adverse	Implementation of standard industry practice soil management measures such as those outlined in Defra's 2009 Guidance document "Construction Code of Practice for the Sustainable Use of Soils on Construction Sites".	Negligible
2) Loss of peat resource	Moderate Adverse	Implementation of standard industry practice soil management measures such as those outlined in SEPA's 2011 guidance "Restoration Techniques Using Peat Spoil from Construction Works", and the IUCN UK Peatland Programme and Yorkshire Peat Partnership's 2019, "Conserving Bogs: The Management Handbook" (2 <sup>nd</sup> Edition).	Negligible
3) Damage to soil resource resulting in impairment of function, quality and resilience	<del>Substantial High</del> to Moderate Adverse	Implementation of standard industry practice soil management measures such as those outlined in Defra's 2009 Guidance document "Construction Code of Practice for the Sustainable Use of Soils on Construction Sites".	Negligible
4) Damage to peat resource resulting in impairment of function, quality and resilience	Moderate Adverse	Implementation of standard industry practice soil management measures such as those outlined in SEPA's 2011 guidance "Restoration Techniques Using Peat Spoil from Construction Works", and the IUCN UK Peatland Programme and Yorkshire Peat Partnership's 2019, "Conserving Bogs: The Management Handbook" (2 <sup>nd</sup> Edition).	Negligible

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Agricultural Land and Soils</b>			
<b>Operational Phase</b>			
Not applicable			

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**TABLE 7.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
**Warrington MSA, J11 M62**

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Waste</b>			
<b>Construction Phase</b>			
Construction waste requiring removal off-site for recycling and recovery	Negligible	A SMWP will be adopted to manage construction wastes. Good practice measures will be applied to minimise waste generation, including: to avoid wasteful working practices; designing out waste; effective material management; hazardous waste management; modern construction methods; sustainable procurement; and, utilising supply chain partners. Implement opportunities to minimise construction waste generation. Strive to reuse/recycle excavation and construction materials onsite. Where this is not feasible reuse/recycle on other local construction projects.	Negligible
Construction waste requiring disposal at landfill	Negligible	A SMWP will be adopted to manage construction wastes. Good practice measures will be applied to minimise waste generation, including: to avoid wasteful working practices; designing out waste; effective material management; hazardous waste management; modern construction methods; sustainable procurement; and, utilising supply chain partners. Employ measures to recycle and recover construction wastes.	Negligible
<b>Operational Phase</b>			
Operational waste requiring removal off-site for recycling	Negligible	A SMWP will be adopted to manage operational wastes. A commercial partner will be appointed to manage all waste and recycling disposal. Good practice measures will be employed to achieve local targets and deliver services consistent with the waste hierarchy and proximity principles, promoting re-use, recycling and composting. Minimisation of operational waste arisings.	Negligible
Operational waste requiring removal off-site for EfW or disposal to landfill	Negligible	A SMWP will be adopted to manage operational wastes. A commercial partner will be appointed to manage all waste and recycling disposal. Good practice measures will be employed to achieve local targets and deliver services consistent with the waste hierarchy and proximity principles, promoting re-use, recycling and composting. Segregation of commercial waste arisings for recycling. Appropriate internal and external storage provision to achieve 50% recycling rate.	Negligible

**TABLE 13.1 SUMMARY OF ENVIRONMENTAL IMPACT**  
*Warrington MSA, J11 M62*

Nature of Impact	Significance of Impact	Mitigation / Enhancement Measures	Residual Impact
<b>Climate Change</b>			
<b>Operational Phase</b>			
The release of greenhouse gas emissions associated with the use of fuel and electricity, that will contribute to the effects of climate change.	Minor Adverse (High Negative)	Various measures outlined in the Energy Statement (Appendix 13.2). This covers aspects of building design to reduce demand, energy efficiency measures to reduce consumption and an assessment of potential viable renewable technologies that could be integrated into the building design. It was found that the size and proposed use of the site make it a feasible location to install a ground source heat pump system, either loop array or vertical borehole depending on geology and ground installation capacity, which has the potential to meet up to 48% of the site energy demand and offset 24.7% of site emissions. The implementation of renewable technology at this deployment would significantly exceed the local planning requirements set out in Policy QE1. It should be noted that these are recommendations and do not represent a formal commitment at this time.	Minor Adverse (Moderate Negative) - please see Technical Paper 13, section 9 for further explanation.

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## 8. Key Mitigation Measures

8.1. The evolution of the scheme has taken account of the following mitigation and as such this is inherent in the design of the proposals:

- Optimum site layout and consideration of construction phasing has resulted in minimal import and export of material during site construction and retention of material on site for re-use in construction.
- The indicative site layout (**Appendix 9**) shows that the Fuel Filling Station can be accessed close to the site entrance without having to navigate the entire site. HGV parking is located in the least obtrusive location. Car parking is to the front of the Facility Building creating a direct route towards the main entrance and the commercial units can be accessed without impacting on external amenity space. The arrangement of these elements reduces the potential for vehicular conflicts within the development site.
- Physical connections via foot and cycle paths are to be incorporated into the proposals, linking the site to the adjacent public right of way network
- Retention of existing vegetation (hedgerows and woodland belts) to the site perimeters as far as possible.
- New landscape planting throughout the Site and enhancement to the Site perimeter planting. Early establishment of this planting and habitats including native tree planting, species-rich grassland and scrub mosaic
- The Indicative Landscape Masterplan and the Biodiversity Offsetting Report indicate that approximately 0.57 hectares of woodland vegetation will be retained within the Site to be enhanced through additional planting, maintenance and management for both habitat and screening purposes.
- The Indicative Landscape Masterplan indicates that in excess of 2 hectares of tree and scrub vegetation will be planted within the Site. This will include the 1.61 hectares of mixed plantation woodland indicated within the Biodiversity Offsetting Report, smaller tree and scrub groups within and on the perimeter of car park areas. These will be maintained and managed for both habitat and screening purposes.
- Tree Protection Plans will be required to be prepared prior to construction works commencing in accordance with BS5837:2012. During the construction phase it is

important that specific responsibility for protecting and maintaining existing vegetation is identified.

- Easements provided to the high pressure gas main in line with PADHI Zone Guidance and discussions with the Health and Safety Executive.
- Silver Lane Brook diversion to enhance ecological habitats
- Peatland type habitat created to retain peat on Site and create an ecological habitat (see Section 4: Project Description for full details)
- Surface water drainage strategy to manage surface water within the Site
- Footpath diversion within the Site, within the Footpath Diversion Zone shown on the Parameter Plans (**Appendix 5**)
- Signalisation of the M62 J11 roundabout junction
- Opening of existing 'stub' to the north of the Site access junction to accommodate the Site access arm.
- Provision of pedestrian crossing and footways on eastern side of the M62 J11 roundabout, incorporated with the proposed signalisation of the junction.
- Provision of sufficient parking within the development to meet guidance in Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'.
- Additional lorry parking
- The heights and scale of the development have been established by the Parameters Plan), and are 'typical' for an MSA development.
- The Indicative Site Plan takes into account topography, and considers appropriate orientation of the proposed buildings.
- The indicative scheme has sought to reflect local design characteristics through urban form and materials.
- The indicative scheme has also sought to use existing public footpaths and local footpaths to connect the Application Site to the surrounding area.
- Sensitive lighting scheme

8.2. Management Plans will be required for habitats and peat and soil handling/relocation. The objectives of these are as follows:

Habitats:

- Design the channel profile with varied bank treatments and angles to provide a greater diversity of aquatic habitats, to include shallow berms, areas of dense marginal planting, alder and willow tree plantings.
- Design the realigned section with range of features of conservation benefit including in channel features and diverse marginal habitats. These will include riffles, areas of slow/static flow, deep peaty sediment;
- Design the route the realigned section of Brook to follow a more natural 'sinuous' form (where possible);
- Include specific mitigation features for aquatic and terrestrial invertebrates (including dragonflies and damselflies) as well as enhancements for fish, kingfisher and other 'Priority' species such as water vole;
- Create a wildlife corridor - linking habitats within the biodiverse landscaped areas on Site and Silver Lane Local Wildlife Site to the north and west;
- Marshy (acid) grassland: habitats will be established especially in the margins of the brook and within the easement of the HPGM.

#### Creation of Peat Habitat Zone:

- The translocated peat will be subject to a different and likely variable hydrological regime and a peatland type habitat will be created with variable peat depth and topography, providing a range of micro-habitats from dry to permanently wet; creating varied habitats for a range of flora and fauna.
- Plant material from 'high quality' peatland vegetation from nearby designated sites will be sourced where possible or existing established nurseries supplying those sites where re-vegetation is taking place, to ensure plants of local provenance establish on site.
- It is expected that the peatland habitat zone will receive water both from rain and from groundwater, given that the external bunds will be semi-permeable and hence allow a degree of continuity with external hydrology. It will therefore be possible to create hollows around groundwater level and to mound areas which will become largely dry heath vegetation. By creating a diversity of topography and habitats, the area will be more resistant to seasonal change as well as climate change.

- During the management phase, parts of the peatland habitat zone would be permitted to develop natural tree and scrub regeneration, with species such as birch willow and alder likely to self-seed from surrounding habitat. This would attract species such as willow warbler, willow tit, and reed bunting. In other areas, trees and scrub may be prevented from establishing, such as parts of the developing floristically diverse heathland and near to the proposed bog pools. This would benefit species of invertebrate that are reliant on open water.

8.3. **Table 8.1** below provides an overview of the key mitigation measures to be included as part of the proposals. Full details of mitigation measures can be found within the detailed Technical Papers which form Part 2 of the ES. These mitigation measures will form part of the development proposal and can be secured by planning condition or legal agreement where appropriate.

8.4. Many of the construction effects will be managed and reduced through the implementation of a Construction Environmental Management Plan (CEMP), a framework for which is attached at **Appendix 12**. There will be a need to carefully manage the handling and movement of peat and soil within the Site. This will be controlled through a Soil and Peat Management Plan (SPMP).

**Table 8.1 – Summary list of Mitigation Measures - Construction**

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
Geology and Ground Conditions	CEMP to include: <ul style="list-style-type: none"> <li>- Good practice measures</li> <li>- Bunded compound for fuels, oils and chemicals</li> <li>- Spill control and clean up measures</li> </ul>	CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.
	SPMP to: <ul style="list-style-type: none"> <li>- Maintain the quality of peat</li> <li>- Engineering measures to retain peat in a stable condition</li> </ul>	SPMP to be secured by planning condition and approved by WBC prior to the commencement of works associated with soil or peat handling on Site. SPMP to be implemented during construction.
	Further Site Investigation works	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site.
	Ground Gas Assessment	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site.

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
	Details and method statement for sheet piled walls for preventing movement around high pressure gas main	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
Traffic and Transportation	CEMP to minimize the level of disruption caused during construction.	CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.
Water Resources	SuDs or similar techniques and surface water storage to be provided as appropriate to balance storm events up to 1 in 100 year event with an allowance for climate change to be contained and managed on site	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
	Construction in line with good practice and CEMP to: <ul style="list-style-type: none"> <li>- control surface water drainage during construction</li> <li>- protect watercourses, groundwater and attenuation features</li> <li>- control release of sediment</li> <li>- ensure compliance with environmental permits and licenses</li> <li>- secure storage of fuels, oils and chemicals</li> <li>- integral drip trays for any static machinery/plant where practicable</li> <li>- Refuelling in designated areas</li> <li>- Pollution incident response plans</li> <li>- Update of water abstractions and private water supply data searches</li> <li>- Preparation of de-watering management plan</li> <li>- Management of concrete/cement mixes to prevent disposal</li> </ul>	CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.
	SPMP	SPMP to be secured by planning condition and approved by WBC prior to the commencement of works associated with soil or peat handling on Site. SPMP to be implemented during construction.
	Further Site Investigation works to determine if any further general pollution prevention measures and best practice design is required at detailed design stage	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site.
Landscape and Visual Impact	Maintenance and management of landscape planting (existing and proposed) – During construction	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
	<p>Ecological Management Plan - management of the new peatland habitat zone, brook realignment zone, existing tree lines, new woodlands and new meadows</p>	<p>Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site associated with brook diversion and creation of Peat Habitat Zone. Details approved to be implemented as agreed.</p>
	<p>CEMP:</p> <ul style="list-style-type: none"> <li>- Location of material storage, cabins, vehicle storage and plant storage</li> <li>- Avoidance of solid hoarding</li> <li>- Restriction on lighting where this is practicable</li> <li>- Good public relations and timely notification of specific construction events</li> </ul>	<p>CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.</p>
Ecology and Nature Conservation	<p>CEMP:</p> <ul style="list-style-type: none"> <li>- Pollution/sediment prevention measures</li> <li>- Updated survey of species, as required. Any change to baseline described and precautionary measures put in place</li> <li>- Invasive species control</li> <li>- Control of dust through suppression measures such as dampening down of roads and covering of storage areas</li> <li>- No access areas to minimize disturbance to habitats</li> <li>- Control of Himalayan balsam and Japanese rose, including monitoring of any regrowth and remediation action</li> </ul>	<p>CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.</p>
	<p>Habitat Management Plan to include habitat creation and management including for the realigned Silver Lane Brook corridor. Objectives of this Plan are included above within paragraph 8.2.</p>	<p>Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site associated with brook diversion and creation of Peat Habitat Zone. Details approved to be implemented as agreed.</p>
	<p>Ecological Clerk of Works (ECoW) (suitably qualified ecologist) to oversee all activities during construction</p>	<p>Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.</p>
	<p>Site clearance works to be undertaken outside of usual bird breeding season (March to July inclusive) where possible. If such timescales cannot be accommodated, a check for the presence of active nests, and nesting birds would be undertaken by a suitably qualified ecologist prior to the commencement of works. Any active nests would be identified and protected subject to the relevant legal provisions until the nesting attempt is complete.</p>	<p>Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.</p>

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
	Pre-construction surveys of proposed culverted section of Silver Lane Brook (water vole)	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
	Root protection measures, covering Root Protection Area, together with barrier protection	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
Socio-Economic	CEMP: - To minimize disruption to PROW - Measures to manage dust - Wheel wash facilities - Measure to control noise - On site management and security	CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
Noise and Vibration	<p>CEMP:</p> <ul style="list-style-type: none"> <li>- Best working practices</li> <li>- When works are taking place within close proximity to those sensitive receptors identified, screening of noise sources by temporary screens may be employed</li> <li>- All machinery should be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers</li> <li>- Site staff should be aware that they are working adjacent to a sensitive area and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting and radios</li> <li>- As far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor</li> <li>- Adherence to any time limits imposed on noisy works by the local authority</li> <li>- Implement set working hours during the week and at weekends</li> <li>- Ensure engines are turned off when possible</li> <li>- Notification to LPA of works overnight time, should these become necessary</li> <li>- Measures within BS5228-2 to manage vibration from piling, including: <ul style="list-style-type: none"> <li>• Keeping ground borne vibration to a minimum</li> <li>• Substitution: Where reasonably practicable, plant and or methods of work likely to cause significant levels of vibration at the receptors identified, should be replaced by less intrusive plant/methods of working</li> <li>• Isolation of plant at source: This may prove a viable option where the plant is stationary (e.g. a compressor, generator) and located close to a receptor.</li> </ul> </li> </ul>	<p>CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.</p>
Air Quality and Dust	<p>CEMP:</p> <ul style="list-style-type: none"> <li>- Dust mitigation Plan (DMP)</li> <li>- Best working practice including recommendations in the IAQM Guidance for dust such as dry materials and aggregates are handled and stored appropriately and use of wheel wash</li> <li>- Ensure vehicles switch off engines when stationary</li> </ul>	<p>CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.</p>
Archaeology and Cultural Heritage	<p>Palaeoenvironmental sampling to evaluate and characterize deposits if present.</p>	<p>Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.</p>

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
	Sectioning to evaluate and record the boundary between Holcroft and Pestfurlong estates.	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
	Archaeological watching brief or strip and record (whichever is appropriate and agreed) potentially after a trial trench evaluation to evaluate the presence/ absence and condition	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
Agricultural Land and Soils	<p>Standard industry practice for handling of soils (Defra 2009) including:</p> <ul style="list-style-type: none"> <li>- The handling of topsoil resources only when sufficiently dry to prevent compaction and damage to soil structure; or implementing strict procedures for the wethandling of soils incorporating amelioration and restoration measures to reverse any damage which may occur for example through compaction.</li> <li>- The handling and maintenance of deeper peats in a wet state to prevent drying and oxidation.</li> <li>- The separate stripping, handling, storage and transportation of different soil layers (topsoils, subsoils and peat) and soil types if there is variation across the Site.</li> <li>- Appropriate seeding of soil storage mounds if required for a period longer than six months, to prevent erosion and to maintain soil structure, nutrient content and biological activity;</li> <li>- De-compacting of the subsoil before topsoil re-instatement; and</li> <li>- Minimising the number of machine movements across topsoil and defining haul routes to reduce compaction and retain soil structure.</li> </ul>	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.
	<p>Site specific SPMP produced by a qualified scientist:</p> <ul style="list-style-type: none"> <li>- Re-use soil where possible with any surplus topsoil removed from site and made available for beneficial reuse elsewhere</li> <li>- Maintain quality of peat and remains in condition suitable for re-use on Site to create a peatland type habitat</li> </ul>	SPMP to be secured by planning condition and approved by WBC prior to the commencement of works associated with soil or peat handling on Site. SPMP to be implemented during construction.
	Standard industrial practice for handling of peat (SEPA 2011)	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works on Site. Details approved to be implemented as agreed.

ES Topic Area	Mitigation Measure - Construction	Implementation and Timing of Mitigation
	Detailed design of Peat Habitat Zone (PHZ)	Requirement to be secured by planning condition and approved by WBC prior to the commencement of works associated with handling/movement of peat on Site. Details approved to be implemented as agreed.
Climate Change (energy and sustainability)	-	
Waste	<p>CEMP:</p> <ul style="list-style-type: none"> <li>- Implementation of measures to reduce construction waste</li> <li>- Strive to re-use/recycle construction materials on Site and where not feasible re-use/recycle on other local projects</li> <li>- Employ measures to recycle and recover waste</li> </ul>	CEMP to be secured by planning condition and approved by WBC prior to the commencement of construction. CEMP to be implemented during construction.

**Table 8.2 – Summary list of Mitigation Measures - Operation**

ES Topic Area	Mitigation Measure - Operation	Timing of Mitigation
Geology and Ground Conditions	In order to mitigate the risks from leakage of fuel tanks, the installation of the tanks will be in accordance with guidance provided by the Association for Petroleum & Explosives Administration (The Blue Book). To include good site practice and the following: <ul style="list-style-type: none"> <li>- The new tanks will have secondary containment measures (i.e. double skin) and will be fitted with an interstitial monitoring device with automatic alarm;</li> <li>- The new tanks will be fitted with overfill prevention; and</li> <li>- Pipework will be installed with a minimum number of joints.</li> </ul>	Requirement to be secured by planning condition and approved by WBC prior to the construction of each phase of development. Details approved to be implemented as agreed.
	As part of the drainage system, all surface water run-off will be intercepted via surface water drains and stored temporarily in order to release to the watercourse at a slower rate (agreed greenfield rate). To mitigate the risk of substances being carried within the run-off, fuel interceptors will be incorporated within the drainage design to remove any hazardous substances which might be present. The interceptors will be subject to regular maintenance and inspections to ensure they are functioning correctly.	Requirement to be secured by planning condition and approved by WBC prior to the construction of each phase of development. Details approved to be implemented as agreed.

ES Topic Area	Mitigation Measure - Operation	Timing of Mitigation
	Gas protection measures will be incorporated into the detailed design to mitigate any risk to future occupiers.	Requirement to be secured by planning condition and approved by WBC prior to the occupation of the development. Details approved to be implemented as agreed.
Traffic and Transportation	<p>Travel Plan. To be designed to minimize the level of vehicle trips associated with staff trips to the Development. To include:</p> <ul style="list-style-type: none"> <li>- appointment of a travel plan co-ordinator</li> <li>- Travel details via the Site's website, notice boards and dedicated Travel Packs for staff</li> <li>- Staff mini bus service between the Site and Birchwood Railway Station</li> <li>- Contribution towards the PROW network to the north of the M62 connecting the Site to Culcheth, as well as along Silver Lane south of the M62 Motorway and/or links that run adjacent to Birchwood Way to the south of the M62</li> </ul>	<p>Requirement to be secured by planning condition and approved by WBC prior to the occupation of each phase of development. Details approved to be implemented as agreed.</p> <p>Contributions towards off Site PROW enhancements to be secured through a S106 Legal Agreement</p>
Water Resources	Surface water drainage details to be designed at detailed design stage to control surface water runoff and provide treatment of runoff during operation as detailed within Section 9 of the Water Resource ES Technical Paper, ES Part 2.	Requirement to be secured by planning condition and approved by WBC prior to the construction of each phase of development. Details approved to be implemented as agreed.
	Maintenance and management of all drainage systems in accordance with best practice/guidance	Extra operational and maintenance management team
	Maintenance and management plan (or equivalent) for watercourse crossing; river direction pump; SuDS pond; road condition including potholes; and drains, sewage pipes and petrol interceptors.	Requirement to be secured by planning condition and approved by WBC prior to construction. Details approved to be implemented as agreed.
	The British Standard: BS 3247:2011+A1:2016 Specification for salt for spreading on highways for winter maintenance and Highways Agency Trunk Road Maintenance Manual: Volume 2 – Routine and Winter Maintenance Code, should be following for the use of de-icing and storage of salts onsite.	Requirement to be secured by planning condition and approved by WBC prior to the occupation of each phase of development. Details approved to be implemented as agreed.
Landscape	Maintenance and management of landscape planting (existing and proposed) – Landscape and Habitat Management Plan outlining works for a 15 year period	Requirement to be secured by planning condition and approved by WBC prior to the occupation of each phase of development. Details approved to be implemented as agreed.

ES Topic Area	Mitigation Measure - Operation	Timing of Mitigation
	Ecological Management Plan - management of the new peatland habitat zone, brook realignment zone, existing tree lines, new woodlands and new meadows	Requirement to be secured by planning condition and approved by WBC prior to the commencement of construction on Site. Details approved to be implemented as agreed.
Ecology and Nature Conservation	Sensitive lighting scheme along the diverted brook corridor	Requirement to be secured by planning condition and approved by WBC prior to the installation of lighting for each phase of development. Details approved to be implemented as agreed.
	Habitat Management Plan to include - Programme of vegetation monitoring to consider any remedial action to ensure the development of wildlife corridor habitats along the route of the diverted Silver Lane Brook corridor. Including checks to hydrological conditions o relocated peat deposits, to ensure they remain wet, and develop a typical peatland flora. Species composition of newly created habitats will be monitored by vegetation survey.	Requirement to be secured by planning condition and approved by WBC prior to the commencement of construction on Site. Details approved to be implemented as agreed.
Socio-Economic	On site security	Implemented by Applicant during operational phase.
	Local Employment Agreement	Requirement to be secured by planning condition and approved by WBC prior to occupation. Details approved to be implemented as agreed.
Noise and Vibration	Standard thermal double glazing to hotel bedrooms with acoustic ventilation to comply with Building Regulations	Requirement to be secured by planning condition and approved by WBC prior to the occupation of the hotel. Details approved to be implemented as agreed.
Air Quality and Dust	Travel Plan to minimize level of vehicular use associated with staff trips. Appointment of a Travel Plan Co-ordinator. Promote travel details via Site's website, on notice boards and in dedicated Travel Packs for staff.	Requirement to be secured by planning condition and approved by WBC prior to the occupation of each phase of development. Details approved to be implemented as agreed.
Archaeology and Cultural Heritage	Detailed design considerations associated with: <ul style="list-style-type: none"> <li>- landscape planting to eastern boundary</li> <li>- retention of existing trees and vegetation to the eastern boundary</li> <li>- building design to reflect local building typologies e.g. agricultural building typology with mass broken down through form</li> <li>- lighting to conform to best practice</li> </ul>	Requirement to be secured by planning condition and approved by WBC prior to construction of each phase. Details approved to be implemented as agreed.

ES Topic Area	Mitigation Measure - Operation	Timing of Mitigation
Agricultural Land and Soils	See Ecology and Nature Conservation (Landscape and Habitat Management Plan)	See Ecology and Nature Conservation (Landscape and Habitat Management Plan)
Climate Change (energy and sustainability)	Measures implemented to meet policy requirement of 10% of site energy demand from renewable technology, e.g. ground source heat pumps operating on grid electricity	Requirement to be secured by planning condition and approved by WBC prior to construction of Facilities Building. Details approved to be implemented as agreed.
Waste	Minimisation of operational waste and segregation of commercial waste arising from recycling. Provide appropriate internal and external storage provision to achieve 50% recycling rate	Requirement to be secured by planning condition and approved by WBC prior to occupation. Details approved to be implemented as agreed.

8.5. Monitoring of elements of mitigation will be as follows:

- Ecology – vegetation and habitat – Measures and Monitoring requirements will be set out within the Landscape and Habitat Management Plan
- Ground gas – monitoring will take place as part of detailed design proposals to inform gas protection measures

## 9. Interaction of Effects and Cumulative Impact

- 9.1. In respect of the assessment of cumulative effects, Schedule 4 of the EIA Regulations states that an Environmental Statement must include a description of the likely significant effects of the development on the environment resulting from *'the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources'* (Schedule 4 (5)(e)).
- 9.2. In respect of the assessment of the interaction of effects, Regulation 4 (2) of the EIA Regulations requires a description and assessment in an appropriate manner, of the direct and indirect significant effects of the proposed development on the interaction of the factors assessed within the ES (i.e. population and human health; biodiversity; land, soil, water and climate; and material assets, cultural heritage and the landscape).
- 9.3. For the purposes of this ES we define the cumulative and the interaction of effects as:

***'Those that result from additive impacts (cumulative) caused by other existing and/or approved projects together with the project itself and the synergistic effects (in-combination) which arise from the reaction between impacts of the project on different aspects of the environment.'***

- 9.4. The additive impacts and their effects and the synergistic effects are considered in turn below.

### Additive Impacts (Cumulative Impacts and their Effects)

- 9.5. It is not the role of an Environmental Statement to assess every theoretical possibility that may come forward, but to look at the reasonable likelihood of a development occurring. Assessment should be of the likely significant effects and be proportionate. It is the assessment of the accumulation of, and interrelationship between, effects which might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place. Thereby, assessing the likely residual effects as a result of the interrelationship between the proposed and cumulative sites.
- 9.6. The overarching National Planning Statement (NPS) for Energy (EN-1) 2011 states that:

“when considering cumulative effects assessment, the ES should provide information on how the effects of the applicant’s proposal would combine and interact with the effects of other developments”.

9.7. Mrs Justice Patterson put it succinctly in R (Kahn) -v- The London Borough of Sutton and Viridor Waste (Thames) Limited and Thames Water Utilities Limited and South London Waste Partnership (2014):

"The key is that the Environmental Statement in the EIA Regulations is only required to include such information as is reasonably required to assess the environmental effects of the development and which the applicant can reasonably be required to compile having regard to current knowledge."

9.8. The European Commission document "Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Actions" is helpful in this regard. At paragraph 4.2.1 it states the following:

"There are limitations in defining the area and time boundary that would be affected by the project. For example, it is only reasonable to consider current events and those that will take place in the foreseeable future. Furthermore assessment can only be based on the data that is readily available. There needs to be a cut-off point at which it can be said that the impacts cannot be reasonably attributed to the project. This should be established."

9.9. The Planning Practice Guidance only requires "regard to the possible cumulative effects arising from any existing or approved development". It does not require the assessment of possible future speculative development options.

9.10. The developments that are likely to have a cumulative impact when considered with the proposed development have been scoped with the Local Authority and Key Consultees during the preparation of this ES in order to produce a list of agreed projects to be considered cumulatively.

9.11. The following table (Table 9.1 and 9.2) includes the list of cumulative developments that are to be assessed in this ES. As per the EIA Regulations, these include other existing and/or approved

projects and as such, those with planning permission that are not yet built, in the vicinity of the Application Site. The exception to this is the consideration of HS2. Ordinarily, projects that are not committed development (i.e. those that do not have the benefit of planning permission), or not reasonably foreseeable, would not be included within the cumulative assessment. However, in this instance, given the national significance of the HS2 proposals, and the location of the potential future HS2 railway line proposed to the land immediately to the north, but outside of, the Proposed Development, and related HS2 construction and HS2 operational maintenance access, which would be partly within the Application Site. HS2 will form part of the cumulative assessment. This will be based on the published information that is available to date. ~~However, it should be noted that the Proposed Development would be constructed and operational at a similar time to the current identified advanced works for HS2, which are programmed ahead of HS2 construction works.~~

9.12. In light of the recent Integrated Rail Plan, published by the Department for Transport in November 2021, it is apparent that the Golborne Link, which is proposed to pass to the north/northeast of the Application Site, is the subject of further review as part of the 'Union Connectivity Review' looking at the faster and higher capacity connections from HS2 to Scotland. As confirmed within the Integrated Rail Plan, this includes consideration of alternatives to the Golborne Link from the HS2 Line to the East Coast Mainline. The 'Union Connectivity Review' Final Report was published in November 2021. It concludes that there may be other alternative connections between HS2 and the West Coast Main Line (rather than the Golborne Link) and that more work is required to better understand the case for and against these options. Notwithstanding this further assessment, HS2 Ltd have confirmed that the Safeguarding Directive and associated plans (dated 2020 and 2021, Appendix 14c) remain in place and therefore the cumulative assessment is based on the timeline agreed with HS2, which is also based on published information available to-date from HS2.

9.13. This ES Addendum provides an updated cumulative assessment in order to take account of published information made available by the Secretary of State for Transport and HS2 since the original ES was prepared in August 2018. It should however, also be noted that there is still limited information available for the HS2 project and as such any assessment undertaken is based on the information that is available to date and, in ~~many~~some instances, can therefore only be a high level qualitative assessment. It is important that the cumulative assessment does not speculate on the potential impacts of other development, so where there is not sufficient

information available or the proposals are not relevant to the other technical areas, a cumulative assessment has not been undertaken.

- 9.14. These limitations and uncertainty in the assessments are fully set out within Section 6 (difficulties in Compilation and Assessment) and Section 9 (Interaction of Effects and Cumulative Impact) of this ES Part I Addendum, as well as Section 10 (Additive Impacts (Cumulative Impact and their Effects)) within each of the Technical Paper Addendums within Part 2 of this ES Addendum.
- 9.15. For the HS2 development, there is no traffic data publically available for the construction or operational phases of the HS2 development. As such, first principles assumptions have been made as to the likely construction traffic associated with the HS2 construction phase within the vicinity of the Site, taking account of published information for Phase I of HS2 between London and the West Midlands. This enables a quantitative cumulative assessment to be undertaken, which builds on the qualitative cumulative assessment undertaken as part of the original ES (dated, August 2018).
- 9.16. The operational phase of the development is expected to consist of the occasional light vehicle in the vicinity of the Site, such as a small van, for maintenance purposes, which would not be material to the operational traffic for the Application Proposals and as such, does not lead to any further assessment.
- 9.17. The Traffic data utilised in the Traffic and Transport, Noise and Air Quality Assessments as part of the main environmental assessment of the Proposed Development has assumed a number of committed developments as part of the future baseline traffic flows. This includes the Birchwood Park developments (numbers 1 and 2 in the table below). Whilst no background growth was applied for the turning movements at Junction 11 of the M62 Motorway, due to consideration of the Birchwood Development; the traffic data assumed traffic growth for more distant developments by applying factors calculated from Temprow to the M62 Motorway mainline traffic. This therefore takes account of any influence on growth resulting from improved network capacity (for example, in the North West this includes the Smart Motorway scheme on the M6 Motorway and M62 Motorway). This assessment does not therefore need repeating for the cumulative assessment, as it already features in the environmental assessment for the Development Proposals.

9.18. The agreed list of cumulative development is shown in the table below (table 9.1 and 9.2). These are also shown geographically on the plans included at **Appendix I4**:

	Cumulative Development	Status	Technical Areas to consider cumulative development	Technical Areas where cumulative development is not relevant
1	The Quadrant, Cavendish Avenue, Birchwood Park, Warrington, WA3 6AE  Application Ref: 2014/23358	Seven units for general industry and/or warehouse/distribution (Use Class B2 and/or B8) Area 7 of 3.64ha site area 12,225m <sup>2</sup> of development Within area 7 of original outline permission g Planning Permission Granted 12-08-2014		Traffic and Transport, Noise and Air Quality consider the impacts of traffic associated with the committed development within the main assessment, so it is not reconsidered as part of the cumulative assessment.
2	Eastern Edge of Birchwood Park Plots 107, 300, 501-502, 611-612, 701-702 and Quadrant, Birchwood Park, Warrington, WA3 6AE  Application Ref: 2015/26044	Part developed. Outline Planning Permission Granted 29-10-2015 (10 year permission) Demolition of existing buildings and erection of new buildings for a combination of offices (B1); light and general industrial (B1/B2); warehousing development (B8) and ancillary retail/ financial & professional services/ non-residential institutions/ assembly and leisure (A1/A2/D1/D2) floor space.	<ul style="list-style-type: none"> <li>- Socio Economic</li> <li>- Waste</li> <li>- Air Quality (dust and PM<sub>10</sub> during construction)</li> <li>- Noise (during construction)</li> </ul>	<p>Given the distance from the site, its detachment from the site and context set within an industrial estate, it is not relevant to the following technical areas:</p> <ul style="list-style-type: none"> <li>- Ground Conditions and Contamination</li> <li>- Water Resources</li> <li>- LVIA</li> <li>- Ecology and Nature Conservation</li> <li>- Cultural Heritage and Archaeology</li> <li>- Agricultural Land and Soils</li> <li>- Climate Change</li> </ul>
3	HS2 (adjacent to the Site)	Land safeguarded for the HS2 route Government consultation:  Current programme: Advanced works Q4 2022 Development Q4 2024 Commissioning Q4 2031 – Q3 2033	<ul style="list-style-type: none"> <li>— Water Resources</li> <li>— Ecology and Nature Conservation</li> <li>— Agricultural Land and Soils (construction)</li> <li>— LVIA</li> <li>— Cultural Heritage (construction)</li> <li>— Socio-Economic</li> <li>— Air Quality (construction)</li> </ul>	<ul style="list-style-type: none"> <li>— Traffic and Transport (construction – lack of available information for traffic movements)</li> <li>— Air Quality and Noise (in respect of traffic movements associated with construction due to the lack of information available)</li> <li>— Noise (HS2 is considered in main assessment, so not reconsidered as part of the cumulative)</li> <li>— Waste</li> <li>— Geology and Ground Conditions</li> <li>— Climate Change</li> </ul>

**Table 9.1: List of Potential Cumulative Development**

9.19. Consideration of the additional HS2 information within this ES Addendum’s cumulative assessment is set out in the table below:

<u>Cumulative Development</u>	<u>Status</u>	<u>Technical Areas to consider additional HS2 cumulative development information</u>	<u>Technical Areas where cumulative development remains as assessed within the original ES (August 2019)</u>
HS2	<p>Land safeguarded for the HS2 route (2020 and additional Map Book plans 2021)</p> <p>Current programme: Advanced enabling works 2025-2027 Construction 2025-2035/2040 Operation 2035-2040</p>	<ul style="list-style-type: none"> <li>- Geology and Ground Conditions</li> <li>- Traffic and Transport</li> <li>- Water Resources</li> <li>- Ecology and Nature Conservation</li> <li>- Agricultural Land and Soils (construction phase only)</li> <li>- LVIA</li> <li>- Cultural Heritage</li> <li>- Noise</li> <li>- Air Quality</li> <li>- Climate Change</li> </ul>	<p>No change to the Cumulative Development Assessment:</p> <ul style="list-style-type: none"> <li>- Socio Economic</li> </ul> <p>Cumulative Development Assessment not relevant:</p> <ul style="list-style-type: none"> <li>- Waste (lack of available information)</li> <li>- Noise Operational (undertaken as part of the assessment of the Application Site)</li> </ul>

**Table 9.2 Technical Areas to considered additional cumulative assessment in this ES Addendum**

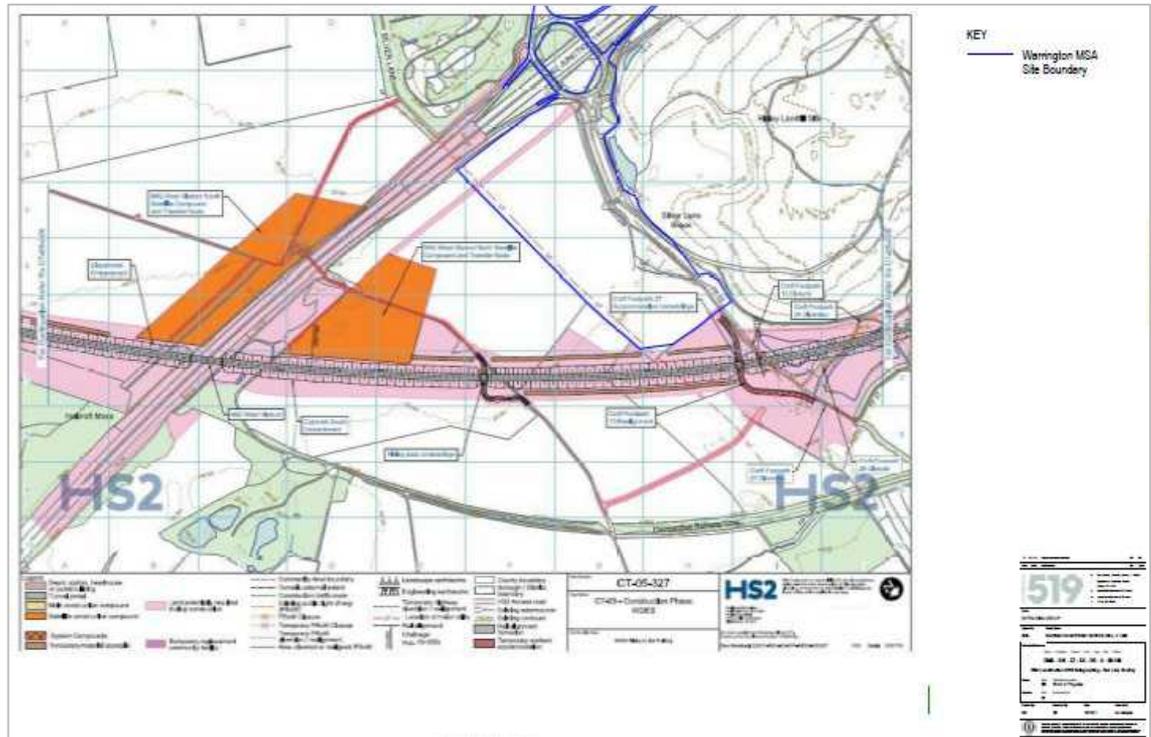
9.20. The below subsections set out our assumptions in respect of the assessment of the HS2 development as part of the cumulative assessment and the information that is currently available.

### **HS2 Documentation**

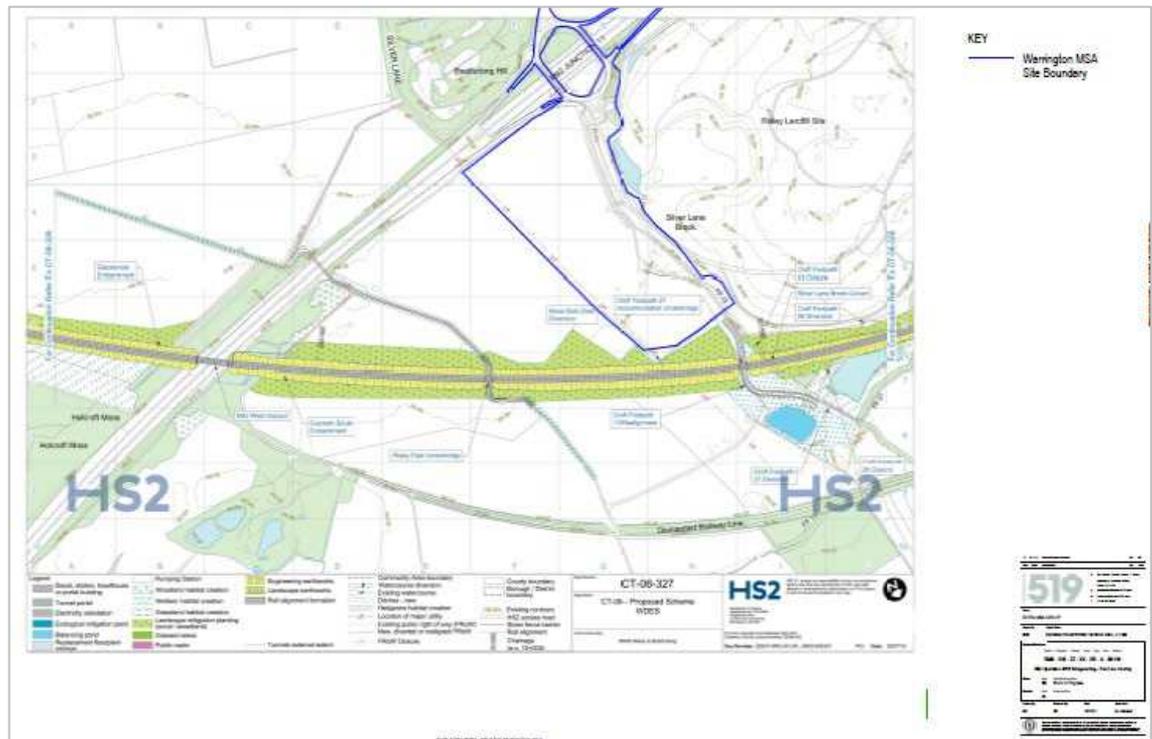
9.21. The information available when the original cumulative assessment was undertaken and reported within the original ES (dated August 2019) was as follows:

- Safeguarding Plan – October 2018
- High Speed Rail (Crewe to Manchester and West Midlands to Leeds) Working Draft Environmental Statement: Vol 1(October 2018)
- High Speed Rail (Crewe to Manchester and West Midlands to Leeds) Working Draft Environmental Statement: Vol 2: Community Area report (MA05 Risley to Bamfurlong) (October 2018)
- High Speed Rail (Crewe to Manchester and West Midlands to Leeds) Working Draft Environmental Statement: Vol 2: Community Area map book (MA05 Risley to Bamfurlong) (October 2018)
- High Speed Rail (Crewe to Manchester and West Midlands to Leeds) Working Draft Environmental Statement: Vol 3: Route-wide effects (October 2018)
- High Speed Rail (Crewe to Manchester and West Midlands to Leeds) Working Draft Environmental Statement: Non-technical Summary (October 2018)

9.22. The HS2 Working Draft Environmental Statement dated October 2018 included a strip of land for a construction access for HS2 through the Application Site as shown below (and **Appendix I4b**):



**Figure 9.1: HS2 Working Draft Environmental Statement, October 2018, Construction Phase (with Application Site shown with a blue line)**



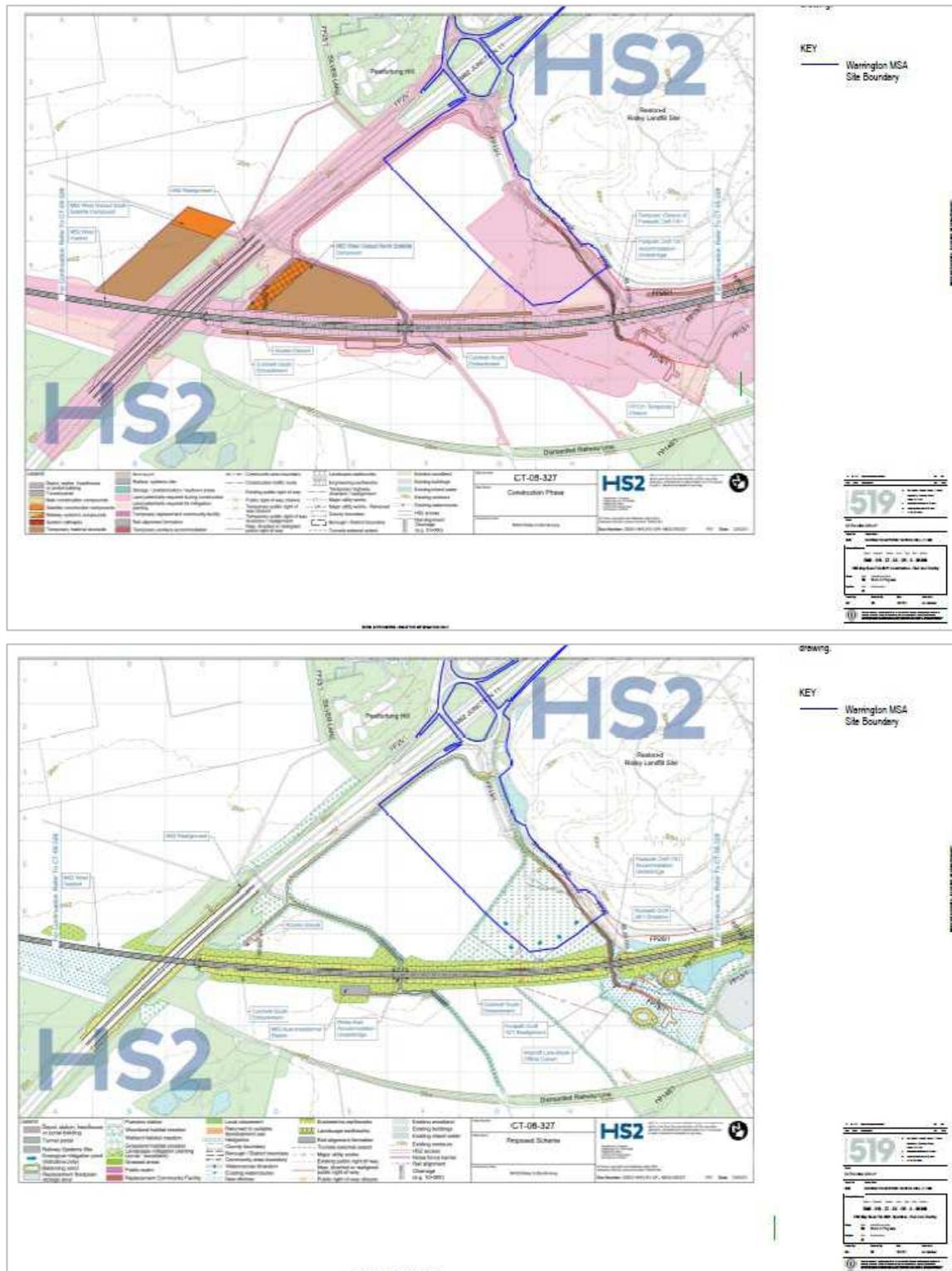
**Figure 9.2: HS2 Working Draft Environmental Statement, October 2018, Operational Phase (with Application Site shown with a blue line)**

9.23. Further information has been made available by the Secretary of State for Transport and HS2 which therefore now informs this ES Cumulative Assessment Addendum:

- Safeguarding Direction October 2020 (Phase 2B: Crewe to Manchester, Volume 2: Warrington Trafford, Wigan)
- High Speed Two Phase 2b Western Leg (Crewe to Manchester and beyond) Route wide Update. Community Area map book (MA05 Risley to Bamfurlong) (June 2021)
- Union Connectivity Review, Interim Report, March 2021
- Integrated Rail Plan, November 2021
- Union Connectivity Review, Final Report, November 2021

9.24. On 7<sup>th</sup> October 2020, the Secretary of State for Transport issued updated Safeguarding Directions in relation to Phase 2b: the Western leg (Crewe to Manchester), which increased the area of the Application Site already affected by Safeguarding Directions. The area shown





**Figure 9.4 and 9.5: Map Books (February 2021) Construction and Operation Phase for HS2 (with Application Site shown with a blue line)**

- 9.26. In addition to the Safeguarding Directions, detailed engagement has been ongoing between the Applicant's consultant team and the HS2 team through the determination of the Planning Application and beyond, in order to understand and agree how the Warrington MSA Project and the HS2 Project can come forward together without prejudicing the delivery of HS2. Through agreement by both parties to a legal agreement and appropriate planning conditions, the HS2 team confirmed that their previous holding objection could be removed as the HS2 team was satisfied that the objectives of the Safeguarding Directions were not compromised (letter dated 29 July 2021, **Appendix I4d**). Subsequently, a Statement of Common Ground has also been agreed with HS2, confirming their position with regards to the two developments being able to come forward without prejudicing HS2 (**Appendix I4e**).
- 9.27. The following plans (included at **Appendix I4f**) and data forms the basis of the ES Addendum Cumulative Assessment, which are informed by the Safeguarding Plans and direct discussions with HS2 to identify land required by HS2 for the construction and operation of the HS2 development:
- ES Cumulative (Indicative) - HS2 Construction Phase – Parameter Plan
  - ES Cumulative (Indicative) - HS2 Construction Phase – Indicative Site Plan
  - ES Cumulative (Indicative) – HS2 Operation Phase - Parameter Plan
  - ES Cumulative (Indicative) – HS2 Operation Phase - Indicative Site Plan
  - ES Addendum Plans – Sketch 1 – Southern Access – Construction Indicative
  - ES Addendum Plans – Sketch 2 – HS2 Northern Access (Indicative)
  - ES Addendum Plans – Sketch 3 – HS2 Southern Access – Operational (Indicative)
- 9.28. In addition, the Applicant's highway consultant, I-Transport, has provided the following information to inform the cumulative assessment (in particular Traffic and Transport, Noise and Air Quality assessments):
- An informed assumption of traffic flows associated with the construction phase of the HS2 development.
- 9.29. The cumulative assessment is therefore robust and undertaken to an appropriate level of detail, commensurate with the information available at the time of assessment. Information on some aspects of the HS2 development is limited and as such some assessments are qualitative and at a high level, rather than quantitative depending on the availability and/or certainty of information

available. Any uncertainty in the assessments is clearly documented within Section 6 of this ES Part 1 Addendum (difficulties in compilation and assessment) and in each Technical Paper's cumulative assessment (Section 10 of each of the Technical Papers within the ES Part 2).

### **Warrington MSA and HS2 – Project Description and Assumptions for Cumulative Assessment**

9.30. A number of assumptions have been made in respect of the delivery of the Warrington MSA and HS2. The HS2 assumptions are based on information publically available and discussions with HS2 (as shown on the programme at **Appendix I4a**):

- MSA Construction: Q3 2023 – Q4 2024
- MSA Operational: from 2025
- HS2 Advanced Enabling Works: 2025 – 2027 (with utility works required to the gas main within the Application Site as early works during 2025)
- HS2 Construction: 2025 – 2035/2040
- HS2 Operational: 2035/2040

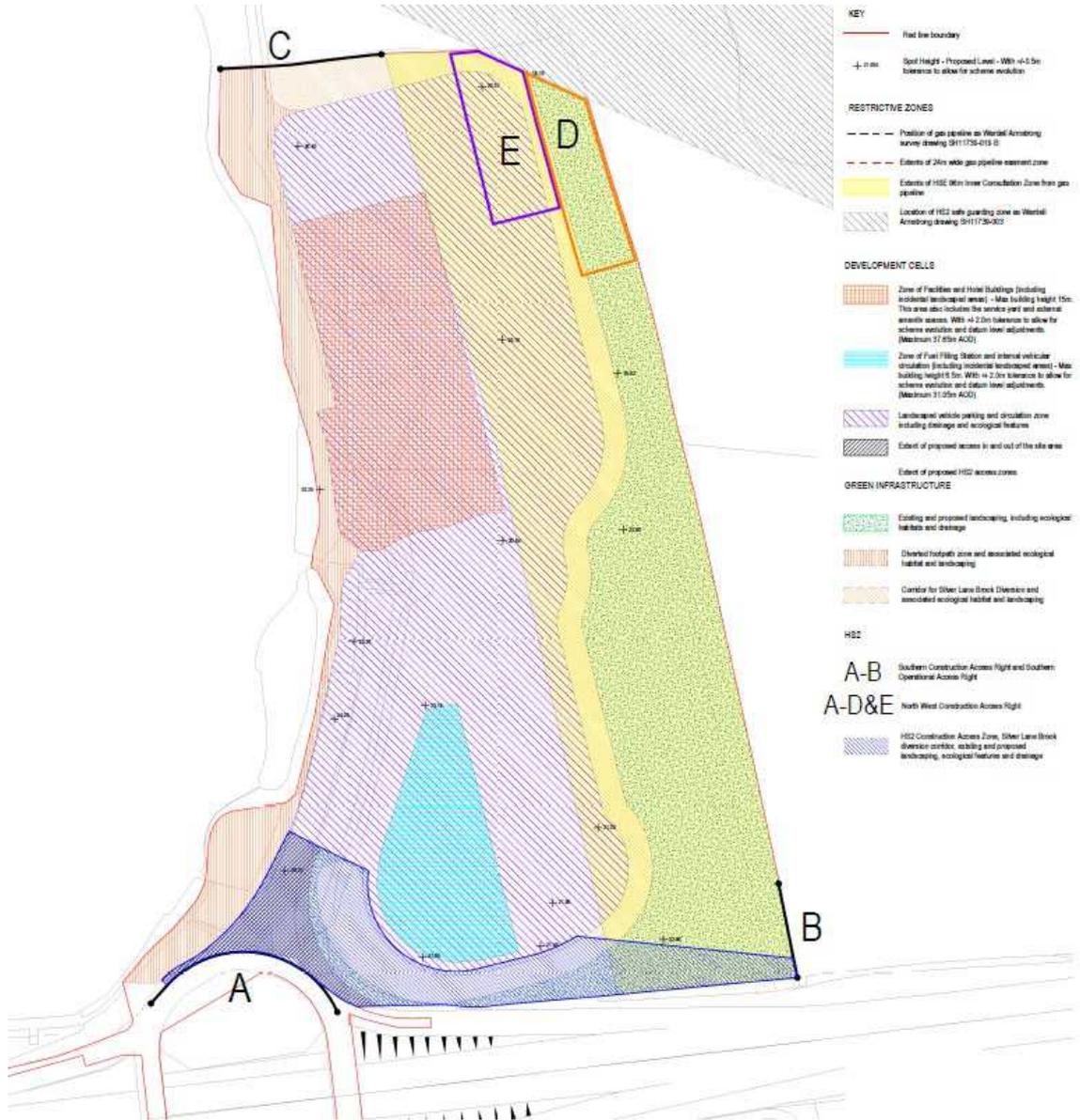
9.31. Therefore it is assumed that the Proposed Warrington MSA will be fully or virtually completed by the time HS2 require access for construction, utility works (i.e. diversion of the gas pipeline) and site compounds (i.e. M62 West Viaduct North Satellite Compound located to the east of the Warrington MSA Application Site and J11 M62 Motorway). The Proposed MSA access roads will therefore have been constructed and available for use for HS2 construction and subsequently, operational traffic.

9.32. Subsequent to the parliamentary process, the details of the HS2's ancillary, road transport and bringing into use works would be promoted by HS2 Ltd through Schedule 17 applications if Warrington Council has opted to become a qualifying authority under Part 2 of Schedule 17.

### **Construction – HS2 Southern Construction Access Road (access between Point A and B)**

9.33. The HS2 Safeguarding Plans (October 2020) identify the need for an HS2 construction access along the southern boundary of the Application Site for access between J11 M62 Motorway and the HS2 construction compound to the east and beyond the Application Site (referred to in HS2 documents as M62 West Viaduct North Satellite Compound).

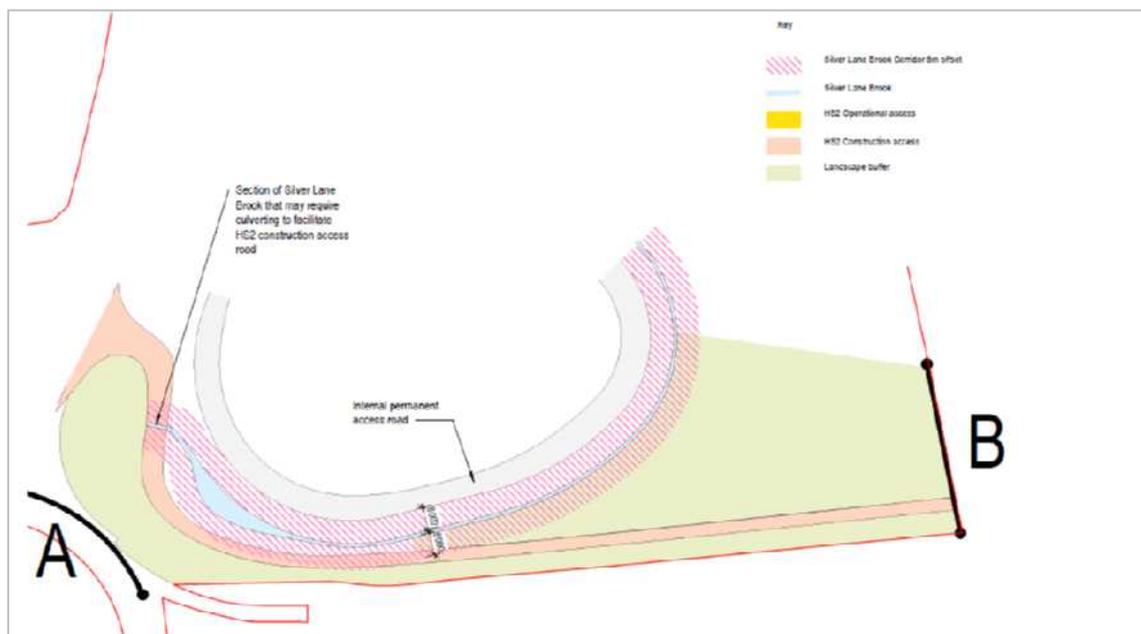
9.34. The plans below (and at **Appendix I4f**) show a zone in which HS2 would construct their construction access route within, and alongside the Application Proposals:



**Figure 9.6: - ES Cumulative (Indicative) - HS2 Construction Phase – Parameter Plan**



**Figure 9.7: ES Cumulative (Indicative) - HS2 Construction Phase - Indicative Site Plan**



**Figure 9.8: ES Addendum Plans - Sketch I - Southern Access - Construction Indicative (HS2 construction access and any brook culvert that may be required is part of HS2 development)**

9.35. As can be seen from the above plans, the HS2 construction access road would cross the following Application Parameter zones:

- Extent of proposed access in and out of the Site area
- Existing and proposed landscaping, including ecological habitats and drainage (adjacent main access in and out of the Site)
- Landscaped vehicle parking and circulation zone including drainage and ecological features
- Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping
- Existing and proposed landscaping, including ecological habitats and drainage (to the east of the Silver Lane Brook corridor)

9.36. The main access road from J11 M62 serving the Application Proposals would be constructed and as such, HS2 would utilize this access point, before filtering off to the east. The HS2 construction access road would cross the diverted Silver Lane Brook at the point it enters the Site or close to this point, and as such HS2 may either need to temporarily extend the existing culvert, or provide a temporary bridge to cross Silver Lane Brook. The HS2 construction access would then run in an easterly direction to the eastern boundary of the site and beyond. Within this zone, the HS2 construction access is assumed to be built to the south of the Warrington MSA development zones and to either the south or north of the already diverted Silver Lane Brook. It is therefore likely that it would be within the Parameter Zone for the 'Corridor for Silver Lane Brook Diversion and associated ecological habitat and landscaping' and therefore could temporarily encroach within the 8m buffer zone required by the Environment Agency for the Silver Lane Brook. After which, it enters the Parameter zone for 'existing and proposed landscaping'. If constructed to the north of the Brook, it is likely to skirt the southern extent of the MSA development zone for 'landscaped vehicle parking and circulation zone'.

9.37. The HS2 access route is temporary and, whilst it is anticipated that the majority of the Warrington MSA planting scheme can be completed, some landscape planting within the HS2 construction access route and its margins would be deferred until a point when the HS2 construction access is no longer required. For the purposes of this cumulative assessment, this date has been assumed to be between 2033 and 2040.

9.38. The HS2 construction access would also skirt the southern point of the Peat Habitat Zone (PHZ). Whilst an area is indicatively shown with the plans for the PHZ (Appendix I0), this is not fixed through the Parameter Plans. The details will be confirmed through reserved matters and can be suitably designed so as to sit to the north of the potential route required for HS2 construction. The HS2 construction access is not therefore anticipated to affect the PHZ.

**Construction – HS2 Northern Construction Access / land for construction and mitigation**

9.39. Through discussions with HS2 Ltd, they have confirmed that they do not require the northern construction access or land to the northern part of the Application Site for construction or mitigation as shown within their Safeguarding plans (see Figure 9.4 above). This is confirmed in the HS2 Statement of Common Ground (Appendix I4e). As such this element does not require accommodation within the Application Site.

**Construction – HS2 Utility Construction Zone and Utility Connection Zone (Zone E and D)**

9.40. The Utility Construction Zone and the Utility Connection Zone are required for works associated with the diversion of the gas main that runs north-south to the eastern extent of the Application Site. This diversion is to be an early element of HS2's enabling works and is assumed will take 12 months in 2025.

9.41. As can be seen from the above plans (Figures 9.6 and 9.7), the HS2 utility construction and connection zones would be accommodated within the following Application Parameter zones:

- Existing and proposed landscaping, including ecological habitats and drainage
- Landscaped vehicle parking and circulation zone including drainage and ecological features
- Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping

9.42. Zone E is identified for the Utility Construction Zone and would contain a construction compound that would sit within the Application Parameter for 'landscaped parking'. As the parking areas will have already been laid out, the Applicant has agreed that these areas could be used by HS2 for their construction compound for the 12 months required for the utility works. On the indicative plans, this is shown as caravan parking, which would temporarily be

located within the area shown for HGV parking to the north of the FFS. The lorry parking area shown on the indicative plans includes 23 spaces in excess of the Circular 02/2013 requirements and hence the minimum Circular 02/2013 lorry parking requirements can still be met during this period. Internal access for the MSA would have an alternative arrangement for the temporary period.

- 9.43. Access from Zone E would be required for HS2 plant and machinery to undertake the utility connection works required within Zone D. This would therefore require one or two simple crossing points across the Diverted Silver Lane Brook for a temporary period of time to facilitate the gas main diversion works. This would therefore encroach within the 8m buffer zone required for the Brook by the Environment Agency and require a crossing point(s) suitable for HS2 vehicles. The landscaping proposed for the area of Zone D affected by HS2 would be deferred until the utility works were completed. After which time, the Warrington MSA landscape proposals would be implemented.

#### **Construction – HS2 Traffic Flows**

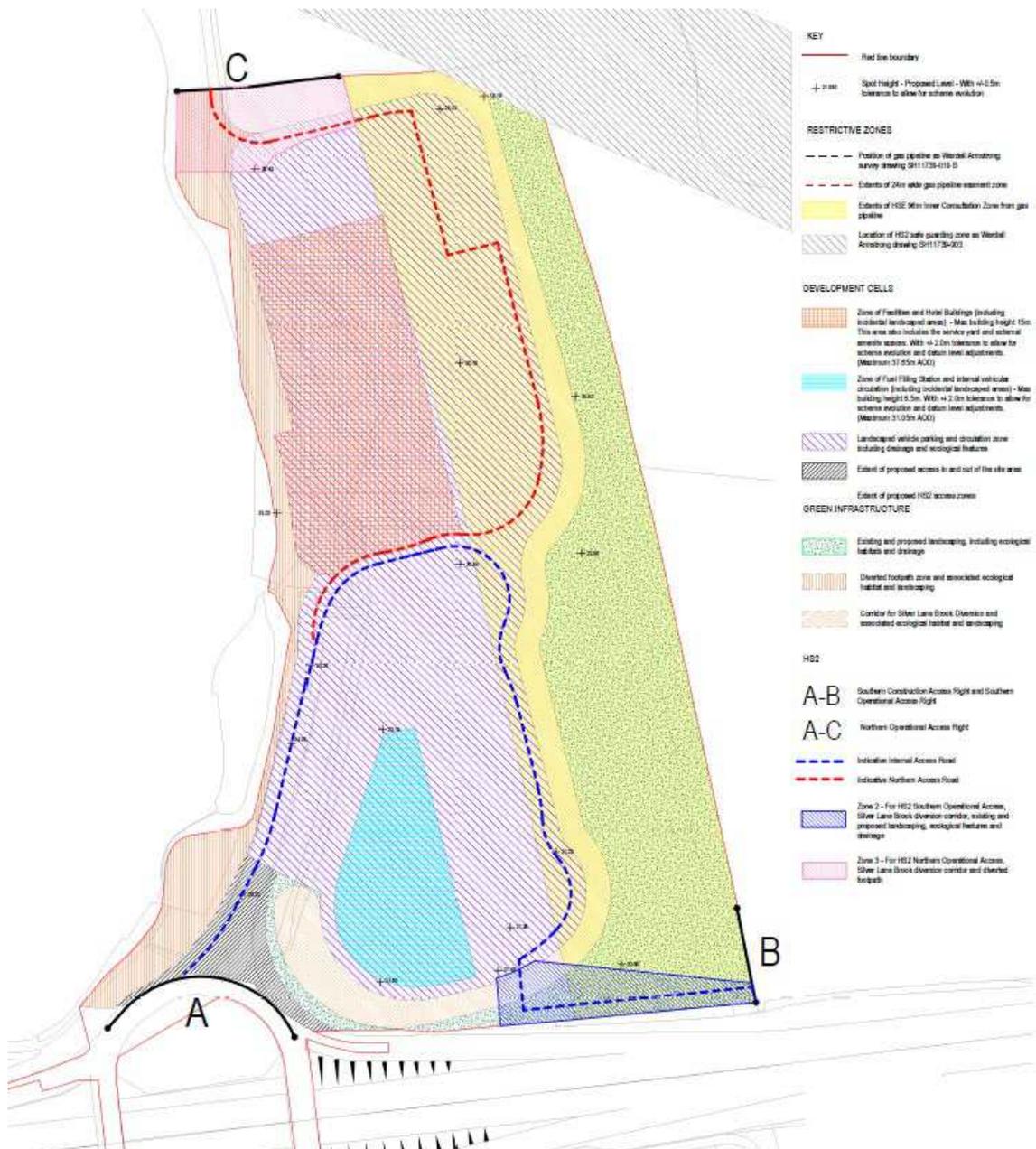
- 9.44. For the HS2 development, there is no traffic data publically available for the construction or operational phases of the HS2 development. As such, first principles assumptions have been made as to the likely construction traffic associated with the HS2 construction phase within the vicinity of the Site, taking account of published information for Phase 1 of HS2 between London and the West Midlands. This enables a quantitative cumulative assessment to be undertaken, which builds on the qualitative cumulative assessment undertaken as part of the original ES (dated, August 2018).

- 9.45. The operational phase of the development is expected to consist of the occasional light vehicle in the vicinity of the Site, such as a small van, for maintenance purposes, which would not be material to the operational traffic for the Application Proposals and as such, does not lead to any further assessment.

#### **Operation – HS2 Southern Operational Access (between Points A and B)**

- 9.46. HS2 require an access for maintenance between the J11 M62 access and a point to the southern extent of the eastern boundary of the Site (identified as Point B on the plans below). It is anticipated by HS2 that this would be required for occasional use by light vehicles such as a small van. HS2 have agreed that this maintenance access can be accommodated within the

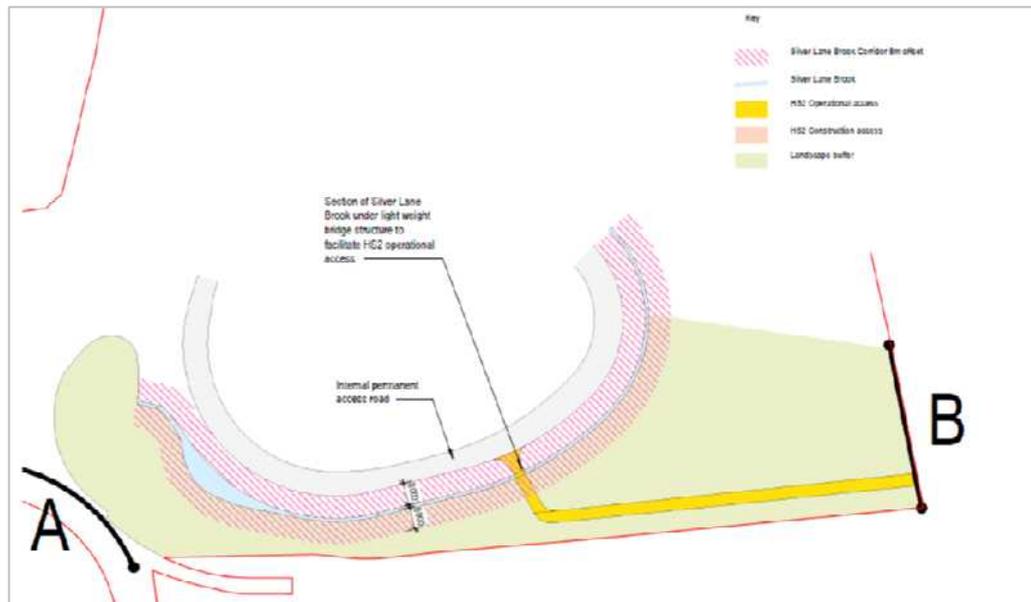
Application's internal access roads leading to a new permanent access which exits from the internal access route at the south eastern point of the Parameter for 'landscape and vehicle parking' and crossing the Parameters for the 'corridor for Silver Lane Brook' and 'existing and proposed landscaping' (as shown on the plans below and at **Appendix I4f**).



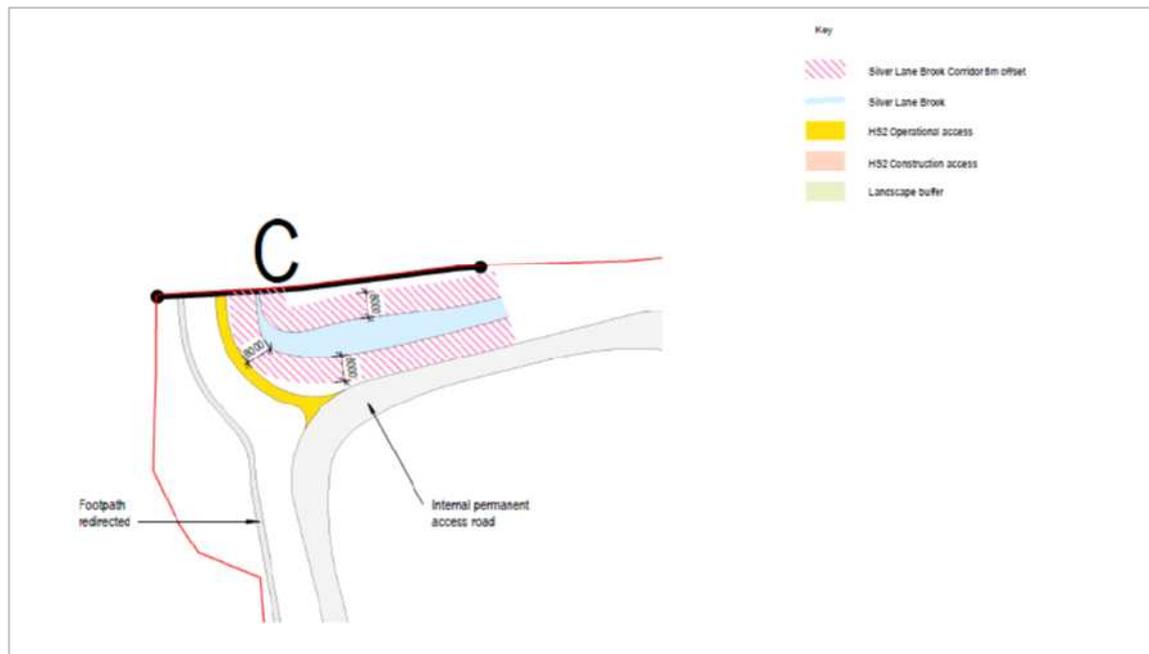
**Figure 9.9: - ES Cumulative (Indicative) – HS2 Operation Phase - Parameter Plan**



**Figure 9.10: ES Cumulative (Indicative) – HS2 Operation Phase - Indicative Site Plan\***



**Figure 9.11: ES Addendum Plans – Sketch 3 – HS2 Southern Access – Operational (Indicative) (HS2 operational access and any brook crossing is part of HS2 development)**



**Figure 9.12: ES Addendum Plans – Sketch 2 – HS2 Northern Access (Indicative) (HS2 operational access is part of HS2 development)**

- 9.47. To cross the diverted Silver Lane Brook, a light weight bridge structure would be required. The HS2 operation access route from the internal access road would therefore use the light weight bridge before joining with the route previously utilized for the HS2 construction route. The HS2 construction route would be downgraded to a suitable small scale access route such as a grass-crete route (or similar) suitable for occasional use by a small van. This route would be landscaped as part of the Warrington MSA landscape proposals.

**Operation – HS2 Northern Operational Access (between Points A and C)**

- 9.48. HS2 require an access for maintenance between the J11 M62 access and a point to the western extent of the northern boundary of the Site (identified as Point C on the plans above). It is anticipated that this would be required for occasional use by a small van for maintenance purposes. HS2 have agreed that this maintenance access can be accommodated within the Application's internal access roads before exiting to a suitable small scale access route such as a grass-crete route (or similar) at the northwestern extent of the Parameter for 'landscape and vehicle parking' into the Parameter for 'the diverted footpath zone and associated ecological habitat and landscaping'. Depending where HS2 take their access, it may also cross into the

Parameter for the 'corridor for Silver Lane Brook Diversion' although it is expected that HS2 will exit the Site further to the west, before rejoining the HS2 route alignment beyond the north of the Application Site (as shown on the Safeguarding Plans at Figure 9.4). The zone for HS2's northern operation access is shown on the plans above (Figures 9.9, 9.10 and 9.11) and at **Appendix I4f**.

9.49. The HS2 maintenance access will be a suitable small scale access route such as a grass-crete route (or similar) running alongside the proposed diverted footpath and will be set within a landscaped setting.

### **Operation – HS2 Ecological Mitigation Areas**

9.50. Through discussions with HS2, they have confirmed that they do not require the Application Site for ecological mitigation in relation to the HS2 development. This is confirmed in the HS2 Ltd Statement of Common Ground. As such this does not require accommodation within the Application Site.

### **Summary of Warrington MSA and HS2 proposals**

9.51. The table below provides a summary of the Warrington MSA and HS2 cumulative proposals:

<b>HS2 Requirement</b>	<b>Application Parameter</b>	<b>Timescale and comments</b>
<b>Zone of HS2 Southern Construction Access</b>	<u>Extent of proposed access in and out of the Site area</u>	<u>Temporary during HS2 construction. Use of Warrington MSA access road from J11 M62.</u>
	<u>Existing and proposed landscaping, including ecological habitats and drainage (adjacent main access in and out of the Site)</u>	<u>Temporary during HS2 construction. Warrington MSA scheme landscape planting either side of HS2 construction access road. However landscaping of access road and its margins deferred until after HS2 construction access no longer required. After which time, the Warrington MSA landscape scheme can be completed.</u>
	<u>Landscaped vehicle parking and circulation zone including drainage and ecological features.</u>	<u>Temporary during HS2 construction.</u>

HS2 Requirement	Application Parameter	Timescale and comments
	<u>Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping</u>	<p>Temporary during HS2 construction. Warrington MSA scheme landscape planting either side of HS2 construction access road. However landscaping of access road and its margins deferred until after HS2 construction access no longer required. After which time, the Warrington MSA landscape scheme can be completed.</p> <p>HS2 route to either require an extension to the existing culvert of Silver Lane Brook as it enters the Site or temporary bridge to cross the Brook.</p>
	<u>Existing and proposed landscaping, including ecological habitats and drainage (to the east of the Silver Lane Brook corridor)</u>	<p>Temporary during HS2 construction. Warrington MSA scheme landscape planting either side of HS2 construction access road. However landscaping of access road and its margins deferred until after HS2 construction access no longer required. After which time, the Warrington MSA landscape scheme can be completed.</p>
<b>Zone of HS2 Northern Construction Access (points A to C) and land for construction and mitigation</b>	<u>Not required by HS2</u>	<u>Not required by HS2</u>
<b>Utility Connection Zone (D) (Construction Phase)</b>	<u>Existing and proposed landscaping, including ecological habitats and drainage</u>	<u>Temporary zone for connection of the gas pipe. Warrington MSA planting deferred until completion of gas main diversion (expected to be within first 12 months of HS2 enabling works)</u>
<b>Utility Construction Zone (E) (Construction Phase)</b>	<u>Landscaped vehicle parking and circulation zone including drainage and ecological features</u>	<p>Temporary zone for the construction compound required for works to the gas pipe.</p> <p>Temporary re-organisation of internal parking and access for the MSA.</p>
	<u>Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping</u>	<p>Temporary zone for the construction phase to enable access between the compound and the utility connection zone.</p> <p>Temporary crossing of diverted silver Lane Brook during the works to divert the gas main (expected to be the first 12 months of HS2 enabling works).</p>

<b>HS2 Requirement</b>	<b>Application Parameter</b>	<b>Timescale and comments</b>
<b>Zone of HS2 Southern Operational Access (points A to B)</b>	<u>Extent of proposed access in and out of the Site area</u>	<u>Use of Warrington MSA access road from J11 M62 for occasional maintenance vehicles during HS2 operation.</u>
	<u>Landscaped vehicle parking and circulation zone including drainage and ecological features</u>	<u>Use of internal MSA access roads for occasional maintenance access.</u>
	<u>Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping</u>	<u>Junction with internal MSA access road, across a lightweight crossing over diverted Silver Lane Brook for occasional maintenance access (small van)</u>
	<u>Existing and proposed landscaping, including ecological habitats and drainage</u>	<u>Links to HS2 construction access road which will be downgraded for the operational phase for occasional use. Set within a landscaped and tree lined area. Access route to be grass-crete surfacing (or similar).</u>
<b>Zone of HS2 Northern Operational Access (points A to C)</b>	<u>Landscaped vehicle parking and circulation zone including drainage and ecological features</u>	<u>Use of Warrington MSA access road from J11 M62 and internal access roads for maintenance vehicles during HS2 operation</u>
	<u>Corridor for Silver Lane Brook diversion and associated ecological habitat and landscaping</u>	<u>To the northeastern point of the internal access roads junction to allow HS2 northern operational access to continue to the north, beyond the Application Site. HS2 access road can be accommodated to the west of where the diverted Silver Lane Brook reconnects with the existing brook.</u>
	<u>Diverted footpath zone and associated ecological habitat and landscaping</u>	<u>Landscaped corridor accommodating the diverted footpath adjacent to HS2 operational access road.</u>
<b>Operation – Ecological Mitigation Areas</b>	<u>Not required by HS2</u>	<u>Not required by HS2</u>

**Table 9.3 Summary of Warrington MSA and HS2 proposals**

## Description of Cumulative Activities

9.52. This Statement has sought to consider cumulative effects in a number of ways. The Technical Papers in Part 2 of the ES and their Addendums have considered the cumulative effects relating

to the particular topic being discussed. The cumulative assessments are therefore set out in greater detail in Section 10 of each of the technical papers in Part 2 of the ES and their Addendums. This section however provides an overview of the cumulative assessments undertaken as part of the environmental assessment work.

### **Construction**

- 9.53. The socio economic cumulative effects of the Proposed Development with the development at Birchwood Park (numbers 1 and 2 on the above table), should they come forward in the same timescales, will result in an overlap in temporary short term construction employment and an increase in economic output. There are also additional training and apprenticeship opportunities. These are all positive cumulative effects.
- 9.54. The developments at Birchwood Park would directly increase the waste generated at construction phase and it is reasonable to expect a percentage to go to off-site recycling and a percentage for disposal at off-site landfill. However this is not considered to be significant and as such would have a minor adverse cumulative effect as a worst case, as not all the developments would come forward at the same time as the Proposed Development.
- 9.55. Construction effects associated with dust and PM<sub>10</sub> are considered unlikely to have a cumulative effect with the proposed development due to the distance of receptors from the Birchwood Park sites, HS2 and the Proposed Development Site. With appropriate mitigation in place for each development, any cumulative effects are considered to be no more than negligible and as such not significant. Construction effects associated with noise will be short term and appropriate mitigation measures implemented to reduce any noise and vibration impacts. Construction works are also mobile and transient and as such noise sources move around the Site, depending on the area of the Site undergoing construction works. Due to the distance and relationship of the developments to receptors, the effects of noise will be no higher than assessed as part of the main assessment for the Application Proposals and as such negligible to minor adverse.
- 9.56. With regard to HS2, the Proposed Development is expected to be near completion as the enabling works for HS2 commence and as such the overlap between the MSA construction and the HS2 construction is limited. The socio economic cumulative effects would be a greater level of employment in the short term, as well as extending into the medium term, which is a positive cumulative effect. However, given the expected construction period for HS2, it is not expected to overlap significantly with the MSA development.

- 9.57. The cumulative effects of construction traffic with HS2 is difficult to assess at this stage as HS2 are yet to undertake a quantitative assessment and as such there are no traffic data available. will be no worse than the operational cumulative effects of the Proposed Development's operational traffic with HS2 construction traffic for effects associated with traffic and transport, noise or air quality receptors. As such these effects are considered as part of the Proposed Developments operational cumulative effects below.
- 9.58. HS2 consider environmental impacts at a Community Level, for which the Community Area MA04: Broomedge to Glazebrook is relevant to the Proposed Development. The cumulative effect of the Proposed Development and HS2 would result in a loss of more than 20ha of agricultural land (the total potential agricultural land take at the local scale as a result of the Proposed Development (11.7 ha), and HS2, (63 ha, HS2 2018) would be 74.7 ha). Of this, more than 20ha is likely to be BMV quality (the total potential BMV agricultural land take at the local scale as a result of the Proposed Development (10.2 ha) and HS2 (44.0 ha, HS2, 2018) would be 50.2 ha.). 20 ha is the level of loss that Natural England identify as requiring consultation with them as a key strategic consultee. As such the scale of the environmental impact could be considered to be substantial adverse and as such significant. However the impact of HS2 alone on the loss of BMV land would be substantial adverse, whereas the Proposed Development, on its own, moderate to minor adverse.
- 9.59. As HS2 enabling works (construction access and site compound) and an operational phase maintenance access will be located within the Application Site there is a potential for cumulative impacts to soil and peat resources. However, as the impacts from the HS2 are programmed to commence when construction of the MSA is either close to completion or fully completed, any cumulative effects would be the result of HS2 and should be considered as part of the assessment of HS2 once further details of those development proposals are known. However, it is noted that the Applicant maintains good levels of communication with HS2 and, where practicable, it is hoped that agreements can be reached which would minimise the disturbance to and/or number of movements of these resources. It is also noted that HS2 would also be expected to apply the same good practice soil and peat management / mitigation measures as the Proposed Development, therefore it is expected that the impacts to soil and peat resources due to HS2 would be not significant and therefore the overall cumulative effect of HS2 and the Proposed Development would also be not significant.

- 9.60. The information available in the Working Draft ES for HS2 indicates a satellite construction compound located to the north of the M62 Motorway and to the east of the Application Site. Advance works for HS2 are predicted to commence ~~2025 autumn/winter 2022~~. At this point it is predicted that the construction phase for the MSA will be near completion. It is therefore unlikely that the proposed cumulative development, when assessed in combination with the Proposed MSA, will alter the predicted effect on landscape and visual receptors in the short term.
- 9.61. There is the possibility of cumulative effects on the water environment when two or more developments are constructed within the same catchment at the same time. Where the Proposed Development construction may overlap with the construction of HS2, there are potential for cumulative effects in respect of accidental release of oil, fuel and other pollutants as well as the release of sediments from earthworks. HS2 construction will include the construction of a new access road in the south of the MSA site boundary to provide access to the HS2 compound areas to the east. This will create new areas of hardstanding but these would solely be for the use of HS2 and therefore the effects of these will be considered and mitigated accordingly by HS2. There will be potential for interaction between the access road and the proposed diversion of the Silver Lane Brook and both developments will provide the necessary mitigation to minimise any potential for impact.
- 9.62. However, it can be assumed that HS2 will be constructed in line with best practice and that a CEMP, or equivalent, will be implemented. This is likely to include pollution prevention measures, emergency response plans including in respect of the access road through the MSA site. This will be temporary in nature for the construction period. Therefore the potential construction cumulative effects arising from HS2 and the Proposed Development are considered to be negligible. Similarly effects associated with ground stability, contamination and ground gas will be suitably mitigated by both HS2 and the MSA within the Site and as such the effects will be negligible during construction and operational phases of either development.
- 9.63. For ecological receptors, a potential short overlap in construction timescales for HS2 and the Proposed Development may result in increased pressure, particularly for breeding birds and over-wintering bird populations. Such cumulative impacts are not considered to be significant however, given the wide availability of similar habitats (arable land) within the Borough, although there would be an anticipated cumulative loss of available habitat.

- 9.64. As a result of HS2 access for construction through the Application Site, there will be some minor and temporary effects to fauna (birds and bats) and habitats (a small section of the diverted Silver Lane Brook and its corridor), although these areas would have already been cleared for the Application Development, with some areas resulting in deferred planting. Overall, the impacts associated with the construction and operation of the cumulation of the MSA and HS2 are minor adverse and not significant.
- 9.65. In terms of archaeological sites, cumulative impacts will principally arise where each development removes individual areas of preserved archaeological remains (identified as construction impacts as part of this Technical Paper) resulting in a gradual erosion and fragmentation of the total archaeological resource of the region in the long term. Development would contribute to the cumulative physical loss of archaeological remains from development in general within the region. However, in all cases of development, if necessary, this would be offset by the contribution made to archaeological understanding of the area through evaluation/excavation and recording. This does not constitute 'substantial harm' and on the scale of 'less than substantial harm' it is minimal and not significant. No additional mitigation would be required as a result of the additional HS2 construction access through the Site compared to that already required as a result of the Proposed Development.
- 9.66. In considering cumulative effects, it should be borne in mind that all developments should have a construction management plan or construction environmental management plan in place to manage and mitigate the effects of individual developments. This should also include a dust management plan and soil management plan where relevant. All development would need to manage their individual surface water and impact on water quality and ground water. Where relevant archaeology should be excavated/evaluated and recorded, which increases understanding. As such cumulative effects are managed and mitigated as far as possible, which will have the effect of minimizing the cumulative effects of the developments.

### **Operation**

- 9.67. The socio economic effects of the Proposed Development with the development at Birchwood Park, would create additional GVA and employment within the economy, both of which would have a positive effect. In terms of HS2, with a station at Warrington Bank Quay, the benefits for Warrington and the Region as a whole are beneficial in terms of the town and regional status and the ability to attract further inward investment. This is beneficial in the longer term.

- 9.68. The developments at Birchwood Park would generate commercial waste during their operational phase and it is reasonable to expect a percentage to go to off-site recycling and a percentage for disposal at off-site landfill. However this is not considered to be significant and as such would have a minor adverse cumulative effect as a worst case.
- 9.69. The cumulative impacts of operational noise with the development at Birchwood Park and the Proposed development is considered to be no more than negligible to minor adverse.
- 9.70. HS2 construction traffic will access through the MSA Site's point of access to reach their construction compound to the east of the Application Site. It is concluded that cumulatively with the operational MSA and other committed development, there would be a negligible impact on driver delay, residential amenity, fear and intimidation, severance and public transport users. Furthermore, the improvements to pedestrian facilities at the M62 Motorway J11 roundabout as part of the signalization scheme as a result of mitigation for the Proposed Development will provide enhancement for pedestrians. Whilst the assessment identifies a high adverse effect for accidents and road safety, as with the assessment for the Proposed Development, there is no pattern for the accidents and two accidents involved drivers under the influence of alcohol. When these two accidents are excluded from assessment, the assessment results in a negligible cumulative effect for accidents and road safety. The traffic and transport cumulative effects are therefore not significant.
- 9.71. There are also negligible effects in respect of traffic noise and air quality, when the construction traffic for HS2, proposed operational MSA and other committed developments are considered cumulatively. The noise and air quality are therefore not significant.
- 9.72. During operation of the MSA, HS2 will still be under construction. The requirement for a HS2 construction access within the south of the Site will delay some of the landscape planting, however, as it is an area of land between the Proposed Development and the M62 Motorway, it is not considered to be of particular landscape sensitivity. Passing the Site, HS2 will be on an embankment. In terms of the effect on National Character Areas NCA 60: Mersey Valley, landscape effect, landform/topography, vegetation (including grassland, woodland and hedges), PROWs (nos. 13, 27 and 28) and the effect on land use pattern and farming, whilst further affected by HS2, the cumulative effects are unlikely to increase from that assessed for the main assessment and as such remain not significant in the local context.

- 9.73. There is the potential that cumulative effects on the County Landscape Character Area, views from the nearest settlements of Culcheth and Gorse Covert, water bodies and drainage systems, wider greenspace network, heritage designations and environmental designations are likely to increase, but that these will still remain not significant in the local context.
- 9.74. View Points VP4, VP6, VP7, VPI0, VPI4 and VPI6 will experience views of both development and are unlikely to change from that assessed within the assessment of the Proposed Development, given the local neighbourhood value and as such will reduce from moderate adverse to minor adverse over time as vegetation establishes. Whilst VPI will experience views from within 1 km of the HS2 works, it is likely that this will screen the view from the northeast and east of the MSA. (View Points shown on LVIA Key Receptor Plan within **Appendix 6**).
- 9.75. During operation, the HS2 project is likely to give rise to cumulative effects with the Proposed Development, however these are largely relating to surface water drainage regimes. It has been assumed that the HS2 project will take into account surface water drainage within the Glaze Brook catchment e.g. by discharges and outfalls being restricted to the greenfield runoff rate and the use of SuDS, where applicable. Therefore, the potential operational cumulative effects arising from HS2 and the Proposed Development are considered to be negligible.
- 9.76. The HS2 construction would continue through the 6-10 year 'medium term' period and would result in the permanent loss of mainly arable habitats associated with notable and protected species, but especially breeding and wintering birds. However, the MSA Development will be completed and operational at this time, and hence there will be a benefit to many species, including breeding birds via the enhancements to the re-aligned Brook corridor. The combined loss in bird overwintering (arable) habitat would increase the pressure on the wider habitats, however it should be noted that there are widespread alternative provisions elsewhere in the borough. ~~It should also be noted that there is currently limited information available to make the assessment and hence confidence levels are low.~~
- 9.77. In the longer term the operational impacts of both developments would result in an additive effect via disturbance to a range of ecological receptors, this may lead to displacement of breeding and wintering birds and minor displacement of foraging and commuting bats. As the MSA proposals will be fully mitigated, the impacts of the HS2 development are anticipated to be not significant once mitigation/compensation has been applied, hence additive effects will be of limited significance overall. ~~At the time of writing no confirmation of mitigation/compensation proposals is available and therefore no detailed assessment can be undertaken.~~

- 9.78. In terms of cultural heritage, this paper has assessed that the impact of the Proposed Development on the setting of designated heritage assets would be neutral; it having been assessed that the Site does not currently contribute towards the significance of any designated heritage assets. As such, no cumulative operational impacts would arise from the implementation of the Proposed Development and HS2.
- 9.79. In considering cumulative effects, it should be borne in mind that all development will have to manage and mitigate their effects and that long term management plans relating to landscape and habitats should be implemented.

### Summary

- 9.80. Socio economic cumulative effects are considered positive in terms of job creation, inward investment and business rates generated. Whilst the cumulative effect of developments could reduce the total archaeology resource in the area, mitigation would be in place for each development to evaluate/excavate and record, thereby increasing understanding. Views would change, but these would be managed with planting, which matures over time.
- 9.81. Although there would be a cumulative loss in habitats, the effect on species is not considered to be significant.
- 9.82. Cumulative effects in terms of traffic and transport, waste, noise, air quality, water resources are considered to remain as assessed through the main assessment and are therefore not considered to be significant.
- 9.83. The cumulative loss of agricultural land, especially BMV land is considered significant. However, it should be noted, that the loss for the HS2 development alone is significant, but for the Proposed Development, it is not considered to be significant.

### Synergistic Effects (In-Combination / Interaction of Effects)

- 9.84. This section considers how the various factors associated with the site will interact across both the construction and operational phases.
- 9.85. Through scheme evolution, close working within the Client and Consultant Team and through regular Design Team Meetings, the various interactions and in-combination effects arising from

the proposed development have been considered fully and discussed at length to ensure any synergistic effects resulting for the proposed development are minimal and addressed through mitigation as necessary to minimise and manage any impacts and their effects. In some instances they have resulted in amendments to the scheme proposals and this is reported through Section 4 of the ES (Alternative Development Options) and Section 6 of each of the Technical Papers within Part 2 of this ES. Considerations associated with the peat underneath the Site, drainage, ecological and landscape matters have had a significant influence on the evolution of the Development Proposals, both at construction and operational phases. This has been to ensure matters associated with biodiversity enhancements and the brook diversion, along with retention of peat on Site to create a peatland type habitat can be achieved alongside the Development Proposals. As well as looking to secure long term enhancement both through retention of vegetation and new planting. Management of the landscape and habitats is also proposed through a Landscape and Habitat Management Plan. A summary of these interactions is also included within this section.

9.86. There are two key areas of interactions which are likely to occur, these being:

- Interaction of construction effects – related impacts in terms of ground, water resources, ecology and agricultural land and soils (including peat); air, noise and traffic; landscape, ecology and drainage; and cultural heritage and landscape.
- Interaction of operational impacts – related impacts associated with those arising from the proposed land uses for the site focusing upon traffic and consequential noise and air implications; landscape, ecology and drainage.

9.87. These are discussed in more detail below.

9.88. The different types of receptors are categorised as follows:

- Humans- (a) long term human receptors- residents, business users; and (b) transient human receptors, including pedestrians, cyclists, drivers and public transport users, construction workers.
- Property- residencies and business uses.
- Ecological- habitats, including protected sites or species.
- Agricultural land, peat and soil
- Historic Environment– heritage assets
- Landscape - character areas

- Controlled waters- surface waters like water courses or groundwater (aquifers).
- The economy
- Local waste infrastructure i.e. landfills, recycle and recovery facilities

9.89. Where all individual residual effects associated with a single receptor group are neutral or negligible there is no requirement to consider in-combination effects as these effects would not be significant. Where at least one effect on a receptor, after mitigation measures are determined, is minor adverse, or greater, then all identified effects (including neutral or negligible) should be reviewed to determine whether there are likely to be in-combination effects upon this particular receptor.

9.90. These are considered for construction and operational stages below.

### Construction

9.91. The table below identifies the worst residual outcome for each of the technical assessments in respect of each of the receptor categories for the construction phase of the development. “A” refers to Adverse and “N” refers to Neutral / Negligible as shown below:

A	Adverse effects
N	Neutral / Negligible effects
B	Beneficial effects

Receptor Category	Ground Conditions and Contamination	Traffic and Transport	Water Resources (Drainage and FloodRisk)	Landscape and Visual Impact	Ecology and Nature Conservation	Agricultural Land and Soils (including peat)	Socio Economic	Noise and Vibration	Air Quality and Dust	Cultural Heritage and Archaeology	Waste	Climate Change (Energy and	Synergistic Effect
Humans	N	N		A			N / B	A	N			A	Yes
Property	N												No
Ecology				A	B								Yes
Agricultural Land and Soils (including peat)	N		N/A			A							Yes
Historic Environment				A						A			Yes
Landscape				A									No
Controlled Water			N										No
Economy							B						No
Local Waste Infrastructure											N		No

**Table 9.3: Possible Synergistic Effects during Construction**

9.92. From the above tables it can be seen that for the construction phase human, ecology, agricultural land (including soils and peat) and the historic environment are most likely to be subject to synergistic effects. These are considered below.

9.93. As set out within the Project Description (Section 2 of this ES Part I Report), the Proposed Development will be undertaken in a series of phases. This will start with the Enabling Phase, which will create the access to the Site and a development platform for the future development.

To facilitate this, the Enabling works will start with the installation of the retaining structure required for the gas pipe line (driven sheet piling). Other works will follow, such as those associated with soil stripping, removal of peat to the Peat Habitat Zone to create a peatland type habitat area, cut and fill works, drainage and creation of the Silver Lane Brook Corridor to enable the diversion of this brook. The footpath diversion will also take place at this stage to ensure the continued route for users of the PROW. Strategic landscape planting and establishment of ecological areas will be early works within the Site to ensure ecological habitats can become established.

- 9.94. The future car parking areas being used for storage and construction related facilities and will come forward for development as and when available to form the parking areas. Works associated with the vehicle parking, internal access roads, Facilities Building, Hotel and FFS will follow, with soft landscaping around these areas.
- 9.95. The construction phase for the proposed development is relatively short (12 to 18 months) and therefore temporary.
- 9.96. The greatest perceived interaction of effects at the construction phase results from the enabling works such as the creation of the peatland type habitat earth works and development platforms, as well as the physical activities associated with the construction of buildings and parking areas. As such the interaction of effects associated with ground, drainage and agricultural land, soils and peat are most likely for the works associated with the creation of the peatland type habitat, having an impact on the agricultural land, soils and peat receptors. Whereas the interactions of effects associated with ground, agricultural land (including soil), landscape, ecology, drainage and resulting traffic, noise and air quality (including dust) effects of traffic generated associated with all of the construction activities, will have an impact on human receptors and the historic environment.
- 9.97. The interaction during construction in respect of ground, landscape, agricultural land, soil and peat, water resources and ecology creates opportunities to enhance the existing landscape and to provide ecological benefits whilst also providing a managed surface water regime for the site. The extent of earthworks has also been balanced against the resulting development and how it will operate and to also minimise the import and export of material. This has also been balanced against the need to maintain existing landscaping and ecological habitats and the mitigation to provide new planting and ecological habitats that also incorporates the opportunity to create

betterment in respect of the new corridor for the diverted Silver Lane Brook and also peatland type habitat area to secure the greatest short term and longer term benefits.

- 9.98. There will be a loss of agricultural land, however the soil will be kept and re-used on site as far as is possible and there will be the ability to retain the peat that is currently under the Site to create a long term peatland type habitat, which is of benefit and prevents the continual degradation of the peat on Site resulting from its current agricultural use.
- 9.99. The use of material on Site as far as possible to create habitats and provide development platforms is also beneficial in that it minimises the need to import and export material as far as possible, thereby minimising traffic movements and consequential impacts on air quality, noise, energy and waste generation. The impacts will also be controlled through the implementation of a Construction Environmental Management Plan.
- 9.100. The proposed earthworks during the construction phase have been considered within the noise and air quality assessments and appropriate mitigation proposed to sufficiently manage any likely impacts. All impacts associated with Air Quality and Dust are therefore considered to be negligible. Those associated with noise are negligible, although there are likely to be short term increases in noise levels above the recommended noise limits, dependent on the construction activities and will be at different locations within the Site as the Site is developed. These will all be mitigated, by managing, and where possible reducing any resulting impacts through good working practices and the implementation of the Construction Management Plan. The sensitive human receptors are located at a distance from the Site, with the closest being approximately 290m away with the M62 Motorway running between them and the Site. All effects are considered not to be significant.
- 9.101. Whilst there are adverse effects assessed on historic environment receptors, the likely interaction of effects associated with these are minimal. Those associated with potential buried archaeology are minor adverse, and where required a watching brief or palaeoenvironmental sampling is proposed. However, in this instance the effects are limited to the historic environment and the receptors, if present, are considered of local importance. In respect of Heritage, the effects on Holcroft Hall are considered to be limited to landscape and visual and are considered negligible.
- 9.102. Much of the mitigation proposed is designed to address a number of interacting environmental impacts and as such will be multi-functional reducing the majority of the likely impacts to

negligible and minor adverse in their significance on human, ecological, landscape and soil and peat receptors.

9.103. This includes the following:

- A Construction Environmental Management Plan (CEMP) and best working practices will be implemented to ensure that the construction impacts are controlled and minimised. A Construction Management Plan Framework is included at **Appendix 12**.
- Soil management measures implemented through a Site specific Soil Management Plan (SMP) (or similar) to be produced by a qualified soil scientist prior to construction, will ensure that the quality of these soils is maintained and they remain in a condition suitable for reuse, either on or off Site. Maintenance of soil quality will also ensure that the soils are able to continue to effectively deliver a range of Ecosystem Services on replacement. The reuse of these soils within the Site will be maximised as far as is practicable.
- A Landscape and Habitat Management Plan will be implemented to deal with matters such as habitat creation and management, as well as mitigating the loss of any habitats during construction. In particular this is relevant to the Silver Lane Brook diversion and creation of a new brook corridor, as well as the creation of the peatland type habitat area. A Framework for the Habitat Management Plan is included at Appendix 5.10 of the Ecology and Nature Conservation ES Technical Paper, ES Part 2.

9.104. In addition to the short term impact of construction, there are however some counterbalancing socio economic beneficial impacts that are largely considered to be minor beneficial in respect of new jobs becoming available in the construction sector that are both direct and indirect and have employee training and skills development opportunities. There will also be increased spending locally, inward investment and increased GVA, all of which is beneficial to Warrington and the Region, having minor benefit to high benefit effects, some of which are considered significant beneficial effects. It is also considered that there would be a minor to moderate beneficial effect on image in terms of the development being seen as a positive for the economy and attract further future investors to the area.

9.105. There are also some ecological impacts that are considered minor beneficial in terms of habitat in respect of the creation of a wildlife corridor and diversion of Silver Lane Brook.

9.106. The synergistic effects are therefore not considered to be any greater for any of the receptors than those already assessed individually within the ES. Furthermore, the construction phase is temporary for a period of 12 to 18 months and as such, meaning different parts of the Site will be worked at different times, which aids to manage the combinations of effects on any one receptor.

### Operation

9.107. The table below identifies the worst residual outcome for each of the technical assessments in respect of each of the receptor categories for the operation phase of the development. “A” refers to Adverse, “N” refers to Neutral / Negligible, and “B” refers to Beneficial.

A	Adverse effects
N	Neutral / Negligible effects
B	Beneficial effects

Receptor Category	Ground Conditions and Contamination	Traffic and Transport	Water Resources (Drainage and Flood Risk)	Landscape and Visual Impact	Ecology and Nature Conservation	Agricultural Land and Soils (including peat)	Socio Economic	Noise and Vibration	Air Quality and Dust	Cultural Heritage and Archaeology	Waste	Climate Change (Energy and Sustainability)	Synergistic Effect
Humans	N	A (N / B)*		A			N / B	A	N			A	Yes
Property	N												No
Ecology			B		N								Yes
Agricultural Land and Soils (including peat)	N		B										Yes
Historic Environment				A						N			Yes
Landscape				A									No
Controlled Water			A		N								Yes
Economy							B						No
Local Waste Infrastructure											N		No

**Table 9.3: Possible Synergistic Effects during Operation**

\*A High Adverse effect has been assessed in respect of traffic and transport and relates to accidents and road safety at M62 J11. However this is a result of two of the observed accidents informing this significance of effect which involved drivers under the influence of alcohol and not therefore as a result of road safety at this junction. When these two accidents are excluded from this analysis, the assessment gives a negligible result. As such this is the effect considered in the assessment of synergistic effects.

- 9.108. From the above tables it can be seen that for the operational phase human, ecology, agricultural land (including soils and peat), the historic environment and controlled waters are most likely to be subject to synergistic effects. These are considered below.
- 9.109. Taking the likely effects associated with human receptors, many of the environmental impacts during the operation phase have been assessed as being negligible after mitigation. These are particularly in relation to ground, air quality, socio economic and, for the reasons specified in the asterisk under Table 9.3 above, traffic and transport.
- 9.110. Where effects are considered to be greater than negligible, these relate to noise associated with the operation of the MSA within the Site, with minor adverse being identified after mitigation for receptors ESR1, 2, 3 and 5 (see plan at **Appendix 6** for key receptors), and effects associated with ESR4 (i.e. Gorse Covert to the south of the M62 Motorway), being assessed as moderate adverse of short duration and at night time. Air quality and odour effects at receptors are considered to be negligible. When noise, air quality and odour are considered together in respect of the human receptors in this location, it is not considered that there is likely to be any greater impact on the receptors than individually assessed through each technical area within the ES. In addition, the M62 Motorway runs between these receptors and the Site and as such acts to segregate the receptors from the Site.
- 9.111. The impact of the operational traffic will have implications for noise and air quality, however this is associated with the diversion of traffic wanting to use the MSA and its facilities from the Strategic Highway Network. The traffic and transport, noise and air quality impacts are however assessed as negligible in this respect.
- 9.112. The benefits arising for human receptors when assessing road safety and accidents on the strategic highway network between existing services is minor to moderate beneficial in traffic and transport terms and substantial to high beneficial in socio economic terms, due to addressing a long standing gap in motorway service area provision in the Region. This is a significant benefit addressing four of the gaps identified in the Region.
- 9.113. Whilst the development of the Site will result in a change from an agricultural field to development in a landscaped setting, the effects on people using the PROW and having views from other areas, including footpath, places of work or transport corridors would reduce to minor adverse over time, as vegetation becomes established. Furthermore, the proposed improvements to pedestrian crossing facilities at M62 Motorway Junction 11 will provide an

enhanced environment for pedestrians and better link PROW and other footpaths, as well as accessibility to the Site. Long term management of proposed and existing landscape planting and ecological habitats, has long term benefits for the Site and the area.

- 9.114. In respect of the peat receptor, there are inter-related ground and drainage benefits associated with the creation of a peatland type habitat. There is also an ecological enhancement benefit from the creation of the peatland type habitat that would not otherwise be realized without the Proposed Development, and which has long lasting benefits through long term management proposals.
- 9.115. Impacts on controlled waters are managed through mitigation to ensure the effects associated with storage of fuel and chemicals and the de-icing of roads, walkways and parking areas are minimal. All other effects associated with creating new drainage regimes within the Site, brook diversion and water crossings are considered to be negligible.
- 9.116. In respect of heritage, the effects on Holcroft Hall are considered to be negligible for landscape and visual impact, with planting proposed which will mature over time. In respect of heritage and the setting of Holcroft Hall, there is not considered to be any impact as a result of the Proposed Development.
- 9.117. Effects associated with Climate Change are adverse and due to the approach taken to assessment, comparing the baseline position of the Site as an agricultural field with the Proposed Development, any change to the baseline conditions is considered significant to a variety of receptors, including human and ecological. This would be the case with any development of an agricultural field. However it is minimized as far as possible with the mitigation proposed and the generation of energy from renewable sources far exceeding the planning policy position through the use of ground source heat pumps (or other renewable energy or low carbon measures that will be considered further through detailed design). The below risk matrix identifies the interaction with ecology, flood risk and air quality and the mitigation proposed:

	Impact of Climate Change	Contribution to Climate Change
Ecology	<p>Climatic changes significantly impact upon both flora and fauna by potentially inhibiting internal biological processes and through indirect consequences such as habitat loss, food resource depletion and water scarcity/flooding. Most species survive within a defined ecosystem and are put at risk when changes occur faster than evolution or behaviour can adapt. This can result in increased displacement, maladaptation, disease and/or mortality.</p>	<p>Reduce the urban heat island effect which can include planting deciduous trees and increasing the availability of green and blue spaces. The use of water features and vegetation to improve landscaping can provide a cooling effect as well as providing insects, invertebrates, small mammals and humans shading from the elements.</p> <p>Additionally, the increase of green infrastructure contributes to the sequestration potential of the Proposed Development, where features will actively absorb a small portion of carbon emissions produced on site.</p>
	<p><b>Mitigation/Adaptation:</b> The Silver Lane Brook flows within a very flat (in places almost static) channel with the proposal to divert to instead follow the southern, eastern and northern boundaries prior to re-joining the existing channel beyond the eastern corner of the application site. The re-design of the channel profile will provide a greater diversity of aquatic habitats including shallow berms, marginal planting, alder and willow tree plantings. The Framework Habitat Management Plan includes the reversion of existing arable land into biodiverse habitats. This will be a combination of water features and green infrastructure to form marshy grassland, shallows pools/ponds, trees and woodland, and flower rich grasslands. Planting will need to take into consideration the future climatic changes to the currently high water table. The proposed SuDS strategy and purposed landscaping should ensure the site is resistant to droughting conditions and ecological habitats are likely to continuing thriving.</p>	
Flooding	<p>There is projected increased precipitation rates over the construction and operational period of the Proposed Development as a result of climate change, which could present an increased risk of flooding.</p>	<p>Flooding itself does not directly exacerbate or contribute to climate change, especially in short-term events. However, the detrimental effects of prolonged, sustained and/or heavy flash flooding on ecosystems could be considered an indirect impact. This could include the loss of vegetation due to storm damage, root saturation/ hypoxia or the formation of water logged soils resulting in a change of carbon sequestration potential. On a localised level large bodies of wadies of water can impact albedo, evaporation and the urban island effect.</p>
	<p><b>Mitigation/Adaptation:</b> The Flood Risk Assessment has shown the site is at low risk of fluvial, pluvial and groundwater flooding and is not within proximity of the tidal reach of any watercourse. Nearby drainage systems on the restored Risley Landfill site were designed for a 1 in 100 year event with a 10% allowance for climate change. Biffa are assessing improvements to the surface water management of this neighbouring site to provide a 40% climate change allowance. The surface water storage design for the proposed development has utilized a 20% climate change allowance on peak rainfall intensity as per Environment Agency guidance. It is considered that there is an overall reduction in on and off-site flood risk achieved by reducing existing surface water discharge and providing surface water storage.</p>	
Air Quality	<p>Dust and particles are constantly interacting with water vapour and other gases in the atmosphere, often driven and influenced by heat and UV radiation. The relationship between air quality and climate change is highly complex, but due to the direct risk to human health, an important consideration. For example, when atmospheric pressure increases pollutants are concentrated to the ground, resulting in increased respiratory health issues. Climate variations across regions will affect air quality differently. Increased precipitation aids the clearing of pollutants from air, whilst warmer, drier conditions stalls air that is saturated in pollutants e.g. smog.</p>	<p>Many air pollutants are volatile in the atmosphere and can act as precursors to greenhouse gas formation, and/or be a greenhouse gas themselves. For example, emissions of NO<sub>x</sub> contribute to ozone formation (O<sub>3</sub>) in reactions with UV radiation. Whilst exposure to O<sub>3</sub> at ground level can cause significant respiratory difficulties, O<sub>3</sub> is also a short-term greenhouse gas, contributing to the warming effect.</p> <p>Particulate matter in the atmosphere can scatter or absorb incoming radiation as well as indirectly effect climate change due its role as condensation nuclei in cloud formation, and therefore impact radiative forcing.</p>

	Impact of Climate Change	Contribution to Climate Change
	<p><b>Mitigation/Adaptation</b>            The Applicant is committed to reducing the emissions of pollutants from the development and will seek to develop and implement a site-wide strategy for pollution reduction, dust and air quality control and safe storage/disposal of contaminants. Where appropriate measures will include:</p> <ul style="list-style-type: none"> <li>• Developing and implementing a best practice Dust Mitigation Plan (DMP);</li> <li>• Providing designated areas for re-fuelling on bunded hard standing;</li> <li>• Re-vegetate earthworks and exposed soil stockpiles to stabilise surfaces;</li> <li>• Ensure sand and aggregates are stored in bunded areas and not allowed to dry out;</li> <li>• Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems;</li> <li>• Use water assisted dust sweepers on the access and local roads to remove, as necessary, any material tracked out of site;</li> <li>• Ensure vehicles entering and leaving the sites are covered to prevent escape of materials during transport;</li> <li>• Appropriate storage and disposal of Municipal Solid Wastes;</li> <li>• Regular maintenance of heating systems to avoid CO release; and</li> <li>• Ensure radon provisions are in place where appropriate.</li> </ul>	

9.118. There are also other significant benefits in respect of social and economic receptors. In terms of the economy, this ranges from minor to moderate beneficial for the local and regional economy, enhancing the locational appeal of the area and Warrington from minor to moderate beneficial. GVA and business rates have a moderate to high beneficial effect for the area. There are also benefits for employment with minor beneficial being assessed. There are further benefits in respect of indicators associated with retail and leisure; community infrastructure, quality of life such as education and skills training, health and wellbeing in respect of provision of walking and cycling routes, and also reduction in crime. The development also raises the image of Warrington and the wider area, which has economic benefits assessed as moderate beneficial.

9.119. The synergistic effects are therefore not considered to be any greater for any of the receptors than those already assessed individually within the ES.

### Summary

9.120. Synergistic effects have been considered throughout the evolution of the development proposals across all the technical areas and scheme design. These will be minimised and managed through the implementation of mitigation, much of which is multi-functional to address synergistic effects.

9.121. The adverse interaction of impacts in and around the Site will occur at their greatest during the short term period (construction). It is however considered that the mitigation proposed as part of the Environmental Assessment (summarised in Section 8) is sufficient to deal with these

impacts which will be controlled by way of planning conditions and a S106 as necessary and as such the majority of impacts will be no worse than minor adverse and negligible and many being beneficial.

- 9.122. The synergistic effects are therefore not considered to be any greater for any of the receptors than those already assessed individually within the ES.

## 10. Conclusion

10.1. The proposals are considered to be EIA Development and as such, in line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, are accompanied by an ES.

10.2. The ES and this Addendum has been prepared on behalf of Extra MSA Group by competent experts to accompany the outline planning permission for a 'New Concept' Motorway Service Area (MSA) at Junction 11 of the M62 Motorway.

10.3. This ES Part 1 Report Addendum presents a detailed project description of the proposals to develop the application site (Section 2), which are controlled by a series of parameters detailed on parameter plans (**Appendix 5**). It sets out the methodology which the Study Team has followed, the alternatives which were considered and the legislative/planning context. Section 7 and the Summary tables set out an overview of the environmental impacts on a topic by topic basis. Section 8 sets out the key mitigation measures. An overview of the additive/cumulative effects and the synergistic/interaction of effects are included in Section 9. A non-technical summary and its Addendum is provided in a separately bound document.

10.4. The Technical Papers in Part 2 of the ES and their Addendums provide more detail of this impact of the development during the construction and operational phases against a range of topics including

- Paper 1 - Geology and Ground Conditions (and Addendum)
- Paper 2 - Traffic and Transportation (and Addendum)
- Paper 3 – Water Resources (and Addendum)
- Paper 4 – Landscape (and Addendum)
- Paper 5 - Ecology and Nature Conservation (and Addendum)
- Paper 6 - Socio Economic
- Paper 7 - Noise and Vibration (and Addendum)
- Paper 8 - Air Quality, Odour and Dust (and Addendum)
- Paper 9 - Cultural Heritage and Archaeology (and Addendum)
- Paper 10 – Agricultural Land and Soils (and Addendum)
- Paper 12 - Waste
- Paper 13 – Climate Change (and Addendum)

- 10.5. These separate papers contain the detailed analysis of impacts and mitigation and should be referred to for the complete assessment of impact. This ES Part I report aims to provide an overview of the predicted effects and how it is proposed to mitigate the impacts. It should be noted that the information submitted for this planning application is extensive given the nature of the site, however, the detailed mitigation strategies will be controlled via the use of planning conditions and the Section 106 Agreement. A variety of mitigation measures are proposed to control, manage and reduce the effects of the Proposed Development. Further mitigation of environmental effects is also inherent in the design of the Proposals. All of the mitigation is devised to either mitigate individual effects or it is multi-functional to mitigate a number of effects.
- 10.6. Section 7 summarises the likely significance of effects assessed through the environmental assessment, with further detail contained within each of the Technical Papers within the ES Part 2.
- 10.7. The likely effects at the construction phase are likely to be greatest, but these will be short term temporary. Most effects are neutral, negligible or minor adverse when mitigation is implemented and as such not significant. This is the case for the impacts assessed for geology and ground conditions, ecology and nature conservation, ~~agricultural land and soils~~, noise and vibration, air quality, odour and dust, traffic and transport, water resources and waste. Many of the effects associated with Heritage are also considered to be minor adverse or less, except for those associated with palaeoenvironmental deposits, for which the effect is minor to moderate adverse, but not considered to be significant.
- 10.8. Most of the effects for the loss of agricultural land and damage to the soil or peat resource are negligible and not significant. However, when taking account of further assessment work undertaken during august 2021 and to ensure a worst case assessment, 3.3 hectares of land has been assessed as Grade 2. As such, loss of this land is assessed as moderate adverse which is a significant effect. Whereas the loss of the 8.4ha of Grade 3a and 3b agricultural land is not considered to be significant in effect. However, the loss of the Grade 2 agricultural land is considered to be off-set by the creation of peatland type habitats within the Peat Habitat Zone (high value ecosystem, which is considered a minor beneficial effect) and through the cessation of the on-going progressive degradation of the peat resource as a consequence of arable cropping activities. The Proposed Development and consequent habitat creation and protection of the valuable non-renewable peat resources (creation of Peat Habitat Zone and

cessation of farming activities) can only be delivered through the loss of all agricultural land within the Site (through built development or land use change) including the small area of Grade 2 land. Therefore, although a significant effect is recorded for the loss of the Grade 2 land it is considered to be outweighed by the benefits to peat and peatland habitats which will occur as a consequence.

- 10.9. Many of the effects associated with landscape and visual impact are also minor adverse or less, except for those associated with environmental designations and the view points VP4, 6, 7, 10 and 14 (as shown on Landscape Receptor Plan at **Appendix 6**), which are considered to be moderate adverse and as such significant.
- 10.10. These significant adverse effects are balanced with the beneficial effects associated with socio economic which are beneficial in respect of job creation and inward investment. Other beneficial effects are associated with the creation of the diversion of Silver Lane Brook to create a wildlife corridor and the creation of high value eco systems.
- 10.11. Through scheme evolution and appropriate mitigation, the likely effects at the operation phase are considered to be minor adverse, neutral or negligible and as such not significant. This is the case for effects associated with cultural heritage, noise and vibration, air quality, dust and odour, traffic and transport, water resources, geology and ground, socio economic and ecology and nature conservation. Over time, as vegetation matures, effects associated with landscape and visual impact will also be minor adverse or better and as such not significant.
- 10.12. Benefits of the proposals are related to socio economic, particularly in respect of job creation, business rates and increased GVA. Other benefits are associated with traffic and transport with the reduction in the potential of accidents on the strategic highway network due to provision of an MSA to address the current gap in MSA provision on the network. Use of peat in habitat creation and enhancement by creating a peatland type habitat and corridor for the diversion of Silver Lane Brook are also benefits of the Proposed Development.
- 10.13. Effects associated with Climate Change are adverse and due to the approach taken to assessment, comparing the baseline position of the Site as an agricultural field with the Proposed Development, any change to the baseline conditions is considered significant to a variety of receptors, including human and ecological. This would be the case with any development of an agricultural field. However it is minimized as far as possible with the mitigation proposed and the generation of energy from renewable sources far exceeding the planning policy position

through the use of ground source heat pumps (or other renewable energy or low carbon measures that will be considered further through detailed design).

- 10.14. The ES Part I also assesses the potential for the synergistic/interaction of effects and concludes that these should be no greater than the individual effects assessed through the main assessment of the Development Proposals. These effects have been fully considered throughout the evolution of the scheme proposals and mitigation, that in many cases is multi-functional, identified as required to address the likely effects so they are suitably reduced and managed.
- 10.15. Cumulative impacts are assessed and take account of a number of developments in the area, including development at Birchwood Park to the south of the M62 Motorway, and also HS2, which is proposed to run in close proximity to the north east of the Application Site with construction and maintenance access through the Site for the HS2 line closest to the Site. Socio economic cumulative effects are considered positive in terms of job creation, inward investment and business rates generated. Whilst the cumulative effect of developments could reduce the total archaeology resource in the area, mitigation would be in place for each development to evaluate/excavate and record, thereby increasing understanding. Views would change, but these would be managed with planting, which matures over time. Although there would be a cumulative loss in habitats, the effect on species is not considered to be significant. Where relevant, cumulative effects in terms of traffic and transport, waste, noise, air quality, geology and ground, water resources are considered to remain as assessed through the main assessment and are therefore not considered to be significant and each development would be responsible for suitably mitigating its own effects. The cumulative loss of agricultural land, especially BMV land is considered significant. However, it should be noted, that the loss for the HS2 development alone is significant, but for the Proposed Development, it is not considered to be significant.
- 10.16. There are therefore not considered to be any potential environmental impacts that cannot be suitably mitigated and which would prevent the proposals from being granted planning permission.

## II. ES Part I Appendices

## ES Part I Appendix I

## Warrington MSA, J11, M62

### Extra MSA Group

## Site Specific Glossary

Site Specific Terminology	Description
A574 Birchwood Way	
Applicant	Extra MSA Group
Application Site	Application Site for proposed development - Land at Junction 11 of the M62 Motorway
AQMA	Air Quality Management Area
Birchwood Park	Business Park to the south of Junction 11 of the M62 Motorway
Borough	The authority area is a Borough
Business Lounge	Contained within the Facility Building to provide facilities for business use
CIA	Cumulative Impact Assessment
Client	Extra MSA Group
Core Strategy (July 2014)	Warrington's adopted local planning policy (although currently under review).
Culcheth	Settlement to the north of the Site
EIA Regulations 2017	The Town and Country Planning (Environmental Impact Assessment ) Regulations 2017. The EIA Regulations the ES is based upon.
emerging Local Plan (Preferred Options July 2017)	Warrington's emerging Local Plan document that was consulted upon in July 2017
EVCP	electric vehicle charging points
Extra MSA Group	Applicant / Client
Facilities Building	MSA facility to include food court, ancillary retail, toilets, washing facilities and staff areas as well as Business Centre and Visitor Centre
FFS Fuel Filling Station	Fuel Filling Station
Gorse Covert	Residential area in Birchwood, to the south of the M62 and Birchwood Park
Green Belt	Land designation
GRR	Greenfield run-off rate
Hotel	
HGV	Heavy Goods Vehicle
HS2	High Speed Rail 2
HSE	Health and Safety Executive
Internal Site Access Road(s)	The access road within the site to facilitate access
Local Plan Core Strategy (July 2014)	Warrington's adopted local planning policy (although currently under review).
LNR	Local Nature Reserve e.g. Risley Moss
LWS	Local Wildlife Sites

## Warrington MSA, J11, M62

### Extra MSA Group

Site Specific Terminology	Description
M62 Motorway	
M6 Motorway	
MAQMA	Motorway Air Quality Management Area
Means of Access	Details of the vehicular access into the Application Site
MSA	Motorway Service Area
NPPF 2019	National Planning Policy Framework, February 2019
Oakwood	Residential area in Birchwood, to the south of the M62 and Birchwood Park
PADHIZone	Zones where planning advice for developments near hazardous installations is relevant
Parameters / Parameter Plan	A series of parameters fixed as part of the proposals which form the basis of the environmental assessment.
Peatland Habitat Zone	Area created on Site as Peatland Habitat as part of the Proposed Development, thereby retaining the peat on Site
Peatland Type Habitat	Area created on Site as Peatland Habitat as part of the Proposed Development, thereby retaining the peat on Site
Primary Internal Site Access Road	The primary access road within the site
Proposed Development	Application Site for proposed development
PROW	Public Rights of Way
Restored Risley Landfill Site	Restored landfill site adjacent the Application Site
SAC	Special Area of Conservation e.g. Manchester Mosses
Silver Lane Brook	Brook currently running south to north to the western boundary.
Site	Application Site - Land at Junction 11, M62 Motorway
SSSI	Site of Special Scientific Interest e.g. Holcroft Moss and Risley Moss
The Town and Country Planning (Environmental Impact Assessment ) Regulations 2017	The EIA Regulations the ES is based upon.
Warrington MSA, J11 M62	The Site
WBC	Warrington Borough Council

Rev F

## Abbreviations

### A a

AADT	Annual Average Daily Traffic
AAWT	Average Annual Weekday Traffic
ABI	Annual Business Inquiry Data
ACM	Asbestos Containing Materials
ADF	Average Daylight Factor
AGL	Above Ground Level. A measurement of altitude above a specific land mass.
AOD	Above Ordnance Datum
APSH	Annual Probable Sunlight Hours
APZ	Archaeological Priority Zone
AQAP	Air Quality Action Plan
AQMA(s)	Air Quality Management Area(s)
AQS	Air Quality Strategy
AVR	Accurate Visual Representations

### B b

BAME	Black, Asian and Minority Ethnic
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BMT	BMT Fluid Mechanics Limited. Wind Microclimate specialist consultant
BRMC	Biodiversity Recording and Monitoring Centre
BS	British Standard
BSI	British Standard Institute

BT	British Telecom
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
BUG	Bicycle User Groups

### C c

CCTV	Closed Circuit Television
CEMP	Construction Environmental Management Plan
CFD	Computational Fluid Dynamics
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Land Exposure Assessment
CLP	Construction Logistics Plan
CLR	Contaminated Land Report
CMS	Construction Management System
CMSC	Construction Management System Contractor
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
COCP	Code of Construction Practice
COP	Code of Practice
CPZ	Controlled Parking Zone
CRN	Calculation of Rail Noise
CRTN	Calculation of Road Traffic Noise
CS	Core Strategy
CWS	County Wildlife Site

## D d

dB	Decibel
dBA	The unit of noise measurement (measured on a logarithmic scale), which expresses the loudness in terms of decibel (dB) scale and the frequency factor
DCLG/CLG	Department for Communities and Local Government
DDA	Disability Discrimination Act
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of Environment, Transport and the Regions (now Department for Transport)
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DoE	Department of Environment
DoT	Department of Transport
DPD	Development Plan Document

## E e

EA	Environment Agency
EAPPG	Environment Agency Pollution Prevention Guidelines
EDBP	Economic Development Business Plan
EH	English Heritage
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMSE	Environmental Management Act 1990
Environmental Management	

StrategyPA	
EN	English Nature
EPS	European Protected Species
EQS	Environmental Quality Standard
ES	Environmental Statement
EU	European Union

## F f

FRA	Flood Risk Assessment
FE	Form of Entry – cohorts of 30 children
FTE (Jobs)	Full Time Equivalent (Jobs)

## G g

GDP	Gross Domestic Product. A measure of the national economic performance.
GEA	Gross External Area
GIA	Gross Internal Area
GP	General Practitioner
GQA	General Quality Assessments
GVA	Gross Value Added

## H h

Ha	Hectare
HDV(s)	Heavy Duty Vehicle(s)
HER	Historic Environment Record
HGV(s)	Heavy Goods Vehicle(s)
HSMS	Health and Safety Management System
HVAC	Heating, Ventilation, Air Conditioning
HWR	Hazardous Waste Regulations 2005
Hz / kHz	Hertz / Kilohertz

**I i**

ICE	Institute of Civil Engineers
IDP	Infrastructure Delivery Plan
IEA	Institute of Environmental Assessment
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
IHT	Institute of Highways and transportation
IMD	Index of Multiple Deprivation

**J j**

JMP	Inclusive Access Consultants
JSA	Job Seekers Allowance
JSNA	Joint Strategic Needs Assessment

**K k**

Kg	Kilogram
KS1	Key Stage 1 – Primary education between years 1-2
KS2	Key Stage 2 – Primary education between years 3-6
Kw	Kilowatt

**L l**

LA10	The noise level exceeded for 10% of the measurement time
LAeqT	Equivalent continuous sound level
LAQM	Local Air Quality

	Management
LDF	Local Development Framework
LDV	Light Duty Vehicles
LEZ	Low Emission Zone
LGV	Light Goods Vehicle
LNR	Local Nature Reserve
LoWR	List of Waste Regulations
LPA	Local Planning Authority
LSOAs	Lower Super Output Areas
LW	Long Wave

**M m**

m	Metre
m <sup>2</sup>	Square metres
m <sup>3</sup>	Cubic metres
MAGIC	Multi-Agency Geographic Information for the Countryside
mm	millimetres
MMP	Materials Management Plan
MNL	Music Noise Level
MOL	Metropolitan Open Land
m/s	Metres per second

**N n**

NAQS	National Air Quality Strategy
NE	Natural England
NEC	Noise Exposure Category
NGR	National Grid Reference
NHBC	National House Building Council
NHS	National Health Service
NIA	Net Internal Area
NMR	National Monuments Record
NNR	National Nature Reserve
No <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxide
NPPF	National Planning Policy

	Framework
NPS	National Planning Statement (NN NPS National Networks National Planning Statement)
NSCA	National Society for Clean Air
NTS	Non-Technical Summary

## O o

ONS	Office of National Statistics
OS	Ordnance Survey

## P p

PAH(s)	Polycyclic Aromatic Hydrocarbons
PAL	Published Admissions Limit
PANs	Published Admissions Numbers
PCBs	Polychlorinated Biphenyls
PCT	Primary Care Trust
PERS	Pedestrian Environment Review System
PIA	Personal Injury Accidents
PPE	Personal Protective Equipment
PPG	Planning Policy Guidance
PPPL	Primary Place Planning Location
PPS	Planning Policy Statement
PTAL	Public Transport Accessibility Level
PV	Photovoltaics

## Q q


## R r

R&A	Review and Assessment
RC	Reinforced Concrete
RF	Radio Frequency
RPG	Registered Park and Garden

## S s

SAC	Special Areas of Conservation
SAM	Scheduled Ancient Monument
SAP	Species Action Plan
SFRA	Strategic Flood Risk Assessment
SHMA	Strategic Housing Market Assessment
SIC	Standard Industrial Classification
SIL	Strategic Industrial Land
SINC	Site of Importance for Nature Conservation
SMR	Sites and Monuments Records
SNCI	Sites of Nature Conservation Importance
SO <sub>2</sub>	Sulphur dioxide
SOC	Standard Occupational Classification
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Urban Drainage System
SVOCs	Semi Volatile Organic Compounds
SWMP	Site Waste Management Plan

## T t

T	Total Annual Probable Sunlight Hours (APSH)
TA	Transport Assessment
TfL	Transport for London
TG	Technical Guidance
TPH	Total Petroleum Hydrocarbons
TPO	Tree Preservation Order

## U u

UDP	Unitary Development Plan
UK	United Kingdom
UK BAP	United Kingdom Biodiversity Action Plan
USA	Updating and Screening Assessment
UXO	Unexploded Ordnance

## V v

VCM	Volatile Correction Model
VOCs	Volatile Organic Compounds
VSC	Vertical Sky Component

## W w

WFD	Water Framework Directive
WHO	World Health Organisation
WM	Winter Months Component of APSH
WRA	Water Resources Act 1991
WW	First World War
WWII	Second World War

## X x


## Y y


## Z z


## Glossary of Terms

### A a

**Adoption** - the final confirmation of a plan as a statutory document by the local planning authority.

**Affordable Housing** - low cost housing for sale or rent, often from a housing association, to meet the needs of local people who cannot afford accommodation through the open or low cost market, or subsidised housing.

**Aged or veteran tree:** A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally.

**Agricultural Dwelling** - a dwelling which is subject to a condition or legal agreement that it shall only be occupied by someone who is employed or was last employed solely or mainly in agriculture, forestry or other appropriate rural employment.

**Air Quality Management Areas:** Areas designated by local authorities because they are not likely to achieve national air quality objectives by the relevant deadlines.

**Alternative option/solution.** Alternative methods of achieving the objectives of the project. They may include: alternative locations that are suitable; or different approaches in terms of design, manufacturing, transportation, energy, or supply of materials etc.

**Ambient:** Background levels

**Amenity** - the pleasant or normally satisfactory aspects of a location which contribute to its overall character and the enjoyment of residents or visitors.

**Anemometer.** Measures the wind speed and transmits wind speed data to the controller.

**Ancient woodland:** An area that has been wooded continuously since at least 1600 AD.

**Ancillary Use** - a subsidiary use connected to the main use of a building or piece of land.

**AOD:** Above Ordnance Datum, the height above acknowledged sea level.

**Appeal** - the process whereby an applicant can challenge an adverse decision on an application by means of written representations, an informal hearing or formal inquiry proceedings. Appeals can also be made against the failure of the planning authority to issue a decision, against conditions attached to a permission and against the issue of an enforcement notice.

**Aquifer:** A water bearing bed of strata, either by virtue of its porosity or because it is pervious.

**Archaeological interest:** There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

**Archaeological watching brief:** Attendance on site of a suitable qualified or experienced archaeologist during the course of ground excavations, usually working to a brief agreed with the Local planning Authority.

**Area of Outstanding Natural Beauty** - area designated by the Countryside Agency or the Countryside Council for Wales where the primary purpose is the conservation and enhancement of natural beauty including flora, fauna, geology and landscape.

**Area of Special Control of Advertisements** - an area which is specifically defined by the local planning authority because they consider its scenic, historical, architectural or cultural features are so significant that a stricter degree of advertisement control is justified in order to conserve visual amenity within that area. Such areas can only be designated with the approval of the Secretary of State.

**Article 4 Direction** - an order made by the Secretary of State, the National Assembly for Wales or the local planning authority, requiring a planning application to be made where normally permitted development rights would apply.

**Article 14 Direction** - issued by the Secretary of State or the National Assembly for Wales to restrict the grant of planning permission by a local planning authority, either indefinitely or for a specified period, normally to give the Department time to decide whether to call in the application.

**Assessment:** An umbrella term for description, analysis and evaluation.

### B b

**Background Noise:** The background noise level is the underlying level of noise present at a particular location for the majority (usually 90%) of a period of time. As such it excludes any short duration noises, such as individual passing cars (but not continuous traffic), dogs barking or passersby. Sources of background noise typically include such things as wind noise, traffic and continuously operating machinery (e.g. air conditioning or generators).

**Back-land** - land which is behind existing development with no, or very limited, road frontage.

**Baseline conditions.** The conditions that would pertain in the absence of the proposed project at the time that the project would be constructed/operated/decommissioned. The definition of these baseline conditions should be informed by changes arising from other causes (e.g. other consented developments).

**BPEO (Best Possible Environmental Option)** - The option that provides the most benefits or the least damage for the environment, as a whole, at acceptable cost, in the long term as well as the short term. (defined in the 12th report of the Royal Commission on Environmental Pollution)

**Best and most versatile agricultural land:** Land in grades 1, 2 and 3a of the Agricultural Land Classification.

**Betterment** - the amount by which the value of land is increased by development or by the grant of planning permission, or because of the development of neighbouring land.

**Bio-diversity** - a measure of the number and range of species and their relative abundance in a community. / The biological diversity of the earth's living resources. The total range of variability among systems and organisms at all levels of organisation and the structural and functional relationships within and between these different levels.

**Bio-diversity Action Plan (BAP)** - the means by which the UK government commitment to the Convention on Biological Diversity at Rio de Janeiro (1992) is to be met.

**Birds and Habitats Directives:** European Directives to conserve natural habitats and wild fauna and flora.

**Borehole:** A deep hole bored into the ground as part of intrusive investigations typically to test depth and quality of ground water.

**Brown-field Site** - land which has been previously developed, excluding mineral workings or other temporary uses.

**Bronze Age:** Prehistoric time period from 2,000 to 700 BC.

**Buffer zone.** An area (human-made or natural) that helps to protect a habitat from damage, disturbance or pollution. It is managed to protect the 'integrity' of the valued habitat and/or the conservation status of species that it supports

**Building Preservation Order** - a notice under Section 3 of the Planning (Listed Buildings and Conservation Areas) Act 1990 to protect buildings of special architectural or historic interest from demolition or alterations that would affect their interest.

## C c

**Cadw** - government agency supporting the preservation, conservation, enhancement, interpretation and appreciation of historic buildings and monuments in Wales.

**Called-in Application** - a planning application referred to the Secretary of State or the National Assembly for Wales for determination by virtue of the powers contained in section 77 of the Town and Country Planning Act 1990.

**Change of Use** - more correctly referred to as a 'material change of use'. A change in the use of land or buildings that is of significance for planning purposes, often requiring planning permission.

**Circular** - guidance, including policy, issued by a government department usually, but not always, in support of legislation.

**Commercial (activity):** Activities involved in buying and selling things, such as office workplaces. Commercial sites are not often open to the public.

**Commitments** - All land with current planning permission or allocated in local plans.

**Community Forests** - A joint initiative between the Countryside Agency and the Forestry Commission to promote the creation, regeneration of well-wooded landscapes around major towns and cities.

**Community Infrastructure Levy:** A levy allowing local authorities to raise funds from owners or developers of land undertaking new building projects in their area.

**Community Right to Build Order:** An Order made by the local planning authority (under the Town and Country Planning Act 1990) that grants planning permission for a site-specific development proposal or classes of development.

**Competent person (to prepare site investigation information):** A person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation.

**Comparison Goods** - 'non perishable' goods for retail sale which are often stocked in a wide range of sizes, styles, colours and qualities, including furniture, carpets, televisions etc.

**Competent Authority.** The authority which determines the application for a consent, permission, license or other authorisation to proceed with a development. It is the authority that must consider the environmental information before granting any kind of authorisation. For example, for projects requiring planning permission this will usually be the Local Planning Authority.

**Compulsory Purchase Orders (CPOs)** - notice issued by the government or a local authority to acquire land or buildings for public interest purposes.

**Conditions** - stipulations attached to a planning permission to limit or direct the manner in which a development is carried out.

**Contaminated Land** - land which has been polluted or harmed in some way rendering it unfit for safe development and most practical uses.

**Controlled Parking Zone (CPZ)** - an area in which all kerbside space is controlled by either waiting or loading restrictions or by designated parking spaces.

**Conservation (for heritage policy):** The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.

**Conservation Area** - an area given statutory protection under the Planning Acts, in order to preserve and enhance its character and townscape.

**Conservation Area Consent** - consent required from the local planning authority before demolishing an unlisted building in a conservation area.

**Contamination:** Contamination is the addition, or the result of addition, or presence of a material or materials to, or in, another substance to such degree as to render it unfit for its intended purpose.

**Consultation** - procedures for assessing public opinion about a plan or major development proposal, or in the case of a planning application, the means of obtaining the views of affected neighbours or others with an interest in the proposal.

**Consultation bodies (consultees).** Any body specified which has been consulted in respect of the Environmental Statement. See **Statutory Consultee** below.

**Convenience Shop** - supermarket, grocers, newsagents, confectioners, tobacconists, off-licences or other shops selling goods which tend to be purchased regularly.

**Conversions** - the sub-division of residential properties into bedsits, self-contained flats or maisonettes.

**Countryside Agency** - organisation responsible for advising government and taking action on issues affecting the social, economic and environmental well-being of the English countryside.

**Countryside Council for Wales (CCW)** - government agency promoting the interests and well-being of rural Wales.

**CO<sub>2</sub>:** (Carbon Dioxide) Contributes about 60% of the potential global warming effect of man made emissions of greenhouse gases. Although this gas is naturally emitted by living organisms, these emissions are offset by the uptake of carbon dioxide by plants during photosynthesis; they

therefore tend to have no effect on atmospheric concentrations. The burning of fossil fuels, however, releases carbon dioxide fixed by plants many millions of years ago and thus increases its concentration in the atmosphere.

**Cumulative effects / impacts:** The summation of effects / impacts that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.

**Cumulative landscape effects:** There is the potential for cumulative landscape effects where there would be:

- An incremental change to the fabric of the landscape, as the result of two or more operational, permitted and/or proposed wind farms.
- An incremental change in the character and/or quality of the landscape as a result of the simultaneous, successive and/or sequential visibility of two or more operational, permitted and/or proposed wind farms from various locations.

**Cumulative visual effects:** can occur where there would be:

- Simultaneous visibility of two or more operational, permitted and/or proposed wind farms at a viewpoint location, in the same sector of the view (within 45degrees).
- Successive visibility of two or more operational, permitted and/or proposed wind farms at a viewpoint location, where each wind farm is in a different sector of the view (>45 percent apart). Sequential visibility of two more operational, permitted and/or proposed wind farms along a linear route.

**Cumulative ZVI:** Areas within which a number of proposed developments may have an influence or effect on visual amenity.

## D d

**Decentralised energy:** Local renewable energy and local low-carbon energy usually but not always on a relatively small scale encompassing a diverse range of technologies.

**Decommissioning:** A process where the site is made safe by removing hazards.

**Deemed Consent** - this allows the display of certain "specified classes" of advertisement without first having to make an application to the local planning authority. Under the Control of Advertisements Regulations there are 14 Classes, all of which are subject to strict conditions and limitations.

**Density** - in the case of residential development, a measurement of either the number of habitable rooms per hectare or the number of dwellings per hectare.

**Departure** - a proposed development which is not in accordance with a local plan but which due to exceptional circumstances the local planning authority proposes to accept - after due publicity and possible referral to the Secretary of State or the National Assembly for Wales.

**Designated heritage asset:** A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.

**Derelict Land** - Land so damaged by industrial or other development that it is incapable of beneficial use without treatment.

**Detailed/Full Application** - The most common type of planning application is one that seeks full or detailed planning permission. It should contain all the information needed for the LPA to reach its decision, but the LPA may seek further information.

**Determination** - local planning authority process to decide whether a proposed development requires planning permission.

**Developer:** The applicant for authorisation for a private project or the public authority which initiates a project.

**Development** - the carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or land.

**Development Area** - a priority area for environmental, social or economic regeneration or a combination of these.

**Development Brief** - document providing detailed information to guide developers on the type of development, design and layout constraints and other requirements for a particular, usually substantial, site.

**Development Consent:** The decision of the Competent Authority or Authorities which entitles the Developer to proceed with the project.

**Development Control** - the process whereby a local planning authority decides whether a planning application meets the requirements of planning policy, particularly as set out in development plans.

**Development Plan** - document (a structure or local plan) that sets out in writing and/or in maps and diagrams a local planning authority's policies and proposals for the development and use of land and buildings in the authority's area.

**Directive:** European Commission (EC) Directives impose legal obligations on European Member States. They are binding as to the results to be achieved, but allow individual states the right to decide the form and methods used to achieve the results.

**Discontinuance Notice** - notice served by a local planning authority requiring the discontinuance of the display of any advertisement, or the use of a site for the display of an advertisement, which has the benefit of deemed consent under the Control of Advertisements Regulations. Action to serve a discontinuance notice may only be taken if the planning authority is satisfied it is necessary to do so to remedy a substantial injury to the

amenity of the locality or a danger to members of the public.

**Displacement:** The extent to which the benefits of a project are offset by reductions of output or employment elsewhere.

## E e

**EA:** Environment Agency

**Economic development:** Development, including those within the B Use Classes, public and community uses and main town centre uses (but excluding housing development).

**Ecology:** The study of living organisms in relation to their surroundings.

**Ecological networks:** These link sites of biodiversity importance.

**Ecosystem services:** The benefits people obtain from ecosystems such as, food water, flood and disease control and recreation.

**Effects/Impacts:** A predicted change in the environmental baseline as a result of the proposed development. Effects can be positive or negative.

**Effluent:** A fluid discharged or emitted to the external environment.

**Employment uses:** Any undertaking or use of land that provides paid employment.

**Employment density:** Average floor space per person in a given building

**EN:** English Nature

**Enforcement** - procedures by a local planning authority to ensure that the terms and conditions of a planning decision are carried out, or that development carried out without planning permission is brought under control.

**Enforcement Notice** - notice requiring the discontinuance of an unauthorised use and/or the removal of buildings, including restoration of land, where development has been begun without permission or in breach of a condition.

**Edge-of-centre** - For retail purposes, a location that is well connected and up to 300 metres of the primary shopping area. For all other main town centre uses, a location within 300 metres of a town centre boundary. For office development, this includes locations outside the town centre but within 500 metres of a public transport interchange. In determining whether a site falls within the definition of edge of centre, account should be taken of local circumstances.

**Emission:** A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.

**English Heritage (Historic Buildings and Monuments Commission for England)** - a national body funded by the government to promote and give advice on building conservation matters.

**English Nature** - a national body funded by the government to promote and give advice on the conservation of England's wildlife and natural features.

**Environmental Appraisal** - the process of weighing all the policies in a development plan for their global, national and local implications.

**Environmental Baseline:** The existing (pre-development) context of a study area.

**Environmental Capacity:** The ability of the environment to accommodate a particular activity or rate of activity without unacceptable change.

**Environmental Impact Assessment (EIA)** - under the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, proposers of certain scheduled developments are required to submit a planning application with an accompanying environmental statement, evaluating the likely environmental impacts of the development, together with an assessment of how the severity of the impacts could be reduced. / This is an assessment carried out under the EIA Regulations. It is the whole process of gathering environmental information; describing a development or other project; predicting and describing the environmental effects of the project; defining ways of avoiding, reducing or compensating for these effects; consulting the general public and specific bodies with responsibilities for the environment; and ensuring that measures are prescribed to avoid, reduce or compensate for environmental effects.

**Environmental Information** - The information that must be taken into account by the decision maker (the Competent Authority) before granting any kind of authorisation in any case where the EIA process applies. It includes the Environmental Statement, including any further information, any representations made by any body required by the Regulations to be invited to make representations, and any representations duly made by any other person about the environmental effects of the development.

**Environmental Statement (ES)** - The report on the assessment carried out under the EIA Regulations, on the environmental effects of a development; normally submitted with the planning application.

**Environmental Studies:** The surveys and investigations carried out by the developer and the EIA team in order to prepare the Environmental Information for submission to the competent authority.

**EIA Regulations** - The UK statutory instruments that are designed to meet the requirements of Council Directive

85/337/EEC on the Assessment of the effects of certain public and private projects on the environment, as amended by Council Directive 97/11/EC, 2003/35/EC and 2009/31/EC.

**EIA Team:** The team which carries out the environmental studies and prepares the environmental information for submission to the competent authority.

**Established use** - a use which does not conform to a plan but against which enforcement proceedings cannot be taken, often because of the length of time a use has been in operation.

**Established Use Certificate** - these were issued by a planning authority before July 1992 where it could be shown that a use of land or buildings had existed since before 1964. It gave immunity from enforcement action. Since July 1992 these have been replaced by Lawful Development Certificates.

**European Spatial Development Perspective (ESDP)** - non-binding regional structure plan for the European Union.

**Examination in Public (EIP)** - consideration of public views on a draft structure plan or proposed changes to it, held before an independent inspector.

**Exclusion List:** A list of threshold and criteria for specified categories of projects defining those projects for which EIA is not required because they are considered to be unlikely to have significant effects on the environment.

**Express Consent** - this is needed to display an advertisement, which does not benefit from deemed consent under the Town and Country Planning (Control of Advertisements Regulations).

## F f

**Fauna:** Animal Life.

**Floodplain:** Land adjacent to a watercourse over which water flows, or would flow but for defences in place, in times of flood.

**Flora:** The plant life of a particular geographical area.

**Footprint:** perimeter of building's ground floor plan.

**Frequency:** The frequency of a sound is equivalent to its pitch in musical terms. The units of frequency are Hertz (Hz), which represents the number of cycles (vibrations) per second.

**Fugitive dust emissions:** Dust emissions escaping from a construction site.

## G g

**General Permitted Development Order (GPDO)** - the Town and Country Planning (General Permitted Development) Order 1995 grants rights (known as permitted development rights) to carry out certain limited forms of development without the need to make an application for planning permission.

**Green Belt** - specially designated area of countryside protected from most forms of development in order to stop urban sprawl and the coalescence of settlements, preserve the character of existing settlements and encourage development to locate within existing built-up areas.

**Green infrastructure:** A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

**Green-field Site** - an area not previously used for built development.

**Grid (also “National Grid” and “Power Grid”)**. A common term referring to the electricity transmission and distribution system.

**Gross:** The sum total without reduction.

**Gross Value Added** - A productivity metric that measures the difference between output and intermediate consumption. Gross value added provides a pound value for the amount of goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

**Ground Investigation (GI)**. An intrusive sub-surface investigation by mechanised plant or hand held tools. Designed to characterise soil or rock by sample recovery or exposure of subsurface strata; thus enabling the correct and accurate design of foundations, slopes or earthworks.

**Ground Water:** Water associated with soil or rocks below the ground surface but is usually taken to mean water in the saturated zone.

## H h

**ha:** 1 hectare = 10,000 sq. metres = 2.47 acres.

**Horizon:** A time - plane recognisable in rocks by some characteristic feature such as flora, fauna or lithology.

**Habitable Room** - all living rooms and bedrooms, but not kitchens, bathrooms, WCs or circulation space, are normally regarded as habitable for the purposes of density calculations.

**Habitat** - A place in which a particular plant or animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together.

**Heritage asset:** A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

**Heritage Coast:** Areas of undeveloped coastline which are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors.

**Historic environment:** All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.

**Historic environment record:** Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.

**Hoarding:** A temporary board fence set up on the perimeter of a building site.

**Hydraulic piling:** A piling mechanism used for pressing in and pulling out sheet piles with minimized noise and vibration generation.

**Hydrogeology:** The study of the geological factors relating to the Earth's water.

**Hydrology:** The study of the distribution, conservation, use of the water of the earth and its atmosphere.

**Hz:** Sound frequency refers to how quickly the air vibrates, or how close the sound waves are to each other (in cycles per second, or Hertz; Hz).

## I i

**Impact** - The way in which a receptor or natural resource is affected by a proposed development.

**Improved grassland:** Grassland that has been modified to increase its agricultural value, often using ploughing and re-seeding, land drainage and treatment with fertilisers and herbicides.

**Inclusive design:** Designing the built environment, including buildings and their surrounding spaces, to ensure that they can be accessed and used by everyone.

**Inert waste:** Wastes that do not undergo any significant physical, chemical or biological transformation.

**In-situ preservation:** Preserving archaeological remains in the natural, original or appropriate position.

**Invertebrate:** An animal lacking a backbone and internal skeleton.

**Indirect impacts:** Impacts on the environment, which are not a direct result of the Development but are often produced away from it or as a result of a complex pathway. Sometimes referred to as secondary impacts.

**Infrastructure** - permanent resources serving society's needs, including roads, sewers, schools, hospitals, railways, communication networks etc.

**Integrated Transport Strategy** - the integration of land-use and transportation planning to allow transport provision and the demand for travel to be planned and managed together, balancing the use of different modes of transport to encourage easy transfer between them and reduced reliance on the private car.

**Iterative process** - A process repeated until the best solution has been found. In the context of EIA, it can be understood as the process of assessment and reassessment until the most appropriate development is achieved.

## J j

## K k

**kWh:** kilowatt hour = 1 unit of electricity.

## L l

**Land Compensation** - concerns the assessment of compensation where land, or some other interest in land, is being acquired, either compulsorily, or by agreement, by an authority possessing compulsory purchase powers.

**Landscape:** Landscape results from the way that different aspects of our environment (physical, social, aesthetic and perceptual) interact together and are perceived by us:

- Physical elements- e.g. geology, landform, soils, flora and fauna.
- Social elements- e.g. land use, enclosure patterns, and the patterns, form and scale of settlements and other built development.
- Aesthetic factors- e.g. colour, form, visual texture and pattern, sounds, smells and touch.
- Perceptual factors- e.g. memories, associations, stimuli and preferences.

**LBAP:** Local Biodiversity Action Plan.

**Landscape character:** the distinct and recognisable pattern of elements that occur consistently in a particular type of landscape, and how these are perceived by people. It reflects particular combinations of geology, landform,

soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

**Landscape character type:** A landscape type will have broadly similar patterns of geology, landform, soils, vegetation, land use, settlement and field pattern discernible in maps and field survey records.

**Landscape effects:** Change in the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be negative or positive.

**Landscape value:** is concerned with the relative value that is attached to different landscapes. In a policy context the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by different communities of interest for many different reasons without any formal designation, recognising, for example, perceptual aspects such as scenic beauty, tranquility or wildness; special cultural associations; the influence and presence of other conservation interests; or the existence of a consensus about importance, either nationally or locally.

**Lawful Development Certificate** - a procedure by which existing or proposed uses and other forms of development can be certified as lawful for planning purposes. An application has to be made to the local planning authority and there is a right of appeal against their decision.

**Listed Building** - building or other structure of special architectural or historic interest included on a statutory list and assigned a grade (I, II\* or II).

**Listed Building Consent** - a permission required for the alteration or demolition of a listed building.

**Local Development Order:** An Order made by a local planning authority (under the Town and Country Planning Act 1990) that grants planning permission for a specific development proposal or classes of development.

**Local Enterprise Partnership:** A body, designated by the Secretary of State for Communities and Local Government, established for the purpose of creating or improving the conditions for economic growth in an area.

**Local Nature Partnership:** A body, designated by the Secretary of State for Environment, Food and Rural Affairs, established for the purpose of protecting and improving the natural environment in an area and the benefits derived from it.

**Local planning authority:** The public authority whose duty it is to carry out specific planning functions for a particular area. All references to local planning authority apply to the district council, London borough council, county council, Broads Authority, National Park Authority and the Greater London Authority, to the extent appropriate to their responsibilities.

**Local Nature Reserve (LNR)** - area designated under the National Parks and Access to the Countryside Act 1949 as being of particular importance to nature conservation and where public understanding of nature conservation issues is encouraged.

**Local Plan** - statutory development plan prepared by a local planning authority setting out detailed policies for environmental protection and development.

**Local Planning Authority** - the local authority or council that is empowered by law to exercise planning functions. This is normally the local borough or district council, but in National Parks and some other areas there is a different arrangement.

## M m

**Made Ground:** Soils or other material that has been deposited by man rather than natural processes, for example to make up ground levels.

**Magnitude:** A combination of the scale, extent and duration of an effect.

**Mandatory List:** A list of thresholds and criteria for specified categories of projects defining those projects for which EIA is always required because they are considered to be likely to have significant effects on the environment.

**Material Consideration** - a matter which should be taken into account in deciding on a planning application or on an appeal against a planning decision.

**Medieval:** Historic time period from AD1066 – AD1485.

**Megawatt (MW)** - A million watts.

**Megawatt-hour (MWh)** - One million watt-hours. Equal to one thousand kilowatt-hours (kWh) or 'units' of electricity.

**Metropolitan** - constituting a large urban area, usually including a city, its suburbs and outlying areas.

**Micro climate:** The climate of a small localised area.

**Mineral Planning Guidance Notes (MPGs)** - a series of documents issued by the Office of the Deputy Prime Minister (ODPM) (previously Department of Transport, Local Government and the Regions (DTLR)) setting out government policy and advice on planning issues relating to mineral resources.

**Minerals Planning Policy Wales** - Document setting out the policy of the Welsh Assembly Government in relation to short and long term future use and safeguarding of mineral deposits.

**Mitigation** - Measures taken to avoid or reduce negative impacts. Measures may include: locating the development and its working areas and access routes away from areas of high ecological interest, fencing off sensitive areas during

the construction period, or timing works to avoid sensitive periods.

**Multiplier:** Figure used to calculate the number of induced and indirect jobs created.

**Multiplier Effects:** Further economic activity (jobs, expenditure or income) associated with additional local income and local supplier purchasing.

## N n

**National Assembly for Wales** - Government body in Wales that debates and approves legislation and holds the Welsh Assembly Government to account.

**National Nature Reserve** - area designated by English Nature to protect and conserve nationally important areas of wildlife habitat and geological formations and to promote scientific research; in Wales it is an SSSI that the Countryside Council for Wales (CCW) has designated of national or international importance for nature conservation. (Note: on the CCW website I noticed that they also refer to National Nature Reserves, as well as SSSIs)

**National Park** - tract of predominantly open and attractive countryside designated under the National Parks and Access to the Countryside Act 1949 with its own administration and management role and function as a local planning authority.

**National Planning Policy Framework – NPPF** sets out the Government's policies on different aspects of planning.

**Nature Conservation** - the preservation, management and enhancement of natural plant and animal communities, and occasionally modified vegetation, as representative samples of their kind.

**Net:** After all deductions have been made.

**Net Additional Jobs:** The number of jobs created in the construction and operating phases, less the number of jobs likely to happen anyway (deadweight), those jobs that are filled by non-impact area residents (leakage) and those jobs displaced in existing businesses or activities by the development (displacement).

**Natural Area:** Sub-division of England, each with a characteristic association of wildlife and natural features.

**Negative List:** See exclusion List

**New Town** - free-standing new settlement designated and planned under the New Towns Act 1946 and subsequent legislation.

**NGR:** National Grid Reference used for identifying locations on OS maps.

**Noise:** Unwanted sound. May refer to both natural (e.g. wind, birdsong etc) and artificial sounds (e.g. traffic, noise from wind turbines, etc)

**Noise sensitive receptors:** Locations that may potentially be adversely affected by the addition of a new source of noise. Can include residential properties, outdoor areas and sensitive species.

**Non-aquifer:** A below ground layer of soil or rock that does not yield water.

**Non-conforming Use** - a use which does not conform to the general provisions of the development plan for the area in which it is located.

**Non-Fossil Fuel Obligation (NFFO)** - a provision of the Electricity Act 1989 requiring regional electricity companies to take a proportion of their electricity from energy sources other than fossil fuels.

**Non-Technical Summary:** A brief report summarising the principle sections of the Environmental Statement in non-technical language. The Non-Technical Summary is bound into the main report, but is also available as a free-standing document.



**Office of the Deputy Prime Minister (ODPM)** - (previously Department of Transport, Local Government and the Regions (DTLR)) government department responsible for town and country planning policy and administration.

**Open space:** All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs) which offer important opportunities for sport and recreation and can act as a visual amenity.

**Original building:** A building as it existed on 1 July 1948 or, if constructed after 1 July 1948, as it was built originally.

**OS:** Ordnance Survey

**Outline application** - a general application for planning permission to establish that a development is acceptable in principle, subject to subsequent approval of detailed matters.

**Out-of-Centre** - a location that is separated from a town centre but is not necessarily outside the built-up area.

**Out-of-town** - an out-of-town development on a green-field site or on land not clearly within the current urban boundary.



**Palaeolithic:** Prehistoric time period from 450,000 – 12,000 BC.

**Park and Ride** - scheme enabling motorists to leave their vehicles at edge-of-town car parks and travel into town centres by public transport.

**Parks and Gardens of Special Historic Interest (GSHI)** - parks and gardens containing historic features dating from 1939 or earlier and registered by English Heritage in three grades as with historic buildings.

**Pathways:** The routes by which impacts are transmitted through air, water, soils or plants and organisms to their receptors.

**Permeability:** The ease at which liquids (or gases) can pass through rocks or a layer of soil.

**Permitted Development Rights** - rights to carry out certain limited forms of development without the need to make an application for planning permission, as granted under the terms of the Town and Country Planning (General Permitted Development) Order 1995.

**pH:** Scale of 0-14 defining the acidity/alkalinity of solutions including those in soils and water bodies; 0 = extremely acid, 14 = extremely alkaline and 7 = neutral.

**Phase I Habitat Survey:** first stage of strategy recommended by Nature Conservancy Council (1990) for ecological surveys. Seeks to provide general description of habitat/vegetation types within a study area, and to fit these to as standard classification so that they can be readily compared.

**Photomontage:** computer aided process which incorporates a photograph of the existing site/view/landscape with a representation of the development to provide an impression of the visual impact of the Development.

**Planning condition:** A condition imposed on a grant of planning permission (in accordance with the Town and Country Planning Act 1990) or a condition included in a Local Development Order or Neighbourhood Development Order.

**Planning Obligations and Agreements** - legal agreements between a planning authority and a developer, or offered unilaterally by a developer, ensuring that certain extra works related to a development are undertaken, usually under Section 106 of the Town and Country Planning Act 1990.

**Planning Gain** - the principle of a developer agreeing to provide additional benefits or safeguards, often for the benefit of the community, usually in the form of related development supplied at the developer's expense.

**Planning Policy Wales** - document setting out the land use planning policies of the Welsh Assembly Government.

**Plant:** A building's generator, heating, ventilation, and/or electricity-production system.

**Playing field:** The whole of a site which encompasses at least one playing pitch as defined in the Town and Country Planning (Development Management Procedure) (England) Order 2010.

**Population** - A collection of individuals (plants or animals), all of the same species and in a defined geographical area.

**Positive List:** See Mandatory List.

**Previously developed land:** Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure.

**Proposals Map** - an obligatory component of a local plan showing the location of proposals in the plan on an Ordnance Survey base map.

**Protected Species** - plant and animal species, including all wild birds, protected under the Conservation (Natural Habitats and Conservation) Regulations 1994, the Wildlife and Countryside Act 1981 and subsequent amendments, or other species protected under legislation specific to them and the Wildlife and Countryside (Amendments) Act 1985.

**Public Open Space (POS)** - land provided in urban or rural areas for public recreation, though not necessarily publicly owned.

**Public Realm** - outdoor areas accessible to the public.

**Public Right of Way** - a way where the public has a right to walk, and in some cases ride horses, bicycles, motorcycles or drive motor vehicles, which will be designated either as a footpath, a bridleway, a road used as a public path (RUPP) or a byway.

**Purchase Notice** - this requires a local planning authority to purchase an interest in land where a planning decision conflicts with the private interests of landowners.

## Q q

**Quasi-static equipment:** moves sufficiently slowly to be considered stationary for the purpose of noise assessment.

## R r

**Ramsar Site** - area identified under the internationally agreed Convention on Wetlands of International Importance, especially as waterfowl sites and as Sites of Special Scientific Interest focusing on the ecological importance of wetlands generally.

**Receptor** - Any environmental or other defined feature (e.g. human beings) that is sensitive to or has the potential to be affected by an impact.

**Recycling** - the recovery of reusable materials from waste.

**Regional Planning Guidance Notes (RPGs)** -policy guidance and advice issued for each region in England by the Secretary of State.

**Regional Shopping Centre** - out-of-town concentration of shops, usually containing over 50,000 square metres gross retail area, typically offering a wide range of comparison goods.

**Regionally Important Geological/Geomorphological Sites (RIGS)** - non-statutory sites of regional importance recognised by English Nature and local authorities.

**Regulation 7 Direction** - a Direction made by the Secretary of State to remove from a particular site or defined area the benefit of deemed consent normally provided by the Town and Country Planning (Control of Advertisements) Regulations.

**Renewable Energy** - energy generated from resources that are unlimited, rapidly replenished or naturally renewable such as wind, water, sun, wave and refuse, and not from the combustion of fossil fuels.

**Residual Effects/Impacts:** Effects/Impacts predicted as a consequence of the development assuming successful implementation of the identified mitigation measures.

**Review:** The process of establishing whether an EIS is adequate for the Competent authority to use it to inform the decision on Development consent.

**Ribbon development** - a narrow band of development extending along one or both sides of a road.

**Risk Assessment:** An assessment of the likelihood and severity of an occurrence.

**RSPB:** Royal Society for the Protection of Birds.

**Rural Development Area** - priority area for economic and social development.

**Rural Diversification** - activities undertaken on surplus land to support farming incomes, including, for example, forestry, leisure and tourism.

## S s

**Scheduled Ancient Monument** - a structure placed on a schedule compiled by the Department of National Heritage in England and Cadw in Wales for protection under the Ancient Monuments and Archaeological Areas Act.

**Scoping** - Is the procedure whereby the Competent Authority and the relevant statutory and other consultees are consulted at the outset, or very early in the EIA process, by the developer to agree what effects should be

covered in the Environmental Statement, how they should be covered and the methods to be used to assess them. If requested by the developer the Competent Authority must give a scoping opinion.

**Screening** - Is the process of deciding whether a particular project that is proposed is subject to the EIA process. It involves checking whether the project falls within the classes of project in Schedules 1 or 2 of the Regulations (or Annexes I or II of the Directives) and if in Schedule 2, whether it would be likely to have significant effects on the environment.

**Section 106 Agreement (see Planning Gain)** - a binding agreement between a council and a developer associated with a grant of planning permission and regarding matters linked to the proposed development.

**Site of Importance for Nature Conservation (SINC):** An area of land designated by a local authority because it supports nature conservation of significance in a county context. Designation criteria and policy context may vary between different local authority areas but they are usually linked with planning policies relating to nature conservation.

**Site of Special Scientific Interest (SSSI)** - area identified by English Nature or Countryside Council for Wales for protection by reason of the rarity of its nature conservation or wildlife features.

**Special Area of Conservation:** Land protected under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora. Data supplied has a status of 'Candidate'.

**Special Needs Housing** - housing to meet need arising from homelessness or overcrowding, and purpose-built or supported housing for the elderly or disabled people or those requiring care.

**Special Protection Area:** Land classified under Directive 79/409 on the Conservation of Wild Birds. Data supplied has a status of 'Classified'.

**Statutory** - required by law (statute), usually through an Act of Parliament.

**Statutory Consultee** - Any body specified in the relevant EIA Regulations which the Competent Authority must consult in respect of an Environmental Statement, and which also has a duty to provide information or advice during the EIA process

**Statutory Undertakers/Statutory Utilities** - providers of essential services such as gas, electricity, water or telecommunications.

**Stop Notice** - a notice served in respect of land subject to enforcement proceedings prohibiting the carrying out or continuing of specified operations which are alleged to constitute a breach of planning control and designed to stop work going on pending the outcome of an appeal.

**Structure Plan** - statutory plan setting out key strategic policies which provide the framework for more detailed policies in local plans.

**Sui Generis** - uses of land or buildings which do not fall into any of the use classes identified by the Use Classes Order, for example theatres, launderettes, car showrooms and filling stations.

**Supplementary Planning Guidance** - additional advice issued by a local planning authority expanding upon its statutory policies.

**Sustainable Development** - environmentally responsible development, commonly defined as "development which meets the needs of the present generation without compromising the ability of future generations to meet their own needs".

## T t

**TANs** - technical advice notes for Wales which provide topic-based supplements to the policy document Planning Policy Wales.

**Threshold:** A level of effect above which an assessment will be taken of whether any changes to procedures need to be made.

**Topography:** The natural or artificial features, level and surface form of the ground surface.

**Town Centre** - describes city, town and traditional suburban centres which provide a broad range of facilities and services and which fulfil a function as a focus for a community and for public transport.

**Town Centre Management** - partnership of local organisations, businesses and individuals to promote the common good of a town by developing, managing, promoting and improving facilities, the useful resources, the economy and the environment of a town centre.

**Townscape** - the appearance and character of buildings and all other features of an urban area taken together as a whole.

**Traffic Calming** - management measures designed to lower traffic speeds or redirect traffic to alternative routes to avoid congestion, reduce accidents and injuries and prevent excess levels of pollution.

**Transport assessment:** A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

**Travel plan:** A long-term management strategy for an organisation or site that seeks to deliver sustainable

transport objectives through action and is articulated in a document that is regularly reviewed.

**Transport Policy and Programme (TPP)** - statutory document setting out a transport authority's bid for the programming and funding of transport measures, produced annually for submission to central government.

**Transport statement:** A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

**Travel to Work Area (TTWA)** - a broadly self-contained labour market area usually focused on an urban employment centre.

**Tree Preservation Order (TPO)** - direction made by a local planning authority that makes it an offence to cut, top, lop, uproot or wilfully damage or destroy a tree without that authority's permission.

**Trial pits:** intrusive investigation positions excavated by a mechanical excavator.

## U u

**Unitary Development Plan** - local plan produced by certain unitary district authorities and London boroughs which have responsibility for the full range of local authority services.

**Urban Fringe** - predominantly open land on the edge of an existing urban area.

**Urban Regeneration** - the re-use or redevelopment of decaying or run-down parts of older urban areas to bring them new life and economic vitality.

**Use Classes Order** - the Town and Country Planning (Use Classes) Order 1987 puts uses of land and buildings into various categories, planning permission not being required for changes of use within the same use class. In practice changes between use classes are likely to require planning permission.

## V v

**Vibration:** In this context, refers to vibration carried in structures such as the ground or buildings, rather than airborne noise

**Village envelope** - boundaries defined on a map beyond which the local planning authority proposes that a village should not be allowed to extend.

**Visual amenity:** The value of a particular area or view in terms of what is seen.

**Visual effect:** Change in the appearance of the landscape as a result of development. This can be positive (i.e.

beneficial or an improvement) or negative (i.e. adverse or a detraction).

**Visual envelope:** Extent of potential visibility to or from a specific area or feature.

## W w

**Welsh Assembly Government** - a body that develops and implements policy in Wales via the civil service and a range of sponsored bodies.

**Wildlife Corridor** - a continuous area facilitating the movement of wildlife through rural or urban environments.

**Wind Farm** - large open site where wind speeds are consistently high on which a number of wind turbines generate electricity for private or commercial use.

**Wind turbine.** A term used for a wind energy conversion device that produces electricity.

**Wireline perspective:** computer aided process which shows landform and number and extent of wind turbines visible from a view.

**Written Statement** - documentary statement of policy, forming part of a development plan submitted by a local planning authority and requiring formal approval.

## X x

## Y y

## Z z

**Zone of influence.** The areas/resources that may be affected by the biophysical changes caused by activities associated with a project.

**Zone of Theoretical Visibility (ZTV):** representation (usually presented as a map with markings or colourings) of the area over which a site and/or a proposed development may be visible. Does not account for buildings or trees local to the viewer that may obscure a view.

## ES Part I Appendix 2





## ES Part I Appendix 3

**Culceth**

**Risley Country Park**

**Proposed  
MSA  
Site**

**M62**

**Birchwood Technology Park**

**Gorse Covert**





KEY  
Application Boundary

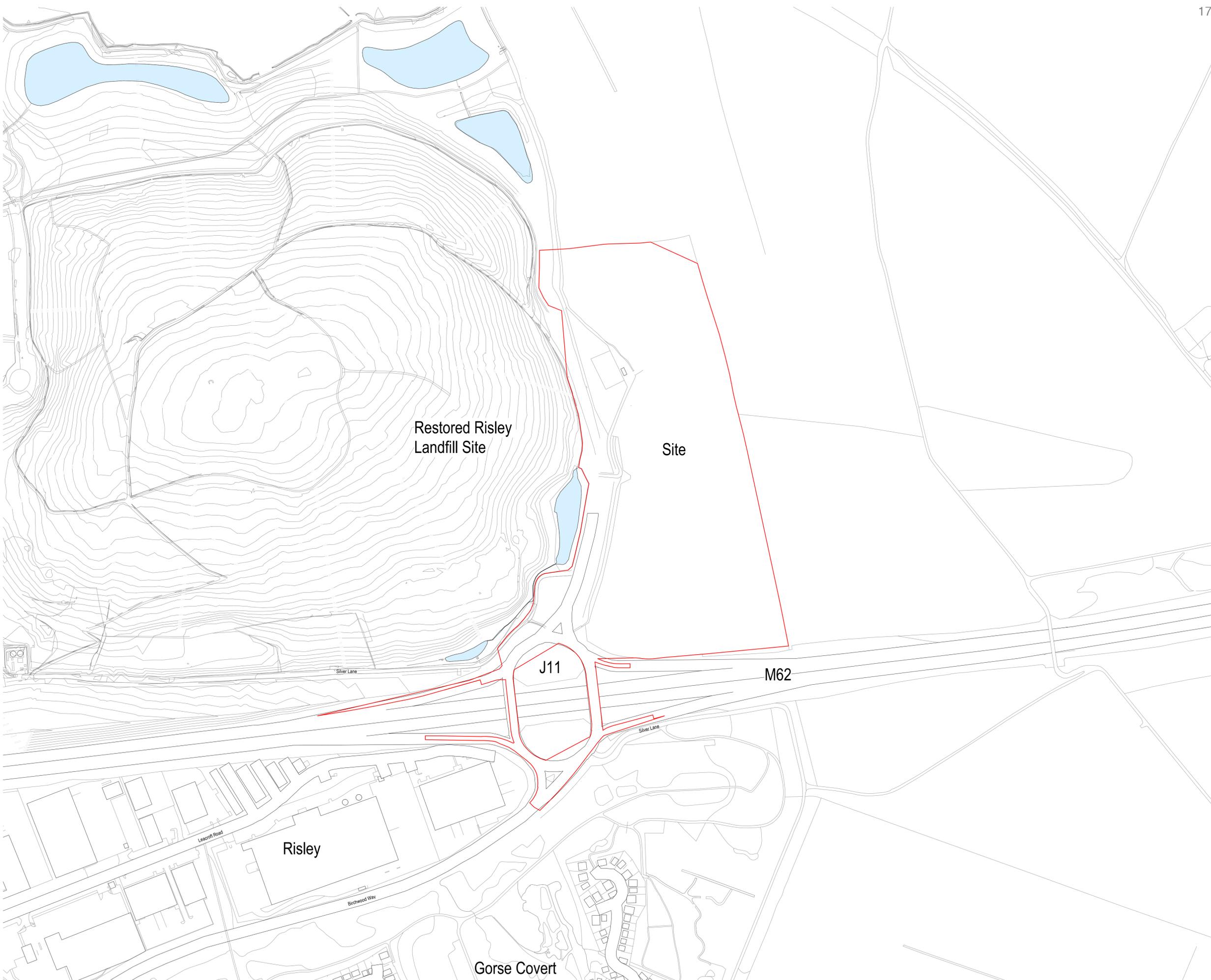
NOTES:

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.



P3	26.07.19	Outline Planning Issue	JLR	TW
P2	22.05.19	Planning Draft For Review	TW	NAB
P1	11.04.19	Change of format	JLR	TW

Rev: Date: Description: By: Rvw:

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Client:  
**EXTRA MSA GROUP**

Project No: 2562  
Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

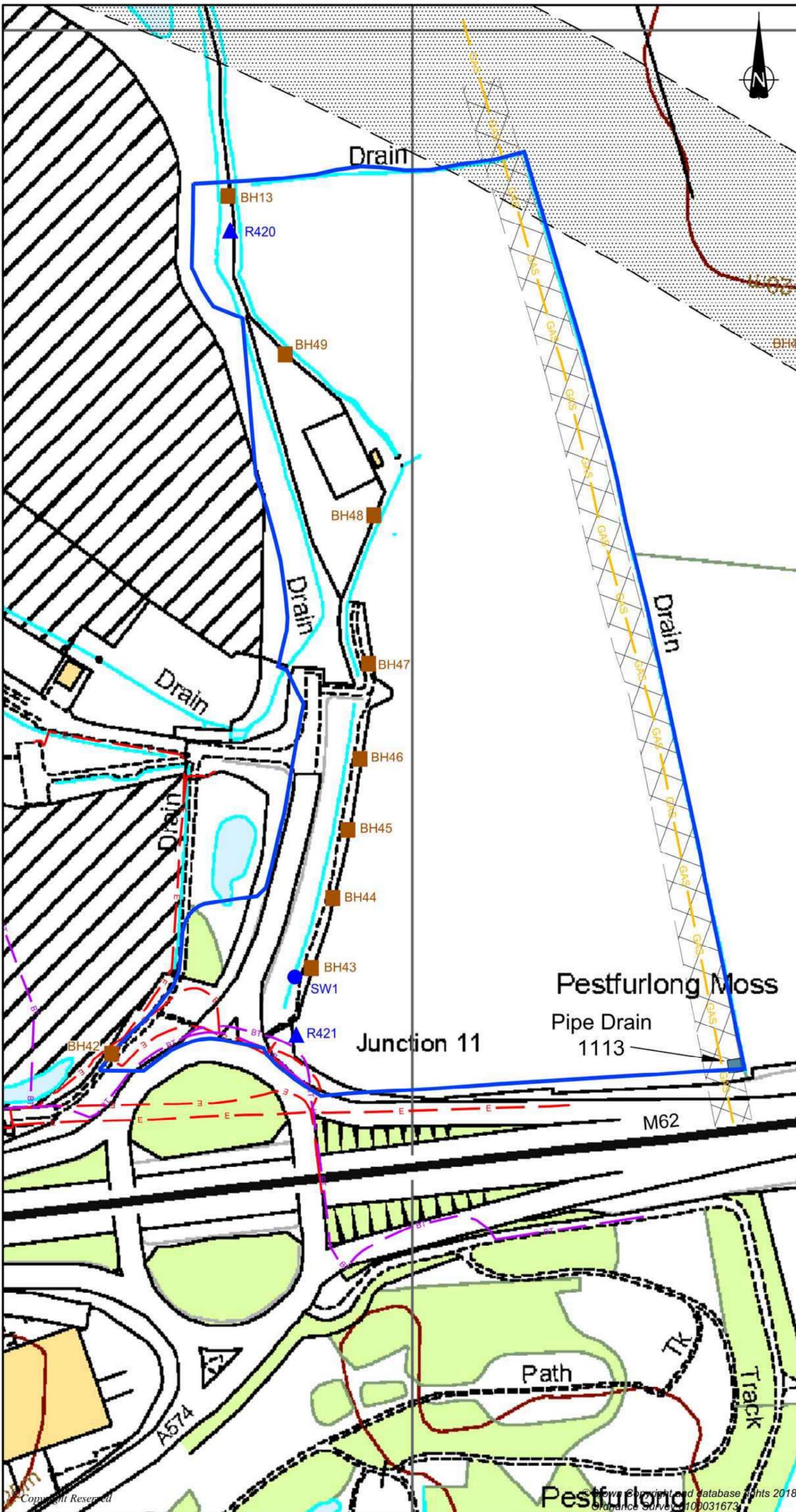
Document Reference:  
Project - Originator - Volume - Level - Type - Role - Number  
**RMS - 519 - ZZ - XX - DR - A - 0740**  
**SITE LOCATION PLAN**

Status: Code Suitability description

Revision: Code Revision status  
**P3 Planning**

Created By: JLR Reviewed By: TW Date: 01.04.19 Scale at A1: 1:2500

## ES Part I Appendix 4



DO NOT SCALE FROM THIS DRAWING

**REFERENCE**

SITE BOUNDARY

APPROXIMATE LOCATION OF GAS PIPELINE WITH 24m WIDE EASEMENT

APPROXIMATE LOCATION OF ELECTRICITY

APPROXIMATE LOCATION OF BT

APPROXIMATE LOCATION OF PIPE DRAIN 1113 TAKEN FROM TITLE DEED CH319763

APPROXIMATE LOCATION OF HS2 SAFE GUARDING ZONE

APPROXIMATE LOCATION OF BIFFA GW MONITORING POINT R420

APPROXIMATE LOCATION OF BIFFA SW MONITORING POINT SW1

APPROXIMATE LOCATION OF BIFFA GAS MONITORING BH BH13

P1					
REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D
CLIENT					
EXTRA MOTORWAY SERVICE AREA GROUP					
PROJECT					
POTENTIAL WARRINGTON MSA					
DRAWING TITLE					
CONSTRAINTS PLAN					
DRG No.	SH11739-003				REV
DRG SIZE	A3	SCALE	1:2500	DATE	05/06/18
DRAWN BY	DP	CHECKED BY		APPROVED BY	

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<input type="checkbox"/> BIRMINGHAM	<input type="checkbox"/> CARDIFF	<input type="checkbox"/> CARLISLE
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> GLASGOW	<input type="checkbox"/> LEIGH
<input type="checkbox"/> MANCHESTER	<input type="checkbox"/> NEWCASTLE UPON TYNE	<input type="checkbox"/> STORRE ON TRENT
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## ES Part I Appendix 5

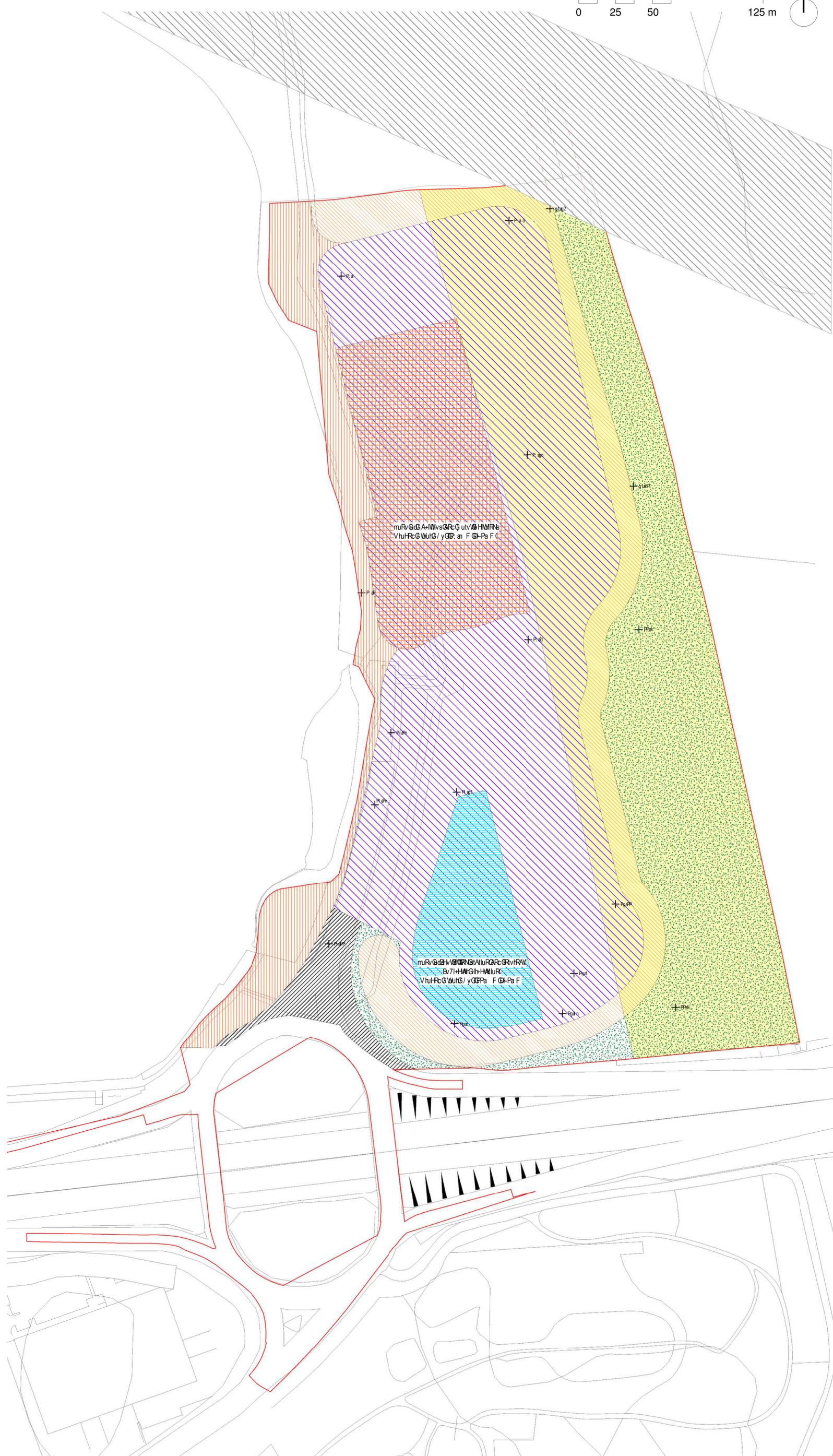


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Rev	Date	Description	By	Prv
P12	24.07.19	Outline Planning Issue	TW	JR
P11	16.07.19	Full update in line with Spawforth advice DTM 15.07.19	TW	TW
P10	09.07.19	Full update	MU	TW
P9	22.05.19	Planning Draft For Review	TW	NAB
P8	22.04.19	Site levels provided by Walsell Armstrong added	JLR	TW
P7	10.04.18	Updated restored landfill area. Amended brook diversion zone	JLR	TW
P6	18.03.19	Updated following comments	JLR	TW
P5	15.03.19	Updated following comments and surveyed gas main	JLR	TW
P4	08.03.19	Updated following scheme revision	JLR	TW
P3	18.12.18	Updated parameter plans following client comment	SK	JR
P2	04.12.18	Parameters Plans revised following updated layouts	SK	JR
P1	03.12.18	Parameters Plans revised to Spawforth and Extra's comment	SK	JR

Client:  
 4eCYM@ LM@Y, f 0  
 Project No: Project Name:  
 P nP OMY@VC, EG, C, YOM@G4Y, @4@Y4M@G@G nP

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Status: Code Suitability description  
 Revision: Code Revision status  
 P12 0@FRN

Created By: LZ Reviewed By: Lo Date: : i@gPg2 Scale at A1: g@G@

Document Reference:  
 Project - Originator - Volume - Level - Type - Role - Number  
**RMS - 519 - ZZ - XX - DR - A - 0703**  
**COMBINED PARAMETER PLAN**



**NOTES**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and I-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

All legal boundaries to be confirmed by the client.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432

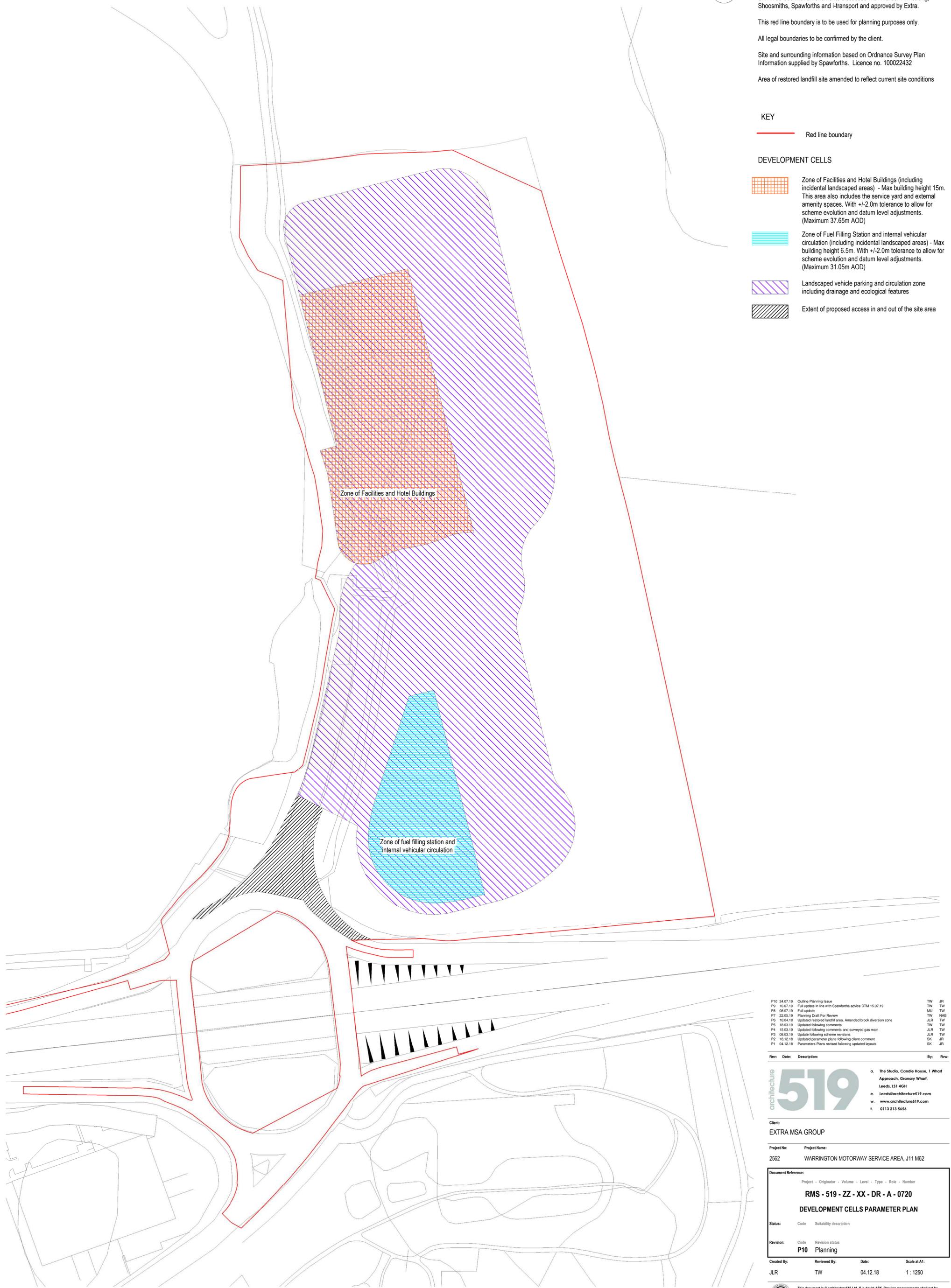
Area of restored landfill site amended to reflect current site conditions

**KEY**

Red line boundary

**DEVELOPMENT CELLS**

- Zone of Facilities and Hotel Buildings (including incidental landscaped areas) - Max building height 15m. This area also includes the service yard and external amenity spaces. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 37.65m AOD)
- Zone of Fuel Filling Station and internal vehicular circulation (including incidental landscaped areas) - Max building height 6.5m. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 31.05m AOD)
- Landscaped vehicle parking and circulation zone including drainage and ecological features
- Extent of proposed access in and out of the site area



P10	24.07.19	Outline Planning Issue	TW	JR
P9	16.07.19	Full update in line with Spawforths advice DTM 15.07.19	TW	TW
P8	08.07.19	Full update	MU	TW
P7	22.05.19	Planning Draft For Review	TW	NAB
P6	10.04.18	Updated restored landfill area. Amended brook diversion zone	JLR	TW
P5	18.03.19	Updated following comments	TW	TW
P4	15.03.19	Updated following comments and surveyed gas main	JLR	TW
P3	08.03.19	Update following scheme revisions	JLR	TW
P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

Rev:	Date:	Description:	By:	Rev:
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Client:  
**EXTRA MSA GROUP**

Project No: 2562  
 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:  
 Project - Originator - Volume - Level - Type - Role - Number  
**RMS - 519 - ZZ - XX - DR - A - 0720**  
**DEVELOPMENT CELLS PARAMETER PLAN**

Status: Code Suitability description

Revision: Code Revision status  
**P10 Planning**

Created By: JLR  
 Reviewed By: TW  
 Date: 04.12.18  
 Scale at A1: 1 : 1250



**NOTES**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and I-transport and approved by Extra.

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All legal boundaries to be confirmed by the client.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432

Area of restored landfill site amended to reflect current site conditions

**KEY**

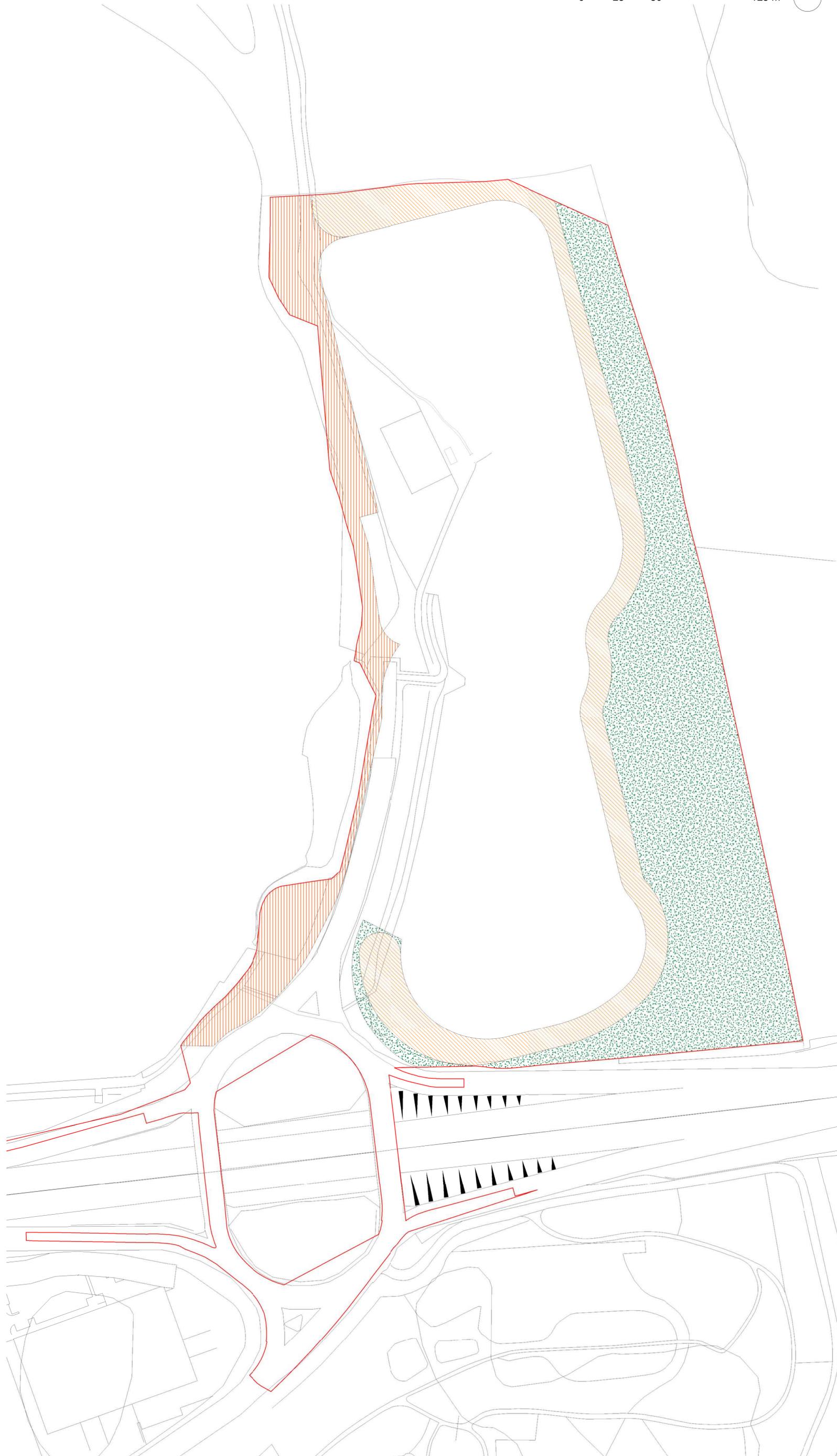
Red line boundary

**GREEN INFRASTRUCTURE**

Existing and proposed landscaping, including ecological habitats and drainage

Diverted footpath zone and associated ecological habitat and landscaping

Corridor for Silver Lane Brook Diversion and associated ecological habitat and landscaping



P10	24.07.19	Outline Planning Issue	TW	JR
P9	16.07.19	Full update in line with Spawforths advice DTM 15.07.19	TW	TW
P8	08.07.19	Full Update	MU	TW
P7	22.05.19	Planning Draft For Review	TW	NAB
P6	10.04.18	Updated restored landfill area. Amended brook diversion zone	JLR	TW
P5	18.03.19	Updated following comments	TW	TW
P4	15.03.19	Updated following comments and surveyed gas main	JLR	TW
P3	08.03.19	Update following scheme revisions	JLR	TW
P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

Rev:	Date:	Description:	By:	Rev:
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**Client:**  
EXTRA MSA GROUP

**Project No:** 2562  
**Project Name:** WARRINGTON MOTORWAY SERVICE AREA, J11 M62

**Document Reference:**  
Project - Originator - Volume - Level - Type - Role - Number  
**RMS - 519 - ZZ - XX - DR - A - 0721**  
**GREEN INFRASTRUCTURE PARAMETER PLAN**

**Status:** Code Suitability description

**Revision:** Code Revision status  
**P10 Planning**

**Created By:** JLR  
**Reviewed By:** TW  
**Date:** 04.12.18  
**Scale at A1:** 1 : 1250



**NOTES**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and I-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

All legal boundaries to be confirmed by the client.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432

Area of restored landfill site amended to reflect current site conditions

**KEY**

— Red line boundary

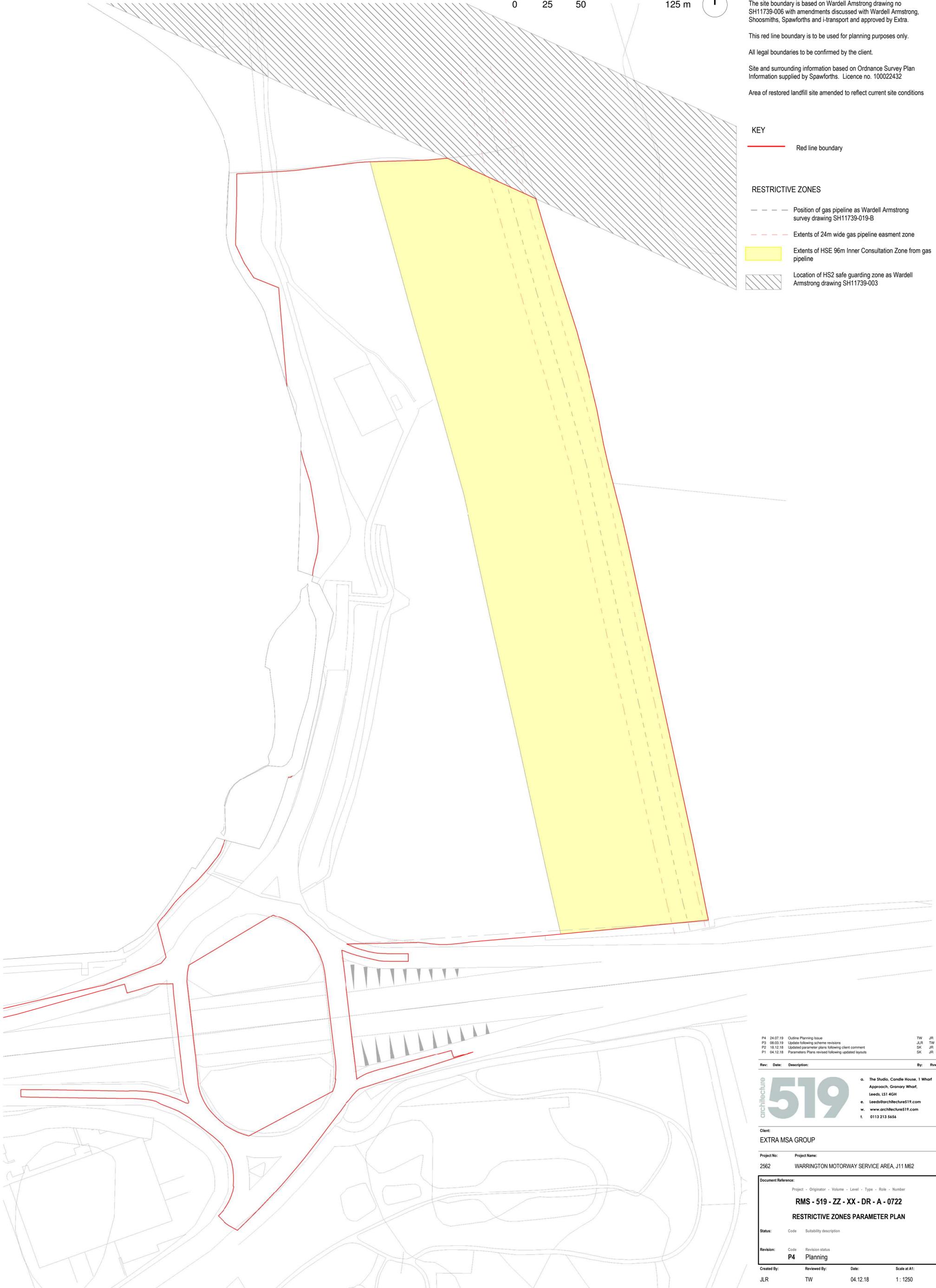
**RESTRICTIVE ZONES**

--- Position of gas pipeline as Wardell Armstrong survey drawing SH11739-019-B

- - - Extents of 24m wide gas pipeline easment zone

■ Extents of HSE 96m Inner Consultation Zone from gas pipeline

▨ Location of HS2 safe guarding zone as Wardell Armstrong drawing SH11739-003



P4	24.07.19	Outline Planning Issue	TW	JR
P3	08.03.19	Update following scheme revisions	JLR	TW
P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

Rev:	Date:	Description:	By:	Rev:
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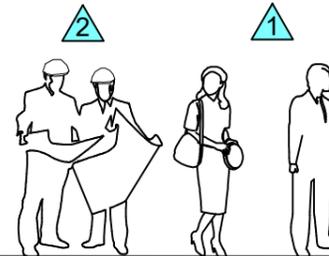
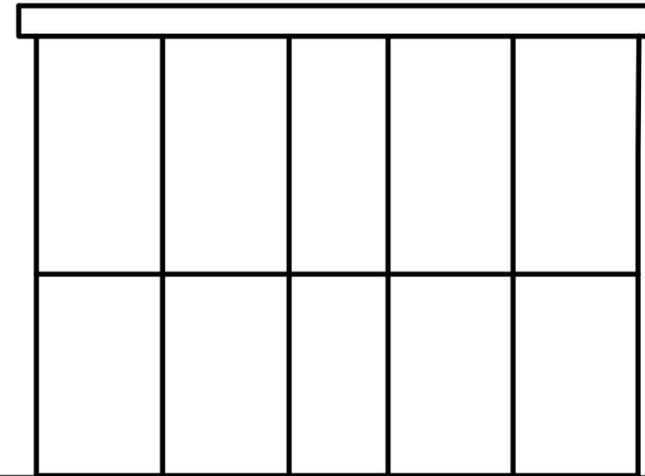
**Client:**  
EXTRA MSA GROUP

**Project No:** 2562  
**Project Name:** WARRINGTON MOTORWAY SERVICE AREA, J11 M62

<b>Document Reference:</b>				
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<b>RMS - 519 - ZZ - XX - DR - A - 0722</b>				
<b>RESTRICTIVE ZONES PARAMETER PLAN</b>				
<b>Status:</b>	Code	Suitability description		
<b>Revision:</b>	Code	Revision status		
	<b>P4</b>	<b>Planning</b>		
<b>Created By:</b>	JLR	<b>Reviewed By:</b>	TW	<b>Date:</b> 04.12.18
				<b>Scale at A1:</b> 1 : 1250

## ES Part I Appendix 6

Proposed Motorway  
Services Area



HP Gas  
Main

Glafe Brook

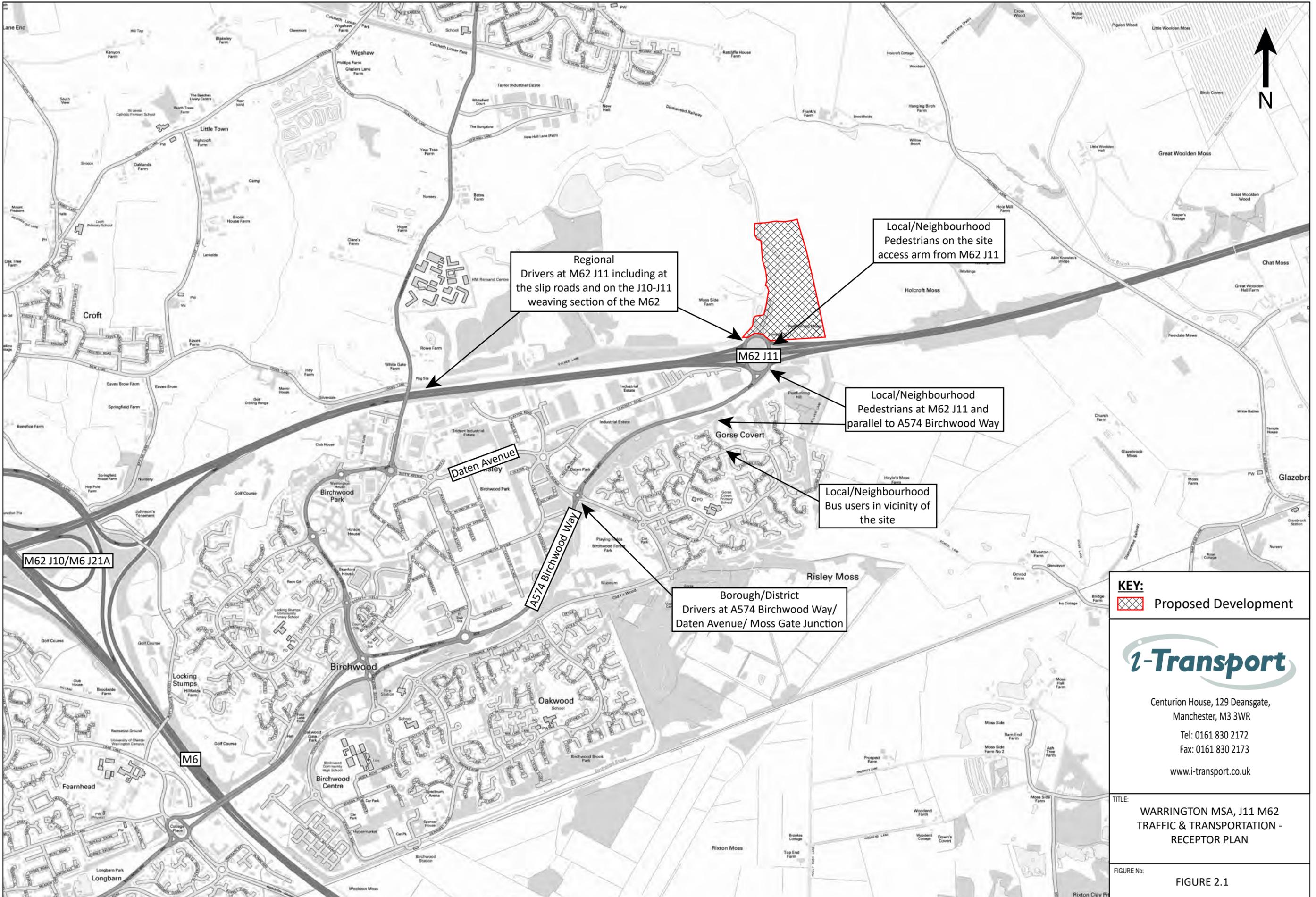
Holcroft Moss



Receptor

- 1 Future Occupiers - Human Health Receptor
- 2 Construction Workers - Human Health Receptor
- 3 Peat and other Geological Strata
- 4 HP Gas Main - Stability and other issues to be considered

A	FIRST ISSUE	13/12/18	SJB	JAS	AJD
REVISION	DETAILS	DATE	DRN	CHKD	APPD
CLIENT EIRA MSA GROUP					
PROJECT POTENTIAL WARRINGTON MSA					
DRAWING TITLE RECEPTOR PLAN - GROUND CONDITIONS					
DRG No. SH11739-011				REV A	
DRG SIZE A3		SCALE NTS		DATE 05/12/18	
DRAWN BY DP		CHECKED BY JAS		APPROVED BY AJD	
<p>SHEFFIELD   TEL 0114 245 6244 WWW.WARDELL-ARMSTRONG.COM</p> <p> <input type="checkbox"/> BIRMINGHAM    <input type="checkbox"/> GLASGOW  <input type="checkbox"/> BOLTON    <input type="checkbox"/> LONDON  <input type="checkbox"/> CARDIFF    <input type="checkbox"/> MANCHESTER  <input type="checkbox"/> CARLISLE    <input type="checkbox"/> N-U-T  <input type="checkbox"/> EDINBURGH    <input type="checkbox"/> STOKE ON TRENT         </p>					



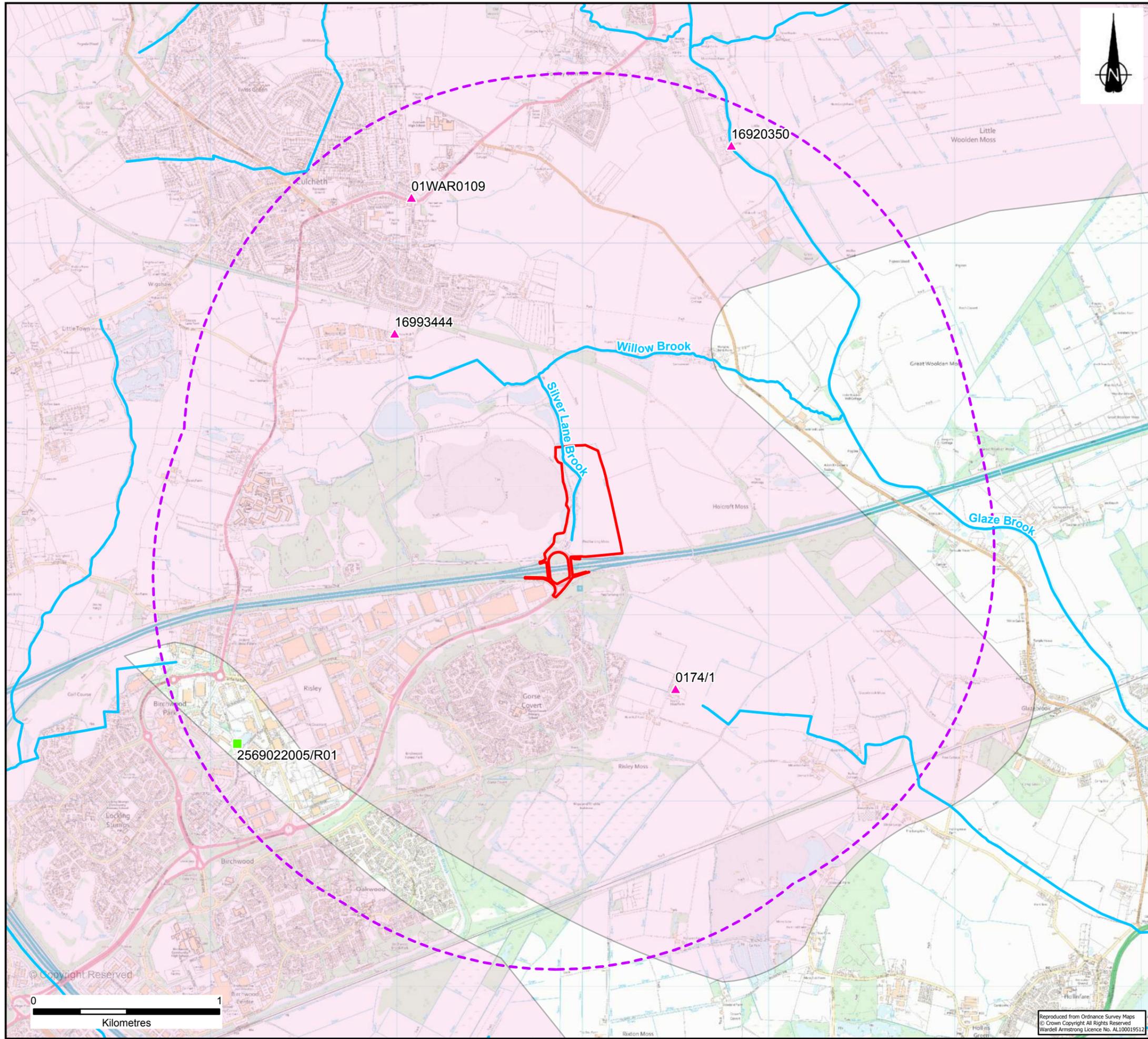
**KEY:**  
 Proposed Development



Centurion House, 129 Deansgate,  
 Manchester, M3 3WR  
 Tel: 0161 830 2172  
 Fax: 0161 830 2173  
 www.i-transport.co.uk

TITLE:  
**WARRINGTON MSA, J11 M62  
 TRAFFIC & TRANSPORTATION -  
 RECEPTOR PLAN**

FIGURE No:  
**FIGURE 2.1**



**KEY**

- Site Boundary
- 2km Buffer
- Main Rivers
- Source Protection Zone 3: (Total Catchment)
- ▲ Discharge
- Abstraction

B A	AMENDED SITE BOUNDARY FIRST ISSUE	JULY 2019 APRIL 2019	SIW HM	RG RC	LB LB
REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT  
**EXTRA MSA GROUP**

PROJECT  
**MOTORWAY SERVICES, WARRINGTON**

DRAWING TITLE  
**FIGURE 9.1  
LOCAL WATER RESOURCES**

DRG No.	SH11739/Figure 9.1	REV	A
DRG SIZE	A3	SCALE	1:20,000
DRAWN BY	HM	CHECKED BY	RG
		APPROVED BY	LB

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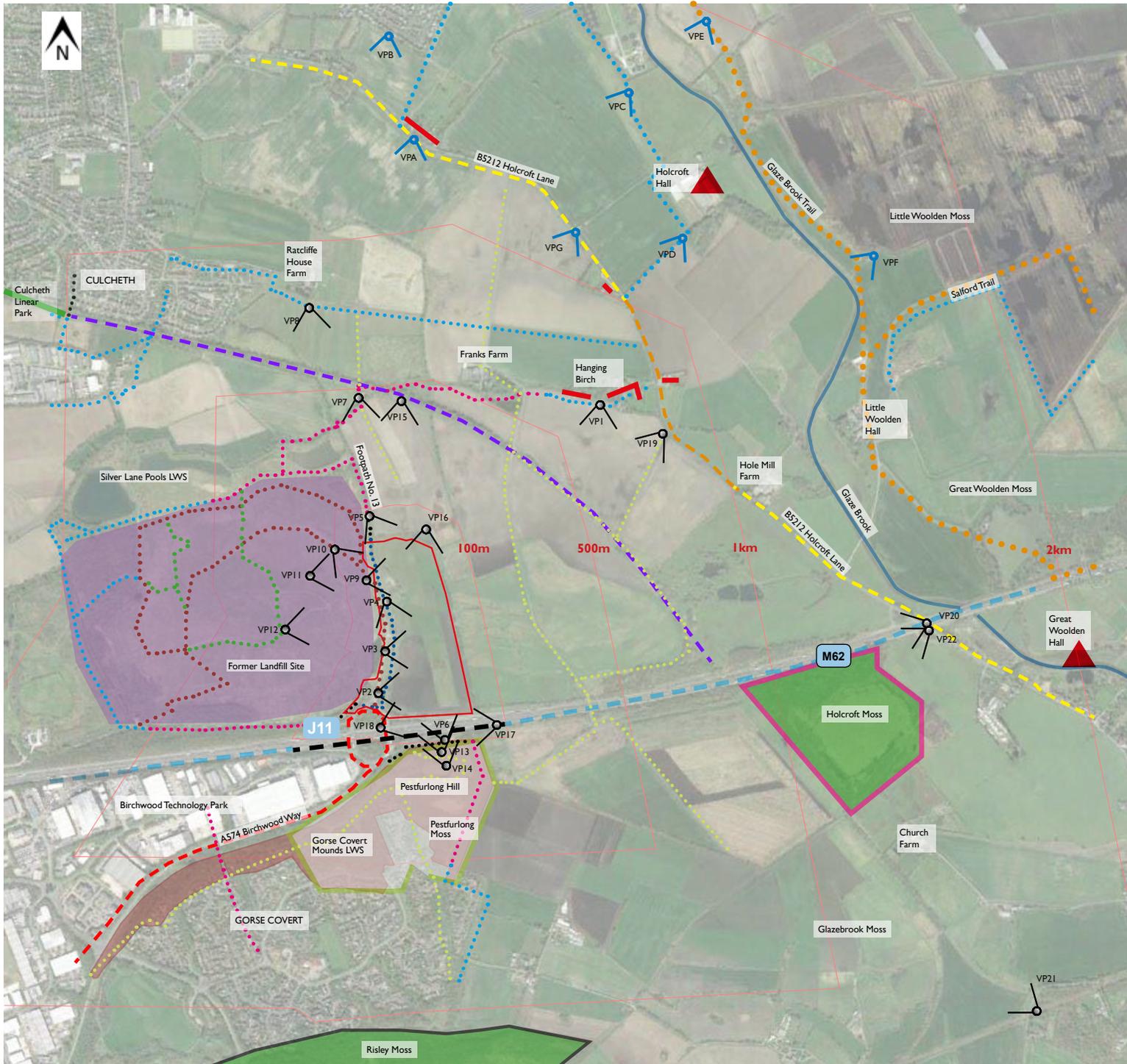
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**Figure 4.1 - Scoping Stage: Potential Receptor Viewpoints Mapped on Aerial Photograph**



**KEY**

-  Proposed Application Boundary
-  Offsets from Application Boundary
-  Potential receptor Viewpoints identified in LVIA Scoping
-  Potential receptor Viewpoints identified following Scoping feedback/ZTV update

**Residential receptors**

-  R1 - properties with front, rear or side elevations facing site, within 1.5km (representative view is VP1)

**Recreation receptors**

-  R2 - Public Right of Way within the Site (VP2, 3,4 and 5)
-  R3 - Public Right of Way within 100m of Site Boundary (VP5 and 6)
-  R4 - Public Right of Way within 500m of Application Boundary (VP8)
-  R5 - Public Rights of Way within 2km of Application Boundary (VP2 and 8, VPC, VPD, VPE)
-  R6 - Permissive Bridleway and Footpath on former (restored) landfill site within 1000m of Application Boundary (VP9, 10, 11 and 12)
-  R7 - Non-designated access track within 500m of Application Boundary (VP13 and 14)

**Place of work receptors**

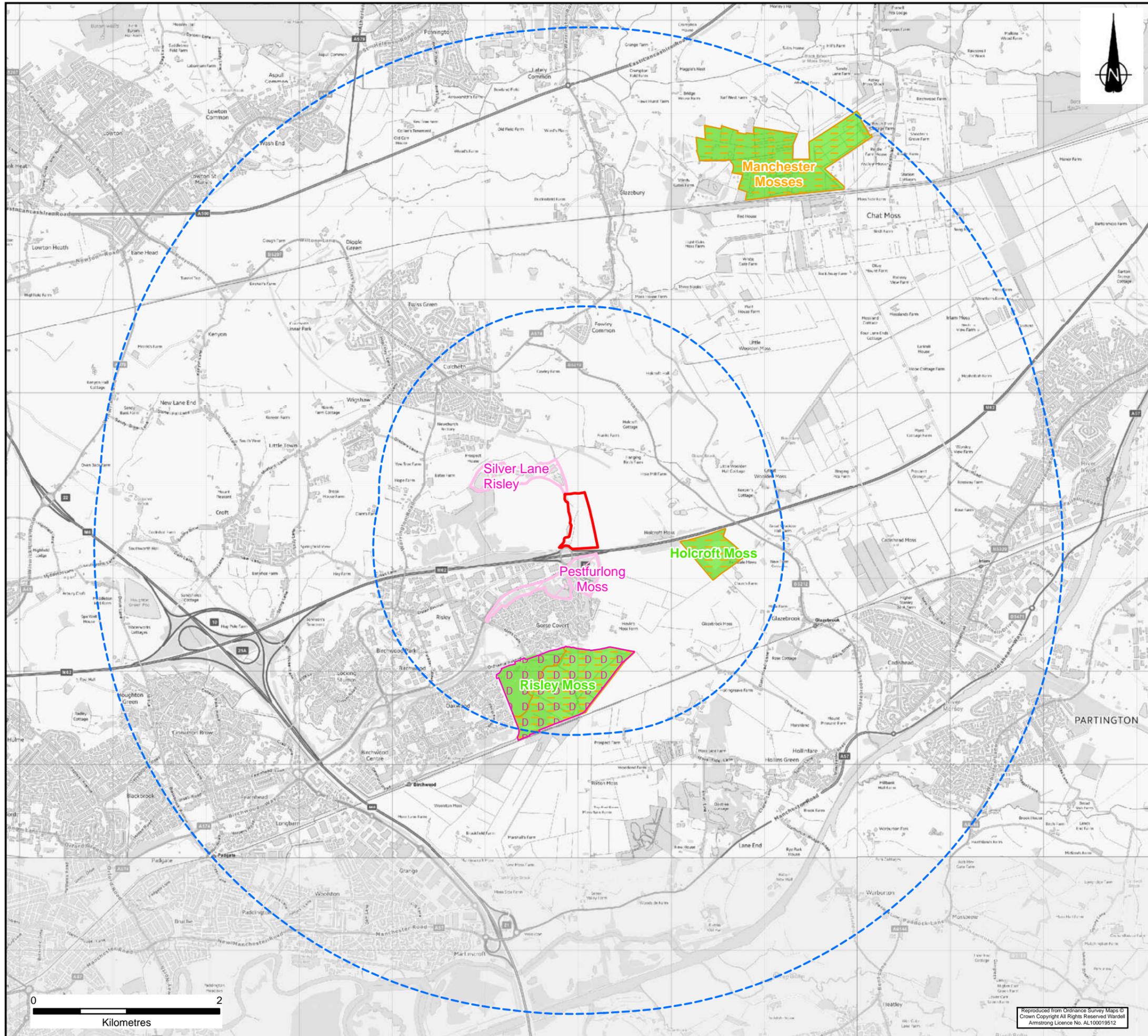
-  R8 - Elevated disused railway line within 1km of Application Boundary (VP15)
-  R9 - No Places of Work receptors have been identified as having views of the site, other than land and buildings included under Recreation Receptors above, and adjacent agricultural land (VP16, VPF)

**Transport receptors**

-  R10 - M1 Motorway and slip roads within 100m of Application Site boundary (VP16)
-  R11 - M1 Motorway and slip roads within 1km of Application Site boundary (no views included)
-  R12 - A-Roads within 500m of the Application Site boundary (VP18)
-  R13 - B-Roads within 1km of the Application Site boundary (VP19)
-  R14 - B-Roads within 2km of the Application Site boundary (VP20 and 21)

-  R15 - Holcroft Moss SSSI

Source of Aerial Photography is Google Earth Pro. Please refer to Photoviews.



**KEY**

- Site Boundary
- 2km and 5km Distance Buffer
- Local Nature Reserves
- Special Areas of Conservation
- Sites of Special Scientific Interest
- Local Wildlife Sites

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Local Sites obtained from the Local Authority under the government open data agreement © Crown Copyright. All rights reserved December 2018.

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT	EXTRA MSA GROUP
--------	-----------------

PROJECT	MOTORWAY SERVICES, WARRINGTON
---------	-------------------------------

DRAWING TITLE	RECEPTORS PLAN
---------------	----------------

DRG No.	SH11739/017	REV	A
DRG SIZE	A3	SCALE	1:40,000
		DATE	14/12/2018
DRAWN BY	SW	CHECKED BY	TP
		APPROVED BY	MB

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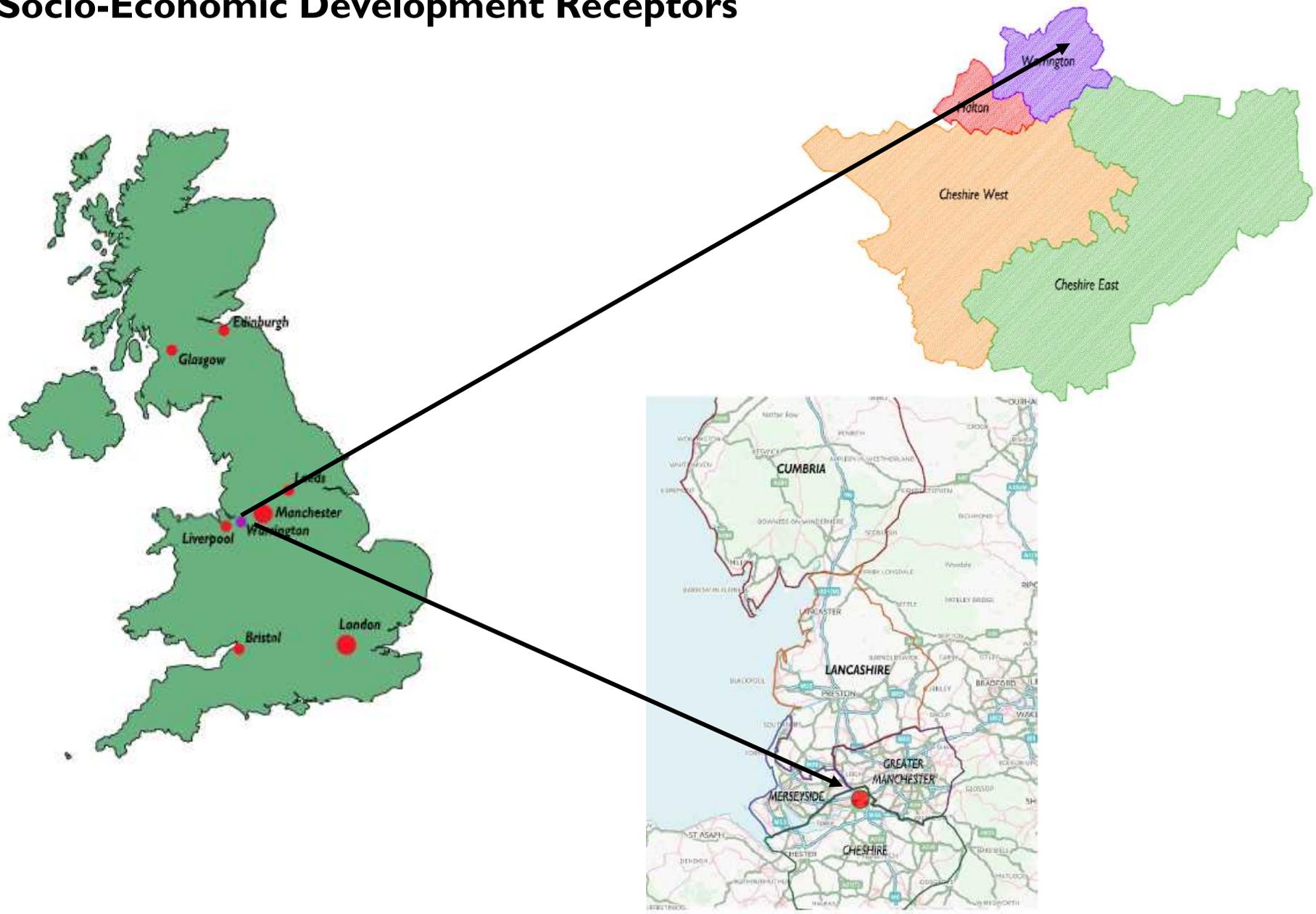
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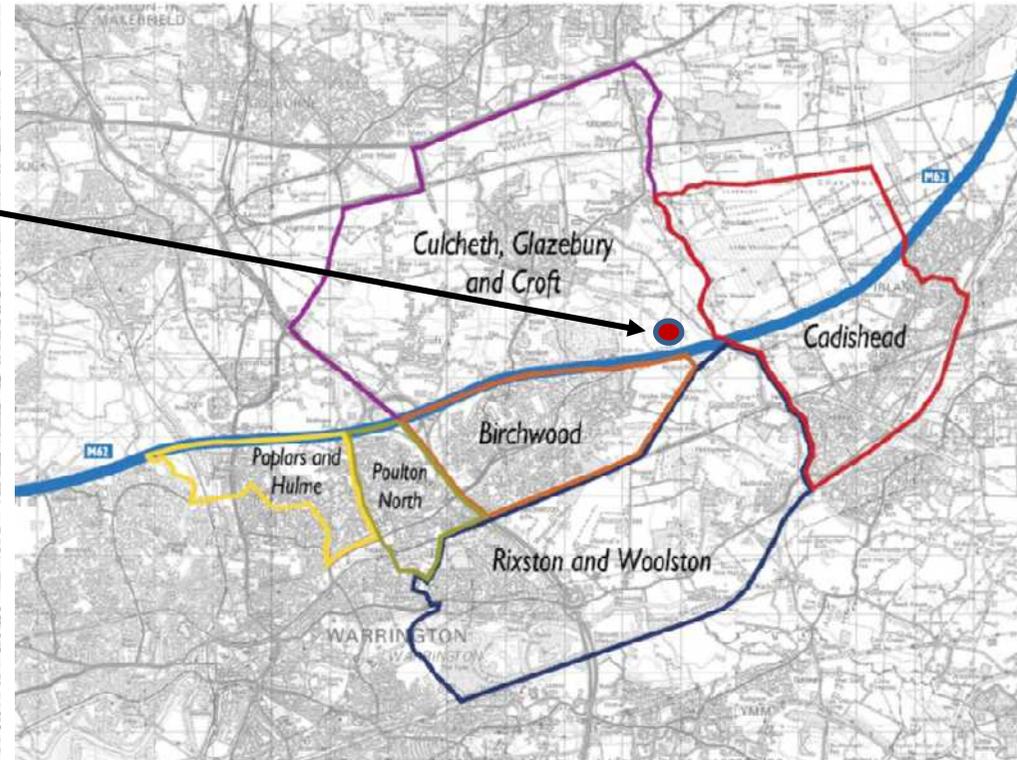
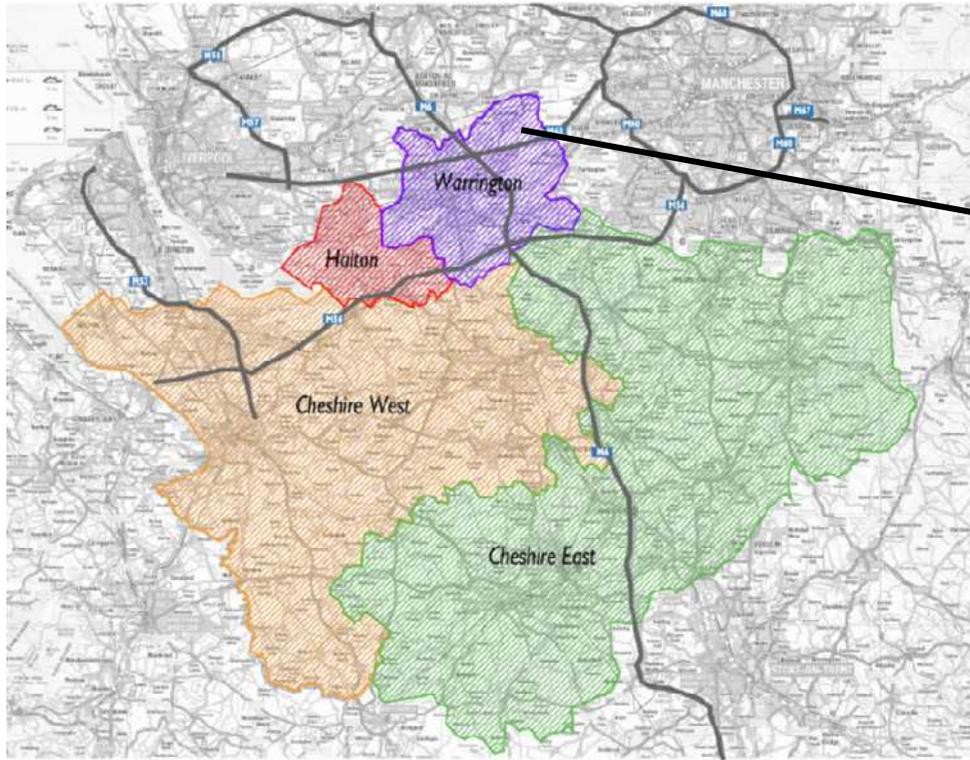
- BIRMINGHAM
- GLASGOW
- BOLTON
- LONDON
- CARDIFF
- MANCHESTER
- CARLISLE
- SHEFFIELD
- EDINBURGH
- STOKE ON TRENT

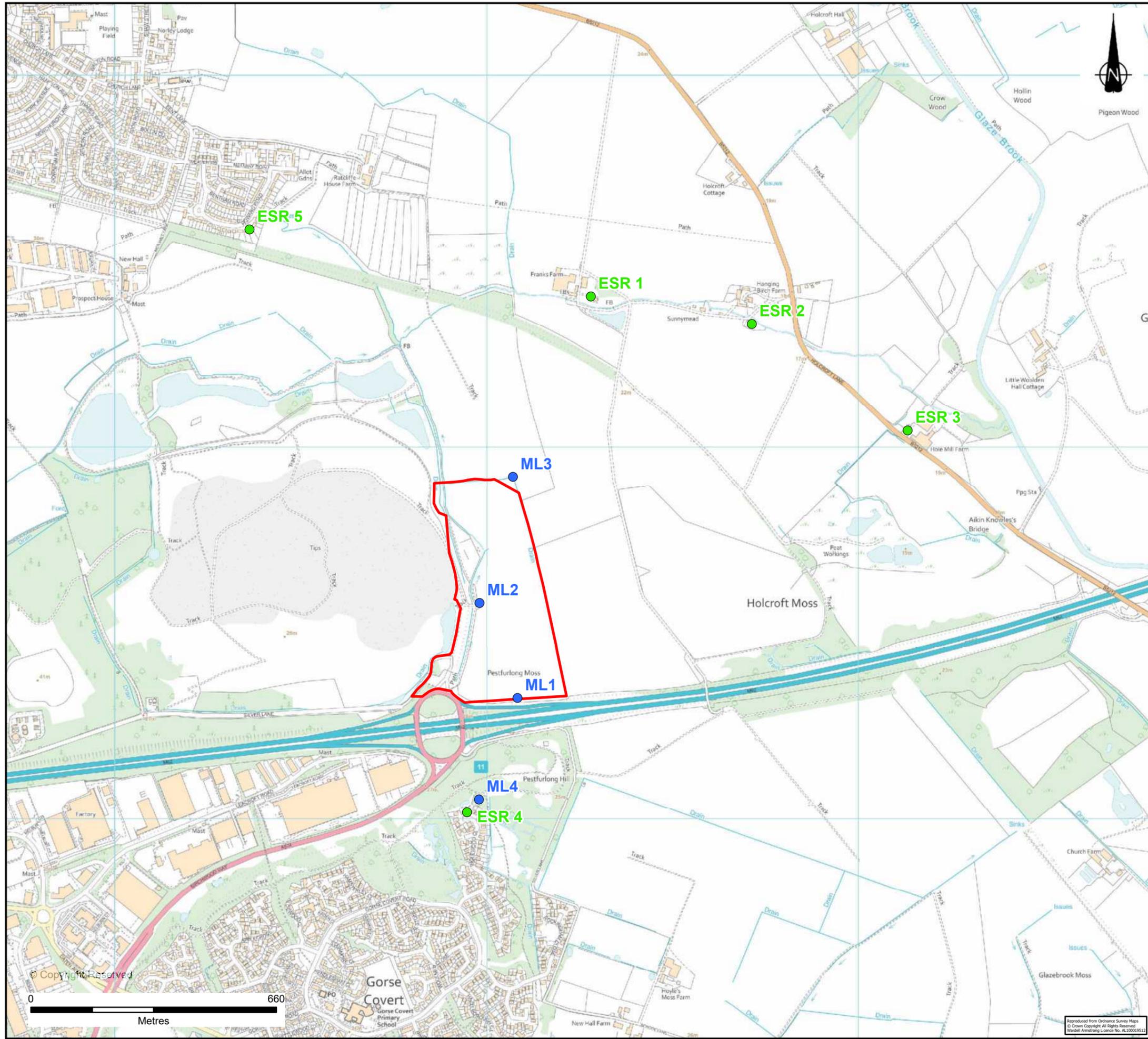


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# Socio-Economic Development Receptors







**KEY**

- Site Boundary
- Noise Monitoring Locations
- Existing Sensitive Receptors

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT  
**EXTRA MSA GROUP**

PROJECT  
**WARRINGTON MSA**

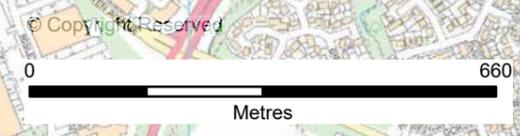
DRAWING TITLE  
**NOISE MONITORING AND EXISTING SENSITIVE RECEPTORS LOCATION PLAN**

DRG No.	SH11739-FIGURE 7.1	REV	P01
DRG SIZE	A3	SCALE	1:10,000
DRAWN BY	EF	DATE	26/04/2019
	CHECKED BY	APPROVED BY	

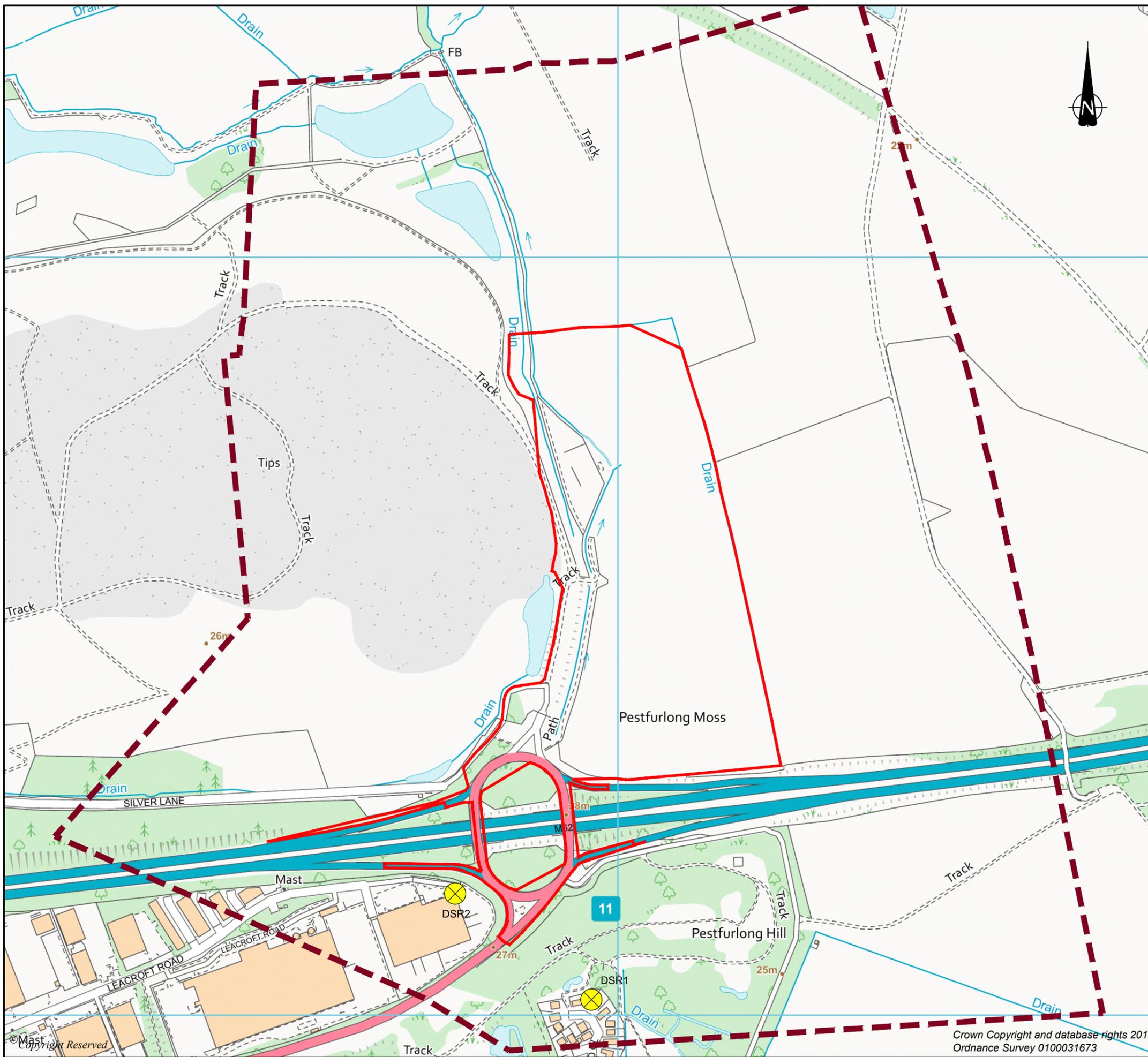
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REFERENCE

	SITE BOUNDARY
	350m CONSTRUCTION PHASE IMPACT ZONE
	DUST SENSITIVE RECEPTOR

C	Site Boundary amended	02/08/19	CT	RF	MTW
B	Site Boundary amended	02/05/19	CT	RF	MTW
REVISION	DETAILS	DATE	DRN	CHKD	APPD

CLIENT  
**ETRA MSA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA JCT 11 M62**

DRAWING TITLE  
**CONSTRUCTION PHASE RECEPTORS (AIR QUALITY)**

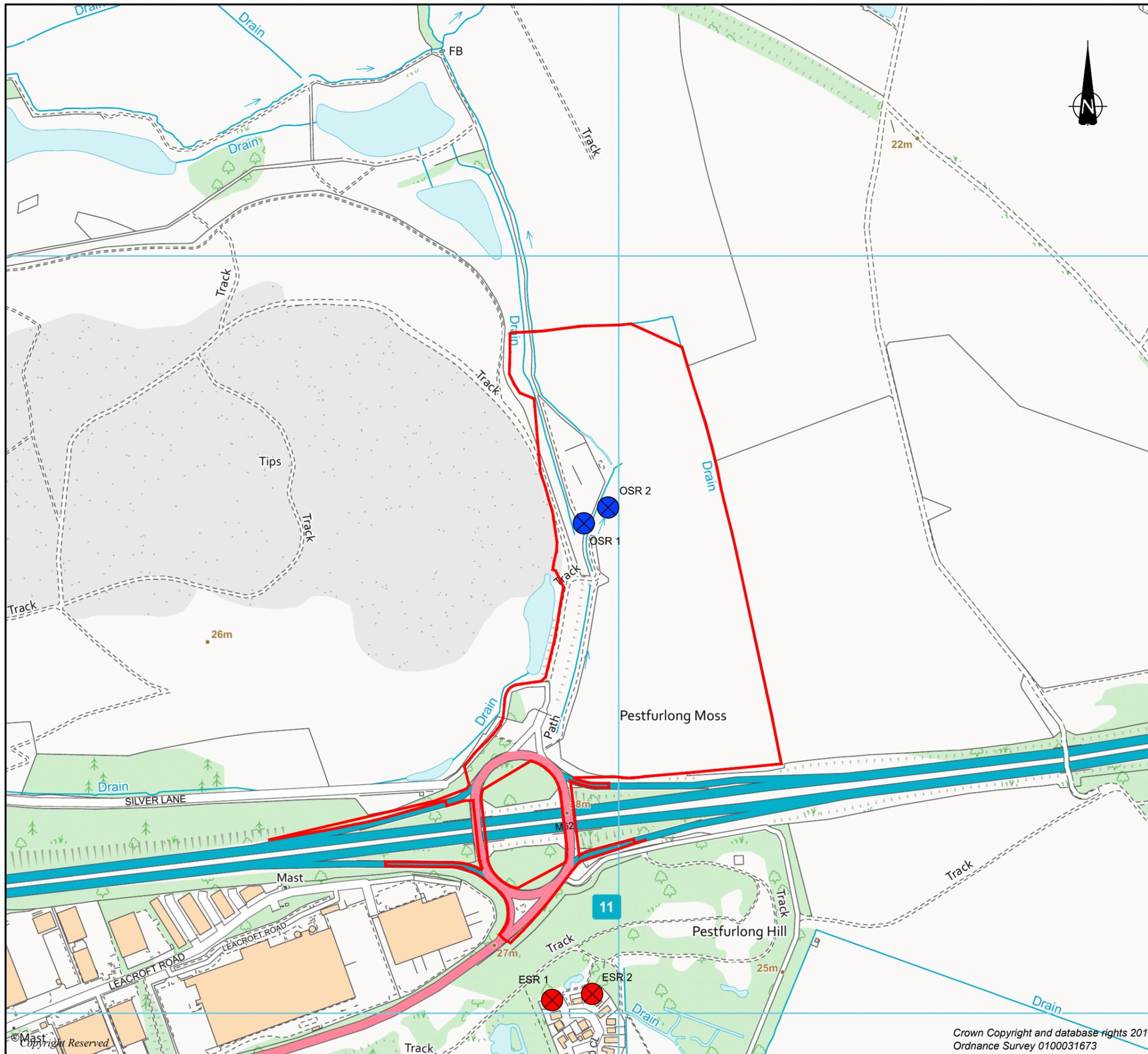
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DRAWN BY	CT	CHECKED BY	RF
		DATE	05/04/19
		APPROVED BY	MTW

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<input type="checkbox"/> CARLISLE	<input type="checkbox"/> NEWCASTLE UPON TYNE
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<input type="checkbox"/> GLASGOW	<input type="checkbox"/> STOKE ON TRENT

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REFERENCE

	SITE BOUNDARY
	EXISTING SENSITIVE RECEPTOR
	ODOUR SENSITIVE RECEPTOR

C	Site Boundary amended	02/08/19	CT	RF	MTW
B	Site Boundary amended	02/05/19	CT	RF	MTW
REVISION	DETAILS	DATE	DRN	CHKD	APPD

CLIENT  
**ETRA MSA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA JCT 11 M62**

DRAWING TITLE  
**OPERATIONAL PHASE RECEPTORS (AIR QUALITY)**

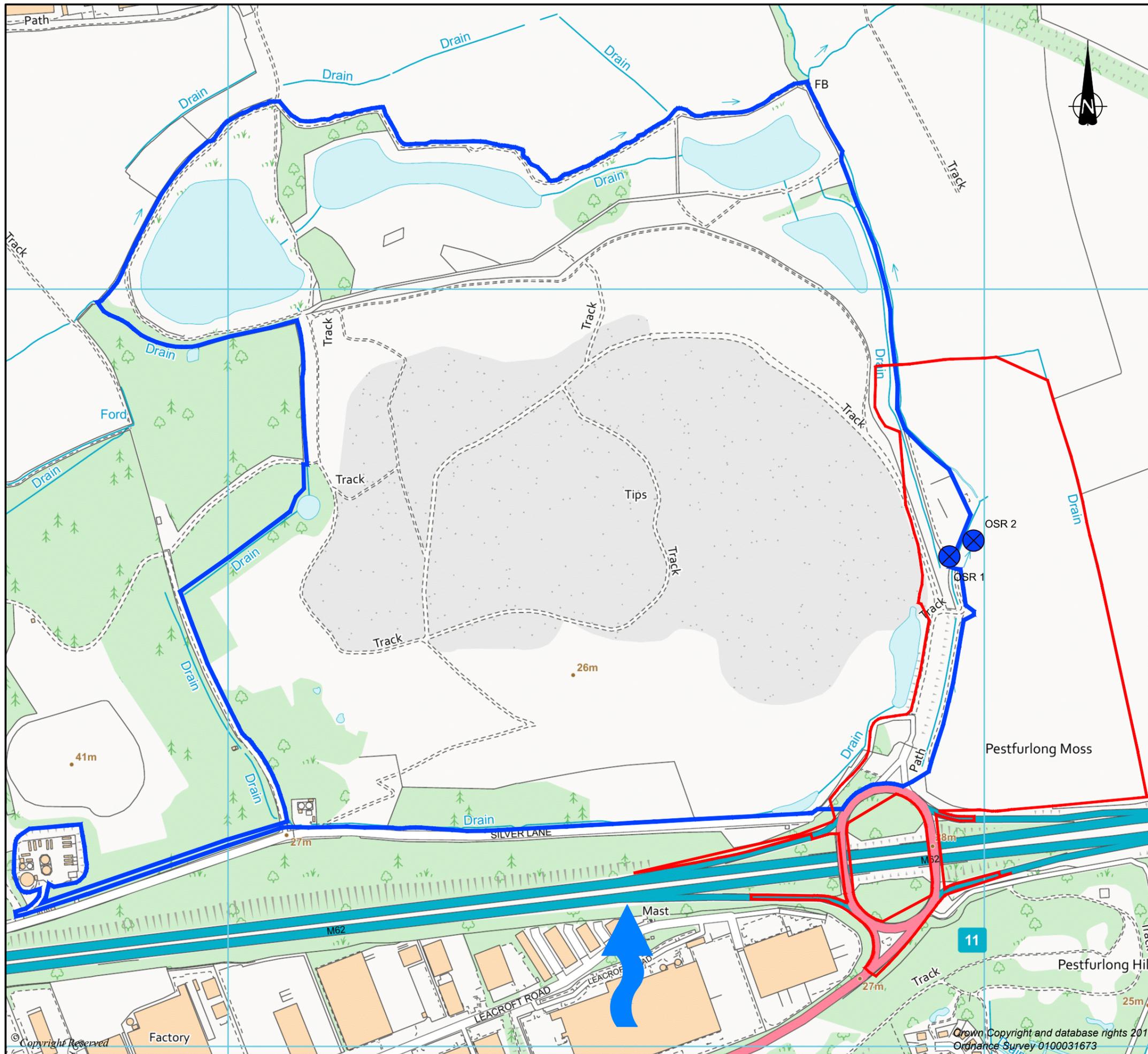
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DRG SIZE	A3	SCALE	1:5000
DRAWN BY	CT	CHECKED BY	RF
		APPROVED BY	MTW
		DATE	08/04/19



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REFERENCE			
	SITE BOUNDARY		
	FORMER RISLEY LANDFILL ENVIRONMENTAL PERMIT BOUNDARY		
	ODOUR SENSITIVE RECEPTOR		
	PREVAILING WIND DIRECTION		

REVISION	DETAILS	DATE	DRN	CHKD	APPD
C	Site Boundary amended	02/08/19	CT	RF	MTW
B	Site Boundary amended	02/05/19	CT	RF	MTW

CLIENT  
**ETRA MSA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA JCT 11 M62**

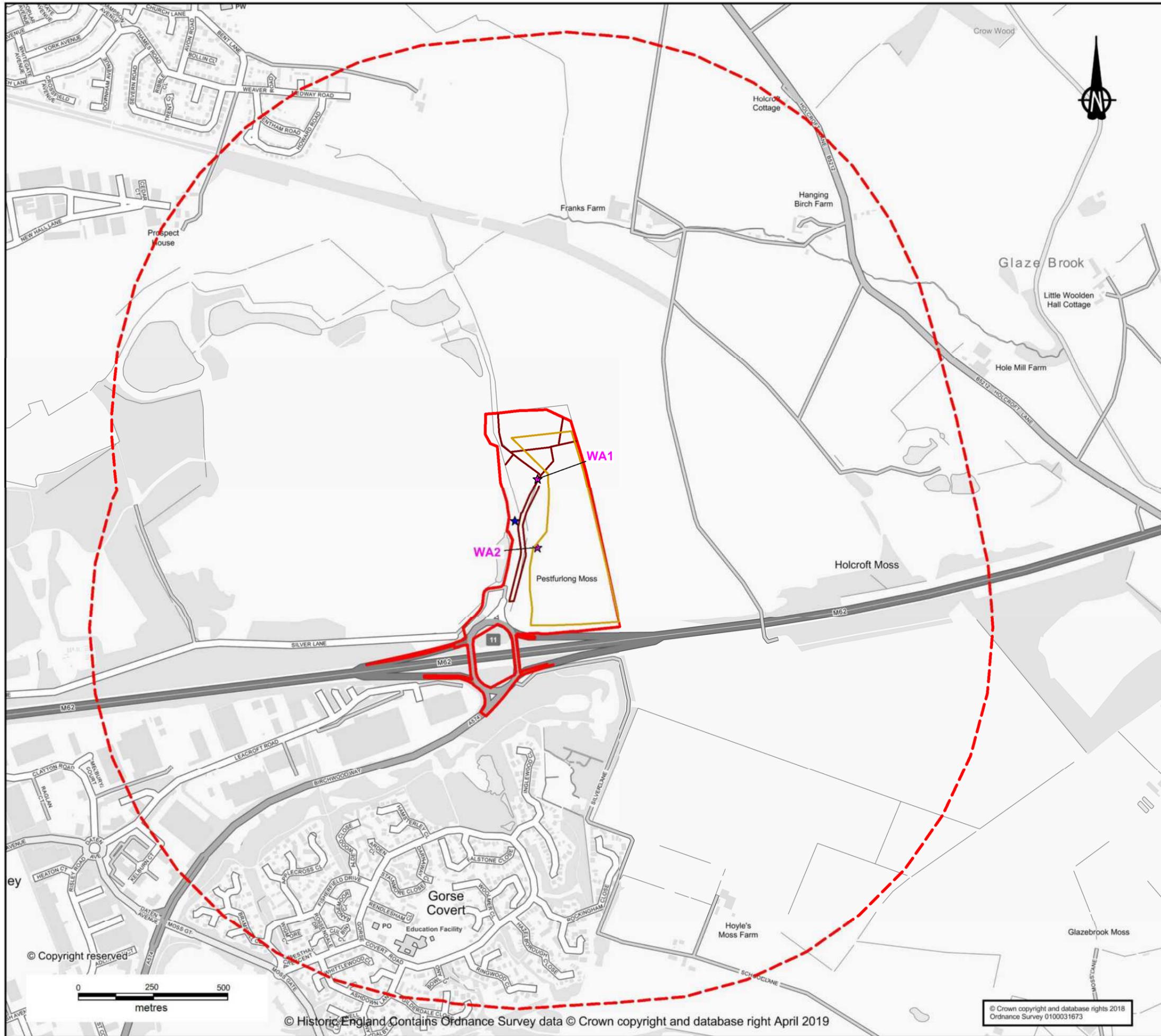
DRAWING TITLE  
**INDICATIVE SOURCE PATHWAY AND RECEPTOR PLAN (AIR QUALITY)**

DRG No.	Figure 8.3	REV	C
DRG SIZE	A3	SCALE	1:5000
DRAWN BY	CT	CHECKED BY	RF
		APPROVED BY	MTW
		DATE	08/04/19

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<input type="checkbox"/> CARLISLE	<input type="checkbox"/> NEWCASTLE UPON TYNE
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> SHEFFIELD
<input type="checkbox"/> GLASGOW	<input type="checkbox"/> STOKE ON TRENT



-  Redline Boundary
-  Search Area (1km)
-  WA Non-Designated Heritage Asset
-  Possible enclosure shown on LiDAR
-  Peat Survey Area - potential for Palaeoenvironmental deposits
-  Former field boundaries on the Tithe map

Non-Designated Wardell Armstrong Reference:  
 WA1 Stone-faced bank  
 WA2 Pesfurlong Moss Farm

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
----------	---------	------	-------	------	------

CLIENT  
**Extra Motorway Service Area Group**

PROJECT  
**Warrington Motorway Service Area J11 M62**

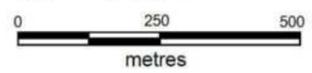
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**Cultural Heritage Receptors**

DRG No	SH11739/029	REV	A
DRG SIZE	A3	SCALE	1:11,000 @ A3
		DATE	July 2019
DRAWN BY	ACH	CHECKED BY	CLD
		APPROVED BY	DFH



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<input type="checkbox"/> CARDIFF	<input type="checkbox"/> MANCHESTER
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> NEWCASTLE UPON TYNE
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> SHEFFIELD





**KEY**

- Site Boundary
- Sample Type
  - Auger Core
  - Soil Profile Pit
- Agricultural Land Classification
  - Subgrade 3a
  - Subgrade 3b
  - Non-agricultural
  - Roads and other hardstanding

**Notes:**

Survey undertaken in January 2019 by Wardell Armstrong.  
 Aerial imagery shown for context purposes only.  
 Boundaries are indicative.

B A	SITE BOUNDARY AMENDMENT FIRST ISSUE	JULY 2019 APRIL 2019	SW SW	HS HS	AJD AJD
REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT  
**EXTRA MOTORWAY SERVICE AREA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA,  
J11 M62**

DRAWING TITLE  
**FIGURE 10.3  
AGRICULTURAL LAND CLASSIFICATION**

DRG No.	SH11739/031	REV	B
DRG SIZE	A3	SCALE	1:2,500
DRAWN BY	SW	DATE	22/07/2019
CHECKED BY	HS	APPROVED BY	CR

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<input type="checkbox"/> BRISTOL	<input type="checkbox"/> GLASGOW
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<input type="checkbox"/> CARDIFF	<input type="checkbox"/> SHEFFIELD
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> STOKE ON TRENT
<input type="checkbox"/> EDINBURGH	



**KEY**

- Site Boundary
  - Peat Depth Survey Area
  - Survey Points
- Peat Depth Interpolation
- $0.0 \leq x < 0.5$  m
  - $0.5 \leq x < 1.0$  m
  - $1.0 \leq x < 1.5$  m
  - $1.5 \leq x < 2.0$  m

**Notes:**

Survey undertaken in January 2019 by Wardell Armstrong.

Depths are below ground level and therefore include the upper approximately 0.36 m of peaty agricultural topsoil.

Aerial imagery shown for context purposes only.

Boundaries are indicative.

REV	DESCRIPTION	DATE	DRAWN	CHKD	APPD
1	SITE BOUNDARY AMENDMENTS FIRST ISSUES	JULY 2019	SW	HS	CR
2	DETAILS	APRIL 2019	SW	HS	CR

CLIENT  
**EXTRA MOTORWAY SERVICE AREA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA, J11 M62**

DRAWING TITLE  
**FIGURE 10.4 PEAT DEPTH**

DRG No.	SH11739/018	REV	B
DRG SIZE	A3	SCALE	1:2,500
DRAWN BY	SW	DATE	22/07/2019
CHECKED BY	HS	APPROVED BY	CR

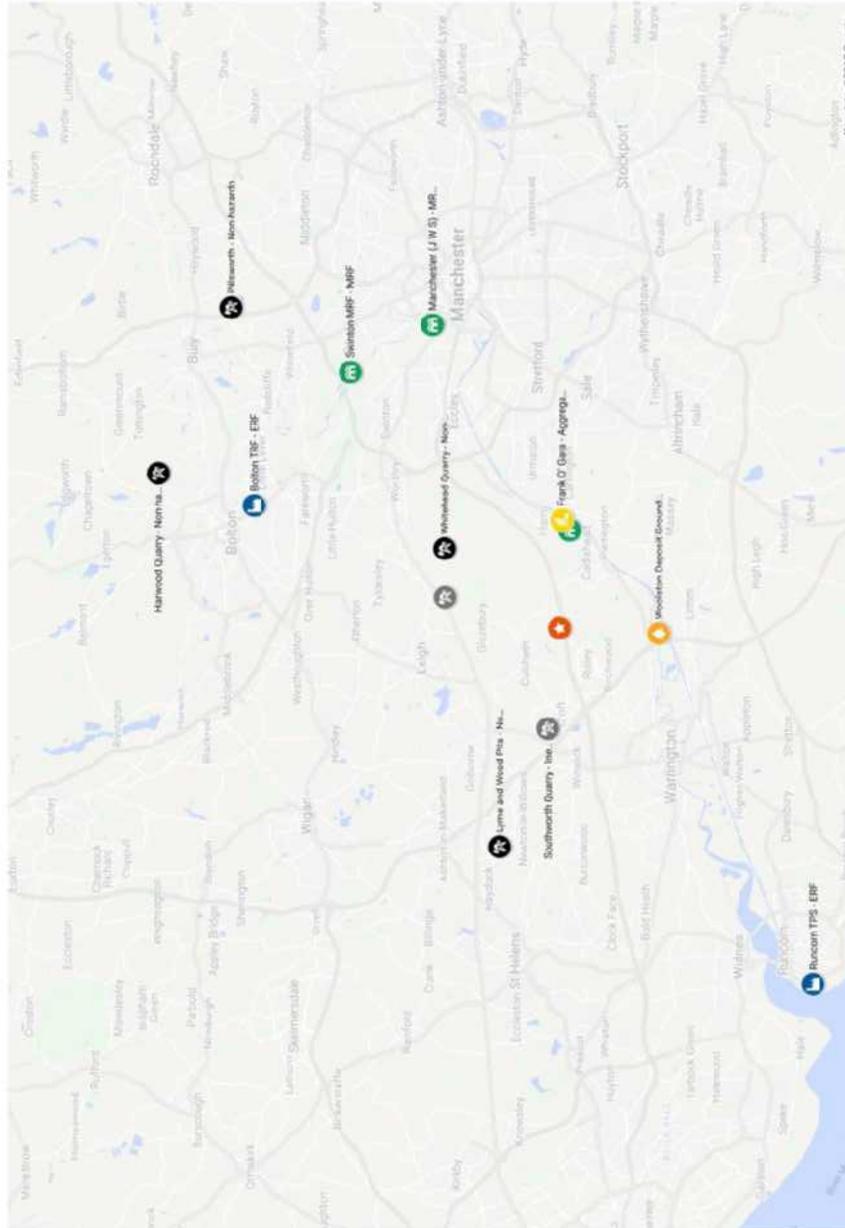
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- EDINBURGH

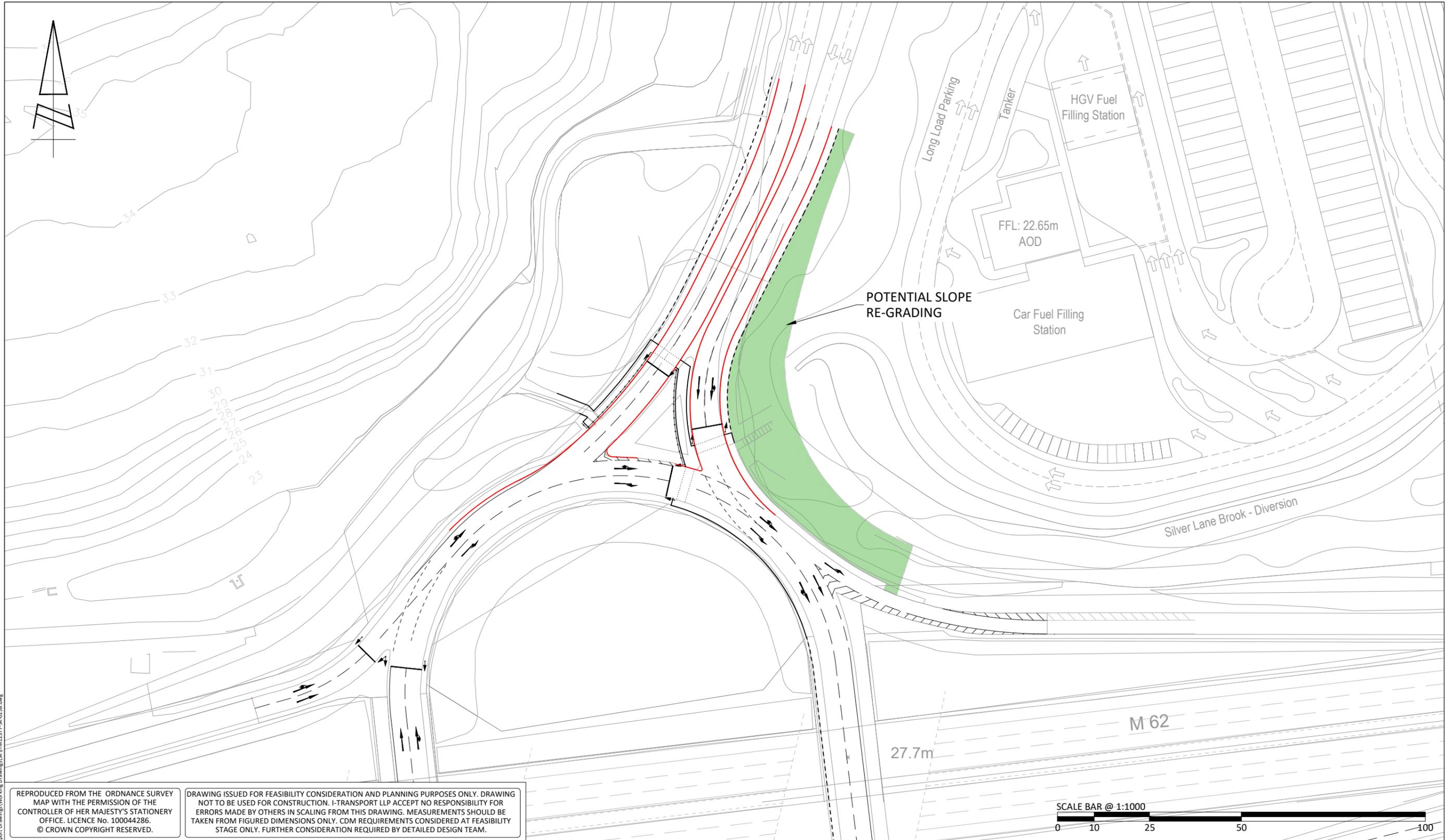
## Appendix I8.1 – Waste Receptor Plan

### Warrington MSA - Local Waste Receptor Plan



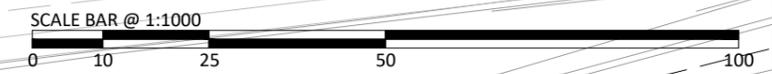
<b>Development Site</b>	Development Site
<b>Material Recycling Facilities</b>	Swinton MRF - MRF Manchester (J W S) - MR H-Leam MRC - MRF
<b>Energy Recovery Facilities</b>	Runcorn TPS - ERF Bolton TRF - ERF
<b>Landfill</b>	Harwood Quarry - Non-hazardous Landfill Pitworth - Non-hazardous Landfill Whitehead Quarry - Non-hazardous Landfill Morley's Quarry - Inert Landfill / Recovery Lyme and Wood Pits - Non-hazardous Landfill Southworth Quarry - Inert Landfill
<b>Recovery</b>	Woolston Deposit Ground - Recovery Frank O Gara - Aggregate Processing

## ES Part I Appendix 7



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Fax: 0161 830 2173  
www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
B	25.07.19	PH	UPDATED SITE LAYOUT	GJ	GJ
A	05.06.19	JB	UPDATED ROUNDABOUT LAYOUT	GJ	GJ
STATUS: FOR INFORMATION					

TITLE:	PRELIMINARY SITE ACCESS LAYOUT	
PROJECT:	WARRINGTON MSA, JUNCTION 11 M62	
CLIENT:	EXTRA MSA GROUP	

SCALE @ A3:	1:1000	CHECKED:	JH	APPROVED:	SE
FILE REF:	ITM12377	DRAWN:	JB	DATE:	19.03.19
DRAWING No:	ITM12377-SK-025				
PROJECT No:	ITM12377	REV:	B		

Z:\Projects\12377\ITM M62 Warrington MSA\Tech\Acad\I-Transport Drawings\Working Drawings\SK\ITM12377-SK-025B.dwg

## ES Part I Appendix 8



**LEGEND**

	APPLICATION SITE BOUNDARY
	EXISTING WOODLAND / TREE
	GAS MAIN
	EXISTING POND
	EXISTING WATERCOURSE
	EXISTING DEVELOPMENT
	PERMISSIVE BRIDLEWAY
	PERMISSIVE FOOTPATH
	PUBLIC FOOTPATH
<b>PROPOSED DEVELOPMENT STRATEGY</b>	
	NEW STRATEGIC GREEN LINK
	AMENITY BUILDING
	FUEL FILLING STATION / ELECTRIC CHARGING STATION
	CHILDREN'S PLAY AREA
<b>LANDSCAPE PROPOSALS</b>	
	PROPOSED AREA OF MIXED WOODLAND / TREE AND SHRUB PLANTING
	ROUGH GRASSLAND
	WILDFLOWER MEADOW
	AMENITY GRASSLAND WITHIN MSA
	FLOWER RICH ACID GRASSLAND WITHIN MSA
	DIVERTED SILVER LANE BROOK, MARGINS AND/ MARSHY ACID GRASSLAND





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ASPECT BUSINESS PARK  
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F: 01159 751576  
www.slrconsulting.com

WARRINGTON MSA J11/M62  
INDICATIVE WIDER LANDSCAPE  
LANDSCAPE CONTEXT

**LC-1**

Scale 1:5,000 @A2	Date AUG 2019
----------------------	------------------

190812-403.08062.00001\_Warrington MSA\_LM-1-LC-1-LC-2.dwg

190812-403.08062.00001\_Warrington MSA\_LM-1-LC-1-1-LC-2.dwg



LEGEND	
	APPLICATION SITE BOUNDARY
	EXISTING WOODLAND / TREES
	PUBLIC RIGHT OF WAY (OFF SITE)
	PERMISSIVE ROUTE ON RESTORED LANDFILL
	GAS MAIN
PROPOSED DEVELOPMENT AREAS	
	FACILITY BUILDING
	FUEL FILLING STATION / ELECTRIC CHARGING STATION
	CHILDREN'S PLAY AREA
PROPOSED LANDSCAPE SCHEME	
	TREE AND SHRUB PLANTING
	AMENITY GRASSLAND
	FLOWER RICH ACID GRASSLAND
	DIVERTED SILVER LANE BROOK, MARGINS AND/ MARSHY ACID GRASSLAND
	PUBLIC RIGHT OF WAY (DIVERTED)
	PERMISSIVE FOOTPATH (WITHIN SITE)



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WARRINGTON MSA J11/M62  
 INDICATIVE LANDSCAPE MASTERPLAN  
**LANDSCAPE MASTERPLAN**  
**LM-1**

Scale 1:2,500 @ A3	Date AUG 2019
-----------------------	------------------

190812-403.08062.00001\_Warrington MSA\_LM-1-LC-1-LC-2.dwg



LEGEND	
	APPLICATION SITE BOUNDARY
MOTORWAY SERVICE AREA (MSA)	
	PUBLIC RIGHT OF WAY DIVERTED (PLANINGS)
	PERMISSIVE FOOTPATH (GRASS)
WIDER LANDSCAPE	
	PUBLIC FOOTPATH (GRASS)
	PERMISSIVE BRIDLEWAY (PLANINGS)
	PERMISSIVE FOOTPATH (PLANINGS)



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WARRINGTON MSA J11/M62  
 INDICATIVE WIDER SITE CONTEXT  
 RECREATIONAL ACCESS

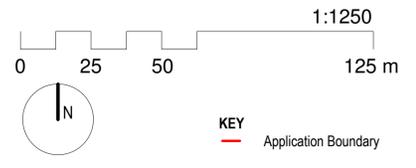
**RA-1**

Scale 1:5,000 @ A3	Date AUG 2019
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## ES Part I Appendix 9



Restored Rislely  
Landfill Site



**NOTES:**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and I-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

Rev:	Date:	Description:	By:	Rvw:
P9	26.07.19	Outline Planning Issue	JLR	TW
P8	25.07.19	FFL's updated	JLR	TW
P7	19.07.19	Building plan updated. Additional colour and detail attached	JLR	TW
P6	16.07.19	Site plan updated in accordance with comments from highway engineer	JLR	TW
P5	11.07.19	New site layout to incorporate peat habitat zone	JLR	TW
P4	22.05.19	Planning Draft For Review	TW	NAB
P3	02.05.19	Play area moved in line with HSE comments. Parking adjusted to accommodate revised play area. Bus stop added following public consultation in line with Extra instruction. Pedestrian link from car parking to PROW added in line with Spawforths comments.	TW	TW
P2	11.04.19	Context coordination. FFS update	JLR	TW
P1	20.03.19	i-Transpasy access plan added, amenity building updated	TW	TW

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w. www.architecture519.com  
t. 0113 213 5656

Client:  
**EXTRA MSA GROUP**

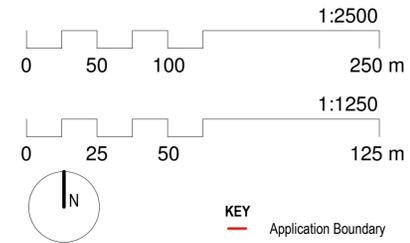
Project No: 2562  
Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:  
Project - Originator - Volume - Level - Type - Role - Number  
**RMS - 519 - ZZ - XX - DR - A - 0751**  
**INDICATIVE SITE PLAN**

Status: Code Suitability description

Revision: Code Revision status  
**P9 Planning**

Created By: JLR  
Reviewed By: TW  
Date: 01.04.19  
Scale at A1: 1:1250



**NOTES:**

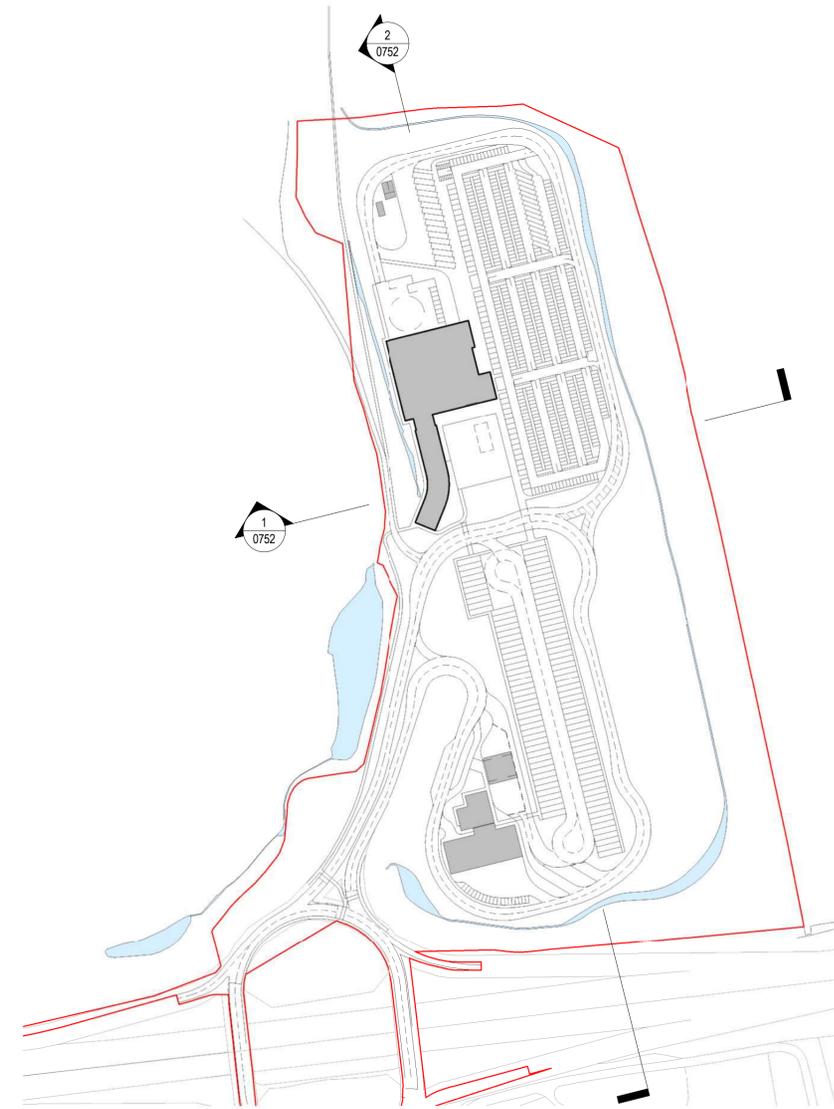
The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

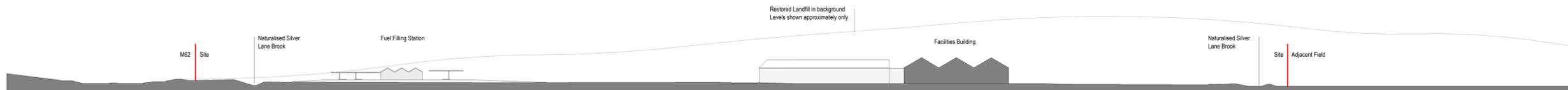
This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.



**INDICATIVE SECTION KEY PLAN**  
1 : 2500



**INDICATIVE SITE SECTION 01**  
1 : 1250



**INDICATIVE SITE SECTION 02**  
1 : 1250

Rev:	Date:	Description:	By:	Rvw:
P2	26.07.19	Outline Planning Issue	JLR	TW
P1	22.05.19	Planning Draft For Review	TW	NAB

**architecture 519**

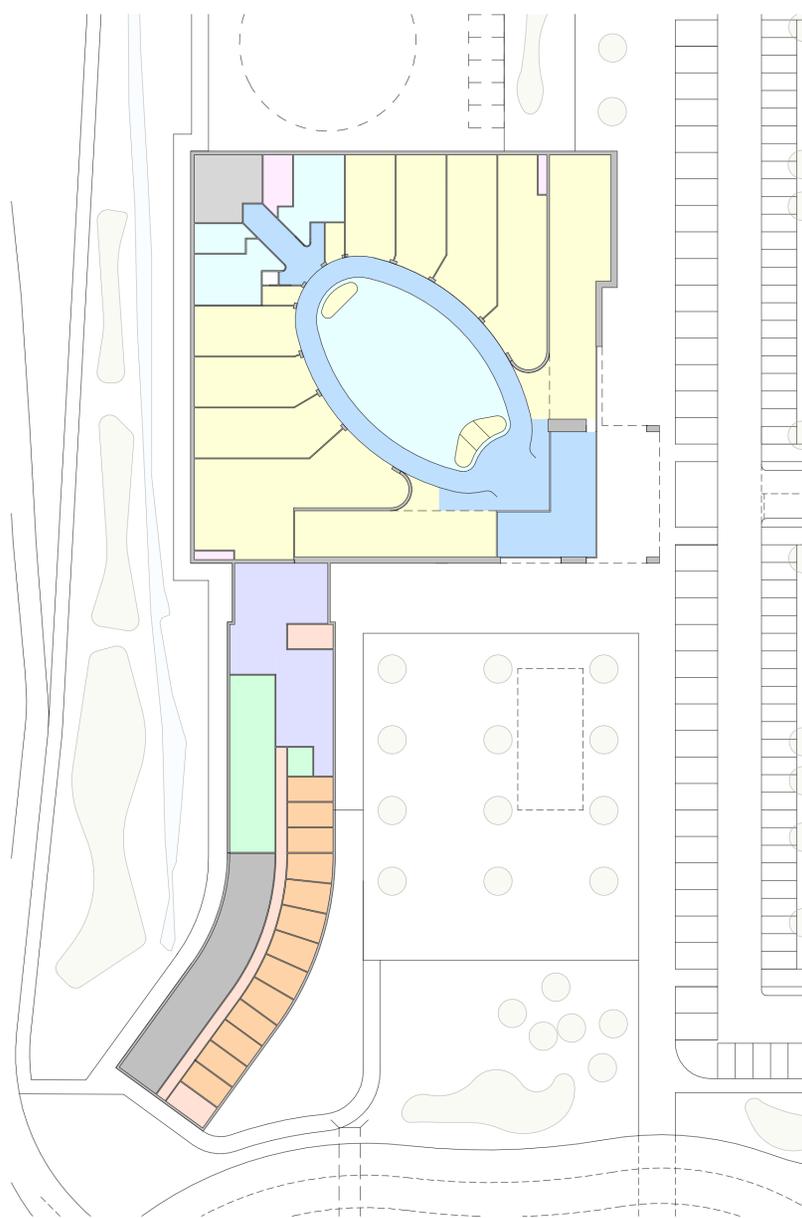
o. The Studio, Candle House, 1 Wharf Approach, Granary Wharf, Leeds, LS1 4GH  
 e. Leeds@architecture519.com  
 w. www.architecture519.com  
 t. 0113 213 5656

Client:  
**EXTRA MSA GROUP**

Project No: 2562  
 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

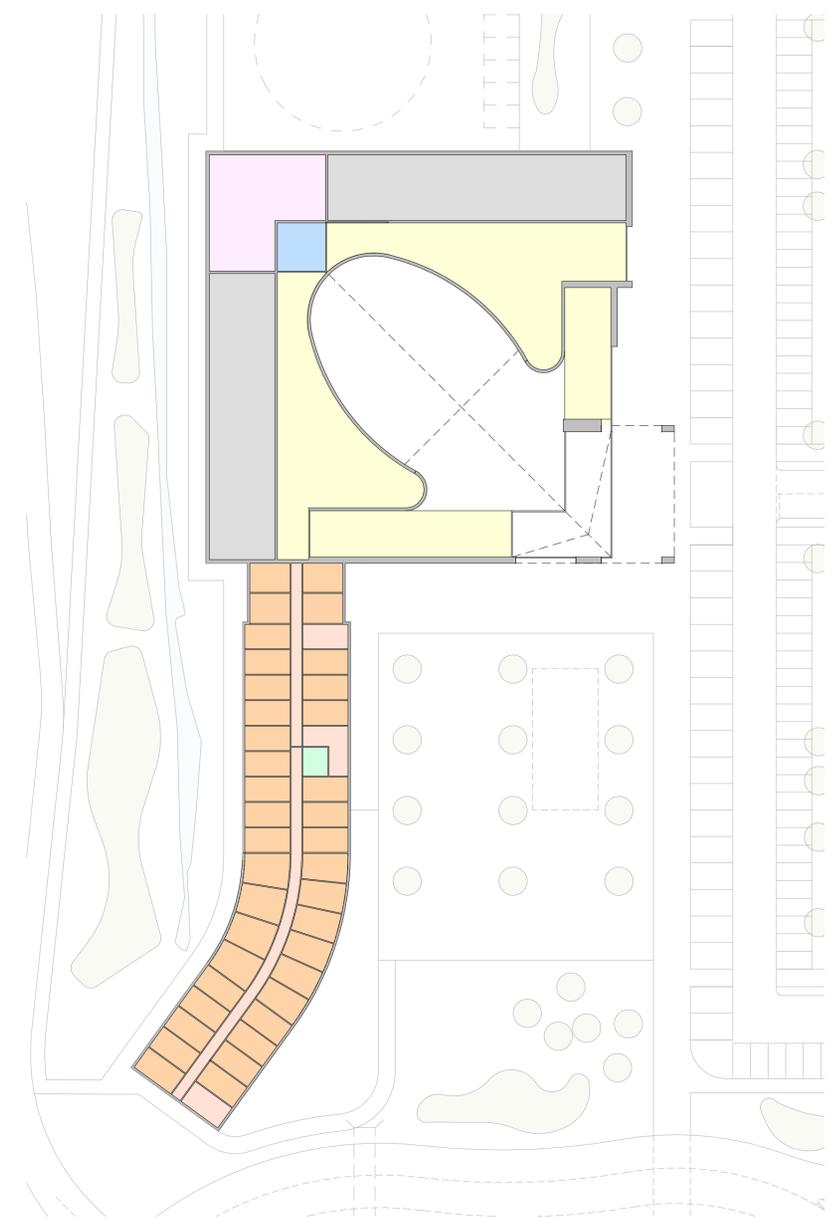
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Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - XX - DR - A - 0752</b>				
<b>INDICATIVE SITE SECTIONS</b>				
Status:	Code	Suitability description		
Revision:	Code	Revision status		
	<b>P2</b>	<b>Planning</b>		

Created By: JLR  
 Reviewed By: TW  
 Date: 01.04.19  
 Scale at A1: As indicated



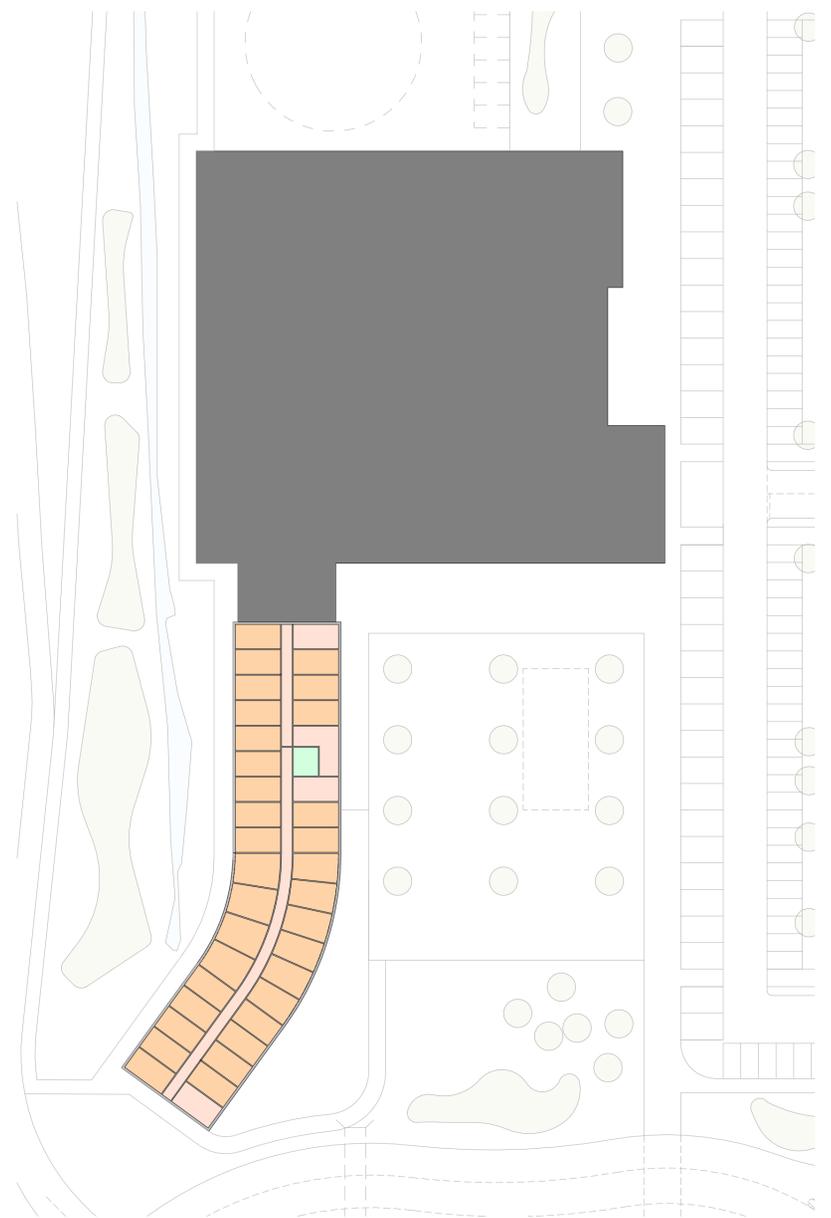
**INDICATIVE GROUND FLOOR PLAN**  
1 : 500

- Facilities - Back of House
- Facilities - Public Facility
- Facilities - Lettable Area
- Facilities - Plant
- Facilities - Public Circulation
- Hotel - Back Of House
- Hotel - Bedrooms
- Hotel - Circulation
- Hotel - Front Of House
- Hotel - Plant



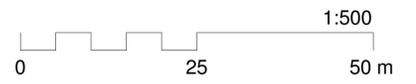
**INDICATIVE FIRST FLOOR PLAN**  
1 : 500

- Amenity - Lettable Area
- Facilities - Back of House
- Facilities - External Plant
- Facilities - Lettable Area
- Facilities - Public Circulation
- Hotel - Back Of House
- Hotel - Bedrooms
- Hotel - Circulation



**INDICATIVE SECOND FLOOR PLAN**  
1 : 500

- Hotel - Back Of House
- Hotel - Bedrooms
- Hotel - Circulation



**NOTES:**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

P2	26.07.19	Outline Planning Issue	JLR	TW
P1	22.05.19	Planning Draft For Review	TW	NAB

<b>Rev:</b>	<b>Date:</b>	<b>Description:</b>	<b>By:</b>	<b>Rvw:</b>

**Client:**  
EXTRA MSA GROUP

**Project No:** 2562  
**Project Name:** WARRINGTON MOTORWAY SERVICE AREA, J11 M62

**Document Reference:**

Project - Originator - Volume - Level - Type - Role - Number

**RMS - 519 - ZZ - XX - DR - A - 0760**

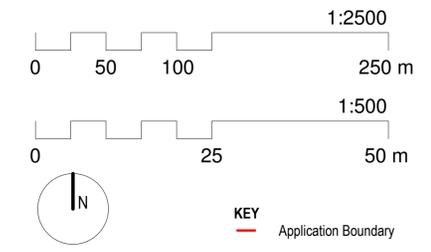
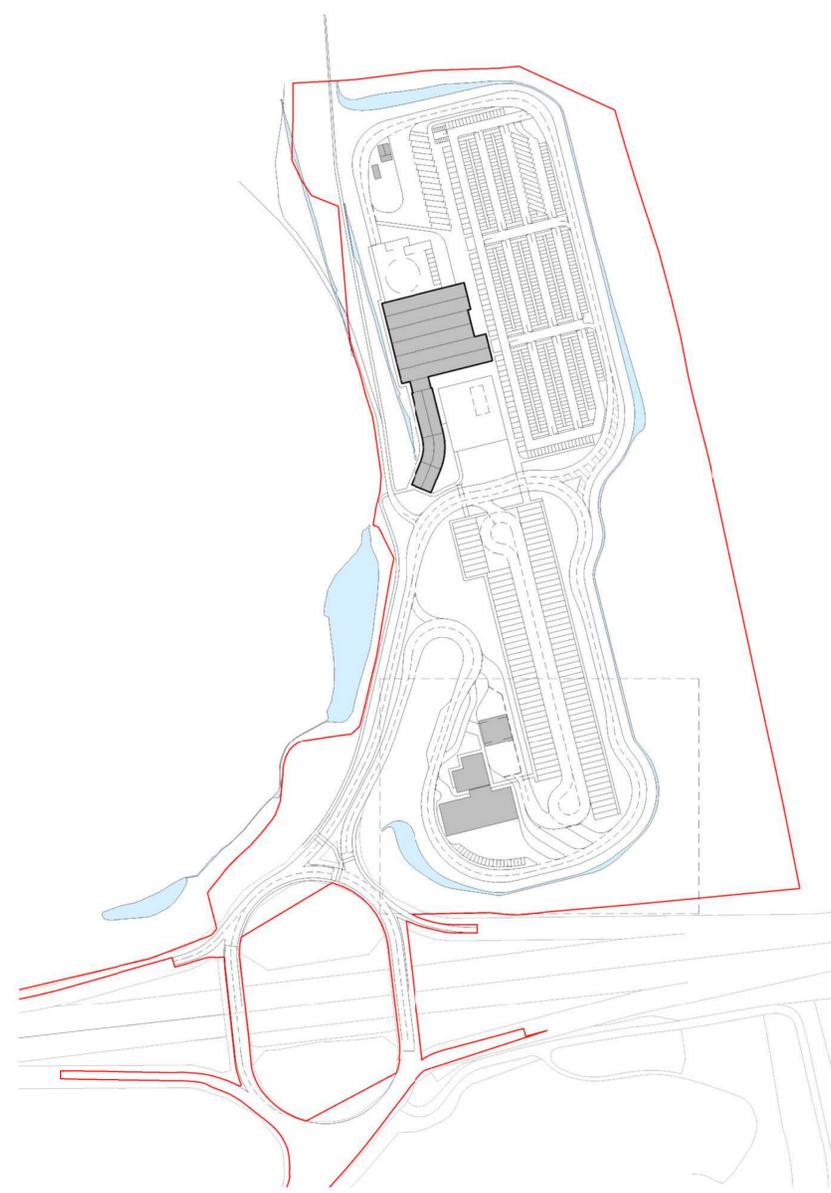
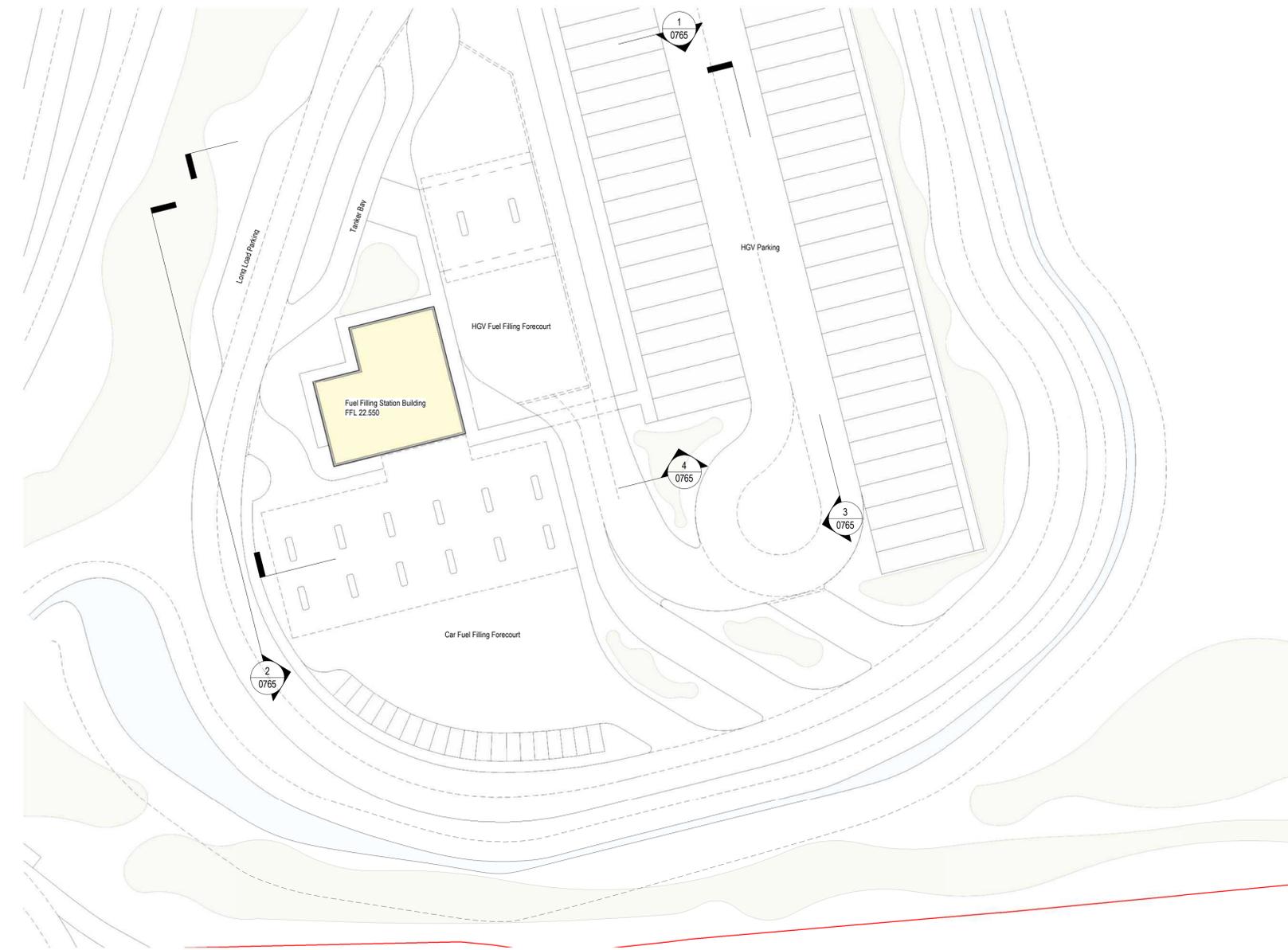
**INDICATIVE FLOOR PLANS**

**Status:** Code Suitability description

**Revision:** Code Revision status

**P2 Planning**

**Created By:** TW  
**Reviewed By:** TW  
**Date:** 21.03.19  
**Scale at A1:** 1 : 500



**KEY**  
— Application Boundary

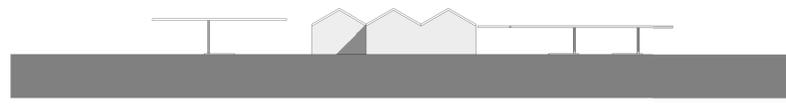
**NOTES:**  
 The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.  
 This red line boundary is to be used for planning purposes only.  
 Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.  
 Area of restored landfill site amended to reflect current site conditions.  
 This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

**INDICATIVE FUEL FILLING STATION GROUND FLOOR PLAN**  
 1 : 500

**INDICATIVE FUEL FILLING STATION KEY PLAN**  
 1 : 2500



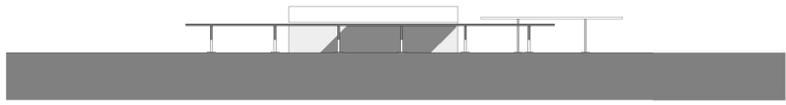
**01 - FFS INDICATIVE NORTH MASSING ELEVATION**  
 1 : 500



**02 - FFS INDICATIVE WEST MASSING ELEVATION**  
 1 : 500



**03 - FFS INDICATIVE EAST MASSING ELEVATION**  
 1 : 500



**04 - FFS INDICATIVE SOUTH MASSING ELEVATION**  
 1 : 500

Rev:	Date:	Description:	By:	Rvw:
F2	26.07.19	Outline Planning Issue	JLR	TW
F1	22.05.19	Planning Draft For Review	TW	NAB

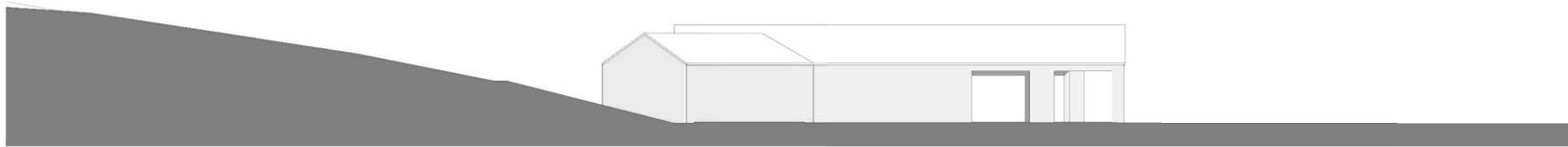
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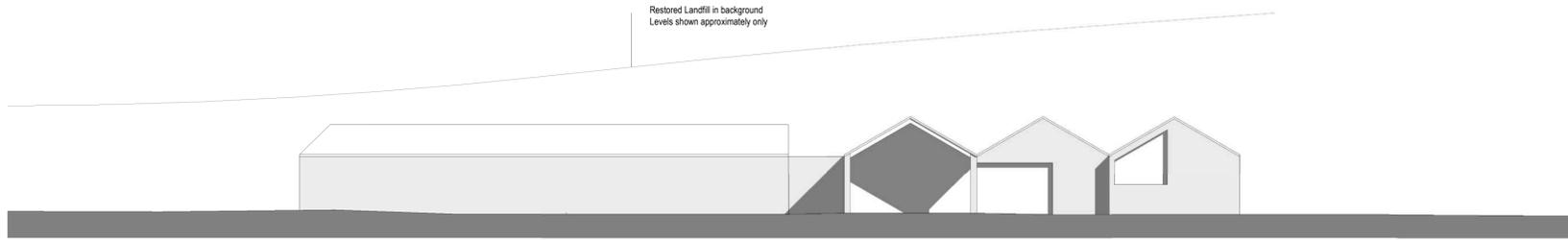
Client:  
**EXTRA MSA GROUP**

Project No: 2562  
 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

<b>Document Reference:</b>				
Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - XX - DR - A - 0765</b>				
<b>INDICATIVE FUEL FILLING STATION PLANS AND ELEVATIONS</b>				
Status:	Code	Suitability description		
Revision:	Code	Revision status		
Created By:	Reviewed By:	Date:	Scale at A1:	
TW	NAB	22.05.19	As indicated	



**01 - INDICATIVE SOUTH MASSING ELEVATION**  
1 : 500



**02 - INDICATIVE EAST MASSING ELEVATION**  
1 : 500



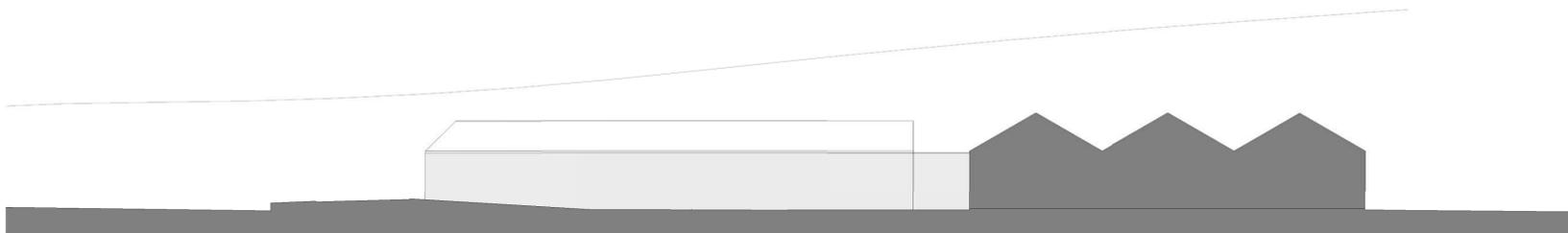
**03 - INDICATIVE NORTH MASSING ELEVATION**  
1 : 500



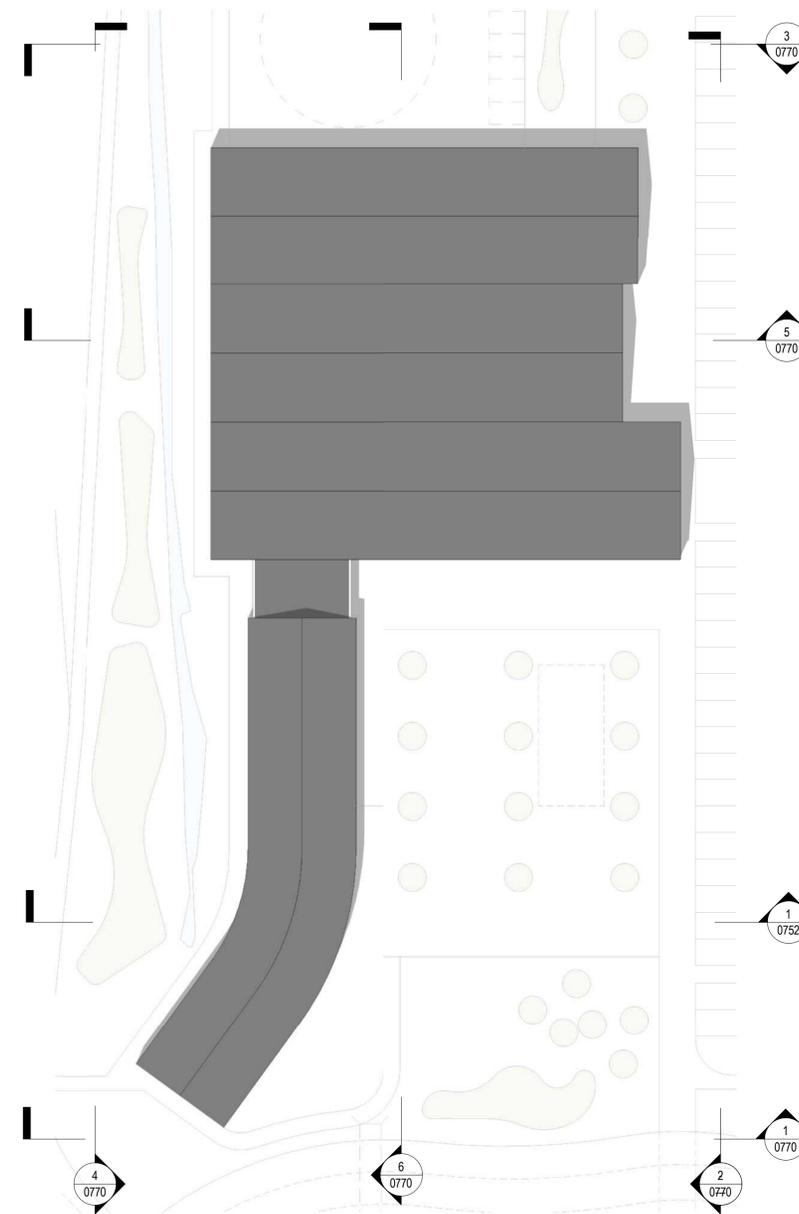
**04 - INDICATIVE WEST MASSING ELEVATION**  
1 : 500



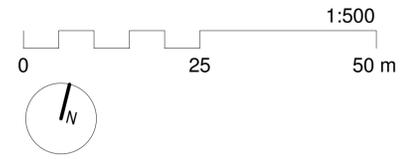
**05 - INDICATIVE SECTION 05**  
1 : 500



**06 - INDICATIVE SECTION 06**  
1 : 500



**INDICATIVE ROOF PLAN**  
1 : 500



**NOTES:**

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

Rev:	Date:	Description:	By:	Rev:
P2	26.07.19	Outline Planning Issue	JLR	TW
P1	22.05.19	Planning Draft For Review	TW	NAB

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Client:  
**EXTRA MSA GROUP**

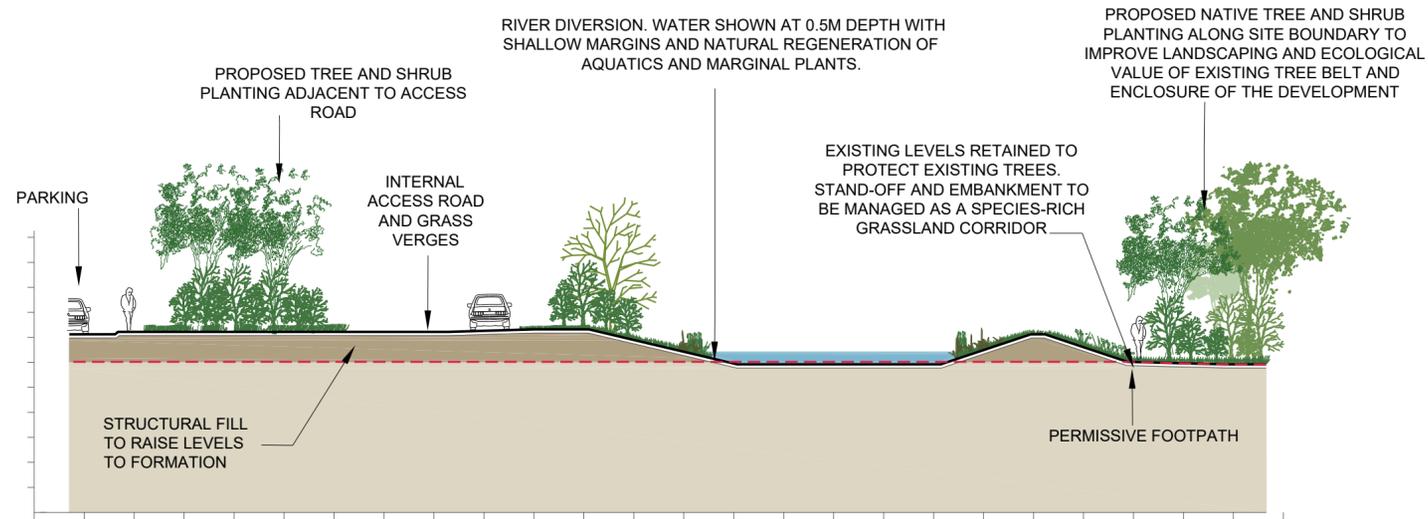
Project No: 2562  
Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

<b>Document Reference:</b>				
Project - Originator - Volume - Level - Type - Role - Number				
<b>RMS - 519 - ZZ - XX - DR - A - 0770</b>				
<b>INDICATIVE MASSING ELEVATIONS, SECTIONS AND ROOF PLAN</b>				
Status:	Code	Suitability description		
Revision:	Code	Revision status		
	<b>P2</b>	<b>Planning</b>		
Created By:	Reviewed By:	Date:	Scale at A1:	
TW	TW	21.03.19	1 : 500	

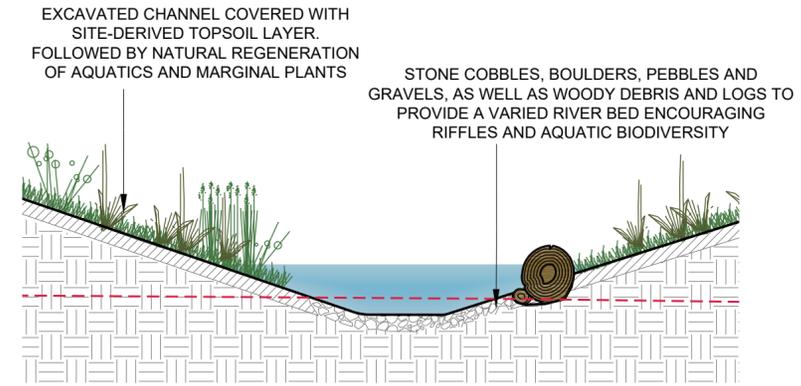
This document is © architecture519 Ltd. If in doubt ASK. Drawing measurements shall not be obtained by scaling. Verify all dimensions prior to construction or product manufacture. Immediately report any discrepancies on this document to the Architect. This document shall be read in conjunction with associated models, specifications and related consultants documents.

## ES Part I Appendix I0

1) NORTHERN CHANNEL



ILLUSTRATIVE INSET TO CHANNEL BASE (1:50)



NOTES

THE PROPOSED DIVERSION AND ENHANCEMENT OF THE SILVER LANE BROOK INCORPORATES MEASURES TO INCREASE TREE COVER AND PUBLIC ACCESS TO CONTRIBUTE POSITIVELY TO THE OBJECTIVES OF THE MERSEY FOREST.

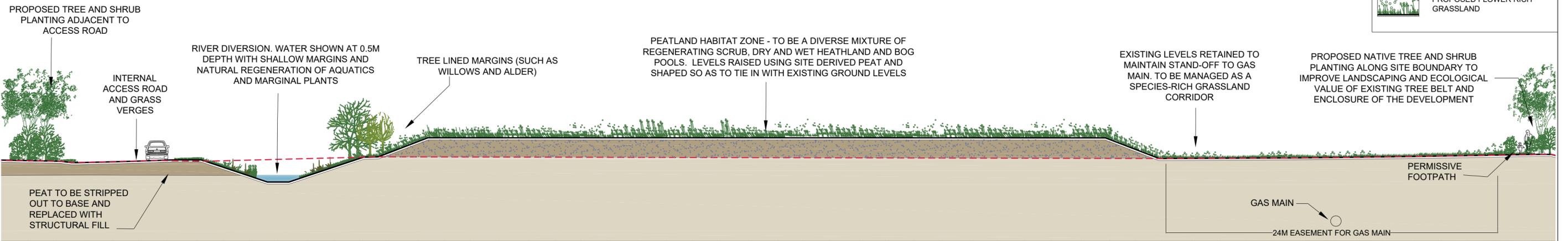
THESE SECTIONS ARE NOT BASED ON PRECISE LOCATIONS, BUT THEY AIM TO DEMONSTRATE THE OVERALL APPROACH IN TERMS OF BIODIVERSITY AND LANDSCAPE ENHANCEMENT OF THE DIVERTED RIVER CORRIDOR.

ENGINEERED DETAILS, CROSSING POINTS AND DRAINAGE CONNECTIONS ARE NOT SHOWN AND ARE TO BE DETERMINED.

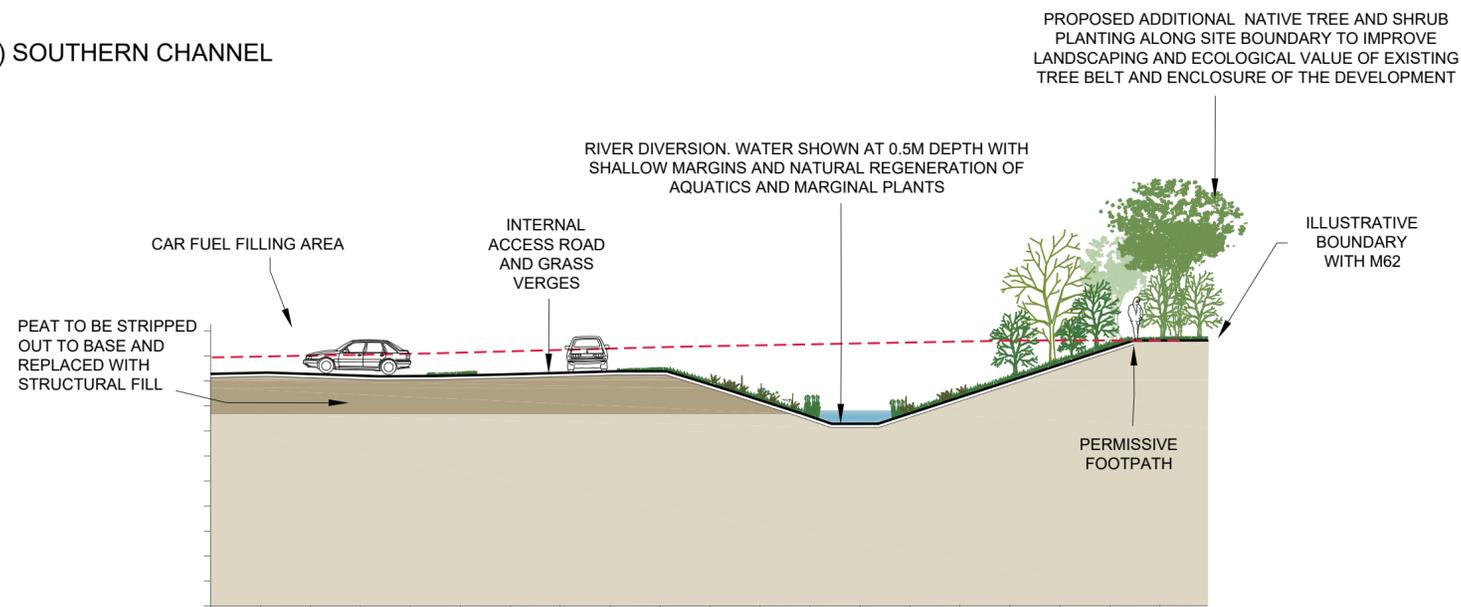
LEGEND FOR SECTIONS

	EXISTING GROUND LEVEL PROFILE
	PROPOSED GROUND LEVEL PROFILE
	IN-SITU GROUND / AREA OF FILL
	EXISTING TREE / SHRUB
	PROPOSED NATIVE TREE / SHRUB PLANTING
	PROPOSED TREE LINED MARGINS (ALDER / WILLOW)
	PROPOSED AMENITY GRASSLAND
	PROPOSED FLOWER RICH GRASSLAND

2) EASTERN CHANNEL

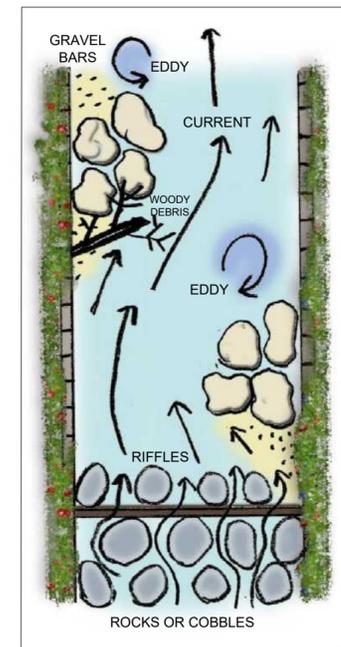


3) SOUTHERN CHANNEL



SKETCH PLAN VIEW

PROPOSED IN-CHANNEL FEATURES TO IMPROVE ECOLOGICAL AND LANDSCAPE VALUE



ASPECT HOUSE  
ASPECT BUSINESS PARK  
BANNERLEY ROAD  
NOTTINGHAM NG9 8WR  
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F: 01159 751576  
www.slrc consulting.com

WARRINGTON MSA J11/M62  
SILVER LANE BROOK DIVERSION  
ILLUSTRATIVE CROSS SECTIONS

**BD-1**

Scale 1:200 (OR AS SHOWN) A2 Date AUG 2019



**KEY**

- Site Boundary
  - Peat Depth Survey Area
  - Survey Points
- Peat Depth Interpolation
- $0.0 \leq x < 0.5$  m
  - $0.5 \leq x < 1.0$  m
  - $1.0 \leq x < 1.5$  m
  - $1.5 \leq x < 2.0$  m

**Notes:**

Survey undertaken in January 2019 by Wardell Armstrong.

Depths are below ground level and therefore include the upper approximately 0.36 m of peaty agricultural topsoil.

Aerial imagery shown for context purposes only.

Boundaries are indicative.

REV	DESCRIPTION	DATE	DRAWN	CHKD	APPD
1	SITE BOUNDARY AMENDMENTS FIRST ISSUES	JULY 2019	SW	HS	CR
2	DETAILS	APRIL 2019	SW	HS	CR

CLIENT  
**EXTRA MOTORWAY SERVICE AREA GROUP**

PROJECT  
**WARRINGTON MOTORWAY SERVICE AREA, J11 M62**

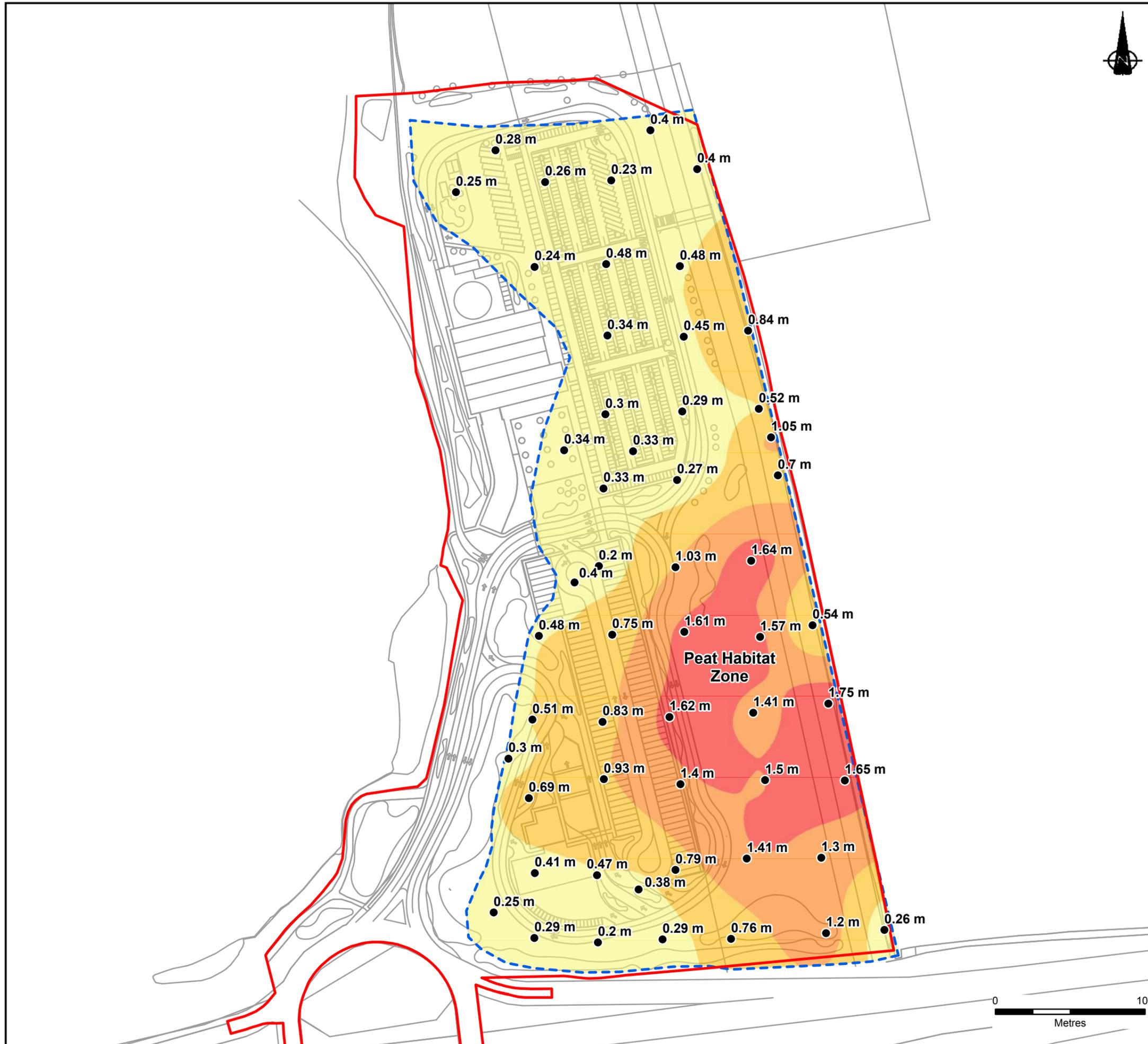
DRAWING TITLE  
**FIGURE 10.4 PEAT DEPTH**

DRG No.	SH11739/018	REV	B
DRG SIZE	A3	SCALE	1:2,500
		DATE	22/07/2019
DRAWN BY	SW	CHECKED BY	HS
		APPROVED BY	CR

**wardell armstrong**

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- BOLTON
- LONDON
- CARDIFF
- MANCHESTER
- CARLISLE
- SHEFFIELD
- EDINBURGH
- STOKE ON TRENT



**KEY**

- Site Boundary
  - Peat Depth Survey Area
  - Survey Points
- Peat Depth Interpolation
- $0.0 \leq x < 0.5$  m
  - $0.5 \leq x < 1.0$  m
  - $1.0 \leq x < 1.5$  m
  - $1.5 \leq x < 2.0$  m

**Notes:**

Survey undertaken in January 2019 by Wardell Armstrong.

Depths are below ground level and therefore include the upper approximately 0.36 m of peaty agricultural topsoil.

Boundaries are indicative.

Site Layout taken from Site Layout Option B1

C	SITE LAYOUT AMENDED	07/2019	HM	HS	CR
B	SITE BOUNDARY AMENDMENTS	07/2019	SW	HS	CR
A	FIRST ISSUE	04/2019	SW	HS	CR
REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT

EXTRA MOTORWAY SERVICE AREA GROUP

PROJECT

WARRINGTON MOTORWAY SERVICE AREA,  
J11 M62

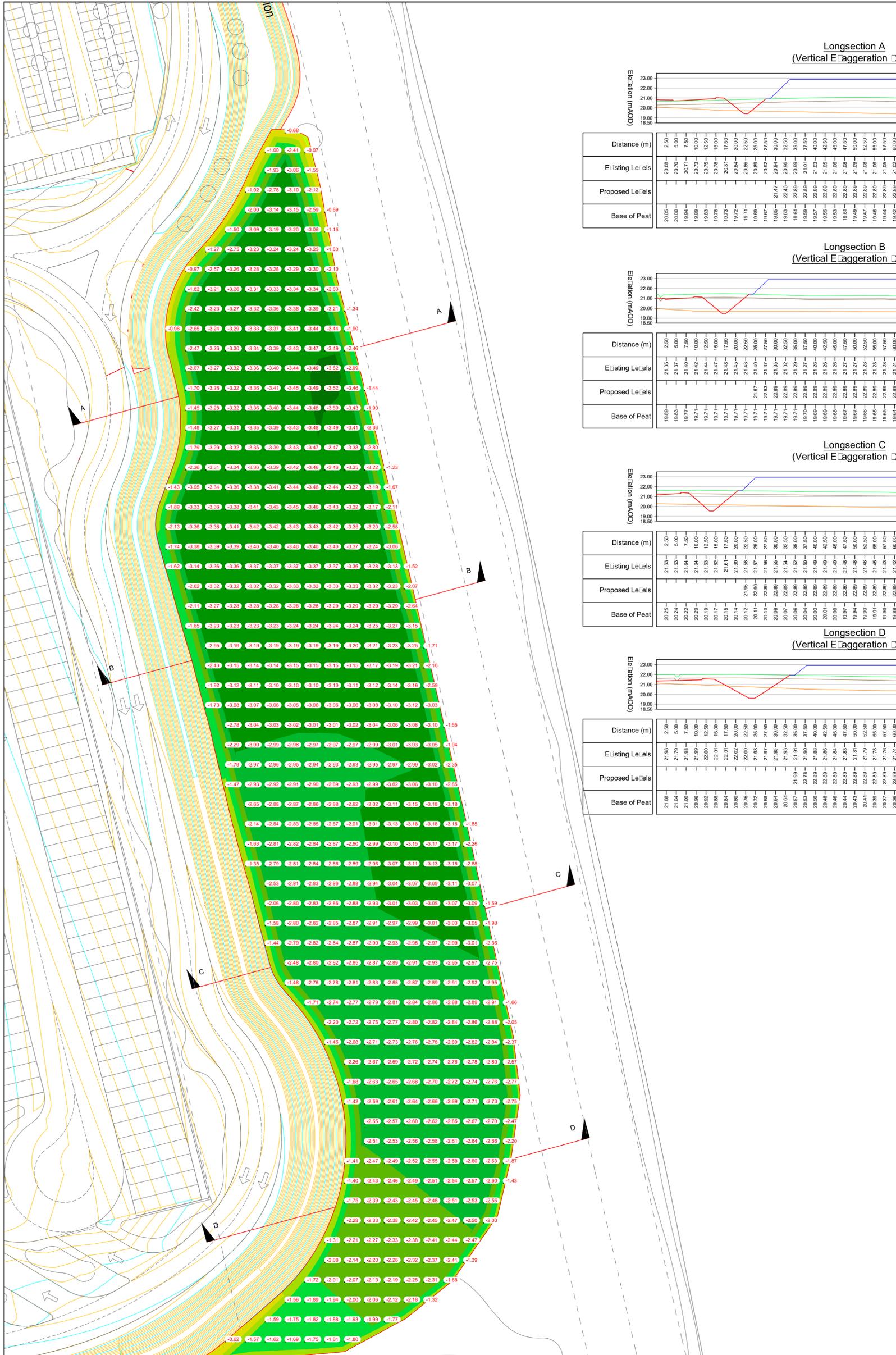
DRAWING TITLE

FIGURE 10.5  
INDICATIVE PEAT DEPTH AND SITE LAYOUT

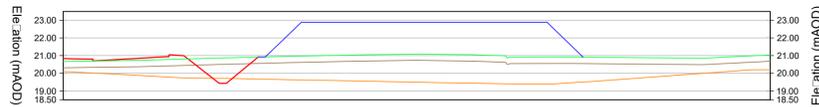
DRG No.	SH11739/034	REV	C
DRG SIZE	A3	SCALE	1:2,500
		DATE	22/08/2019
DRAWN BY	SW	CHECKED BY	HS
		APPROVED BY	CR

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<input type="checkbox"/> BIRMINGHAM	<input type="checkbox"/> GLASGOW
<input type="checkbox"/> BOLTON	<input type="checkbox"/> LONDON
<input type="checkbox"/> CARDIFF	<input type="checkbox"/> MANCHESTER
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> SHEFFIELD
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> STOKE ON TRENT

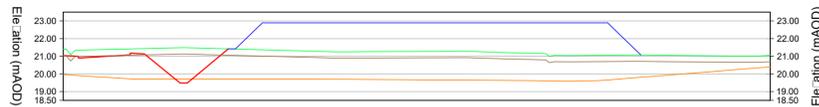


Longsection A  
(Vertical Exaggeration x2.50)



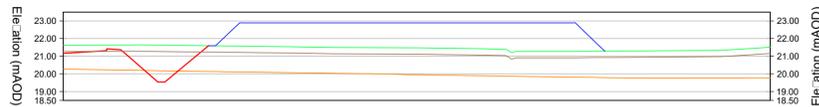
Distance (m)	Existing Levels	Proposed Levels	Base of Peat
2.50	20.68	20.68	20.05
5.00	20.70	20.70	20.00
7.50	20.71	20.71	19.84
10.00	20.73	20.73	19.89
12.50	20.75	20.75	19.93
15.00	20.78	20.78	19.78
17.50	20.81	20.81	19.73
20.00	20.84	20.84	19.72
22.50	20.86	20.86	19.71
25.00	20.88	20.88	19.69
27.50	20.92	20.92	19.67
30.00	20.94	20.94	19.65
32.50	20.96	20.96	19.63
35.00	20.98	20.98	19.61
37.50	21.01	21.01	19.57
40.00	21.03	21.03	19.55
42.50	21.06	21.06	19.53
45.00	21.08	21.08	19.51
47.50	21.09	21.09	19.49
50.00	21.08	21.08	19.47
52.50	21.06	21.06	19.46
55.00	21.04	21.04	19.44
57.50	21.02	21.02	19.44
60.00	21.00	21.00	19.42
62.50	20.98	20.98	19.41
65.00	20.91	20.91	19.39
67.50	20.91	20.91	19.39
70.00	20.91	20.91	19.41
72.50	20.91	20.91	19.48
75.00	20.90	20.90	19.53
77.50	20.89	20.89	19.61
80.00	20.89	20.89	19.68
82.50	20.87	20.87	19.83
85.00	20.86	20.86	19.76
87.50	20.85	20.85	19.91
90.00	20.85	20.85	19.88
92.50	20.84	20.84	20.05
95.00	20.84	20.84	20.13
97.50	20.89	20.89	20.20

Longsection B  
(Vertical Exaggeration x2.50)



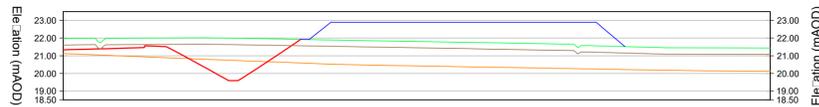
Distance (m)	Existing Levels	Proposed Levels	Base of Peat
2.50	21.35	21.35	19.88
5.00	21.37	21.37	19.83
7.50	21.40	21.40	19.77
10.00	21.42	21.42	19.71
12.50	21.44	21.44	19.71
15.00	21.47	21.47	19.71
17.50	21.48	21.48	19.71
20.00	21.45	21.45	19.71
22.50	21.43	21.43	19.71
25.00	21.40	21.40	19.71
27.50	21.37	21.37	19.71
30.00	21.35	21.35	19.71
32.50	21.32	21.32	19.71
35.00	21.29	21.29	19.71
37.50	21.27	21.27	19.71
40.00	21.26	21.26	19.68
42.50	21.26	21.26	19.66
45.00	21.26	21.26	19.66
47.50	21.27	21.27	19.67
50.00	21.27	21.27	19.67
52.50	21.28	21.28	19.66
55.00	21.28	21.28	19.65
57.50	21.28	21.28	19.65
60.00	21.24	21.24	19.64
62.50	21.21	21.21	19.62
65.00	21.18	21.18	19.62
67.50	21.16	21.16	19.61
70.00	21.15	21.15	19.62
72.50	21.14	21.14	19.59
75.00	21.14	21.14	19.59
77.50	21.08	21.08	19.61
80.00	21.07	21.07	19.75
82.50	21.07	21.07	19.83
85.00	21.05	21.05	19.91
87.50	21.03	21.03	19.76
90.00	21.03	21.03	20.07
92.50	21.02	21.02	20.15
95.00	21.02	21.02	20.23
97.50	21.02	21.02	20.33

Longsection C  
(Vertical Exaggeration x2.50)



Distance (m)	Existing Levels	Proposed Levels	Base of Peat
2.50	21.03	21.03	20.25
5.00	21.04	21.04	20.24
7.50	21.05	21.05	20.22
10.00	21.06	21.06	20.20
12.50	21.07	21.07	20.19
15.00	21.07	21.07	20.17
17.50	21.06	21.06	20.15
20.00	21.04	21.04	20.14
22.50	21.02	21.02	20.12
25.00	21.01	21.01	20.11
27.50	21.00	21.00	20.10
30.00	20.99	20.99	20.10
32.50	20.98	20.98	20.08
35.00	20.96	20.96	20.07
37.50	20.94	20.94	20.06
40.00	20.93	20.93	20.04
42.50	20.91	20.91	20.04
45.00	20.90	20.90	20.01
47.50	20.89	20.89	20.01
50.00	20.88	20.88	20.01
52.50	20.87	20.87	19.97
55.00	20.86	20.86	19.94
57.50	20.85	20.85	19.93
60.00	20.84	20.84	19.93
62.50	20.82	20.82	19.91
65.00	20.81	20.81	19.88
67.50	20.80	20.80	19.86
70.00	20.79	20.79	19.84
72.50	20.78	20.78	19.83
75.00	20.77	20.77	19.81
77.50	20.76	20.76	19.80
80.00	20.75	20.75	19.78
82.50	20.74	20.74	19.76
85.00	20.73	20.73	19.75
87.50	20.72	20.72	19.76
90.00	20.71	20.71	19.76
92.50	20.70	20.70	19.77
95.00	20.69	20.69	19.77
97.50	20.68	20.68	19.77

Longsection D  
(Vertical Exaggeration x2.50)



Distance (m)	Existing Levels	Proposed Levels	Base of Peat
2.50	21.98	21.98	21.08
5.00	21.99	21.99	21.04
7.50	21.99	21.99	21.00
10.00	21.99	21.99	20.96
12.50	22.00	22.00	20.92
15.00	22.01	22.01	20.88
17.50	22.02	22.02	20.84
20.00	22.02	22.02	20.80
22.50	22.02	22.02	20.76
25.00	22.01	22.01	20.72
27.50	22.00	22.00	20.68
30.00	21.99	21.99	20.64
32.50	21.98	21.98	20.61
35.00	21.96	21.96	20.57
37.50	21.94	21.94	20.53
40.00	21.92	21.92	20.50
42.50	21.89	21.89	20.48
45.00	21.86	21.86	20.46
47.50	21.84	21.84	20.44
50.00	21.83	21.83	20.43
52.50	21.81	21.81	20.41
55.00	21.79	21.79	20.39
57.50	21.76	21.76	20.37
60.00	21.74	21.74	20.34
62.50	21.72	21.72	20.34
65.00	21.70	21.70	20.32
67.50	21.67	21.67	20.30
70.00	21.67	21.67	20.28
72.50	21.67	21.67	20.27
75.00	21.66	21.66	20.27
77.50	21.65	21.65	20.25
80.00	21.64	21.64	20.23
82.50	21.63	21.63	20.23
85.00	21.62	21.62	20.21
87.50	21.61	21.61	20.18
90.00	21.60	21.60	20.18
92.50	21.59	21.59	20.17
95.00	21.58	21.58	20.15
97.50	21.57	21.57	20.13

- KEY:**
- EXISTING PROFILE
  - TOPSOIL STRIP LEVEL (300mm DEPTH)
  - BASE OF PEAT / TOP OF NATURAL CLAY
  - PROPOSED SITE LEVELS
  - CLAY BUND / TOP OF PEAT LEVEL
- NOTES:**
- DRAWING IS FOR PLANNING PURPOSES ONLY.
  - CLAY BUND STRUCTURE SUBJECT TO DETAILED DESIGN.
  - TOP OF PEAT LEVEL SUBJECT TO AGREEMENT, LEVEL SHOWN AT 22.9m AOD.
  - BUND TO BE 1 IN 2.5 GRADE MAX.
  - FOUNDATION FOR BUND SUBJECT TO CONFIRMATION AND DETAILED DESIGN.
  - ELEVATIONS SHOWN ARE BETWEEN BASE OF PEAT/TOP OF NATURAL CLAY LEVEL AND 22.9m AOD LEVEL.
  - TOTAL DEPTHS INCLUDE IN SITU PEAT AND PEAT TRANSFERRED FROM DEVELOPMENT AREA.
  - PEAT DATA CALCULATED FROM PEAT SURVEY UNDERTAKEN BY WARDELL ARMSTRONG IN JANUARY 2019.

REVISION	DETAILS	DATE	DRAWN	CHECKED	APPROVED
CLIENT					
EXTRA MSA GROUP					
PROJECT					
MOTORWAY SERVICES, WARRINGTON					
DRAWING TITLE					
INDICATIVE PEAT DEPTHS WITH PEAT HABITAT ZONE					
DRG No.		REV			
SH11739-006		-			
DRG SIZE	SCALE	DATE			
A1	1:500	23.07.19			
DRAWN BY	CHECKED BY	APPROVED BY			
AS	HS	JS			

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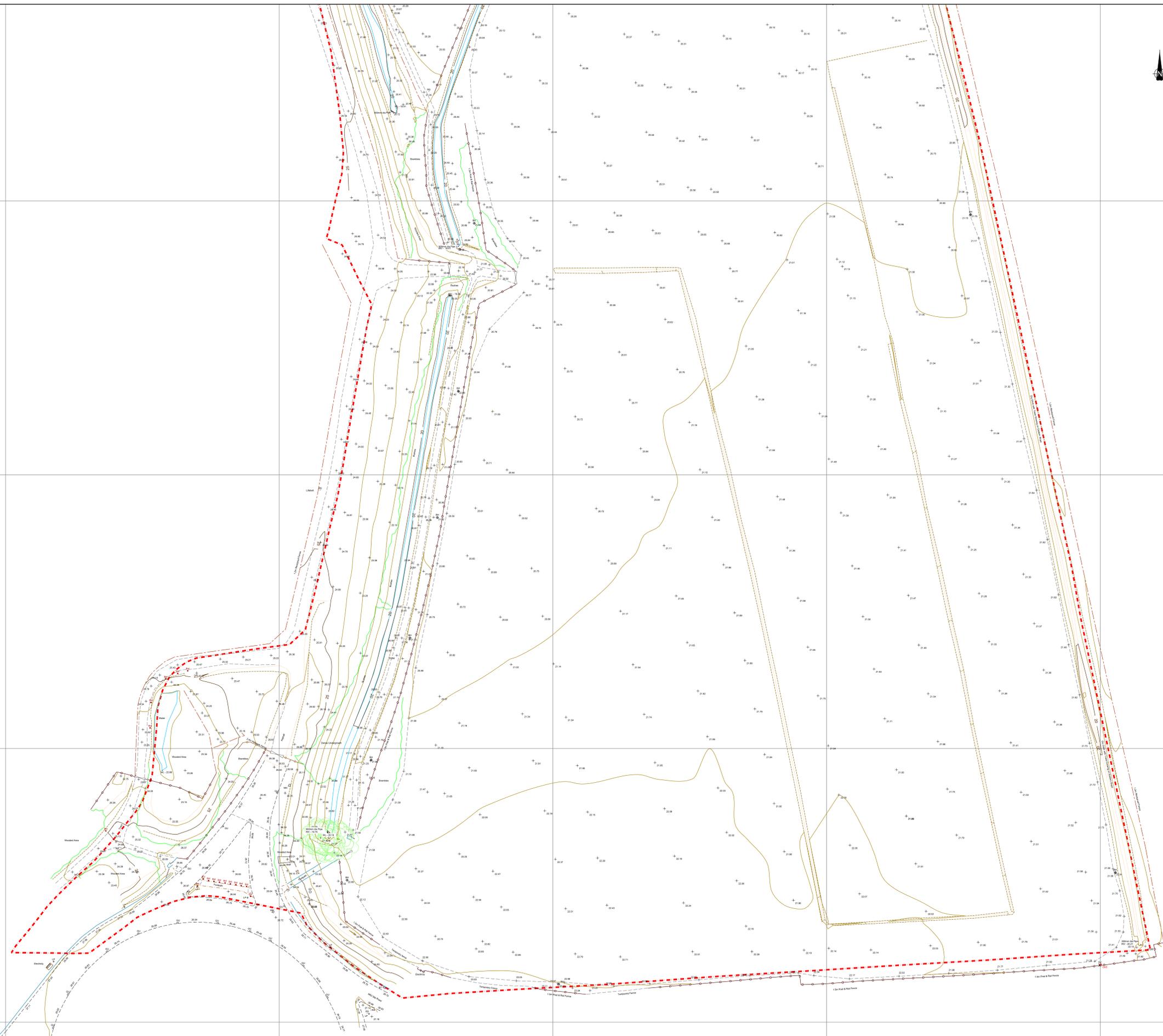
## ES Part I Appendix I I



DO NOT SCALE FROM THIS DRAWING

- REFERENCE**
- SITE BOUNDARY
  - TOP OF SLOPE
  - BOTTOM OF SLOPE
  - EDGE OF TRACK
  - EDGE OF PAVING
  - ROAD CHANNEL
  - STOCKPROOF FENCE
  - POST & RAIL FENCE
  - PALLISADE FENCE
  - BARRIER
  - GATE
  - EDGE OF SCRUB/TREE COVER
  - INDIVIDUAL TREES
  - BOLLARD
  - BOREHOLE
  - ELECTRICITY POST
  - GAS MARKER
  - MANHOLE
  - ROAD GULLEY
  - TELECOM COVER
  - LAMP POST
  - SIGN POST
  - SPOT LEVELS
  - WATER LEVELS

**NOTE**  
 SITE SURVEYED BY GPS (OSM15) & LEVELS SHOWN ARE IN METRES AOD.



REVISION	NO.	DATE	BY	CHKD
CLIENT WARRINGTON MSA J11 M2 MOTORWAY				
PROJECT POTENTIAL WARRINGTON MSA				
DRAWING TITLE TOPOGRAPHICAL SURVEY AS AT 19TH JANUARY 2019 PLAN 2				
DRG NO.	SH11739-019	REV	A	
DRG SIZE	A0	SCALE	1:500	DATE 21/01/19
DRAWN BY	SG	CHECKED BY	TH	APPROVED BY AD

## ES Part I Appendix I2

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ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT



**EXTRA MSA GROUP**

**Warrington Motorway Service Area, J11 M62**

**Framework Construction Environmental Management Plan**

**August 2019**

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**Warrington Motorway Service Area, J11 M62**

**Framework Construction Environmental Management Plan**

**August 2019**

**PREPARED BY:**

Helen Simpson Associate Director



**APPROVED BY:**

Andy Dunhill Director



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## **1 INTRODUCTION**

### **1.1 Background**

1.1.1 This document is the Framework Construction Environmental Management Plan (CEMP) for the proposed new Motorway Service Area (MSA) to the north of Junction 11 of the M62, on the north-eastern edge of Warrington, in Cheshire (the Proposed Development).

1.1.2 Wardell Armstrong has been commissioned by the client, the Extra MSA Group, to prepare this framework CEMP as part of the outline planning application for the Proposed Development.

### **1.2 Aims and objectives**

1.2.1 The framework CEMP sets the framework within which the finalised, more detailed CEMP for the Site would be developed, in advance of works commencing on site and following receipt of planning permission.

1.2.2 The detailed CEMP will ensure that all environmental mitigation measures outlined within the consent are fully incorporated into the construction phase of the proposed development. It will be prepared in accordance with all relevant UK legislation and Regulations, environmental guidelines, approved Codes of Practice and industry standards and the general guidance provided in the CIRIA C741 'Environmental good practice on site guide'. 4th edition, 2015.

1.2.3 The detailed CEMP will include a Schedule of Environmental Legislation relevant to the Proposed Development and the site location / its baseline conditions. This will be maintained up to date for the duration of the construction works on Site.

1.2.4 This framework CEMP has been prepared based on the information available at the time of submission of the outline planning application. Once planning permission is granted, a number of detailed aspects of the Proposed Development will require to be finalised and the information used in that process will be expected to feed into the development of the finalised CEMP.

1.2.5 It is likely that the detailed investigations will form part of the conditions attached to the planning permission, that will require to be discharged prior to development commencing on site. Once these site investigations have been completed and the design of the site has been finalised, a detailed CEMP will be produced.

1.2.6 Following this, it is anticipated that the CEMP will be subject to approval by Warrington Borough Council (WBC) and any relevant statutory consultees.

1.2.7 The CEMP will remain an active document for the full duration of the construction period on Site and will be subject to review and updating where necessary. This will ensure that the construction operations of the Proposed Development meet all existing and emerging good industry practice standards, as well as reflecting any changes to conditions found on Site.

1.2.8 The Applicant and Principal Contractor will be responsible for updating the content of the future CEMP. The Applicant, together with all contractors and subcontractors, will be required to adhere to the CEMP in its final approved form.

### **1.3 Structure of this framework CEMP**

1.3.1 This framework CEMP is structured as follows:

- Section 1 – introduction, aims and objectives, and structure of the CEMP.
- Section 2 – a description of the proposed development, key sensitive receptors and the anticipated programme for construction.
- Section 3 – sets out the roles and responsibilities of the various key personnel involved in the management of construction on the site.
- Section 4 – identifies the preliminary surveys and ground investigations anticipated as part of the development of the detailed design for the site, and their relevance to the environmental management of the construction activities on site.
- Section 5 – describes the general site operations anticipated and includes general working arrangements, health and safety, storage of oils and fuels, arrangements for concrete batching, silt traps and waste management.
- Section 6 – provides an outline of the construction activities that will take place on site and the management of these.
- Section 7 – addresses the anticipated need for environmental site management practices, using information from the Environmental Statement (ES) prepared for the site. Aspects addressed are: ecology; peat handling, storage and re-use on site; hydrology and hydrogeology; cultural heritage and archaeology; construction noise and vibration; and construction air quality.

- Section 8 – provides a summary of considerations to be given to monitoring, review and reporting procedures during construction, together with a suggested complaints procedure.

1.3.2 As part of the development of the detailed CEMP, a sensitive receptors figure will be prepared, showing the locations of the nearby residential properties, ecology sites and other sensitive features present within or close to the boundary of the Site. These sensitive receptors must be considered during the construction phase of the Proposed Development.

1.3.3 In addition, it will be relevant that the detailed CEMP is considered in conjunction with a number of other reports and management plans, either comprising part of the outline planning application or to be produced once consent is granted. These are identified below.



1.3.4 The finalised CEMP will be consistent with the aims and objectives of all the supporting reports and management plans for the project.

## **2 DESCRIPTION OF THE PROPOSED DEVELOPMENT**

### **2.1 The Site**

- 2.1.1 The Site is located to the northeast of the urban area of Warrington, approximately 8.5km (5 miles) from the centre of Warrington. The centre of Manchester is located approximately 17.5km (11 miles) to the east of the Site and the centre of Liverpool, approximately 32 km (20 miles) to the west.
- 2.1.2 The Site is located to the north of the M62 Motorway at Junction 11, and has direct access to Junction 11 via a spur to the motorway junction roundabout (Birchwood Way). The M62 Motorway also provides access to the wider Strategic Road Network, with the M6 Motorway running north/south, approximately 4km (2.5 miles) to the west of the Site, and the M60 Motorway, which runs around Manchester, approximately 10km (6.1 miles) to the east of the Site.
- 2.1.3 Junction 11 of the M62 Motorway also provides access to the A574 Birchwood Way and the Birchwood area of Warrington, which is located to the south of the M62 Motorway corridor and consists of Birchwood Park (a business park) and beyond this, residential areas of Gorse Covert and Oakwood, which are suburbs to Warrington.
- 2.1.4 Immediately to the west of the Site is a former landfill site (Risley Landfill), where landfilling began in 1979, but which has now ceased, and the site restored and planted. There are a series of permissive footpath routes across the restored landfill site. To the east and north is arable farmland. A disused railway line crosses the farmland that is beyond the Site boundary, and arches to the east and north approximately 0.6km (0.4 miles) from the Site boundary.
- 2.1.5 To the east and north of the Application Site are agricultural fields. The settlement of Culcheth lies to the north west of the Site, with its centre approximately 2 km (1.2 miles) from the Site.
- 2.1.6 The planning application redline encompasses the M62 J11 Motorway Roundabout, spur from the roundabout and the main part of the Site. The main part of the Site relates to an area of land of approximately 15.41ha in extent, whilst the total land within the redline and therefore including highway works to M62 J11 Motorway Roundabout is 16.81ha
- 2.1.7 The agricultural land within the Site comprises a large arable field (11.58 ha). A small triangular area of rough grassland is present to the west of the Site (approximately 1.0 ha), this land previously formed part of a larger agricultural field, the majority of which

was incorporated into the Risley Landfill Site. The remnant field area was removed from agricultural use by the operation of the landfill site and is therefore considered to be non-agricultural. All other land within the Site is also non-agricultural comprising areas of restored landfill and hardstanding. The agricultural land is partially located over peat deposits, which are located predominantly to the south western section of the Site.

- 2.1.8 The site lies within the Liverpool, Manchester and West Yorkshire Green Belt (an extensive area covering all land not within settlements within this and the wider area). It lies at a lower level than the roundabout junction with the M62, but at a higher level than the motorway.
- 2.1.9 In the vicinity of the site, the motorway corridor and junction area are lit. There are trees to the eastern, and parts of the southern and south-western boundaries with a post and rail fence forming the southern site boundary. On the western boundary of the Site, the Silver Lane Brook (classed by the Environment Agency (EA) as a main river) extends into part of the site. The Site lies within Flood Risk Zone 1 (low risk of flooding).
- 2.1.10 Various public rights of way are present in the area of the site, including on the western site boundary. Part of the HS2 high speed rail network Safeguarded Land corridor arcs around the north-eastern corner of the Site, beyond the application boundary.
- 2.1.11 The M62 motorway corridor has a 50m buffer, Air Quality Management Area along its length in this area.
- 2.1.12 A high pressure National Grid Transmission gas pipeline runs from north to south through the eastern part of the Site, there is an 80ft (24.4m) easement above the pipeline in which no development can occur, and to which access by National Grid (for maintenance and survey) must be maintained. Consultation regarding the pipeline has also been undertaken with the Health and Safety Executive (HSE) to discuss the proposals and the extent of development that is acceptable under PADHI (planning advice for developments near hazardous installations). The HSE identified a 96 m buffer (HSE Inner Consultation Zone) from the location of the gas pipeline in which the placement of buildings and sensitive end-uses (e.g. the Facilities Building and overnight HGV parking areas) is prohibited. The Site has been designed in accordance with these restrictions.

2.1.13 The closest statutory ecological Site is Holcroft Moss (Special Area of Conservation (SAC) and Special Scientific Interest (SSSI)) which is c.890m from the Proposed Development to the west and is separated from it by the M62. Astley and Bedford Mosses (SAC and SSSI), and Risley Moss (SAC and SSSI) are (together with Holcroft Moss) components of the internationally designated Manchester Mosses SAC suite, which all lie more distant from the Proposed Development. Manchester Mosses SAC is designated for the presence of Annex 1 Habitats namely '*Degraded raised bogs still capable of natural regeneration*'. Non-statutory conservation Sites located within 2km of the Site are Pestfurlong Moss Local Wildlife Site (LWS) Gorse Covert Mounds LWS, Rixton Moss LWS and Silver Lane Risley LWS.

## 2.2 The Proposed Development

2.2.1 The outline planning application is for the development a Motorway Service Area (MSA) including a facilities building, a hotel (up to 100 beds), service yard, Fuel Filling Station, Electric Charging Station, pumping station(s) and substation(s), parking facilities for each category of vehicle as well as access and internal circulation roads. The Site will include structured and natural landscaping with outdoor amenity space / picnic area and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas and ecological mitigation.

2.2.2 There will also be retaining structures, associated infrastructure / services and earthworks, including those associated with the diversion of Silver Lane Brook and retention of peat within the Peat Habitat Zone. The existing public right of way to the west of the Site is also to be diverted.

2.2.3 The outline planning application has determined a range of parameters to be applied to the various aspects of the Proposed Development, relating to maximum building heights and tolerances associated with changes to existing ground levels. These will be subject to detailed design at the reserved matters stage.

## 2.3 Key sensitive receptors

2.3.1 The key sensitive receptors present within and in the areas closest to the Site are identified as:

- Manchester Mosses SAC and Pestfurlong Moss LWS;
- breeding and wintering bird assemblages present on or in the vicinity of the site;
- bats using the site for foraging and commuting;

- the Silver Lane Brook (an EA main river);
- the public footpath on the western edge of the site;
- the high pressure gas pipeline in the eastern part of the site;
- the former area of landfill;
- areas of peat deposits within the Site;
- residential properties at Franks Farm, 500m to the north of the site and off Inglewood Close, some 300m to the south of the site;
- the grade II\* listed Holcroft Hall, 1.5km to the north of the site; and
- the former Pestfurlong Moss farmstead (archaeological remains).

2.3.2 The detailed CEMP will have regard for these and any other key sensitive receptors that may be identified in the period leading up to commencement of construction.

## **2.4 Development programme**

2.4.1 It is anticipated that all planning permissions (outline and reserved matters) and subsequent discharge of associated planning conditions could be achieved to allow construction operations to commence on Site in Quarter 4 2021. Based on similar MSA developments completed by Extra MSA Group construction is anticipated to take approximately 12 months, opening to the public in Q4 2022.

2.4.2 The general sequence of construction activities on the Site is anticipated to be as follows (with many tasks undertaken concurrently, to minimise the duration of the construction programme):

- complete all pre-construction surveys including further ground investigations and any other assessments required by planning conditions;
- finalise and agree the detailed CEMP with the local planning authority and all relevant statutory consultees;
- commence topsoil strip;
- establish the construction site access (including any improvements required to the local road network);
- securely enclose the construction works area and establish the temporary construction compound on site;
- import to the site all necessary aggregate and other construction materials;

- installation of the retaining structure required for the protection of the gas pipeline;
- installation of the retaining structure of the Peat Habitat Zone, commencement of direct transfer of Peat from the development area and creation of peatland type habitats;
- undertake the diversion of the tributary of the Silver Lane Brook (an EA main river);
- construction of the main access into the Site, including embankments to the access road, topsoil stripping and associated earthworks to establish the development platforms required for the buildings and parking areas, fuel filling station and so on;
- install the buildings, internal roads and car parking areas, fuel filling station, lighting, infrastructure and utilities and other features of the proposed MSA including hard and soft landscaping; and
- once the development is fully installed, reinstate all disturbed areas, remove the temporary construction compounds and clear the site so that it is fit for operation as a Motorway Service Area.

### **3 PROJECT IMPLEMENTATION FRAMEWORK**

#### **3.1 Introduction**

3.1.1 This section of the CEMP discusses the implementation framework for the Project and provides the organisation structure for the construction phase of the Project along with roles and responsibilities. Procedures relating to liaison and communication with other contractors are also provided in this section.

#### **3.2 Implementation Framework**

3.2.1 The Proposed Development will be owned and operated by EXTRA MSA GROUP. The Principal Contractor has yet to be appointed, but will also likely undertake the role of Principle Designer under the CDM Regulations, 2015.

#### **3.3 Project and Site Level Organisation Structure**

3.3.1 Establishing roles and responsibilities is important to ensure the successful construction of the Proposed Development, including the implementation of the CEMP. The organisational structure of the project environmental team will be presented in the detailed CEMP (organogram or similar). It is noted that, for instance

during periods of annual leave, roles and responsibilities will pass to a nominated representative, to be appointed at that time.

### **3.4 Roles and responsibilities**

3.4.1 There are a number of roles that will be involved in the construction of the Proposed Development, all of which will be responsible for ensuring the CEMP is complied with, where this is applicable to their relevant area of the construction process. These include:

- Project Manager;
- Principal Contractor's Site Manager;
- Ecological Clerk of Works (ECoW);
- Construction Design and Management co-ordinator; and
- other roles associated with specialist technical elements of the proposed development.

3.4.2 The responsibilities of each of the above roles is addressed in more detail in the following paragraphs. It is noted that in the detailed CEMP the titles assigned to each of these roles may change according to the structure of the project team; however, the responsibilities and clear designation of these responsibilities to an assigned/named person (or nominated representative in times of absence) will remain.

#### ***Project Manager***

3.4.3 The Applicant's appointed Project Manager will be responsible for ensuring that all measures contained within the CEMP are appropriately implemented and that all staff and contractors adhere to the practices set out within it. In particular, the Project Manager will be responsible for:

- Ensuring the requirements of the CEMP are fully implemented across all relevant areas of the construction process.
- Ensuring contractors are aware of the key environmental constraints within and adjacent to the Site. For example, the close proximity of the landfill site to the west, the diversion of Silver Lane Brook; the movement and management of peat resources; and presence of important natural heritage sites within the wider area.
- Ensuring compliance with the CDM Regulations 2015.
- Appointing a qualified and competent Principal Contractor to build the works.

- Establishing roles and responsibilities in advance of the construction phase, including the requirements for any environmental specialist roles which may be required (i.e. hydrologist, archaeologist, geotechnical engineer and environmental health specialist).
- Ensuring that qualified specialists are in place within the Principal Contractor's team to undertake environmental monitoring and reviewing of construction methods and required mitigation measures.
- Working alongside the Principal Contractor to review the CEMP as required throughout the construction period to take account of emerging good industry practice and on-site conditions.

***Principal Contractor's Site Manager***

3.4.4 The construction works for the Proposed Development would fall under the CDM Regulations 2015. As such, the Principal Contractor will provide a Health & Safety Construction Plan in accordance with the CDM Regulations. This plan will include, and not be limited to a construction programme, emergency procedures, site layouts and fire plans, method statements and details of the proposed site induction programme.

3.4.5 The Principal Contractor will be responsible for the civil works of the Proposed Development, i.e. internal and any external roads, building foundations, hardstanding areas, watercourse diversion, protection of the gas pipeline and so on. The Principal Contractor will formally appoint a Site Manager prior to the construction works commencing on Site. The Site Manager will be responsible for the day-to-day management of the Site, including ensuring environmental responsibilities are discharged and will report to the Project Manager. The duties of the Site Manager will include:

- Implement pre-construction surveys.
- Ensure detailed Construction Method Statements are prepared for individual areas of work.
- Carry out safety, health and environmental risk assessments for the construction works prior to commencement of construction activities.
- Prepare a programme of works, including those of sub-contractors for review and comment by the appropriate authorities and the Project Manager. This will take account of sensitive work activities, potential weather delay periods and ecological, habitat and species protection requirements.

- Work with the Ecological Clerk of Works to inspect all operations to ensure that all potential ecological, hydrological, geotechnical and archaeological constraints have been identified, and/or mitigated for prior to the onset of construction in that area.
- Ensure construction of the proposed scheme will proceed in accordance with the approved Plan, unless otherwise agreed in writing.
- The Principal Contractor will also be responsible for liaising with and obtaining all relevant consents, licenses, authorisation and permits required for the construction at the site.

***Ecological Clerk of Works/Project Ecologist***

- 3.4.6 Prior to construction commencing, an appropriately qualified Ecological Clerk of Works (ECoW) will be appointed. The ECoW will be responsible for ensuring that the ecological mitigation measures are implemented, and that the construction works do not result in adverse effects on the environment. The Project ECoW will be suitably qualified and will report to the Site Manager. The ECoW will oversee the works and will be supported by appropriately experienced and licensed specialists where required, and will call upon assistants during busy periods. For instance, the placement of peat into the Peat Habitat Zone will be monitored by a soil scientist.
- 3.4.7 Prior to any intrusive ground investigations and all subsequent construction stages, the ECoW will provide ecological training and raise the awareness of the construction staff about site specific ecological issues through induction procedures. The construction work programme will be informed by bird breeding season and will be designed to avoid periods of high sensitivity for protected species where practical. The ECoW will also ensure that opportunities to avoid sensitive habitats during construction are identified and taken into consideration.
- 3.4.8 The ECoW will be responsible for the implementation of the Habitat Management Plan (HMP) during the construction period and restoration period, and the ecological requirements of the CEMP.
- 3.4.9 The ECoW will monitor compliance with the CEMP and will report any breaches to the Project Manager who will have the authority to recommend stopping works and undertake remedial actions, if necessary, to prevent or limit environmental damage. Duties of the ECoW will include:
- Ensuring that the proposed mitigation is implemented.

- Monitoring of all construction, pollution prevention and mitigation activities.
- Maintenance of the Environmental Register which details issues identified by the ECoW, noting the advice provided and the steps taken on site to resolve these issues.
- Integration of construction activities with the Soils and Peat Management Plan (SPMP), in particular in relation to the placement of peat.
- Micro-siting works to minimise effects on peat within the Site.
- Checking surveys at an appropriate time of year prior to the commencement of physical works on Site, to ensure that any legally protected species and their resting places are protected from construction damage and/or disturbance.
- Pre-construction site surveys to identify any protected bird species breeding on site, if construction activities start on site during the bird breeding season (March until August), followed by the development and agreement of suitable measures with Natural England to avoid harm to individuals and their young or disturbance at nest sites. However, the currently proposed phasing would allow for the removal of all suitable breeding bird habitat from within development areas at the start of the construction period (Q4 2021) which is outside of breeding bird season.

#### ***CDM Co-ordinator***

3.4.10 The construction works will fall under the Construction Design and Management (CDM) Regulations 2015. A CDM Co-ordinator will be appointed who will produce a pre-construction safety information pack in accordance with CDM regulations. This plan will detail the development construction programme, emergency procedures, site layout, fire plans, method statements and details of the proposed induction training programme.

#### ***Other Roles***

3.4.11 The Applicant may retain a Site Environmental Representative who will liaise with the Project Manager.

3.4.12 Prior to the commencement of construction, the Principal Contractor will produce specific Contractors' Method Statements (CMS) for the Works. The CMS will be in addition to the CEMP and will be reviewed, amended and agreed by the Project Manager and the ECoW (and/or other suitable technical specialist depending on the nature of the works covered by the CMS) to ensure that all practices comply with this CEMP and good environmental practice.

### 3.5 Training and Awareness

3.5.1 The Principal Contractor will develop an environmental communication and training plan prior to physical works. It will include requirements for all employees, sub-contractors, suppliers and other visitors to be trained at induction on the Environmental Plans and will promote environmental awareness throughout the project.

3.5.2 As a minimum, the following topics included in the induction are:

- Waste management.
- Ecology (including species and/or habitat protection).
- De-watering of excavations.
- Working in or near watercourses.
- Surface water and groundwater pollution and control.
- Sediment and dust management.
- Noise and dust management.
- Archaeology.
- Soil and Peat management including ground stability as well as stripping and storage.
- Environmental incident and emergency response procedures (see page 64)
- Reinstatement techniques.

3.5.3 An 'environmental risk map', showing all sensitive areas, exclusion zones, wash out areas, watercourses, refuelling locations and waste management facilities will be produced prior to construction and displayed on the site notice boards. The map will remain live and will be updated throughout the project and re-issued as required.

3.5.4 Appropriate personnel (such as site foremen and machine operators) are to receive environmental training in order to ensure project work is carried out with due regard to environmental protection and to minimise on environmental impact of the project. Training and awareness raising will include:

- Briefing staff on the Plans through presentations.
- Site Induction environmental element to include ecology, surface water, and groundwater and soil management.
- Toolbox talks on site specific issues (further details provided below).

- Method Statements are to include environmental elements including (as appropriate) surface water management (including appropriate sediment control methods), task specific risk assessments, acceptable frost precaution, bio-security and reinstatement methods.
- Pollution prevention training to include practical element for site-based staff (including the practical use of spill kits, and training on the consideration and selection of appropriate sediment mitigation installation).
- Emergency training to include fire prevention techniques particularly for land cable operators.

### **3.6 Tool Box Training Topics and Training**

- 3.6.1 In order to provide on-going reinforcement and awareness training, the topics listed above, along with any other environmental issues which arise on site, will be discussed at regular Tool Box Talks. Tool Box Talks will be site specific where required. A schedule of Tool Box Talks will be maintained by the Site Manager.
- 3.6.2 Toolbox talks and training will be delivered by the Principle Contractor, or on their behalf by a subcontractor, by specialist personnel on site as required, and in liaison with the project team.
- 3.6.3 The proposed Tool Box Talk schedule is to be considered as a live document and will be coordinated with the programme of works. Additional Tool Box Talks will be added as required based on circumstances such as unforeseen risks, repeated observation of bad practices, perceived lack of awareness, pollution event, etc.
- 3.6.4 Where these circumstances do not arise, Tool Box Talks will be delivered based on time elapsed since the topic was last covered. Specialist or targeted Tool Box Talks may also be delivered to specific personnel depending upon works being undertaken and personnel responsibilities.
- 3.6.5 A record of all Tool Box Talks and attendees will be maintained and recorded.

## **4 COMMUNICATIONS**

### **4.1 Communications-General**

4.1.1 Environmental issues will be communicated to all relevant parties by means including:

- Environmental Policy Statement (to be displayed on site notice board).
- Project Environmental Plan (including site specific EMP's) and Site Waste and Material Management Plan.
- Key environmental constraints maps, including exclusion zones to be displayed on site notice boards (Whilst maintaining confidentiality of sensitive species and/or landowner requirements).
- RAMS (risk assessments and method statements).
- Site Coordination Meetings.
- Management Review Meetings.
- Environmental briefings and Tool Box Talks (including the presentation of a weekly environmental log that includes a look ahead to the activities required in the following week and the specific mitigation required).
- Site induction and training sessions.
- Audits
- Consultation with Local Authorities and other regulatory bodies.
- Advance notification to residents advising of project works.
- Project Enquiry/Complaints line to be set up and managed by the Applicant's Project manager or nominated representative.

### **4.2 Communication between Contractors**

4.2.1 Should there be more than one contractor on site; the weekly site meetings convened by the Principle Contractor's Site Manager or his nominated representative will serve as the focal point for formal communication between all parties working on the site, however daily communication may be required and will be requested as necessary. All meetings will be minuted, will include attendance records and will be distributed to the relevant personnel as required. Further details on the meetings are provided in the following paragraphs.

4.2.2 The weekly site meetings will allow contractors to communicate, discuss and consult any change in conditions, working practices, health, safety and environmental

arrangements, procedures and overall environmental performance. The meetings will include any near misses or hazards that have been identified and any residual risks that have been identified in conjunction with the implemented environmental protection measures.

- 4.2.3 Each contractor will nominate a person(s) to attend these meetings with the appropriate authority to act on those contractors' behalf.
- 4.2.4 Weekly Site co-ordination meetings will be held in all work areas where more than one construction team is working. The meetings will allow appointed team members to debate their proposed work programme for the following week, with particular attention to any plant movements or deliveries. Notes of this meeting will be circulated to all attendees within 24 hours of the meeting's completion to ensure the maximum protection to the local environment by allowing appropriate protection measures to be put in place.
- 4.2.5 These will be augmented by additional meetings at intervals dictated by the requirements of the contract or at key stages of the works. Minutes of all such meetings will be produced and held on file for record purposes, with copies supplied to each (sub)contractor. The Project Manager, will ensure that lessons learnt are communicated across the project to ensure best practice.
- 4.2.6 Contractors are required to maintain records of all staff that have undergone training and have been given Tool Box Talks as part of their site induction.

### **4.3 External Communication**

- 4.3.1 The Principle Contractor will support Extra MSA Group at all public relations and community liaison activities, including local community meetings.
- 4.3.2 A notice board will be erected at the site compound to provide basic project details and key contact numbers to members of the public.

## **5 INSPECTIONS, DOCUMENT CONTROL AND REPORTING**

### **5.1 Audits and Inspections**

5.1.1 In addition to audits carried out by Extra MSA Group, the Principle Contractor will implement its own programme of audit and inspections to check that site operations are in compliance with this CEMP, current procedures and legislation, and are using Best Practice. Inspections will provide a measure of performance towards achieving the project objectives & targets (which are to be determined within the detailed CEMP). Daily site inspections will be carried out by the Site Manager and by the ECoW when on site.

5.1.2 The Principle Contractor should undertake a detailed site inspection every 30 days which reviews the project against the CEMP. The findings will be communicated to key members of the Principle Contractor's project team and Extra MSA Group.

### **5.2 Monthly Reporting**

5.2.1 The monthly report shall include the following information:

- Number of Environmental Incidents and near misses.
- Number of environmental Tool Box Talks.

### **5.3 Records**

5.3.1 The following records will be maintained to demonstrate conformance to this Plan:

- Induction and training records.
- Site inspection reports.
- Incident Reports.
- Supplier and contractor records.
- Drainage consents.
- Licences.
- Superseded copies of Environmental Plans.
- Document Control.

5.3.2 A Document Management System will be used to process and manage documents associated with the project. The Document Management System will process documents throughout their life cycle from inception through creation, review, storage and distribution, archival or destruction.

## 5.4 Approval and Review of Plan

- 5.4.1 The plan shall be subject to continuous assessment and development throughout the course of the project as necessary to reflect recommendations arising from incidents, changes to legislation, changes to the scope or nature of work, or other significant developments having impact on environmental issues. As a minimum the plan shall be formally reviewed every six months by the Principle Contractor project team and/or in consultation with their appointed Environmental Consultants and within one week following a high potential environmental incident.
- 5.4.2 This CEMP and Appendices shall be held on site in a filing system and maintained by the Site Manager.
- 5.4.3 The outline Plan has been prepared by Extra MSA Group, but the detailed CEMP will be reviewed/amended and approved in the first instance by the principle contractor then be submitted to Extra MSA Group for final review and approval.

## 6 PRE-CONSTRUCTION SURVEYS AND GROUND INVESTIGATION

### 6.1 Introduction

- 6.1.1 This section of the framework CEMP considers the **surveys and ground investigations to be carried out in advance of construction activities starting on Site** and after development consent has been obtained. These surveys will contribute to the detailed design of the Proposed Development, and to the identification of any additional environmental controls that will require to be considered during construction (and added to the detailed CEMP).
- 6.1.2 Information set out in section 7 below also is also relevant to the discussion in the following sections.

### 6.2 Ecology surveys

- 6.2.1 An Extended Phase 1 Habitat Survey (EP1HS) was undertaken on 31<sup>st</sup> October 2018 to recording the broad habitat types present on Site. The survey recorded no habitats of intrinsic ecological value. The survey and desk based ecological records data were then used to undertake a Preliminary Ecological Appraisal for the site which identified the following species receptors as requiring further detailed (species specific) survey.
- Protected species (Great Crested Newt, Bats, Badger, Water Vole, Reptiles);
  - Barn Owl; and
  - Breeding and Wintering birds.

6.2.2 These detailed surveys identified a requirement for additional pre-construction surveys to be completed, as described below.

***Breeding birds***

6.2.3 During the breeding bird survey (BBS) undertaken in March to June 2019, a total of forty-two species were recorded on site across all survey visits. Only Meadow pipit, willow warbler, reed bunting, skylark, song thrush, lapwing and dunnock were considered to be breeding on Site. However, the preferred nesting habitats of these species represent the majority of habitats on site – reedbed, scrub, tree, hedgerow and ground nesting.

6.2.4 The currently proposed phasing of the construction period (Section 2.4) would see construction commence in Q4 2021 (October to December) and hence allow for initial site clearance works (removal of all suitable breeding bird habitat within the development area) to be undertaken outside of the usual bird breeding season (normally taken to be March – July inclusive) in line with good practice guidance. If such timescales cannot be accommodated (i.e. if site clearance cannot be completed prior to breeding bird season), a check for the presence of active nests, and nesting birds would be undertaken by a suitably qualified ecologist prior to the commencement of works. Any active nests would be identified and protected (for example suitable disturbance-free buffer zones created) subject to the relevant legal provisions until the nesting attempt is complete.

***Great Crested Newt (GCN)***

6.2.5 Eleven waterbodies located either within the Site or within a 500m radius of the Site were subject to eDNA testing (to DEFRA guidelines) on the 15<sup>th</sup> April 2019 and 3<sup>rd</sup> May 2019 (within the optimum period for waterbody surveys to determine GCN presence / absence). All results were negative for the presence of Great Crested Newt (GCN) DNA showing GCN were absent from all waterbodies at the time of survey. Therefore, no further surveys were undertaken in 2019.

6.2.6 However, a single GCN was recorded terrestrially during a reptile survey on 21<sup>st</sup> May 2019. This incidental record of a lone individual does not indicate the presence of a breeding population, which if present would have been recorded by the presence of eDNA in the waterbodies. As there are no ponds within the site itself and very limited potential terrestrial habitat for this species, no adverse effects to this species are anticipated. However, as a precautionary measure, further eDNA sampling of the

waterbodies will be undertaken prior to the onset of construction and licensing considerations provided in the event that a positive survey result is received.

- 6.2.7 The eDNA sampling will be undertaken in the period 15 April and 30 June 2021 following the same field sampling protocols as used in 2019 and outline below:
- 6.2.8 The surveyor will wear gloves (fresh pair at each waterbody) to prevent transfer of DNA between locations. Twenty number 30 ml sub-samples will be taken from each waterbody. Sample locations will be evenly spaced around the waterbody margin and where possible, and targeted towards areas of habitat most suitable for GCN (e.g. where there is vegetation suitable for egg laying).
- 6.2.9 All 20 subsamples will be placed into a sterile Whirl-Pak plastic bag. The bag will be closed securely and shaken for 10 seconds.
- 6.2.10 With a fresh pair of gloves on the surveyor will extract 15ml of water from the Whirl-Pak bag using a sterile syringe and place it into a sterile tube containing 35ml of ethanol to preserve the eDNA samples. The tubes will be closed and shaken for 10 seconds to mix the samples and the preservatives. This will be repeated six times to obtain six subsamples per waterbody. All samples will be labelled with the relevant eDNA testing kit reference and unique waterbody identifier reference / number. The remaining water within the Whirl-Pak bag will be tipped back into the waterbody.
- 6.2.11 Details of the 2021 surveys will be provided in the detailed CEMP. The detailed CEMP will also describe licensing requirements and any additional mitigation requirements in the event that a positive survey result is obtained.

### ***Water vole***

- 6.2.12 Pre-construction surveys of the proposed culverted section of Silver Lane Brook are required in order to ensure the baseline assessment for water vole remain accurate. Any modifications to the baseline assessments will be described and precautionary measures, such as translocation or habitat manipulation and hence avoiding impacts (including appropriate buffers) will be included within the detailed CEMP and subject to the necessary prior consents.
- 6.2.13 Based on the currently proposed construction programme the two pre-construction survey visits will be undertaken in the period mid-April to late September 2021 to cover the period when water vole are most active.
- 6.2.14 The surveys will be undertaken in accordance with the Water Vole Conservation

Handbook (Strachan & Moorhouse, 2006) with modifications to suit the conditions of the site, if required. The brook habitats will be systematically surveyed for evidence of water vole in the form of:

- faeces: water vole usually deposit faeces (latrine) in concentrations along the waters bank of which (latrine sites) are typically found at home-range boundaries where females mark territories during the breeding season;
- burrows: comprising either single isolated holes or a series of holes slightly above the water's edge or under water surface known as bolt holes;
- tracks: form as water vole leave burrows either to the water or bank tops leading to lawns;
- feeding stations: form and consist of cut vegetation usually on a 45°-degree angle and often stems are stripped leaving behind white flesh piles;
- footprints; prints are usually about 15-25mm from toe to heel, often evident in soft muddy substrate along water's edge or banking and outside burrows; and
- visual observation of water vole during the survey.

6.2.15 Latrines are indicators of terrestrial behaviour, which in turn generally correlates with breeding activity. It is therefore considered that watercourses/bodies which display latrines, burrows and feeding signs form breeding sites for water voles.

6.2.16 Should water voles be identified following survey, detailed methodologies for the most site-appropriate mitigation (displacement or trapping and translocation) and Natural England protected species licencing requirements would be set out in the detailed CEMP.

#### ***Pre-construction ecological checking survey***

6.2.17 In addition to the species specific pre-construction surveys outlined above, a pre-construction ecological checking survey will be conducted. This site walkover will be undertaken by a suitably qualified ecologist to identify any changes to the ecological baseline, for example evidence of species not recorded in 2018 / 2019 (for example badger) now using the Site; or the introduction of new, or further spread of currently identified, invasive species. Such changes along with appropriate mitigation measures, where required, would be described in the detailed CEMP.

### **6.3 Ground investigations**

6.3.1 A preliminary site investigation (SI) was completed in December 2018 to identify,

describe, and broadly delineate the peat deposits present at the site. In addition, the SI aimed to provide preliminary geotechnical information to inform design of the Proposed Development. Further site investigation (SI) works will be undertaken to inform the detailed design.

- 6.3.2 One of the aims of this SI will be to establish the depth of the Till (clay) that underlies the Site and in particular in the area underlying the proposed refuelling station and underground fuel storage tanks. The SI would also aim to confirm the elevation and degree of confinement of the Helsby Sandstone Formation aquifer. The results of the SI would be used to determine if any bespoke mitigation, above general pollution prevention measures and best practise design, is required at the detailed design phase to protect the Helsby Sandstone Formation aquifer.
- 6.3.3 The findings of the SI will also be important in determining issues such as how the building foundations are to be designed and engineered.
- 6.3.4 Ground gas monitoring has not yet been completed for the Site, this will be completed as part of pre-construction survey works and a gas assessment will be completed to determine the risk to future occupiers.
- 6.3.5 The design of the SI and ground gas monitoring will be agreed with WBC and will be set out in the detailed CEMP.

#### **6.4 Archaeological investigations**

- 6.4.1 There may be a requirement for pre-commencement archaeological site investigations in order to satisfy any requirements of conditions imposed as part of the planning consent for the Site. As also noted in section 7.6 below, this could involve sectioning of a former estate boundary between the Pestfurlong and Holcroft estates; a programme of boreholes/from the peat deposits present within the Site; and an archaeological watching brief or strip, map and record (whichever is appropriate and agreed) of Pestfurlong Moss farmstead, potentially after a trial trench evaluation.
- 6.4.2 The sectioning of the former estate boundary would require a trench across the feature to evaluate and record the profile, depth and any buried deposits, if present.
- 6.4.3 The palaeoenvironmental sampling of the peat would involve placement of windowless boreholes as appropriate.
- 6.4.4 In the area of the former Pestfurlong Moss farmstead, it is possible that a trial trench evaluation would be required in the first instance in order to evaluate the presence/

absence of remains and if present, establish and characterise the remains. A trial trench evaluation would involve the stripping of soil under archaeological control at pre-commencement, until the natural geology or the first archaeological horizon is exposed. This would inform the necessity, scope and timing of further work (as agreed) which may include strip, map and record of the area undertaken pre-commencement, or an archaeological watching brief, undertaken during topsoil stripping.

- 6.4.5 A strip, map and record excavation is a programme of controlled, intrusive fieldwork under control of an archaeologist and is undertaken pre-commencement. It examines, records and interprets any archaeological deposits, features and structures found to be present and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area.
- 6.4.6 An archaeological watching brief is similar to a trial trench evaluation, although undertaken under supervision of an archaeologist during ground works.
- 6.4.7 In each case, the objective of the investigation would be to determine/ absence, character, survival and any specific aims as set out in a Written Scheme of Investigation (WSI). The scope and extent of such fieldwork would need to be agreed with the Local Planning Authority Archaeologist and would likely be secured through planning condition. Therefore, the specific agreed details of the required pre-commencement archaeological works will be set out in the detailed CEMP.

## **7 GENERAL SITE OPERATIONS**

### **7.1 Introduction**

- 7.1.1 The following sections outline the measures that will be implemented during the site construction operations in order to ensure the protection of the ecology and environment of the site area. This includes hours of working, construction compounds, movement of equipment and control of noise.

### **7.2 General working arrangements**

- 7.2.1 Construction work will take place between 0700 and 1800 hrs Mondays to Fridays and 0700 and 1500 hours on Saturdays, with no working on Sundays or Bank Holidays unless agreed in advance with the local planning authority.
- 7.2.2 The ecological mitigation set out in Section 7.2 states that there will be no night-time

working in order to limit the disturbance of breeding and wintering bird populations and extant bat populations. However, should there be periods where night-time working is necessary, this will be agreed in advance with WBC.

- 7.2.3 Any other requirements for general site working, including those imposed by any planning conditions, or in relation to site security, will be identified prior to works commencing on site and included in the detailed CEMP where relevant.

### **7.3 Health and Safety**

- 7.3.1 This section identifies how safety issues will be managed during the construction of the proposed MSA. It has regard for the safety policies already established for the Extra MSA Group.

- 7.3.2 All risks associated with the construction of the Proposed Development can be avoided, mitigated against, or safely managed through effective design, and the use of appropriate management systems and codes of conduct.

- 7.3.3 A wide range of legislation and guidance is available relating to the consideration of risks to health and safety, including at construction sites. The HSE (Health and Safety Executive) has published a range of information addressing this aspect.<sup>1,2</sup>

#### ***Implementation of Health and Safety legislation and guidance***

- 7.3.4 Should the proposed development be consented, the Applicant would ensure that the appropriate resources are put in place so that health and safety legislation can be implemented. Guidance would be made available on site demonstrating this. The Extra MSA Group is committed to maintaining an excellent health and safety record and the safety of all site workers and the general public during the construction phase would be of paramount importance to achieving this. All guidance would be followed rigorously, and health and safety records maintained on site until all works are completed and the site is handed over to the operator.

- 7.3.5 A Quality, Health, Safety and Environmental (QHSE) Management policy would be put in place for the Proposed Development in advance of construction commencing. This would be aligned with the relevant standards such as OHSAS 18001:2007 and ISO 14001:2015. This would set out how the site is to be controlled and operated to protect the health and safety of the public and the workforce and to minimise impacts

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<sup>1</sup> <http://www.hse.gov.uk/construction/healthrisks/index.htm>

<sup>2</sup> <http://www.hse.gov.uk/construction/resources/guidance.htm>

on the environment in and around the site. All work would be planned in advance and risk assessments carried out. The policy will cover training, the investigation of incidents and near-incidents, as well as active auditing and inspection to ensure that work is being carried out in accordance with the QHSE policy.

- 7.3.6 All subcontractors would be required to sign up to the QHSE policy, to ensure a consistency of standards applied across the whole of the project.
- 7.3.7 The development of this framework CEMP is focussed on environmental issues and would form an integral part of the overall QHSE policy and management system for the site.

***Workforce and equipment safety during the construction phase***

- 7.3.8 Daily “toolbox talks” would be carried out by the site manager or their designated (e.g. foreman) representative as part of the implementation of the QHSE policy and the site-specific CEMP and to alert the workforce to any hazards and changes to the site.
- 7.3.9 Personal Protective Equipment (PPE) would be worn at all times on site to further reduce risks and a comprehensive risk assessment would be undertaken by the site manager prior to construction commencing on site. The workforce would be checked for competence and trained on the site-specific procedures before starting work, and continually trained throughout the project. The project would fully comply with the Construction (Design and Management) Regulations 2015.
- 7.3.10 Welfare facilities such as toilets and a site office would be provided during the construction phase.
- 7.3.11 The proposed development may require some workers to occasionally have to work at a height. In all instances it will be a mandatory pre-requisite for the person involved in working at height to have been properly trained to work safely in these conditions. A comprehensive risk assessment will be carried out prior to any activity taking place at height. In all cases, suitable PPE will be worn, including harnesses and ropes where necessary, and any ropes and climbing equipment will be maintained in good working order and regularly checked.
- 7.3.12 In addition, a detailed Construction Transport Plan including a site speed limit of 15 mph will be produced in order to reduce risks associated with internal site road traffic.

### ***Public safety***

- 7.3.13 A public footpath follows the western boundary of the site, forming part of a circular route (the southern edge of which is a bridle path linking to an 'other route with public access' connecting to the A574 further to the west, and via an underpass beneath the M62, to Leacroft Road on the south side of the motorway) enclosing the disused landfill site and connecting with the roundabout at junction 11 of the M62. This circular route also connects with other footpaths further to the north, linking with New Hall industrial estate to the north-west and Franks Farm and the B5212 to the north.
- 7.3.14 Although the site would be secured to prevent public access, a duty of care would lie with the developer and appropriate action must be undertaken to protect anyone who does visit the site. This would include ensuring that all visitors to the site complete the site induction process and are made aware of any hazards present within the site area.

### ***Fencing & Hoarding***

- 7.3.15 Temporary means of enclosure and demarcation of the site operational boundaries will be erected prior to the commencement of construction activities. Barriers, platforms and hoardings will be erected, adapted, and maintained throughout the construction phase, to segregate the public from construction activity. Site hoarding will conform to current standards and erected to agreed heights and with the use of materials such as timber frames and be plywood faced with sufficient surface densities. All site hoarding will be painted on both faces in a plain uniform manner in order not to distract drivers on the adjacent M62.
- 7.3.16 A 24-hour contact number which the public may use will be displayed prominently on the site notice board and at suitable locations on the site hoardings.

### ***Transport***

- 7.3.17 A full Construction Transport Plan will be implemented both on and off site, to minimise risks associated with road traffic. Haulage routes to and from the site will be agreed with Highways England and the Local Authority, and all necessary consents and licences will be obtained prior to any work commencing.
- 7.3.18 A clear signage strategy will be implemented to ensure construction traffic utilises

designated routes, and HGV movements will be restricted as far as possible to minimise impacts to sensitive receptors. It is expected that most materials will be imported and exported via the M62, and all Contractor vehicle movement onto the site will do so by agreed routes.

### ***Lighting***

7.3.19 Works will only take place during standard hours as referred to in section 5.2, or if an emergency dictates that work needs to be carried out outside of these hours. Potentially, work will need to take place during hours of darkness or when natural light is insufficient. External floodlighting will be used during the construction phase in order that work can safely take place. Currently, the exact location of external floodlighting is not known and, following the appointment of the Principal Contractor, this information will be available in the detailed CEMP and/or their Health & Safety Plan. The design and location of floodlights that are deployed will be such that drivers on the M62 and other roads will not be affected by their use (see also section 9.2.8).

### ***Pest control***

7.3.20 Measures will be put in place to ensure that the risk of infestation by pests or vermin is minimised by through the timely disposal of food wastes or other material attractive to pests. If any infestation occurs the Site Manager (or nominated representative) will implement corrective measures / actions to deal with the infestation as required by Warrington Borough Council's Environmental Health Officer.

### ***Emergency procedures***

7.3.21 Procedures will be put in place to respond to any emergency incidents that may occur on site. All appropriate staff will be trained and made aware of any formal emergency plans, spill contingency plans, and health & safety plans that are in place. In the event of any emergency incident Warrington Council, the EA, and any other interested bodies will be notified as required by the above plans. These will be prepared by the Principal Contractor and detailed in the detailed CEMP.

### ***Risk assessment and management***

7.3.22 Prior to work commencing on site, the Principal Contractor will identify all safety, health and environmental risks associated with the construction phase of the development. Where these risks cannot be reduced to a low level, control measures will be put in place.

## **7.4 Storage of oils, fuels and chemicals**

7.4.1 Storage location points must be identified on clearly displayed plans within the Site. In accordance with the COSHH Regulations, all containers must be clearly marked as to their contents. The relevant provisions of the Waste Management Licensing Regulations also apply to handling and storage of waste oil.

7.4.2 On-site storage of oil and fuels will be avoided if possible. Where on-site storage of oil and fuels is required, the volumes to be stored will be minimised as far as practical through efficient management of resource. Storage of oil, fuels, and chemicals is prohibited within 50 m of any body of water, including ditches and ponds, or surface water drain. Clearly defined areas for the storage of oil will be identified as part of the site establishment process. Issues to be considered when siting oil storage on site includes:

- Suitability of ground conditions e.g. can the area be protected against flood damage/inundation/subsidence.
- Proximity to sensitive environmental receptors such as surface waters, surface water drainage systems.
- Ease of access to proposed storage area for oil deliveries/refuelling.
- Ability to secure proposed oil storage areas (to prevent theft/vandalism).
- Ensure no fuel stores are sited where they could be hit by moving vehicles and plant.
- Ensure all site staff are aware of designated fuelling areas and also those areas where fuelling is not permitted.

7.4.3 Storage areas will:

- have an impermeable base in areas of groundwater risk;
- have control measures in place and have adequate spill kits easily accessible;
- be adequately signed/labelled; and
- be secured against damage/theft/vandalism.
- Spill kits will be located and maintained at all oil storage and refuelling locations.

7.4.4 Storage tanks must be:

- in good repair;
- fit for purpose;
- appropriate type and capacity for contents;
- be appropriately labelled identifying the contents; and
- they must comply with the requirements of Government guidance and the Control of Pollution (Oil Storage) (England) Regulations, 2001.

7.4.5 The bunded area will be cleared regularly to limit the build-up of residues and if necessary, waste will be disposed of via a specialised contractor. Drip trays and plant nappies DO NOT constitute bunding.

7.4.6 Mobile fuel tanks will be double skinned and locked when not in use, be of appropriate type and capacity for the contents and in good conditions, and be appropriately labelled identifying the contents.

7.4.7 The storage and handling of oils and fuels on site during construction will be undertaken in accordance with the following documents:

- APEA and Energy Institute: “Design, construction, modification, maintenance and decommissioning of filling stations” (known as the Blue Book), 4th edition, 2018;
- Pollution Prevention Guidelines (PPG) 1 General Guide to the Prevention of Pollution;
- PPG2 Above Ground Oil Storage;
- PPG4 Treatment & Disposal of Sewage where no Foul Sewer;
- PPG5 Works & Maintenance in, or near Water;
- PPG6 Working at Construction and Demolition Sites;
- PPG8 Safe Storage & Disposal of Used Oils;
- PPG10 Pollution Prevention Guidelines Highway Depots;
- PPG21 Polluting Incident Response Planning; and
- PPG22 Dealing with Spills.

7.4.8 It is acknowledged that all PPGs have been withdrawn by the Environment Agency (EA), as the legislative requirements contained within the documents are, in many cases, no longer correct; however, the PPGs are still considered to be a relevant and effective source of best practice information and are widely used and accepted within the construction industry.

7.4.9 Other guidance documents may be published by the Environment Agency in the future and any that are relevant to the construction activities at the MSA site will be incorporated into the detailed CEMP.

7.4.10 The use of biodegradable oils and lubricants will be considered where possible.

7.4.11 All oils, fuels and chemicals must be stored in bunded, or secondary containment, facilities in the compound area or on site. Drip trays and plant nappies DO NOT constitute bunding. Bunding or secondary containment, must:

- provide, for a single tank, at least 110% of the maximum storage capacity of the tank.
- provide, for two or more tanks in one secondary containment system, at least 110% of the biggest tank's maximum storage capacity, or 125% of the total maximum storage capacity of all the tanks, whichever is the greatest.
- be impermeable to water and oil.
- be intact and without openings or valves for drainage.
- any draw-off pipes and fill pipes that pass through the containment system must be adequately sealed.
- all valves, filters, sight gauges, vent pipes, and taps must be within the secondary containment, and so that any oil lost will be retained within it.
- any sight gauge must be supported and fitted with a valve that closes automatically when the gauge is not in use.
- fill and draw-off pipes must be located or protected so that they cannot be damaged by an impact or collision.
- all taps and valves fixed to the storage tank, through which oil can be discharged to the open, must be fitted with locks and locked shut when not in use.
- hoses to be fitted with trigger-type handles suspended back within the bund after use.
- valves and trigger filler handles to be kept padlocked when not in use.

7.4.12 Should rainwater ingress into the bund be such that there is insufficient capacity remaining to meet the storage volume requirements of the Oil Storage Regulations (see above) or should the bund be at risk of over topping (thereby creating a pathway for pollutants to reach ground) the water must be tankered away for disposal as hazardous waste (note the bund should never be allowed to reach this point).

7.4.13 For smaller storage/ spill prevention equipment such as spill containment pallets, bunded drum cradles etc., should these be full of rainwater to a level such that there is insufficient capacity remaining to meet the storage volume requirement, the water must be pumped (NOT TIPPED) to a suitable storage container clearly marked as being contaminated water from drip trays & Hazardous waste. This water must be stored in on or in a bund in the hazardous waste area and be disposed of as hazardous waste.

#### ***Drum storage***

7.4.14 Where oil drums are over 200 litres in size, it will be ensured that:

- multiple drums and containers have suitable secondary containment with sufficient capacity to contain at least 25% of the total volume of the containers, or 110% of the largest container, whichever is the greatest;
- drum storage areas will be covered to prevent rainwater getting into bunds and drum pallets;
- drums will be labelled and positioned such that leaks cannot overshoot the bund or drip tray wall; and
- all containers are stored securely when the site is unattended.

#### ***Flammable and hazardous substances***

7.4.15 All flammable and hazardous substances will be kept in a secure bunded cupboard, cabinet or tank constructed of materials that are chemically resistant to the contents.

7.4.16 Any oil or similar material will be cleaned immediately if spilled, using appropriate absorbent material to prevent it entering any local watercourse. Oil spill kits will be provided and training on their use given to all site personnel.

### **7.5 Operation and Refuelling of Plant and Equipment**

7.5.1 Plant and equipment must be located and used on hard-standing and where practicable, away from any other body of water, including ditches and ponds, or surface water drains unless specifically carrying out project works on watercourses. Self-bunded plant must be specified and used where possible. Plant or equipment must not be stored / placed / parked directly over the site drainage system. 'No Parking' exclusions will be established.

7.5.2 Spill mitigation (drip trays and plant nappies) must be used for static plant including generators and compressors; and placed beneath mobile plant when parked or stored for any length of time, for example at break times or at the end of the working day.

The spill mitigation must also be in place during refuelling. Oil, oil powered pumps and generators must be positioned on spill mitigation surrounded by earth or sand bunds and located at least 10m from any watercourse (increasing to 50m where practical).

- 7.5.3 **Plant nappies will be used in preference to drip trays**, as they provide greater environmental protection than drip trays, are easier to use and manage and are less susceptible to damage. Plant nappies trap oils and fuels, but allow water to pass through, any oil residue that may have been picked up by the water is filtered out so only clean water is released. Drip trays must be monitored and emptied regularly with inspections being carried out daily during periods of wet weather. Drip trays must not be allowed to overflow. Monitoring of drip trays must be conducted following rainfall.
- 7.5.4 Should drip trays be at risk of over topping (thereby creating a pathway for pollutants to reach ground) the water must be pumped (NOT TIPPED) from the drip tray to a suitable storage container clearly marked as being contaminated water from drip trays & Hazardous waste.
- 7.5.5 The effluent collected from drip trays and waste plant nappies must be disposed of as hazardous waste and in accordance with the site specific Site Waste Management Plan (to be produced as part of the detailed CEMP). Spill kits will be easily accessible for all re-fuelling operations. Refuelling will not be undertaken near drains or within a minimum of 10m from surface waters (increasing to 50m where practical).
- 7.5.6 Refuelling will only be carried out by named personnel and these personnel will undergo appropriate training. The transfer of fuel between machines or plant is forbidden. Wherever possible, refuelling must be undertaken in the compound areas and not at the work sites. All refuelling must take place on hard-standing (for large plant) or over plant nappies or drip trays (small plant and equipment) and is prohibited within 10m of any body of water, including ditches and ponds, or surface water drain, and within 5m of a foul drain. For fuel bowser refilling, the fill pipe must be situated within the secondary containment system of the bowser, or if not, a drip tray or plant nappy must be used during delivery to the tank. All coupling and discharge points must be checked prior to discharge of a delivery. Deliveries must be supervised AT ALL TIMES. Fuel delivery nozzles must not be locked on, allowing the operator to leave the area. The use of 'Dead Mans' catches on fuel pumps (i.e. that allow fuel pumping without attendance) is STRICTLY PROHIBITED. A spill kit must be adjacent to the tank during deliveries. An example refuelling procedure is presented below.

## REFUELLING PROCEDURE

Refuelling to be undertaken by **trained /authorised personnel only.**

Minimum PPE requirements: **safety glasses / safety goggles; fully coated PVC gloves / disposable PVC gloves.**

### BEFORE REFUELLING:

- Ensure that engines are switched off;
- Ensure that small tool engines have cooled down;
- Ensure that no ignition sources are present (**no naked flames, NO SMOKING and no spark producing items**);
- Ensure that a plant nappy is in place (or a drip tray if no plant nappy is available).

**The use of 'Dead Mans' catches on fuel pumps (i.e. that allow fuel pumping without attendance) is STRICTLY PROHIBITED.**

### AFTER REFUELLING:

- Turn the lower valve off;
- Lock the bowser;
- Monitor and record volumes of fuel used within the fuel register.

### IN THE EVENT OF A SPILL:

- Follow the spill procedure and clean up immediately;
- **Remove any contaminated clothing and wash skin with soap and water;**
- Report spill to your supervisor.

7.5.7 All flexible draw-off pipes must be fitted with a tap or valve at the delivery end that closes automatically when the draw-off pipe is not in use. All flexible draw-off pipes must be kept within the secondary containment system when not in use or enclosed in a secure cabinet equipped with a drip tray. Pump sets must be fitted with a non-return valve and must be protected from unauthorised use.

7.5.8 All fuel storage bowsers must be located or protected so that they cannot be damaged by impact or collision.

## 7.6 Plant Maintenance

7.6.1 The use of vehicles and plant poses similar risks to those posed by the storage of liquids. Fuel and oil may leak from such equipment, which may then enter drains and / or watercourses, as well as contaminating the ground itself. Plant will therefore be maintained in good working order to reduce the risk of oil/fuel leaks. The following will be implemented:

- Vehicles and plant provided for use on the site will be in good working order to ensure optimum fuel efficiency and are free from leaks. Only plant with integral bunding and/or drip trays will be specified;
- Sufficient spill kits will be carried on all vehicles;
- Any hired vehicles and plant will be checked on delivery and not accepted if they are not in good working order; for example, leaking, excessive fumes, excessive noise and/or smoke.
- Vehicles and plant will be regularly maintained to ensure that they are working at optimum efficiency and are promptly repaired when not in good working order.
- Vehicles and plant will not park near or over drain.
- Employee-owned vehicles will not be driven or parked in construction areas unless authorised to do so.
- Topping up of vehicles and plant will be carried out on hardstanding, using drip trays and not over or near drains, or, where this is not reasonably practicable, drip trays and/or drain covers will be used to reduce the risk of spills.
- Vehicles and plant will not be overfilled with fuel.
- Plant containing oils will be regularly inspected and maintained to both prevent and identify leaks.
- Wherever possible, plant maintenance will be scheduled with plant hire exchanges – this removes the need to undertake onsite maintenance so limits the opportunity for spills or discharge of fuels or oils at site.
- Where onsite maintenance becomes necessary, or emergency maintenance is required this will be undertaken, whenever possible, on an impermeable surface in the main construction compounds and satellite compounds. Any drips or leakage of fuel or oil will be cleaned up immediately.
- Plant operators will conduct daily and weekly inspections of plant giving consideration to leaks or drips, arranging immediate repairs when necessary.

## 7.7 Concrete batching

7.7.1 Concrete batching will only be undertaken on site within the site compound.

7.7.2 When operating an on-site batching plant, particulate matter and wastewater runoff are primary pollutants of concern. Point source emissions may occur during the transfer of material to silos, the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate storage piles. Potential batching plant wastewater and runoff pollutants include cement, sand, aggregates, chemical additive mixtures, fuels and lubricants.

7.7.3 Suitable pollution prevention measures will be developed in conjunction with the ECoW, and installed prior to the operation of the batching plant, including but not limited to the following:

- use of a wastewater collection system to prevent contamination of local watercourses;
- implementation of dust prevention measures to include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, fabric filters, etc.;
- enclosing any free-falling transfer points from conveyors to stockpiles with chute(s) and apply dust suppression materials at these points (suppression agents, water spray);
- load concrete trucks in a way to minimise airborne dust emissions;
- pre-mix of materials in a totally enclosed concrete mixer before loading the materials into the concrete truck;
- providing equipment necessary to clean all concrete trucks and other vehicles after loading (preferably dry cleaning methods) and before exit from the site area, to wash off any dust and/or mud deposited on the wheels and/or vehicle body;
- Discharge of concrete onto ground, other than for defined works, will be STRICTLY PROHIBITED;
- maintenance of all equipment, including any dust / particulate collection equipment, according to manufacturer's recommendations to prevent leaks;
- keeping a routine maintenance log on site of all equipment/filter systems, recording date and time of all corrective actions; and
- provision of integrated quality, safety and environmental management systems for the Site, operation of the plant, and delivery processes.

7.7.4 These and any other appropriate measures will be incorporated into the detailed CEMP.

## **7.8 Waste management**

7.8.1 Waste management will follow the waste hierarchy and be in compliance to Section 34 (The Duty of Care) of the Environmental Protection Act, The Hazardous Waste (England and Wales) Regulations 2005 and the site specific Site Waste Management Plan (SWMP) (to be produced for the detailed CEMP).

7.8.2 The Principal Contractor's Site Manager will ensure that waste is stored correctly on site and will ensure the site is kept tidy and free from litter and that waste storage areas are appropriately secured to prevent pollution and allow waste to be suitably segregated at point of generation with appropriate labelling. This will include:

- Segregation of waste according to its type to prevent cross-contamination of inert, non-hazardous and hazardous wastes.
- Covered skips to prevent wind blow.
- Litter barrier nets will be used where required to prevent windblown rubbish.
- Any waste that could leach or has the potential to enter a watercourse will be stored on an impervious surface with barriers to prevent lateral flow.
- All liquid wastes will be stored on impermeable surfaces within a secondary containment system, ideally a bund with 110% capacity of the container.
- All storage areas/containers will be clearly labelled to identify the waste types and properties.
- Waste on site will be stored on site for the minimum required duration.
- Vehicles transporting waste will be suitably secured to prevent waste from escaping.
- Hazardous waste storage will be inspected weekly for leaks, corrosion etc. and to ensure that incompatible wastes, such as chemicals, are stored correctly.
- A waste inventory will be maintained which shows the types of hazardous wastes stored on site, quantities and location. Staff will be trained on the special storage and disposal arrangement for each type of waste. No waste will be burned on site, and no fly-tipping will be permitted. Security measures will be in place to prevent unauthorised handling or disposal of project waste by unauthorised persons.

- A SWMP will be prepared detailing how waste arising from the project will be managed, in compliance with the waste hierarchy; set out the plan for efficient materials and waste handling and set reduction targets. The SWMP will have a record of the types and quantities of waste that will be produced during the project, and a measurement of the quantities and types of waste produced with a comparison against the targets.
- The Principle Contractor will be responsible for obtaining copies of Waste Carriers Licenses, Environmental Permits and Exemptions, and checking they are registered with Environment Agency. The Principle Contractor will maintain a site file for record and inspection purpose.
- Waste Transfer Notes for Controlled Waste and Consignment Notes for Hazardous Waste will be held in the site file for record and inspection purposes for 2 and 3 years respectively.

7.8.3 Where possible, packaging materials will be removed prior to onward transportation to working areas, or else all the packaging waste will be removed from the working area on the same day the waste is generated.

7.8.4 Waste will be disposed of at licensed waste facilities with the movement of waste being carried out by licensed waste carriers only. All waste will be managed, controlled and disposed of following the appropriate waste management legislation.

#### ***Contaminated waste***

7.8.5 Although it is unlikely that any existing contaminated land will be encountered during construction works, the detailed CEMP will set out the arrangements to be put in place so as to ensure that the presence of contaminated land or materials does not give rise to adverse effects on the environment, as a result of construction activities. Consultation with the local authority contaminated land officer will be carried out to identify any contaminated areas and the hazards that these might present.

7.8.6 If contaminated material is excavated, it will be necessary to determine the concentrations of any contaminants within this. Once this has been carried out, the results will be used to classify the materials as hazardous or non-hazardous, in accordance with Environment Agency (EA) technical guidance.<sup>3</sup> This will allow the material to be handled and disposed of in accordance with the appropriate legislation.

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<sup>3</sup> <https://www.gov.uk/government/publications/waste-classification-technical-guidance>

If concentrations of contaminants allow the waste to be utilised elsewhere on site, advice will be sought from the EA. Any exemptions (under the Environmental Permitting Regulations) would require to be sought before the use of such materials on site. Where contaminated materials require disposal, disposal will be to a licensed waste disposal site and all parties will discharge their statutory obligations in relation to the waste management Duty of Care, imposed by Section 34 of the Environmental Protection Act 1990, etc and the Environmental Permitting Regulations 2007.

## **8 OUTLINE CONSTRUCTION ACTIVITIES**

### **8.1 Construction site layout and appearance**

8.1.1 The layout, appearance and operation of the construction site offices and compound(s) will be detailed prior to the commencement of construction activities and the information submitted to WBC for approval. It is envisaged that the layout, appearance and operation of the construction site, site offices and compound(s) will be managed along the following lines:

- smoking areas will be provided at designated locations;
- all fires will be prohibited, including fires for the disposal of vegetation, packaging or any other material;
- the Principal Contractor (PC) shall comply with the requirements of the local Fire Authority and will take all necessary measures to minimise fire risks;
- food waste will be contained within suitable closed waste receptacles and removed from site on at least a weekly basis. Other wastes may be segregated into streams such as timber, metal, plastic, paper and general waste to assist with recycling from the site. All waste will be removed at frequent intervals and the work site kept clean and tidy;
- adequate toilet and welfare facilities will be provided and kept clean with all toilet waste collected and disposed of in accordance with the relevant legislation. No toilet waste will be discharged on site;
- records of construction plant used on the site shall be maintained on a week by week basis;
- all vehicles will enter and exit the site in a forward direction; if space restrictions prevent this then vehicle movements will only take place when properly controlled

by a responsible person or persons observing the rear of the vehicle (i.e. a banksman); and

- spill kits will be kept at each working area, site compound and within all mobile plant.

## **8.2 Internal access roads**

8.2.1 Access to the site will be via the existing access to the roundabout at Junction 11 of the M62.

## **8.3 Creation of the Peat Habitat Zone**

8.3.1 Excluding the peaty (organic-rich clay loam) agricultural topsoils, there are 45,300 m<sup>3</sup> of deeper Peat resources within the Site. The presence of this Peat presents geotechnical constraints to the placement of structures sensitive to settlement, such as buildings, roads and car parks. Therefore, the development layout has been designed to take account of this and has been evolved through discussions with key consultees such as Natural England, the Greater Manchester Ecological Unit (GMEU) and the Environment Agency. Through the iterative design and consultation process the Proposed Development has been designed to maximise the area of undisturbed (avoided) Peat, with disturbed Peat to be retained within the Site for beneficial reuse in the creation of peatland type habitat.

8.3.2 The area of undisturbed peat equates to approximately 50.1% (22,700 m<sup>3</sup>) of the Peat on Site, including the deepest areas of Peat to the south east. The remaining 49.9% (22,600 m<sup>3</sup>) of Peat lies within the development area. It is proposed to remove this resource and directly place it within the retained peat areas (Peat Habitat Zone) to create a peatland type habitat. The agricultural topsoils would be removed prior to the peat removal / placement.

8.3.3 Although the surface topography of the Peat Habitat Zone would be undulating, creating a range of habitat conditions (as described below), it can be thought of as a plateau at a constant height of 22.9 m AOD. Due to the sloping nature of the natural ground this would mean the layer of placed peat would vary in thickness being shallower to the south.

8.3.4 As the placement of the Peat would raise the surface of the Peat Habitat Zone above the height of the surrounding land a bund would be required to retain the upper (placed) layers of Peat within it.

- 8.3.5 Prior to the installation of the bund, the eastern and southern edges of the Peat Habitat Zone would be continuous with the wider peat basin to the south and east of Site. However, the retaining bund cannot be placed directly over the Peat, as these soft deposits would be unable to support the weight of the structure. Therefore, a suitable foundation would be constructed by the excavation of a trench (using trench boxing) to the base of the peat deposits which would then be backfilled with a suitable material to allow the loads from the bund to be transferred to the underlying clay strata. The bund would be constructed from clay at a batter of 1 in 2.5; and would be impermeable to prevent the loss of water from the Peat Habitat Zone.
- 8.3.6 The design of the foundation is on-going and the nature of the fill is to be determined subject to consultation with Natural England and will therefore be confirmed in the detailed CEMP. The fill may include a single compacted aggregate founded unit (which would be slowly permeable and allow the continued movement of water between the Peat Habitat Zone and the wider peat basin); a single impermeable clay founded unit (which would contain all water within the Peat Habitat Zone); or a combination of aggregate and clay founded units (to create variable hydrological regimes).
- 8.3.7 The northern and western edges of the Peat Habitat Zone would be created by sheet piling (required to stabilise the retained peat whilst the peat within the development area is removed). This sheet piling would therefore also provide protection to the National Grid gas pipeline (described in Section 2.1.12). The sheet piling would stand proud of the retained peat to 22.9 m AOD (the top of the placed peat) and would be designed / installed to be as watertight possible to prevent the loss of water from the Peat Habitat Zone during the construction phase.
- 8.3.8 Once the southern and eastern sections of the bund and the sheet piling are installed, the Peat from the development area would be dug out and placed directly within the Peat Habitat Zone.
- 8.3.9 The void created by the excavation of the development area peat would be backfilled using suitable materials to create the development platform and the Brook diversion. A retaining embankment to the Peat Habitat Zone (bund) would be created to northern and western sides of the sheet piling, this would have a batter of 1 in 2.5 and like the eastern and northern bunds this would be constructed from clay and would be finished with a layer of site-won organic-rich topsoil.
- 8.3.10 The recreation of an impermeable / low permeability barrier to the northern and western edges the Peat Habitat Zone, as naturally occurs at the edge of the existing

peat basin, would ensure that water continued to be contained within the basin and that the Peats within the Peat Habitat Zone were maintained in a wettened state.

8.3.11 Within the Peat Habitat Zone, a mosaic of habitats such regenerating scrub, dry and wet heathland areas and bog pools, will be created as a peatland type habitat. This will be achieved through the creation of wet surface hollows and drier mounded areas which will become largely dry heath vegetation. By creating a diversity of topography and habitats, the area will be more resistant to seasonal change as well as climate change.

## **9 ENVIRONMENTAL SITE MANAGEMENT PRACTICES**

### **9.1 Introduction**

9.1.1 The following sections describe the mitigation control measures that will be incorporated into the detailed CEMP to protect the environment of the local area, during construction. The requirements for preconstruction surveys are listed in Section 6.

### **9.2 Ecology**

9.2.1 The detailed CEMP will include updated surveys and specific measures required for species protection, where required / identified through preconstruction survey. In addition, measures identified in the CEMP addressing good site management practice (for instance, control of dust through suppression measures) will also be important in protecting adjacent habitat areas that are important for invertebrates, breeding and wintering bird and bat populations.

9.2.2 The Ecology chapter of the ES has identified the following measures to be included in the CEMP and implemented on site during construction, these will be further described in the detailed CEMP:

- the identification of offsite protected areas, during construction, which will be 'no access' areas for site workers, to minimise the footprint of the development area and limit disturbance as far as possible;
- measures to control Himalayan Balsam and Japanese rose, including the necessary monitoring of any regrowth and subsequent remedial action;

- implementation of habitat enhancement and compensation measures, in accordance with the LVIA and Illustrative Masterplan for the site;
- development and implementation of a Habitat Management Plan (based on the Framework Habitat Management Plan, HMP, provided as Appendix 5.10 to the ES. This will include measures to limit the disturbance of breeding and wintering bird populations and extant bat populations, including no night-time working and limited access (as above) to surrounding habitats; and habitat creation and management provisions, including measures in mitigation for the loss and subsequent realignment of the Silver Lake Brook corridor. These measures are identified as:
  - design of the channel profile with varied bank treatment and angles to provide a greater diversity of aquatic habitats; to include shallow berms, areas of dense marginal planting, alder and willow tree planting;
  - design of the realigned section with a range of features of conservation benefit, including in-channel features and diverse marginal habitats including riffles, areas of slow / static flow and deep peaty sediment;
  - the realigned section of the Brook to be designed with a more natural, 'sinuous' form where possible;
  - specific mitigation features for aquatic and terrestrial invertebrates to be included as well as enhancements for fish, kingfisher and other priority species such as water vole;
  - creation of a wildlife corridor, linking habitats within the biodiverse landscaped areas on site and within the Silver Lane LWS to the north and west;
  - establishment of marshy (acid) grassland habitats especially in the margins of the brook and within the easement of the gas pipeline; and
  - enhancement of the hydrological conditions on site to maintain a high water table within certain parts of the realigned Brook corridor. Within this area, several pools of varying depths will be created with densely vegetated margins; this may form part of the overall Sustainable Drainage System (SuDS) proposals for the site.
- creation of new native tree planting and enhancement of the retained vegetation within the site;

- creation of species-rich grassland and scrub mosaic, including within the route of the high pressure gas main in the east of the site; and
- all construction activities to be overseen by an Ecological Clerk of Works (ECoW) who will also ensure that the mitigation measures and procedures set out in the detailed CEMP are implemented.

9.2.3 The Habitat Management Plan will also include objectives for the creation of the Peat Habitat Zone as follows:

- The translocated peat will be subject to a different and likely variable hydrological regime and a peatland type habitat will be created with variable peat depth and topography, providing a range of micro-habitats from dry to permanently wet; creating varied habitats for a range of flora and fauna.
- Plant material from 'high quality' peatland vegetation from nearby designated sites will be sourced where possible or existing established nurseries supplying those sites where re-vegetation is taking place, to ensure plants of local provenance establish on site.
- It is expected that the Peat Habitat Zone will receive water both from rain and from groundwater. It will therefore be possible to create hollows around groundwater level and to mound areas which will become largely dry heath vegetation. By creating a diversity of topography and habitats, the area will be more resistant to seasonal change as well as climate change.
- During the management phase, parts of the Peat Habitat Zone would be permitted to develop natural tree and scrub regeneration, with species such as birch willow and alder likely to self-seed from surrounding habitat. This would attract species such as willow warbler, willow tit, and reed bunting. In other areas, trees and scrub may be prevented from establishing, such as parts of the developing floristically diverse heathland and near to the proposed bog pools. This would benefit species of invertebrate that are reliant on open water.

9.2.4 In order to minimise the effects of construction (e.g. disturbance from works) on the environment, all activity will be confined to clearly defined working areas.

9.2.5 Trees located close to proposed construction works, within and outwith the site boundary, would be provided with barrier protection of their Root Protection Areas (RPAs). If these areas are unable to be avoided, the tree(s) (which have a low retention value) would either be removed and subsequently replaced post-construction, or

tracks routed within RPAs would be provided with a geotextile layer overlain with clean angular stone, as their sub-base, to avoid excavation within the RPA.

9.2.6 Regardless of whether the 2021 surveys yield a positive result for GCN presence, the following standard working methods, to minimise the risk of harming or killing amphibians (and reptiles) will be in place throughout the construction period:

- Staff will be briefed through a Tool Box Talk on the potential presence of reptiles/amphibians, the potential for offences to occur and the working methods to follow to ensure that the risk of reptile injury/death due to the works is minimised.
- Where possible, areas of habitat with high value for reptiles such as piles of rubble, log piles, south facing slopes with short vegetation, will be avoided through micro siting. Where this is not possible the following measures will be implemented:
  - Any areas potentially providing refuges for reptiles such as rock piles, brick rubble, rubbish or fallen timber that have been present within the area to be cleared will be searched by hand and removed before the start of works in that area.
  - Areas of high risk vegetation will be cleared progressively using hand tools (including chainsaws) to provide animals with an opportunity to move out of the area. Areas of tall grassland/heathland will be trimmed, and scrub cut down to ground level and arisings removed from the working area.
  - Following vegetation clearance, the area will be left for 2 to 3 days to allow any animals to move out of the area before any excavation commences. The ECoW will check the area immediately before works commence.
- Where practicable, areas of standing water will not be allowed to persist for more than a week during the construction period during the amphibian breeding season.
- The use of insecticides/herbicides in areas where reptiles or amphibians may be present will be minimised.
- If any reptiles or amphibians are found at any time during the works (including clearance operations), works will stop in that area immediately and the ECoW will be contacted. If they are likely to be harmed without immediate action, they will be carefully placed in a cool, humid and shaded receptacle and released into adjacent areas of suitable habitat that are not affected by development and which will not be disturbed in the future.

9.2.7 All works causing ground disturbance will follow best practice techniques of vegetation and habitat reinstatement. The prompt reinstatement of all disturbed areas will be carried out wherever possible.

9.2.8 Although the majority of effects would occur during construction, there is the scope for the operation of the site to impact on the ecology of the area. The Ecology chapter of the ES identifies the following measures that are to be referenced within the CEMP and implemented as part of the works:

- inclusion of oil and fuel separators within the drainage design, to ensure no incidental pollution of aquatic features;
- installation of a new network of footpath signage within, and potentially outwith the development, to avoid increased public pressure on the Silver Lane LWS, directing visitors to the formalised paths already established around the LWS, in addition to providing optional routes within the development landscaped areas;
- creation of a sensitive lighting scheme to ensure that the wildlife corridor created by the realigned Brook remains available to foraging and commuting bats. The lighting scheme will include restrictions on lighting within the site, both during and post-construction. This could include the following measures:
  - avoidance of light spill, using directional or baffled lighting;
  - addition of cowls to fixed lighting installations, to ensure this is as directional as possible;
  - use of variable lighting regimes – switching lights off when human activity levels are low;
  - avoidance of the use of blue-white short wavelength lights and lights with high UV content; or
  - creation of light barriers, using tree planting.
- tree planting on the eastern and northern site boundaries will assist in mitigation of disturbance effects to faunal species using the arable farmland habitats to the north of the site (including the limited assemblage of winter birds).

9.2.9 A programme of vegetation monitoring is proposed to be implemented to consider any necessary remedial actions to ensure the development of the wildlife corridor habitats along the route of the realigned Silver Lane Brook. This will include checks to assess the hydrological conditions of relocated peat deposits to ensure these areas remain wet and develop a typical peatland flora. The structural and species

composition of newly created habitats will be monitored by vegetation surveys, potentially including fixed-point photography. These measures will be included in the Habitat Management Plan for the site. This will be further described in the detailed CEMP.

### **9.3 Soils and peat handling, storage and re-use on site**

- 9.3.1 A highly degraded peat topsoil is identified across the Site at an average depth of 0.36 m. Although identified as a peat topsoil, due to the lack of an active living layer of peat (i.e. an acrotelm colonised with peat species – essential for a healthy, active peatland), this topsoil can be treated as an organic-rich soil resource as opposed to a peat resource. Based on the current masterplan, the removal of this topsoil across the development area (including the Peat Habitat Zone) will result in the generation of 42,000 m<sup>3</sup> of topsoil resource. The remaining topsoil resources will remain undisturbed.
- 9.3.2 The design of the Proposed Development allows for 15,840 m<sup>3</sup> (37.7%) of the stripped topsoils to be reused in Site landscaping. This assumes the placement of topsoil to a depth of 36 cm, consistent with their current depth. The remaining topsoil would be exported from site for beneficial reuse elsewhere.
- 9.3.3 The topsoil resources within the Site would be protected against damage by the adoption of industry standard measures for the management of soil, such as those set out in Defra's 2009 Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
- 9.3.4 Over the majority of the Site, the peaty topsoils are underlain by deeper peat deposits. The on-site retention of the peat resources and the creation of the Peat Habitat Zone is described in Sections 8.3 and 9.2.
- 9.3.5 The direct transfer of the Peat from the development area to the specially prepared Peat Habitat Zone would ensure no double handling of the resource and minimise the potential for damage to the peat, peat drying or carbon loss. The incorrect management of Peat during construction could result in damage through the impairment of function, quality and resilience. In the absence of any England-specific guidance, peat within the Site would be protected against damage by the adoption of industry standard measures for the management of peat set out in the Scottish Environmental Protection Agency's (SEPA) good practice guidance for upland blanket

peats, which can be applied to lowland peats (SEPA “Restoration Techniques Using Peat Spoil from Construction Works”, July 2011). Similarly, advice on the construction of peat retention bunds and peatland management is also provided by the IUCN UK Peatland Programme (IUCN UK Peatland Programme and Yorkshire Peat Partnership “Conserving Bogs: The Management Handbook” (2nd Edition), 2019).

9.3.6 The adoption of industry standard measures for the management of soil and peat will ensure that the quality of the resource is maintained and it remains in a condition suitable for reuse either on Site or (in the case of soils) elsewhere.

9.3.7 Prior to construction, soil and peat management within the Site would be defined through a detailed site-specific Soil and Peat Management Plan (SPMP) produced by a qualified soil scientist. Typical working methods and techniques include, but are not limited to, the following:

- The handling of topsoil resources only when sufficiently dry to prevent compaction and damage to soil structure; or implementing strict procedures for the wet-handling of soils incorporating amelioration and restoration measures to reverse any damage which may occur for example through compaction.
- The handling and maintenance of deeper peats in a wet state to prevent drying and oxidation.
- The separate stripping, handling, storage and transportation of different soil layers (topsoils, subsoils and peat) and soil types if there is variation across the Site.
- Appropriate seeding of soil storage mounds if required for a period longer than six months, to prevent erosion and to maintain soil structure, nutrient content and biological activity;
- De-compacting of the subsoil before topsoil re-instatement;
- soil loosening techniques such as deep-tine cultivation will be used where required to break up any compaction that has occurred, in advance of site restoration and landscaping;
- In peaty and soft unsaturated clay soils, where the use of geotextile membranes is not appropriate, wheeled vehicles may be fitted with low ground pressure-bearing pneumatic tyres to allow a greater distribution of weight; and
- Minimising the number of machine movements across topsoil and defining haul routes to reduce compaction and retain soil structure.

9.3.8 Furthermore, the establishment of permanent vegetative cover within the

landscaping areas (both areas with natural and restored soil profiles) would mitigate further topsoil and peat loss which is currently experienced at the Site due to cultivation (wind erosion and continued incorporation of the deeper peat into the plow layer, see paragraph 5.18).

9.3.9 The detailed SPMP will also set out the methods to be used in addressing how materials are to be handled and where these can be used on site, including the pre-construction archaeological investigation works outlined in section 6.4 of this framework CEMP.

9.3.10 The SPMP would be a 'live' document which would be updated throughout the life of the project as new data becomes available.

9.3.11 As noted in the introduction to this framework CEMP, this management plan would form part of the detailed CEMP for the site.

#### **9.4 Hydrology and hydrogeology**

9.4.1 Construction activities may adversely affect the quality of surface water or groundwater as a result of contaminated runoff from, or spillages on the construction site. Control and mitigation measures to be implemented to prevent pollution will include the development of a surface water management strategy for the site.

9.4.2 The key principles of the water-related components of the detailed CEMP will include:

- construction design to minimise disruption to the natural flow regime;
- planning and preparation works to ensure that all precautions are taken in order to provide protection to watercourses, groundwater and attenuation features, including the supervision of sub-contractors and liaison with the local authority and EA area staff;
- adoption of measures to prevent and control the release of sediment, such as directing surface water across vegetated zones or through mesh fencing to capture the sediment, or the use of sediment traps or settlement lagoons, where a larger volume of sediment is anticipated. The maintenance requirements of these features (inspections, clearance, repair etc.) will be set out in the detailed CEMP;
- compliance with environmental permits and licenses;
- secure storage of all fuels, oils and other polluting substances within suitable bunded containers and use of drip trays (as detailed below);

- refuelling within designated areas only, and use (where possible) of biodegradable oils and lubricants;
- preparation of pollution incident response plans for the control of accidental releases of pollution or other environmental incidents, making onsite resources (spill kits, absorbent materials, oil booms etc.) available to all contractors at all times of operation on site;
- update of data searches in relation to water abstractions and private water supply and in relation to the potential for any unregistered abstractions;
- preparation of a dewatering management plan and peat handling plan; and
- calculation of cement / concrete mixes to ensure sufficient quantities are supplied without the need for disposal of any excess; and monitoring of the cement / sand mix ratio for consistency and suitability.

9.4.3 The following will be included within the detailed CEMP:

- Where practicable, perimeter drains will be installed to prevent surface water runoff from filling excavations; these drains would discharge to small settlement ponds, prior to discharge to watercourses and will be subject to permit from the Environment Agency / Warrington Borough Council;
- where dewatering is required to remove water from excavations, water will be pumped on to the adjacent grassland via a screen or filter system, in order to reduce the silt load, and not directly affect the watercourses;
- soil stockpiles will either be seeded with a suitable grass mix or covered to reduce the risk of runoff and silt creation;
- hessian, mulches or tackifiers (liquid mulch binders) will be used where it is not possible to re-vegetate or cover stockpiles with topsoil, as soon as is practicable;
- existing and new surface water drains will be kept clear of silt or weed build-up; and
- roads and hard surfaces will be kept clean, to prevent a build-up of mud and sediment that could contaminate surface water.

***Other discharges***

9.4.4 Other effluents may be produced that need to be properly managed and controlled in order to prevent contamination of surface water and groundwater. The Principal Contractor will ensure that:

- washing of equipment using detergent is carried out at commercial facilities only;
- washing of vehicles and equipment without the use of detergent is only carried out at either commercial facilities, or at purpose-built wash stations where the water is contained for controlled disposal;
- all foul effluent will be contained; and
- the foul effluent container will be subject to daily inspection and a maintenance and emptying schedule as recommended by the manufacturer. The effluent will be removed by tanker and disposed of at a licensed facility.

#### ***Disposal of Accumulated Rainfall/Surface Water***

9.4.5 Rainwater and surface water may accumulate in a number of locations on site, for example in uncovered bunds and drip trays. This has the potential to become contaminated. To reduce this risk, the following measures will be implemented:

- bunds or drum pallets will be covered, where possible, to prevent the accumulation of rainwater;
- interceptor type drip trays will be provided rather than standard drip trays (for locations where drip trays will be permanently in place) or plant nappies (for mobile plant);
- if a standard drip tray or uncovered bund is used, the following will be carried out:
  - ensure it is regularly inspected (daily) and emptied either via tanker and disposed of immediately off site at an appropriately licensed facility (for large quantities) or to an on-site, bunded, storage facility for later off-site disposal (small quantities). The inspection frequency will increase during times of frequent rainfall;
  - check water from uncovered bunds for obvious signs of contamination (for example, visible oil and smells) in order that the correct disposal option can be identified;
  - ensure that only uncontaminated water is disposed of by draining it onto a grassed or stoned area on the site which is at least 10m from any drains and watercourses and 50m away from any boreholes or wells. If contaminated, it will be disposed of as hazardous waste; and
  - ensure that any oil present is absorbed using a spill kit and disposed of as hazardous waste.

- 9.4.6 Surface water runoff from the site will be managed using appropriate SuDS or similar techniques to ensure that discharge is maintained as existing, with surface water storage provided as appropriate to balance storm event flows that exceed this discharge rate (including an allowance for climate change).
- 9.4.7 Preventing the creation of silty water and the control of any silty water should it be generated are vital to the protection to watercourses, groundwater, drains and attenuation features.
- 9.4.8 Water can be successfully managed on-site through measures such as the creation of grips and bunds to control and direct water, the directing of surface water across vegetated zones, or by passing water through mesh fencing (silt fencing) in order to capture the sediment. Sediment traps or settlement lagoons may be considered if the quantity of sediment laden water is anticipated to be large.
- 9.4.9 Pumping rates for the silt traps will be adjusted to allow the settlement of any solids, prior to the discharge of water from the traps.
- 9.4.10 A programme of routine surface water monitoring and regular inspection of silt traps will be put in place to monitor surface water management during the construction stage, this will be detailed in the detailed CEMP. Settlement lagoons or siltbusters will be employed in areas where the level of runoff is likely to exceed levels normally contained within a silt trap. These would be agreed with the ECoW prior to commencement on site.

#### ***Dewatering***

- 9.4.11 Deep excavations may require dewatering. Water pumped or otherwise removed from excavations will be passed through a silt-separator tank or the equivalent and discharged to ground or surface water. If required, a permit or exemption would be sought from the EA prior to undertaking any such operations.

#### ***Drainage***

- 9.4.12 Excavations will be planned and executed so as to not create preferential drainage pathways with the potential to cause flooding of lower land, or other damage. Appropriate measures will be implemented, such as the introduction of baffles or creation of sumps to reduce the risk of preferential drainage paths being created.

## **9.5 Traffic Management**

- 9.5.1 Traffic will be managed according to the Traffic Management
- 9.5.2 Project team members to utilise any public transport and to car share to reduce the number of vehicle movements on the project. However, adequate parking and staff instructed that fly parking is not permitted.
- 9.5.3 All vehicles on site will reverse park.
- 9.5.4 All personnel visiting a particular site will abide by these instructions regarding the route to site and parking arrangements.
- 9.5.5 Clear signage will show construction traffic access and access and signage in Working Areas.
- 9.5.6 Full sheeting will be provided for all works vehicles carrying friable (dusty) material or likely to deposit loose muck or materials on the public highway during transit.
- 9.5.7 Vehicles carrying wet material likely to leak from the vehicles will be provided with tailgate seals.
- 9.5.8 During excessive rainfall and ground saturation, stripping and reinstatement works may be suspended, or when site work activities are causing unacceptably high damage – which will reduce contamination of the adjacent road surfaces.
- 9.5.9 Vehicles leaving or entering the site will be checked by a Site Supervisor to ensure that their loads are secure. This does not relieve the driver of a vehicle of his legal and contractual responsibility to ensure that the load is secure.
- 9.5.10 Inspections of road conditions will be undertaken prior to works commencing to record whether any remediation is required as a result of the Proposed Development activities.
- 9.5.11 Road cleanliness will be monitored and proactive measures to maintain cleanliness adopted as required.

## 9.6 Dust Management

9.6.1 Dust and particulate matter arising from site can annoy neighbours and may cause health effects at high concentrations; and impact sensitive ecological habitats. The proposed development site lies within 1km of the Holcroft Moss area of the Manchester Mosses SAC (incorporating the Holcroft Moss SSSI), the wider area of which includes the Risley Moss SSSI. A small number of residential receptors are located within 350m of the site boundary (approximately 15 properties on Inglewood Close, some 290m to the south of the site), and none within 50m of the route to be used by construction vehicles on the public highway. A small number of commercial / industrial units are located within 350m of the boundary, on Leacroft Road, to the south-west, though these are potentially less sensitive to effects of dust.

9.6.2 As noted above, the M62 has an Air Quality Management Area (AQMA) extending to 50m from the roadside within the Warrington Borough Council area.

9.6.3 The implementation of effective mitigation measures during construction can substantially reduce the potential for nuisance dust and particulates to be generated. Therefore, a best practice dust mitigation plan (DMP) will be produced pre-construction and implemented for the Site. The DMP will be incorporated into the detailed CEMP. The DMP will set out the practical measures that could be incorporated as part of a best working practice scheme. This will take into account the recommendations included within Institute of Air Quality Management (IAQM) guidance, which may include various mitigation measures including:

- Daily inspections of high risk dust areas, especially during dry weather to assess control methods in place.
- Site compound areas will be hardstanding where practicable.
- Site speed limits on haul road to limit dust.
- A bowser will be used to undertake damping-down of tracked site areas, haul routes and entrances during dry weather and to suppress dust from soil stockpiles, stripped working corridors and material storage areas.
- Wind conditions will be monitored throughout the works, and backfill material will be dampened down when dust that could affect the public and road users is likely.
- A road sweeper and water jet vacuums will be employed where necessary to remove deposits of silt or other materials from roads and reduce the risk of this being washed into surface water gullies or watercourses.

- If required, wheel cleaning and vehicle & equipment washing facilities will be provided prior to vehicles leaving site.
- Litter picking will be undertaken between the work site entrance and the compound when necessary.
- Full sheeting will be provided for all works vehicles carrying friable (dusty) material or likely to deposit loose muck or materials on the public highway during transit.
- All containers will be covered or enclosed to prevent escape of dust and waste materials during loading and transportation.
- Vehicles carrying wet material likely to leak from the vehicles will be provided with tailgate seals.
- All plant must be well maintained in order to minimise emissions.
- All vehicles to switch off engines when stationary.
- Drills that are powered by compressed air are not permitted on site unless appropriate control measures are in place.
- Choice of plant must be considered with regard to potential emissions e.g. electric generators and compressors rather than diesel/petrol.
- Dust must be minimised from potentially dusty operations including excavation, cutting, grinding e.g. damping down of work faces, minimise cutting and grinding on site, use of wet cutting systems or fully enclose work areas.
- Engineers will identify and implement measures to ensure the minimisation of dust from stock-piles and open excavations, e.g. locate stockpiles out of the wind, away from site boundaries, compact, bind, or cover stockpile surfaces, minimise storage time on site, damp down.
- Activities will be planned to ensure that, as far as practical, particularly dusty activities are not carried out in unsuitable weather conditions (e.g. dry/windy) unless suppression is in place.
- Soil stockpile heights will be kept to a minimum height with gently grading of the side slopes.
- Surfaces of completed areas and bunds will be restored as quickly as possible and seeded if required.
- Materials must not be burnt on site.
- Covered containers must be used for organic waste and removed frequently.

- Ensure potentially odorous activities e.g. sewer works, are completed as quickly as possible and that masking agent is used where possible.
- Staff will show consideration to the sensitive receptors, including residential properties, including ensuring that they do not drop litter walking to and from the site.
- Materials will be positioned away from residential areas, places of public access or drains.
- If complaints are made, these will be followed up immediately and action taken to avoid a repeat complaint.

## **9.7 Noise Management**

9.7.1 To reduce the potential impact of noise levels generated by the construction phase of the Proposed Development, at existing receptor locations in the immediate vicinity of the Site, mitigation measures will be required.

9.7.2 Best working practice will be implemented during each phase of the earthworks and construction works at the Site. The construction works will follow the guidelines in BS5228-1 and the guidance in BRE Controlling particles, vapour and noise pollution from construction sites, Parts 1 to 5, 2003.

9.7.3 The following measures will be put in place to minimise noise emissions:

- When works are taking place within close proximity to those sensitive receptors identified, screening of noise sources by temporary screens may be employed;
- All machinery should be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers;
- Site staff should be aware that they are working adjacent to a sensitive area and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting and radios;
- As far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor;
- Adherence to any time limits imposed on noisy works by the local authority;
- Implement set working hours during the week and at weekends;
- Ensure engines are turned off when possible; and

- Should earthworks and construction activities need to be carried out during night-time hours, the local authority could include a planning condition which requests advance notice and details of any night working to be provided.

## **9.8 Management of Vibration**

9.8.1 The most common form of vibration associated with piling is the intermittent type derived from conventional driven piling.

9.8.2 To minimise the potential for vibration to be generated by any necessary piling it is recommended that careful consideration is given to the type of piling to be used. However, it is recognised that the piling process will need to be selected on the basis of the strata to be encountered, the loads to be supported and the economics of the system.

9.8.3 As the construction programme and methodologies become more defined it is suggested that earthworks and construction vibration be reconsidered and that a detailed strategy for control be devised and implemented. This will be contained in the detailed CEMP.

9.8.4 The receptors likely to be affected by piling will vary depending on the phase of the Proposed Development under construction. Once the precise building locations, ground conditions for each location and type(s) of piling are confirmed, vibration levels will be estimated and recommendations for control made as appropriate.

9.8.5 To keep ground borne vibration to a minimum the following measures, as referred to in BS5228-2 (2009): Code of practice for noise and vibration control on construction and open sites: Vibration, should be put in place:

- Substitution: Where reasonably practicable, plant and or methods of work likely to cause significant levels of vibration at the receptors identified, should be replaced by less intrusive plant/methods of working;
- Isolation of plant at source: This may prove a viable option where the plant is stationary (e.g. a compressor, generator) and located close to a receptor

9.8.6 BS5228-2 also indicates that mitigation might include: use of alternative methods, removal of obstructions, provision of cut-off trenches, reduction of energy input per blow, reduction of resistance to penetration.

9.8.7 There are a number of measures which can be implemented, depending upon the type of piling chosen. For example, continuous flight auger (CFA) piling produces

significantly less vibration than conventional vibration piling. Therefore, fewer mitigation measures would be required if CFA piling were chosen as the preferred method.

## **10 MONITORING, REVIEW AND REPORTING**

### **10.1 Monitoring**

10.1.1 The Principal Contractor's Site Manager will be responsible for maintaining a register of all environmental monitoring, which should be made available for auditing and inspection.

#### ***Dust monitoring***

10.1.2 The potential risks to health and sensitive receptors are referred to in section 7.8. There are very few residential and sensitive receptors within close proximity to the site. It is therefore not proposed to carry out dust monitoring during the construction phase. However, this will be subject to review during the construction phase, according to the detailed CEMP and any Dust Emissions Management Plan that is prepared in due course by the Principal Contractor.

#### ***Noise monitoring***

10.1.3 During the construction phase, work carried out at the proposed MSA development is likely to generate noise that may propagate (extend) beyond the proposed development boundary.

10.1.4 At this stage, detailed information regarding the nature and timescales of activities likely to take place during the construction phase is not known. Activities on the site, which could give rise to construction noise impacts if carried out, could include (but are not limited to):

- site preparation i.e. ground excavation, removal of any existing structures, levelling of ground, trenching, trench filling, unloading and levelling of hardcore and compacting filling;
- construction of the buildings for the MSA and associated infrastructure, as generally outlined in section 2.4.2; and
- movement of vehicles onto and within the site, and vehicles exiting the site.

10.1.5 The above activities have the potential to generate short-term increases in noise

levels, however, these are unlikely to be significant given the proximity of high levels of traffic on the M62. Construction noise mitigation has been addressed in the Noise chapter of the ES and will be detailed in the detailed CEMP and any associated Noise Mitigation Plan. Given the above, it is not proposed to routinely carry out any noise monitoring during the construction phase, although the requirement for this will be regularly reviewed. Should noise complaints be received by the site or by any regulatory body, action will be taken which may include the implementation of noise monitoring. Should this be necessary, the Principal Contractor's Site Manager will agree the location(s), methods and noise limits with the Warrington Borough Council's Environmental Health Department during subsequent construction works.

## **10.2 Reporting**

10.2.1 Reporting procedures will be defined by the Project Manager who will hold overall responsibility for providing feedback to the relevant, interested parties on the environmental performance of the construction works.

## **10.3 Environmental Incidents**

10.3.1 The Principal Contractor will advise Warrington Borough Council within 24 hours of any incidents of non-compliance with the CEMP and will respond to any reported incidents within 24 hours, or as soon as reasonable practicable. In the event of working practices being deemed dangerous either by Warrington Borough Council or the Health and Safety Executive (HSE), immediate remedial action will be taken.

10.3.2 A suggested formal procedure for handling Environmental Incidents is detailed below. This will be refined following the appointment of the Principal Contractor.

- all Environmental Incidents (including near misses) are to be reported to the Site Manager;
- the Site Manager (or nominated representative) will record full details of the Environmental Incident and ensure that they are responded to as soon as reasonably practicable (preferably within one hour but always within 24 hours); and
- the Site Manager (or nominated representative) will monitor and ensure that appropriate action is taken; and
- the Site Manager (or nominated representative) will undertake an investigation to assess what corrective and preventive action, or further investigation is necessary to avoid recurrence of the Environmental Incident.

## 10.4 Complaints

10.4.1 A centralised register of all reported complaints and incidents will be maintained by the Project Manager (or nominated representative).

10.4.2 A suggested formal procedure for handling project complaints / concerns is outlined below and represented in the flow chart, Figure 8.1 below:

- stakeholders will be able to report any concerns, complaints or other comments to the Site Manager in writing, by email or in person at the site offices. Site contacts details should be provided at site entrances, on perimeter hoardings and possibly at appropriate community locations;
- the Site Manager (or nominated representative) will take full details of the concerns expressed and ensure that a formal assessment is commenced of the reported concern. They will also issue an initial response to the person who has submitted the complaint / concern confirming its receipt. The Site Manager will record the date and contact information associated with a complaint / concern on a standard form and place a copy in a project grievance register;
- the Site Manager (or nominated representative) will undertake an investigation to assess that corrective and preventive action, or further investigation is necessary;
- the Site Manager (or nominated representative) will respond within a reasonable timescale (typically not more than 30 days) and place details of the completed corrective and preventive actions within the project grievance register. If a longer-term programme is required to provide an adequate solution, then this programme will be detailed on the register against the specific issue;
- the Site Manager (or nominated representative) will notify the relevant stakeholder of the proposed corrective and preventive actions to be adopted;
- any corrective measures / actions will be implemented with associated implementation dates being recorded;
- for long term corrective action, the complainant will be informed of proposed action; and
- following the implementation of the corrective action and agreement with the relevant stakeholder that the complaint has been adequately addressed the case will be closed and date recorded.

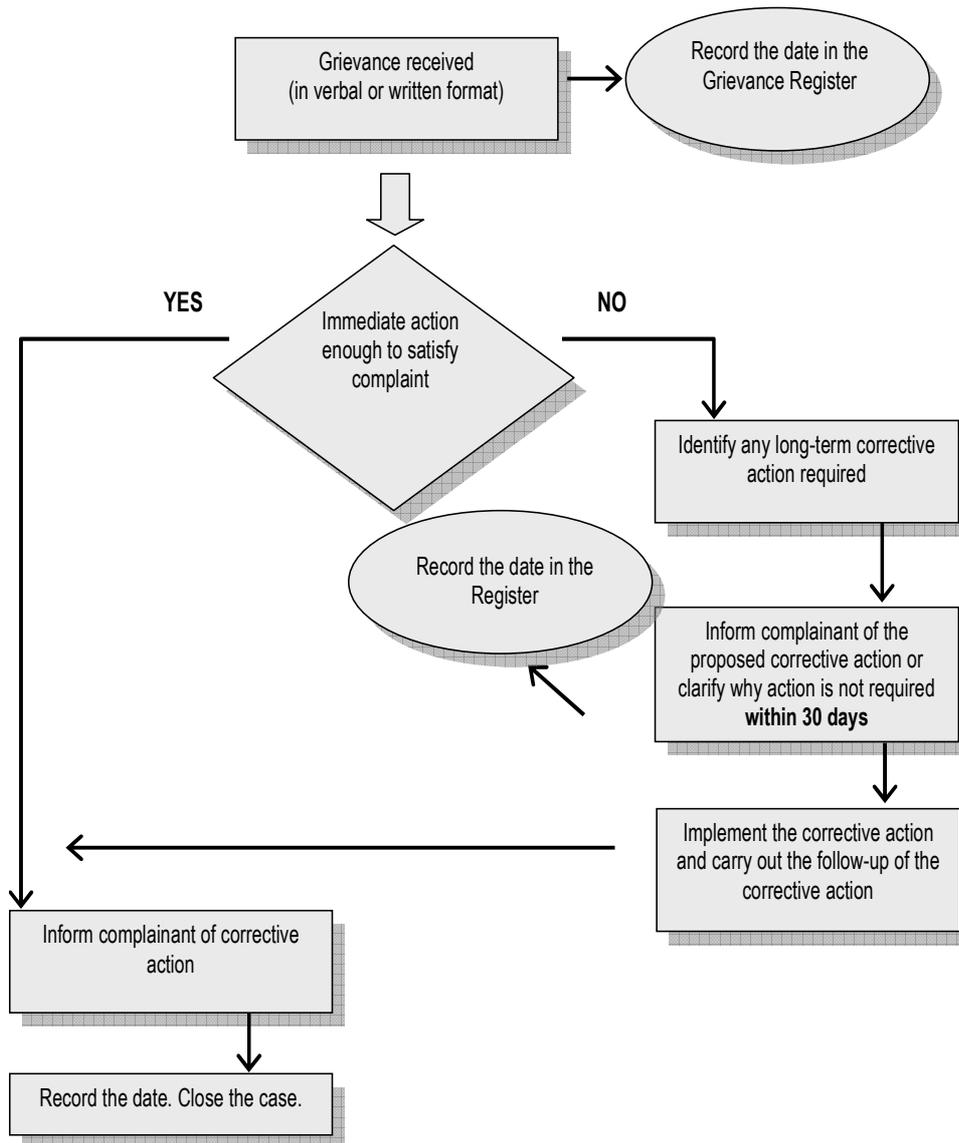


Figure 8.1: Suggested complaints procedure

10.4.3 In the event that a complaint is not resolved to the satisfaction of the complainant directly with the Site Manager, the following levels of mediation will be available:

- if the grievance cannot be adequately addressed by the Site Manager, the complaint / concern will be escalated within the Principal Contractor's organisation; and
- if the grievance is still not adequately resolved the issue will be taken to Warrington Borough Council for a final decision to be made.

## 11 EMERGENCY PREPAREDNESS & RESPONSE

11.1.1 Full details on environmental preparedness and response procedures will be provided by the Principal contractor in the detailed CEMP, however the key features of the plan have been discussed below:

### 11.2 Environmental Emergency Preparedness

#### *Emergency Contact List (to be completed at detailed CEMP)*

Emergency Contact List		
Designation	Organisation	Telephone
Emergency oil spill and other chemical clearance	TBC	TBC
Environment Agency	Incident Hotline	0800 807060
Project Manager	TBC	TBC
Site Manager	TBC	TBC
Senior Technical Advisors – Ecology, Archaeology and Hydrology	TBC	TBC
ECoW Team	TBC	TBC

11.2.1 Site specific emergency contacts will be included in the RAMS. The responsible persons assigned in the text below are liable to change in the detailed CEMP.

### 11.3 Potential Environmental Incidents

11.3.1 Incidents may fall into the following categories:

- unlawful disposal of waste or contaminated spoil.
- pollution of surface or groundwater.
- fly tipping or public events causing obstruction to site works.
- oil and chemical spills.
- injury or death of protected species.

11.3.2 Environmental incidents will be categorised as follows:

- Incident: An uncontrolled and unexpected release of a substance, noise or dust with the potential to pollute air, land and water resources which can be contained and mitigated against using on-site equipment.
- Emergency incident: An incident where the effects cannot be controlled by personnel with equipment on site e.g. large spillages of hydrocarbon or petrol,

where outside assistance from an emergency spill response team or Environment Agency (EA) is required to bring it under control.

- Major incident: A situation where any of the following have occurred:
  - An emergency incident as above.
  - A legal breach of legislation is identified.

11.3.3 The Site Manager must ensure that the following is undertaken:

- In the event of a leak or spillage the substance must be immediately contained and prevented from being discharged to drains or watercourses, or from soaking into the ground, using the emergency spill kits.
- Spillages must NOT be washed into drains, or surface water.

11.3.4 Used absorbent materials and contaminated spoil must be swept up, or dug out, and contained in an appropriate container and arrangements made with an appropriately licensed waste contractor for disposal as hazardous waste.

11.3.5 The Site Manager is initially responsible for recording and communicating the incident. The Site Manager will mobilise a specialist spill response contractor, if required. Additionally, Extra MSA Group must also be contacted and informed of the event, for minor incidents this may be through monthly reporting; or at scheduled meetings. For major incidents and emergencies, Extra MSA Group will be contacted as soon as possible following the incident.

11.3.6 Appropriate spill materials will be stored across the site and will also be carried by sub-contractors working on site, who will be trained in its usage and in its correct disposal. In the event that a pollutant has entered a drain or soaked into the ground or there has been an uncontrolled release to atmosphere in breach of authorisation conditions, then the Site Manager will provide advice regarding further appropriate remediation requirements, and will contact the appropriate regulatory body if appropriate.

11.3.7 It is the Site Manager's responsibility that all staff are provided with training in emergency response (see Section 3.5) and an emergency spill response plan should be advertised around the site (for example on notice boards and chemical/fuel storage areas); an example is provided at page 64.

### ***Environment Agency***

11.3.8 In the event of a discharge directly into or adjacent to a watercourse, ditch, pond or surface water drain including any quantity of any uncontrolled substance, but not

limited to:

- HAZCHEM listed chemical.
- Fuel spillage greater than 100 litres.
- Oil spillage greater than 20 litres.
- Major incidents in combined drainage areas involving:
  - 25 litres detergent;
  - 25 litres disinfectant;
  - 250 litres foodstuff;
  - 25 litres paints and dyes;
  - 250 kg inorganic powders;
  - 25 litres organic liquids (e.g. antifreeze, lube oils etc.).

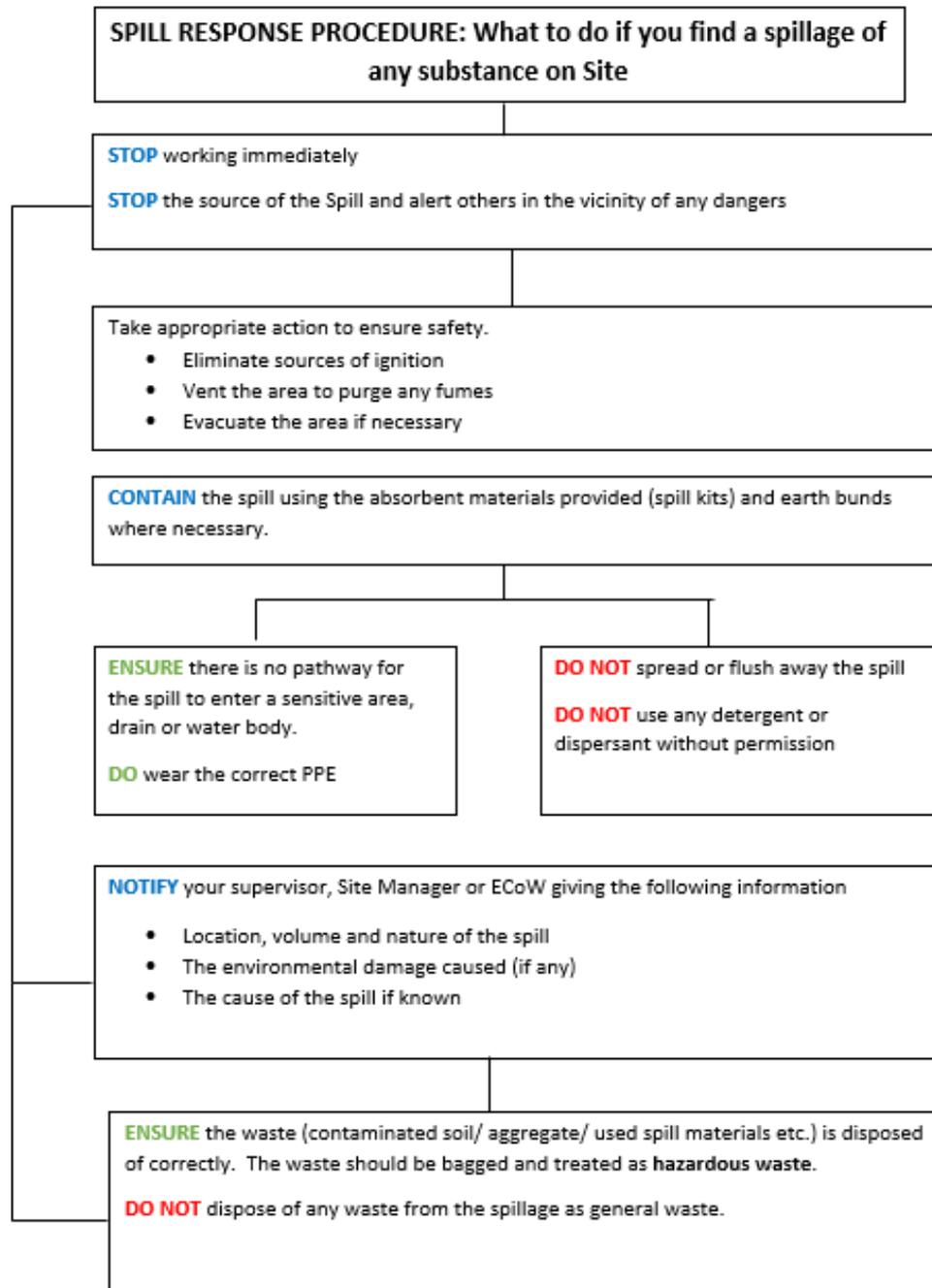
***The Sewerage Undertaker***

11.3.9 In the event of an uncontrolled discharge to foul water drain.

***Natural England***

11.3.10 In the event of an incident that causes damage or disturbance to a protected species or habitat.

**Example of Emergency Response to Spills (to be issued to site staff)**



## 11.4 Spill Kits

11.4.1 Spill kit location points should be identified in the project CDM drawing and detailed in the relevant method statements. Spill kits must include as a minimum:

- Absorbent wipes and socks.
- Plastic bags for used spill kit materials.

11.4.2 And the site must also have access to the following equipment and information:

- Absorbent granules.
- Drain covers.
- Plastic bunds or trays.
- Relevant and up-to-date material safety data sheets and COSHH information for substances used on site.
- Shovels and brooms.

11.4.3 Spill kits will be made available in the following locations:

- Adjacent to all fuel storage and refuelling areas.
- All mobile plant.
- All static plant with oil or fuel requirements.

11.4.4 When work is being undertaken in hydrologically and ecologically sensitive areas identified by the ECoW or other environmental specialist, spill kits will be available adjacent to the works (i.e. carried in site vehicles).

11.4.5 Spill kits must be contained in a suitable, labelled, weather-proof receptacle which can also be used to contain and transport contaminated spoil and absorbent materials (e.g. plastic bin or sturdy bag). Additional equipment for sensitive locations may include:

- Plugging clay and slab.
- Absorbent cushions.
- Booms.

11.4.6 The Project Manager or nominated representative is responsible for ensuring that spill kits are checked at least weekly and kept fully stocked and in good repair.

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## ES Part I Appendix I3

**Extra MSA Group**

# **M62 J11 Warrington Services**

## **Need and Alternative Sites Assessment**

Revision 05 August 2019



## Revision Record

Revision Reference	Date of Revision	Nature of Revision	Author	Checked By
04	02/08/2019	Update	DR	DR
05	08/08/2019	Update	KG	DR

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## Appendices

- 1. Counsel’s written opinion on Highway Need**
- 2. Email from Highways England confirming gapping**

# I. Introduction

I.1. A need has been identified to provide an additional Motorway Service Area (MSA) on the M6 / M62 / M60 corridors of the Strategic Road Network in the North West of England. Spawforths in conjunction with i-Transport are instructed on behalf of Extra MSA Group to undertake a Need and Alternative Sites Assessment in order to identify the most appropriate location upon which to locate a new MSA to meet the identified need.

## Structure of the Report

- Section 2** Outlines the key national transport policy context relating to the Strategic Road Network and the provision of roadside facilities on motorways in England. This includes national spacing requirements between MSAs.
- Section 3** Considers the need to provide a new MSA on the Strategic Road Network having regard to the policy context set out in Section 2.
- Section 4** Considers general locations on the Strategic Road Network where the identified need could best be met. It demonstrates that there are four “gaps” in provision that amount to a need for a new MSA. This section identifies an area of search for the Alternative Sites Assessment to meet the full need i.e. all four “gaps”.
- Section 5** Discusses potential On-line and Off-line (Junction) locations within the area identified to meet all four “gaps” having regard to the requirements of National Policy Guidance.
- Section 6** Considers whether there are any suitable On-line locations within the identified area of search where a new MSA could be accommodated.
- Section 7** Considers whether there are any suitable Off-line locations within the identified area of search where a new MSA could be accommodated.
- Section 8** Sets out the high level Alternative Sites Assessment that has been undertaken. This section considers the characteristics and potential of a number of alternative sites to accommodate a new MSA and identifies the most sequentially preferable location upon which to site such a facility having regard to locational, planning, engineering and environmental constraints.
- Section 9** Summarises the findings of the report and concludes the assessment.

## 2. Background and Policy Context

- 2.1. The Strategic Road Network plays a key role in the safe and efficient movement of goods, supplies and people around the United Kingdom; it is critical to the performance of the economy and is essential in helping to facilitate planned economic growth.
- 2.2. This is confirmed by a Department for Transport report 'Action for Roads: A Network for the 21st Century' (July 2013) which states that *'The road network is vital to our nation and a crucial part of the national transport system. It provides real and direct economic benefits: to business, to workers, to consumers. Better connections support individual towns and cities and strengthen the country as a whole. Failures of the road network increase costs, stifle employment opportunities and make it harder to do business in the UK'*<sup>1</sup>.
- 2.3. The need to keep the Strategic Road Network flowing, supporting economic connectivity and mitigating the cost of delay is fundamental to national economic performance. The impact and costs of delays resulting from accidents on the Strategic Road Network can be significant and widespread. The Government estimates that the economic impact of a three lane carriageway closure on a busy motorway can be more than £500,000<sup>2</sup>. The social impact of accidents on the Strategic Road Network is also substantial and by 2020, Highways England has a target to reduce the number of people killed or seriously injured on the network by 40%<sup>3</sup>.
- 2.4. Driver fatigue is a recognised cause of road accidents and it is estimated that 20% of accidents on the Strategic Road Network are fatigue related. Rule 91 of the Highway Code advises that in order to minimise risks, journeys should be planned to incorporate sufficient breaks. The Rule advises that the most effective ways to counter tiredness are to stop in a safe place, drink caffeinated coffee and take a short nap. Government advice is that motorists should stop and take a break of at least 15 minutes every two hours. Drivers of many commercial and public

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<sup>1</sup> Paragraph 1, page 5.

<sup>2</sup> Paragraph 1.4, Review of Investigation and Closure Procedures for Motorway Incidents – Preliminary Report (May 2011). Department for Transport, Highways Agency, Association of Chief Police Officers and the Home Office.

<sup>3</sup> Page 4 Highways England Delivery Plan 2015 – 2020, (March 2015) Highways England

service vehicles are also subject to a regime of statutory breaks and other vehicle time restrictions.

- 2.5. The UK's network of Motorway Service Areas therefore perform an essential road safety function in ensuring the safety and welfare of drivers and their passengers and they underpin the safe and efficient operation of the M6, M62 and M60 in the North West of England and other Motorways throughout the country. MSAs create opportunities and facilities for motorists and commercial drivers and their passengers to take breaks, refresh and relax in safe and convenient locations on the Strategic Road Network.

### **Establishing the 'Need' case – Policy Test**

#### Department for Transport (DfT) Circular 02/2013

- 2.6. Government Policy relating to the Strategic Road Network is contained within Department for Transport (DfT) Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'.
- 2.7. Paragraph 8 of this document states that a well-functioning Strategic Road Network enables growth by providing for safe and reliable journeys. Paragraph 7 also reaffirms that the Strategic Road Network plays a key role in enabling and sustaining economic prosperity and productivity, whilst also helping to support environmental and social aims and contributing to wider sustainability objectives and improved accessibility to key economic and social services.
- 2.8. Annex B specifically relates to roadside facilities for road users on motorways in England and sets out policy on the provision, standards and signage of roadside facilities on the Strategic Road Network. The Circular confirms that all such proposals will be considered in the context of the National Planning Policy Framework (NPPF 2019) and, in particular, the statement that it includes within paragraph 104 footnote 42, regarding the primary function of roadside facilities being to support the safety and welfare of the road user.
- 2.9. Although MSAs are privately owned and operated, they exist primarily to meet a **public safety need** on the Strategic Road Network, the need being to provide facilities which support the safety and welfare of the travelling public. The absence of such facilities in areas where there is a need places the safety and welfare of the travelling public at risk and increases the chances of accidents. Some 20% of all major accidents are fatigue related and the provision of properly gapped MSAs does significantly assist in reducing fatigue related accidents.

2.10. In line with paragraph 104 (e) of the National Planning Policy Framework (NPPF 2019), it is clear that the purpose of an MSA is to ensure the safety of drivers on the Strategic Road Network. This point is reinforced in Annex B of the Circular, which states at paragraph B4:

*“Motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Government advice is that motorists should stop and take a break of at least 15 minutes every 2 hours. Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements.”*

2.11. **Highways England’s objective and clear recommendation set out at paragraphs B5 and B6 is that the maximum distance between motorway services areas should be no more than 28 miles which is typically 30 minutes travelling time.** This distance can also be shorter, subject to compliance with the design requirements of the Design Manual for Roads and Bridges. This requirement or “need”, to ensure driver safety through the provision of an MSA at maximum intervals of 30 minutes leads directly to the recommendation of the Highways Agency that there should not be a gap of more than 28 miles between MSAs. Paragraph B6 is set out below in full:

*“The Highways Agency therefore recommends that the maximum distance between motorway service areas should be no more than 28 miles. The distance between services can be shorter, but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation” (emphasis added).*

2.12. In order to meet the Government’s objective of ensuring the safety and welfare of road users, there is a need to provide an MSA on those stretches of the Strategic Road Network where there is an existing gap between MSAs of more than 28 miles. Paragraph B8 confirms that in determining applications for new MSAs, Local Planning Authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their own specific merits. Paragraph B8 is set out in full below:

*“The distances set out above are considered appropriate for to (sic) all parts of the strategic road network and to be in the interests of and for the benefit of all road users regardless of traffic flows or choice. In determining applications for new or improved sites, local planning authorities should not need to consider the merits of the spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their specific planning merits.”*

- 2.13. The Circular does not include provision for traffic flows to form part of a weighting process to evaluate the importance of a gap. **A gap either exists or it does not; flows and route choices are irrelevant.**

National Planning Policy Framework (NPPF 2019)

- 2.14. The National Planning Policy Framework (NPPF 2019) sets out the Government’s planning policies for England and how these should be applied. The NPPF (2019) is a material consideration in planning decisions (paragraph 2) but it also notes that *“other statements of government policy may be material when preparing plans or deciding applications”* (paragraph 6). The main purpose of the planning system is to contribute to the achievement of sustainable development. Achieving sustainable development means that the planning system has three overarching objectives, economic, social and environmental:

*“**an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*

***an social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and*

***an environmental objective** – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve*

*biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”*

- 2.15. Paragraph 82 of the NPPF (2019) relates to “building a strong, competitive economy”. It notes that that planning decisions should “*recognise and address the specific locational requirements of different sectors*”.
- 2.16. In relation to “promoting sustainable transport”, Paragraph 102 requires that “*transport issues should be considered from the earliest stages of development proposals*”, including the environmental impacts of traffic and transport infrastructure, and opportunities to promote walking, cycling and public transport use. Paragraph 103 notes that “*significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes*”.
- 2.17. The NPPF (2019) states in paragraph 104(e) that “*Planning policies should:-*
- e) Provide for any large-scale transport facilities that need to be located in the area (42), and the infrastructure and wider development required to support their operation, expansion, and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a national significant infrastructure project and any relevant national policy standards*”.
- 2.18. Footnote 42 states that “*Policies for large scale facilities should, where necessary, be developed through collaboration between strategic policy-making authorities and other relevant bodies. Examples of such facilities include ports, airports, interchanges for rail freight, public transport projects and roadside services. The primary function of roadside services should be to support the safety and welfare of the road user (and most such proposals are unlikely to be national significant infrastructure projects)*”.
- 2.19. Paragraph 107 requires that planning decisions “*should recognise the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance*”.
- 2.20. **It is clear that within the NPPF (2019), the starting point for the consideration of an MSA is paragraph 104(e) footnote 42 which provides that “The primary function of roadside services should be to support the safety and welfare of the road user” and that this point is reinforced in Annex B of Circular 02/2013. The Circular guidance is**

a material consideration in the determination of MSA applications by virtue of paragraph 6 of the NPPF (2019): “*other statements of government policy may be material when preparing plans or deciding applications*”. In establishing the need for an MSA above, it is also clear that such an MSA should contribute towards sustainable development (paragraph 7) but that planning decisions should recognise the “specific locational requirements” of sectors such as MSA (paragraph 82); and that operational issues such as lorry parking are also important (paragraph 107).

#### Leading Counsel Opinion

- 2.21. Extra MSA Group has obtained Leading Counsel’s Opinion on the interpretation of need based on the NPPF (2019) and Circular 02/2013. Counsel advised (14<sup>th</sup> May 2019 – paragraph 11) that “*The 2013 Circular was a deliberate departure from previous policy in that the Government decided to make clear that once a gap of more than 28 miles has been identified, the need for an MSA will be established (i.e. the absence of an MSA in such a situation frustrates the Government’s objective of supporting the safety and welfare of the road user). The local planning authority in such a situation should not concern itself with the merits of spacing beyond asking itself whether (a) the proposed MSA will help ensure that the maximum distance of 28 miles is not breached, and (b) that the new facility will not breach the requirements set out in the Design Manual for Roads and Bridges. **For the purposes of applying the policy on “need” as set out in the Circular, it is not permissible to take a graduated approach to need by reference to the number of drivers using a particular stretch of the strategic road network or any other considerations such as route choice or the nature of the journeys. The existence of the requisite gap is conclusive evidence of need, and in the particular circumstances of this case it removes any necessity to debate how many drivers will choose a particular route (for example M6 South – M62 East, in preference to any other route.**” A copy of the full advice is included in Appendix I.*

#### Highways England: The Strategic Road Network Planning for the Future (September 2015)

- 2.22. The Highways England: The Strategic Road Network: Planning for the Future (September 2015) document confirms the approach that Highways England takes to engaging in the planning system in relation to the whole Strategic Road Network, comprising of motorways and all-purpose trunk roads in England. It confirms that the Document is written in the context of the NPPF and Circular 02/2013. The Document confirms that “*the Strategic Road Network (SRN) is arguably the biggest and single most important piece of infrastructure in the country and is*

*the core of our national transport system*". It also confirms that **"operating an effective and efficient SRN makes a significant contribution to the delivery of sustainable economic growth. Efficient and reliable connections enhance the UK's image and reputation as a good place to invest. By enabling the efficient movement of people and goods the SRN helps create the conditions for growth through enabling businesses to:-**

- **Access the skills and ideas they need to perform and grow;**
- **Access their suppliers and control their costs;**
- **Serve the customers and reach out to new markets; and**
- **Create effective collaborations and partnerships.**

**The SRN is therefore essential to the growth, well-being and balance of the county's economy"**.

- 2.23. The Document has a section relating to *"Roadside facilities, including Motorway Service Areas"*. It confirms that *"new and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation, which together set the framework within which local planning authorities should consider the planning proposals for such developments"*. As confirmed earlier, this legislation and regulation relates to the NPPF and Circular 02/2013 (as well as the Town and Country Planning Development Management (Procedure) Order (England) 2015). In light of the above the Highways England 2015 Document supports the importance of public safety considerations and the contribution of the SRN to the national economy and re-affirms the role and relevance of both the NPPF and Circular 02/2013.

### 3. Establishing the ‘Need’ for a New MSA

3.1. Section 2 has set out the key National Transport Policy context relating to the Strategic Road Network and the provision of roadside facilities on Motorways in England, including national spacing requirements between MSAs. This Section will now consider the need to provide a new MSA on the M6 / M62 / M60 corridors of the Strategic Road Network in the North West of England having regard to this context.

3.2. **The Highways Agency produced a national report in January 2010 titled: “Spatial Planning Framework Review of Strategic Road Network Service Areas”.** The 2010 Study was commissioned to assess the provision of service areas on the Strategic Road Network in England (paragraph 1.1). The purpose of the Study was to “*encapsulate the results of the MSA study which provides a gap study of those MSAs located in each region*”. Paragraph 1.3 confirmed that this Study comprised the following:--

*“Identification of the location of MSAs along the Motorway Network;*

*Determination of the separation of MSAs;*

*Identification of any gaps in provision; and*

*Recommendations to address provision issues along the Motorway Network”.*

3.3. It is recognised that this Study pre-dated Circular 02/2013 as it used a requirement of 40 miles or greater to identify a “gap”. This distance has now been superseded by the Circular 02/2013 requirement that “*the maximum distance between motorway service areas should be no more than 28 miles*”. The conclusions of the 2010 Study can therefore be considered extremely robust as the maximum size of the gap has subsequently been reduced.

3.4. In the North West, the 2010 Study set out in Table 4.2 a Matrix Displaying MSA Separation in the North West:

**Table 4.2: Matrix Displaying MSA Separation in the North West**

Motorway Service Area	Government Office Region	Birch	Blackburn with Darwen	Bolton West	Burton in Kendal NB	Burtonwood	Charnock Richard	Chester	Gretna (A74(M) Scotland)	Hartshead Moor	Killington Lake SB	Knutsford	Lancaster (Forton)	Lymm	Sandbach	Southwaite	Tebay	Terminus of A627(M) (Oldham)	Terminus of M53 (Chester)	Terminus of M53 (Wallasey)	Terminus of M55 (Blackpool)	Terminus of M56 (Chester)	Terminus of M57/M58 (Switch Island)	Terminus of M602 (M'cr City Centre)	Terminus of M65 (Colne)	Terminus of M67 (Mottram & Hyde)	Todhills	Truckhaven (Camforth)
Birch	North West	#		17		22	35	39		24				25				6					39	13	28	17		
Blackburn with Darwen	North West		#	16			15						25								26			32	18	35		
Bolton West	North West	17	16	#			16						28								28			18		30		
Burton-in-Kendal (Northbound O	North West				#												22											
Burtonwood	North West	22				#	20							10									18	16		34		
Charnock Richard	North West	35	15	16		20	#						25	23							26		19	30		48		
Chester	North West	39						#				20		14					6	20		6						
Gretna (A74(M) Scotland)	Scotland								#																		6	
Hartshead Moor	Yorkshire and North East	24								#								22										
Killington Lake (Southbound On	North West										#		26															15
Knutsford	North West							20				#		7	14													
Lancaster (Forton)	North West		25	28			25				26		#															13
Lymm	North West	25				10	23	14				7		#												26		
Sandbach	North West											14			#													
Southwaite	North West															#	27											12
Tebay	North West																27	#										
Terminus of A627(M) (Oldham)	North West	6									22							#										
Terminus of M53 (Chester)	North West							6											#	22								
Terminus of M53 (Wallasey)	North West							20											22	#								
Terminus of M55 (Blackpool)	North West		26	28			26						28									#						
Terminus of M56 (Chester)	North West							8														#						
Terminus of M57/M58 (Switch Island)	North West	39				18	19																#	35		52		
Terminus of M602 (M'cr City Centre)	North West	13	32	18		16	30																35	#	38	26		
Terminus of M65 (Colne)	North West	28	18																					38	#			
Terminus of M67 (Mottram & Hyde)	North West	17	35	30		34	48							26									52	26		#		
Todhills	North West								6								12										#	
Truckhaven (Camforth)	North West				5						15		12															#

# Motorway Service Station Gap Analysis National Overview - Distance between MSA's



Key	
	<b>GO Regions</b> Areas
	A-Roads
	<b>National MSA's</b>
<b>MSA Gaps</b> Number of Routes > 40 miles separation	
	0
	1-10
	10-20
	20+

Figure 4.1

- 3.5. **Paragraph 5.4 of the Study confirmed that “in the North West, Charnock Richard and the terminus of the M58 to the terminus of the M67 are both routes further than 40 miles long with no MSA provision. There are a further nine routes above the 28 miles threshold”.**
- 3.6. Since the 2010 Study was published no new MSA provision has been delivered to meet any of these gaps in the North West region and hence the public safety need identified in 2010 has not been met. As has been noted in Section 2, Circular Guidance 02/2013 has been produced since the 2010 Study which has reduced the maximum gap requirement from 40 miles to 28 miles and hence the “further nine routes above the 28 mile threshold” identified within the 2010 Study now also display a public safety need that must be met.
- 3.7. The M6 / M62 / M60 Motorways are amongst the busiest and most important in the UK. The M62 has daily traffic flows of circa 115,000 vehicles in the vicinity of Junction 11 (24 hours AADT 2016). It is the west – east trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and it also connects the two City Regions of Liverpool and Manchester. The area around Greater Manchester, Warrington and St Helens accommodates a convergence of other significant Motorway and major road networks (M6 / M58 / M60 / M62) that also make connections from the east to the west; north to south; and to the orbital around Manchester.
- 3.8. There are six existing MSAs located on the Strategic Road Network in and around the North West of England. These are listed in Table I and illustrated on the plan below.

Motorway	MSA	Location
M6	Charnock Richard	On-line between J27 and J28
M62	Birch Services	On-line between J18 and J19
M62	Burtonwood Services	Off line at J8
M61	Rivington Services	On-line between J6 and J8
M6	Knutsford Services	On-line between J18 and J19
M56	Chester Services	Off line at J14

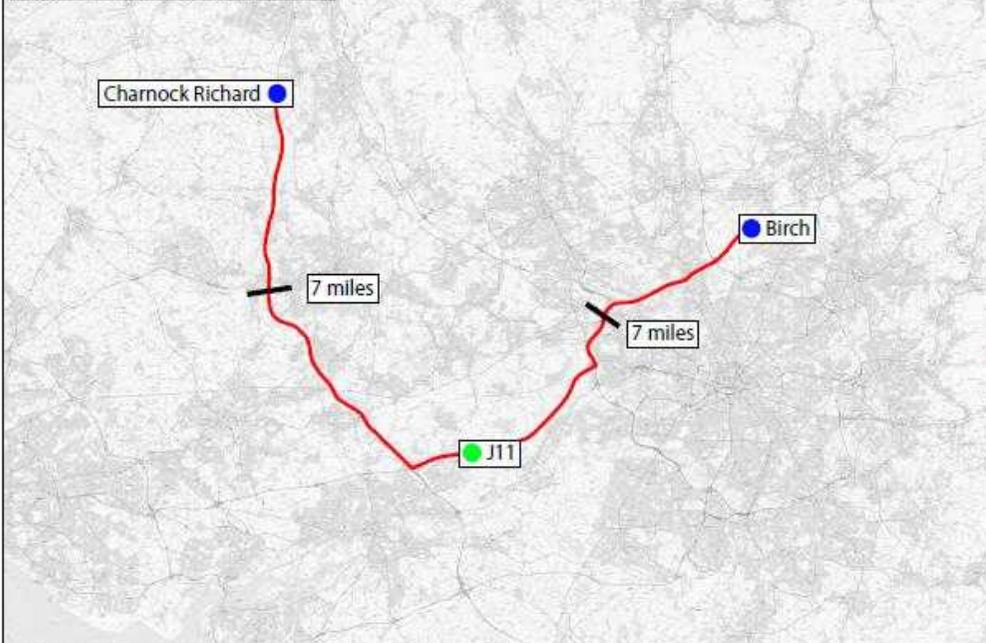
Table 1: Existing MSA locations in and around the North West Region

### Gaps on the Network

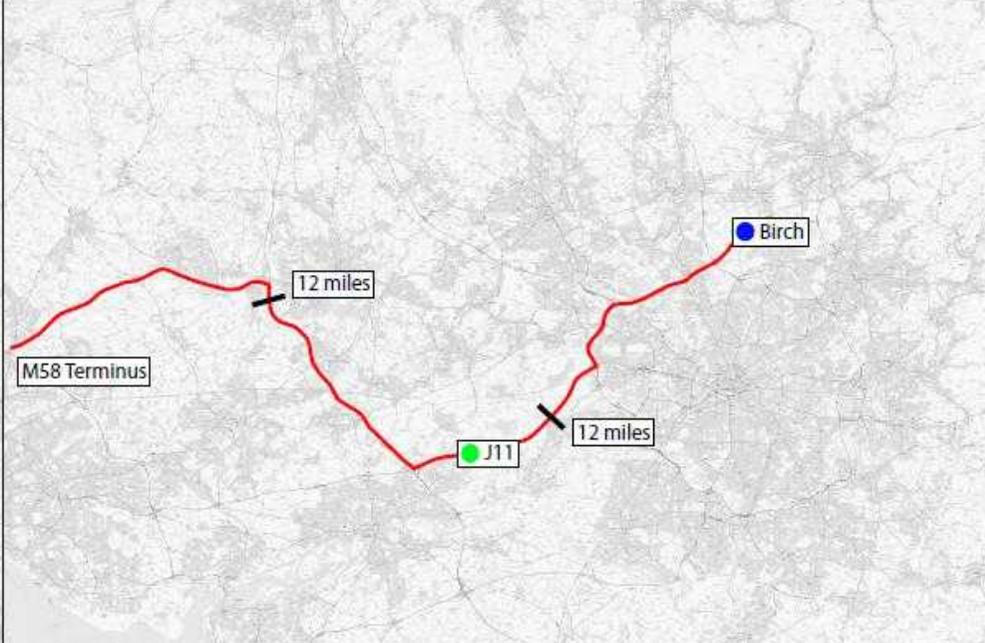
3.9. Based upon the gapping parameters contained within Circular 02/2013, **FOUR** defined policy gaps exist in the provision of MSA facilities on the Strategic Road Network within the North West Region where spacing between existing MSAs is greater than the maximum limit of 28 miles or a maximum travelling time of 30 minutes. These gaps are:

- On the M58/M6/M62/M60/M62 corridor between M58 Terminus (Switch Island) and Birch Services.
- On the M6/M62/M60/M62 corridor between Charnock Richard Services and Birch Services.
- On the M58/M6/M62/M60/M67 corridor between M58 Terminus (Switch Island) and M67 Terminus (Hattersley Roundabout).
- On the M6/M62/M60/M67 corridor between Charnock Richard Services and M67 Terminus (Hattersley Roundabout).

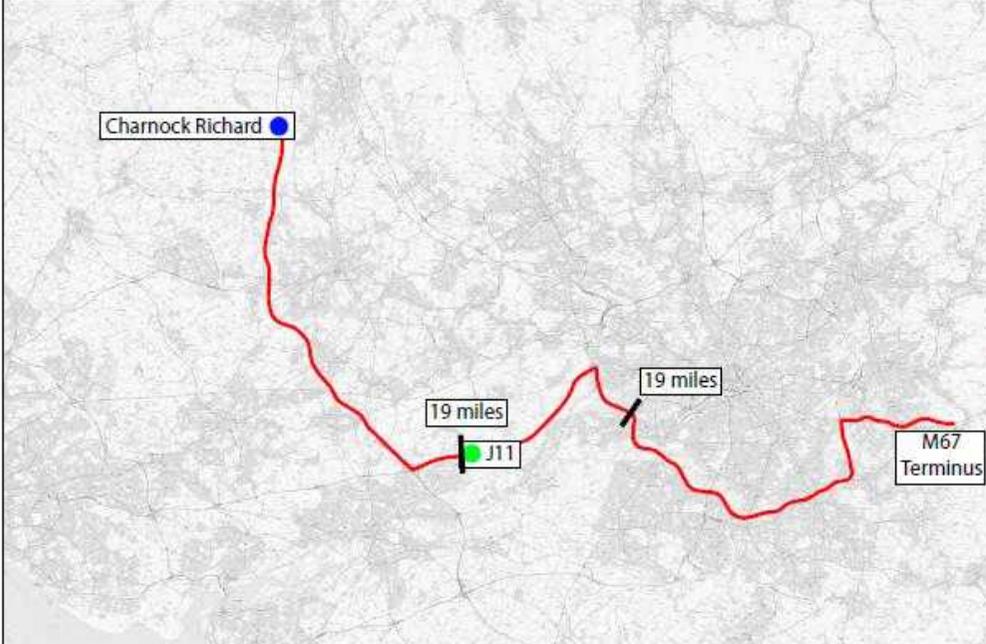
Charnock Richard to Birch : 35 miles



M58 Terminus to Birch : 40 miles



Charnock Richard to M67 Terminus : 47 miles



M58 Terminus to M67 Terminus : 52 miles



Plan 1: Existing MSA Spacing Diagram

3.10. The current distance spacing between the aforementioned MSA facilities is set out in Table 2 below and illustrated on the above plan.

From	To	Current Route	Current Distance
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles

Table 2: Existing gaps of greater than 28 miles between MSAs in the North West Region

3.11. The distances set out above are clearly in excess of the 28 mile maximum distance and importantly the travelling time over these distances is significantly in excess of the 30 minute maximum time set out in Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development'.

3.12. Charnock Richard Services are located on line between Junctions 27 and 28 of the M6. The location of this MSA is relevant to traffic heading south on the M6 as traffic heading south east on the M61 can use the facilities at Rivington services. Traffic from Liverpool on the M62 can use Burtonwood Services at Junction 8. Traffic coming from M58 (Switch Island) or any locations south of Charnock Richard and then heading south on the M6 and then on the M60 / M62 has no provision before Birch Services. Similarly traffic emanating from a similar location and then heading south on the M6, east on the M62 and then south east on the M60 (around Manchester) and along the M67 towards the Pennines to reach the urban areas of Sheffield and Doncaster has no provision right through to the M67 terminus.

3.13. **The gapping between existing MSA facilities on this section of the Strategic Road Network is significantly greater than the maximum 28 mile distance. It is also greater than the 30 minutes travelling time requirement given the often congested nature of the M6, M62 and M60 Motorways passing through the North West Region, as frequently occurs within this area. The needs of motorists, commercial drivers and their passengers are not being adequately met within this area.**

3.14. **Therefore in accordance with Circular 02/2013, there is a need fully supported by Policy, for an additional MSA to serve the identified gapping between:-**

- **M58 Terminus and M62 Birch Services;**
- **M6 Charnock Richard and M62 Birch Services;**
- **M58 Terminus and M67 Terminus; and**
- **M6 Charnock Richard and M67 Terminus.**

3.15. The nature of the specific need within the North West region has been considered by Leading Counsel, instructed by Extra MSA Group. Counsel advised in paragraph 10 that *“It can be seen from the above that the existence of Burtonwood Services and Lymm Services do not address the identified gaps, for the simple reason that some drivers will take a journey whereby despite the existence of these two MSAs they will drive for more than 28 miles (and significantly longer than 30 minutes) before they encounter an MSA. How many such drivers there will be is irrelevant for the purposes of applying the Government policy on need – as paragraph B8 of the Circular makes explicit, once such a gap is shown to exist, it is not necessary to have regard to other considerations in determining whether a need exists (i.e. the existence of the gap is in and of itself conclusive evidence of need for planning purposes.”* A copy of the full advice is included in Appendix 1.

#### **Confirming this Gap**

3.16. As part of their pre application discussions, Extra MSA Group has consulted with Highways England. **Highways England confirmed at this time that based upon current distances between existing MSA facilities, it would have “no objection in principle to the proposed development of a new MSA at M62 J11 (“Warrington Services”) on the grounds of spacing”.** A letter dated 11<sup>th</sup> June 2019 from Julie Prince (Senior Policy

Advisor) at Highways England to Warrington Borough Council confirming this gapping conclusion is enclosed at Appendix 2.

### **Summary**

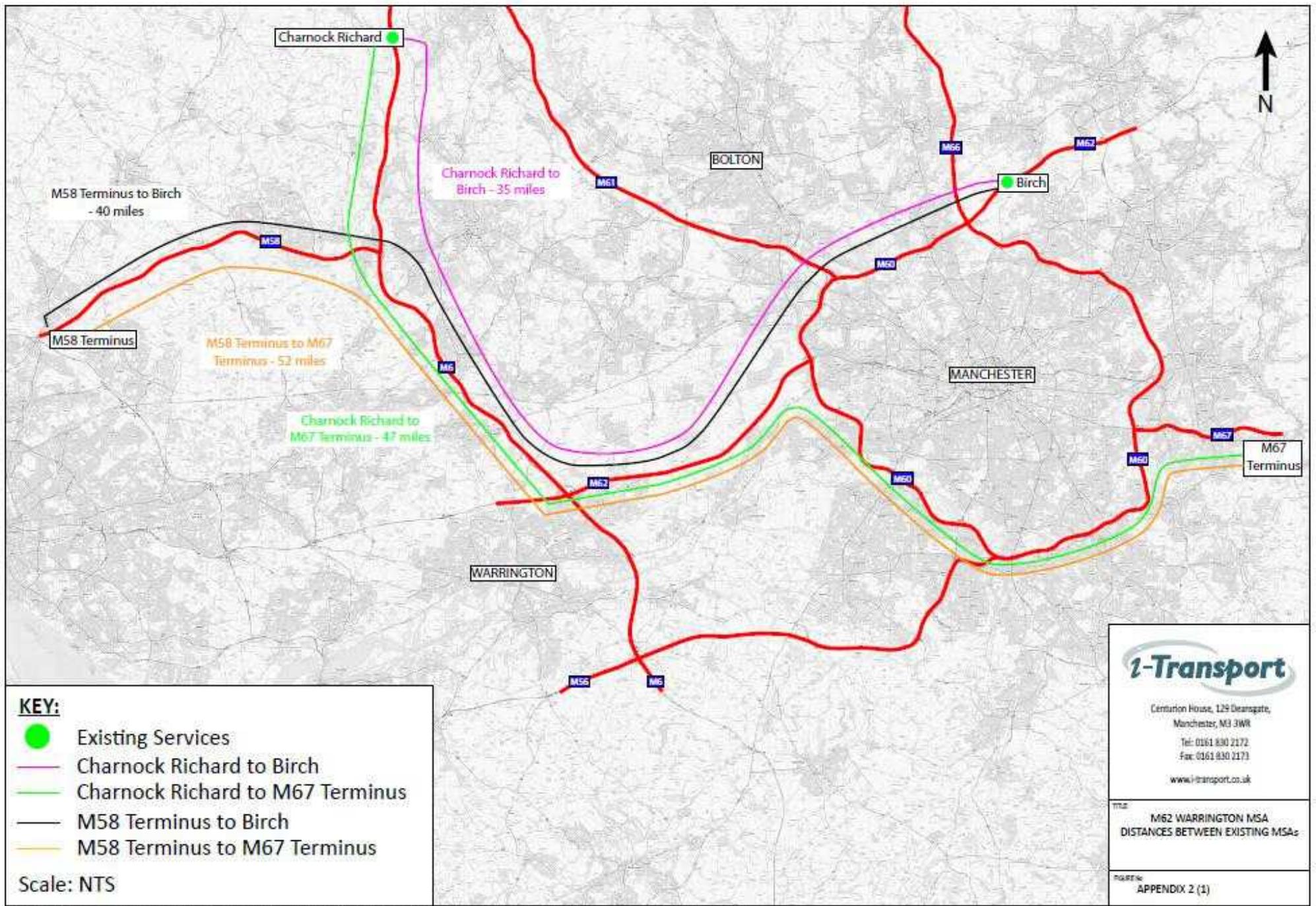
- 3.17. In summary, there is a strategic need fully supported by policy, for a new MSA to serve the identified gapping between M58 Terminus and M62 Birch Services; M6 Charnock Richard and M62 Birch Services; M58 Terminus and M67 Terminus; and M6 Charnock Richard and M67 Terminus. This is based on Government policy in Circular 02/2013 which sets out the maximum acceptable distances between facilities. The need has also been supported as recently as 11<sup>th</sup> June 2019 by Highways England.

## 4. Meeting the Need for a New MSA

- 4.1. Section 3 has explained why a need, fully supported by policy, exists for a new MSA to serve the **FOUR** identified gaps in the North West of England and how despite those gaps being identified in 2010, no new provision has been made to fill these gaps.
- 4.2. The next stage in this assessment is to consider general locations on the Strategic Road Network where the identified need could best be met and identify an area of search to form the basis of the Alternative Sites Assessment.

### Area of Search

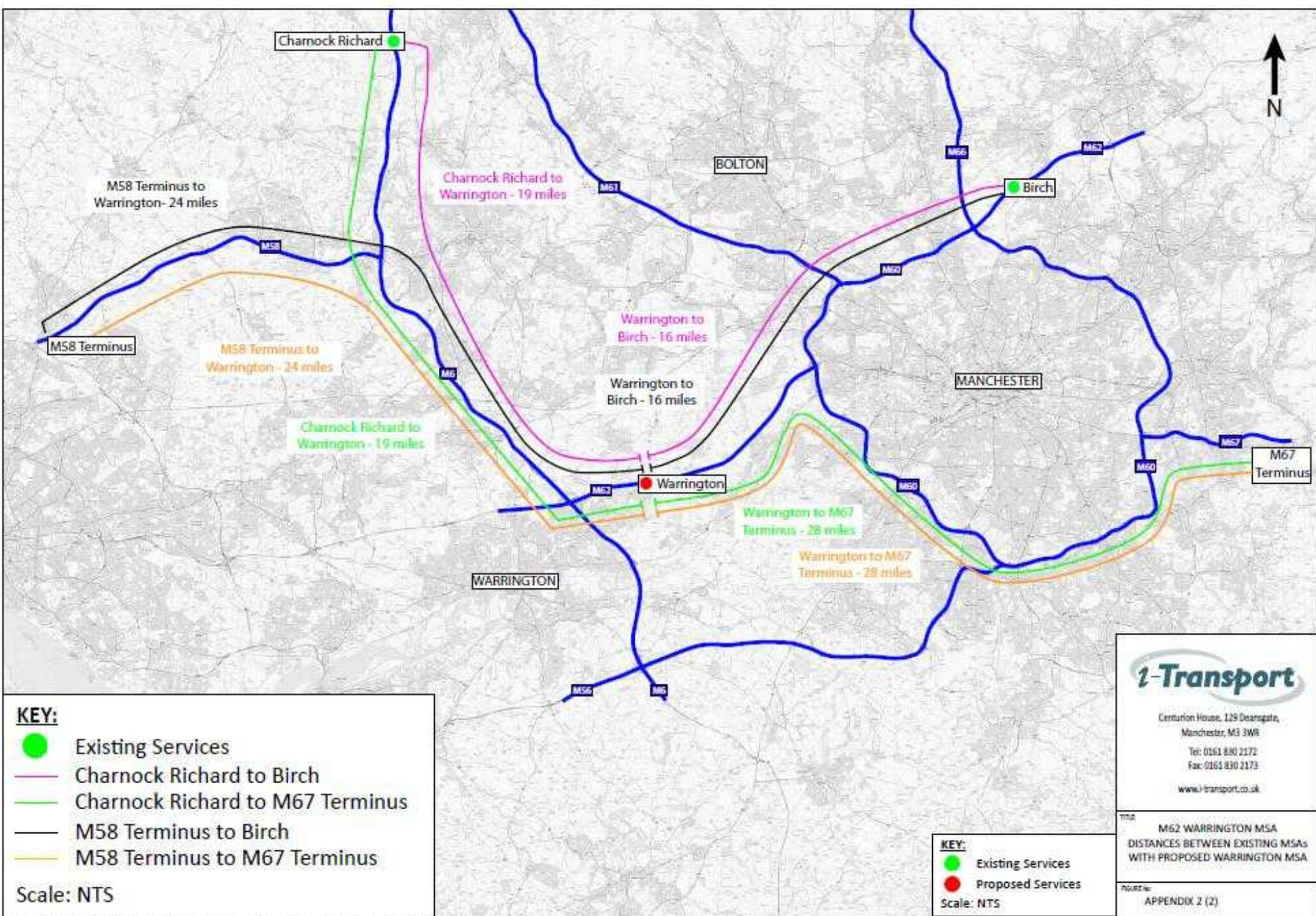
- 4.3. As previously discussed, Circular 02/2013 sets a maximum distance of 28 miles between motorway service areas; this typically translates to a maximum drive time of 30 minutes but on busy and congested sections of the Strategic Road Network, this can be shorter.
- 4.4. The diagram below (Plan 2) illustrates the current gaps between existing MSAs on the Strategic Road Network in this area:



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Plan 2: Distances between Existing MSA

4.5. The diagram below (Plan 3) illustrates that the introduction of a new MSA at either Junction 11 of the M62 or on line to the east of the junction (defined as the Optimal Search Area) would reduce all **FOUR** of the established gaps on the corridors of the Strategic Road Network to policy compliant distances.



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Plan 3: Distances between existing MSA and the Optimal Search Area

4.6. An MSA within the area identified at and to the east of Junction 11 of the M62 would achieve the following:

From	To	Current Route	Current Distance	New Route	Proposed Distance (range)
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles	M58/M6/M62	24 – 28 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles	M6/M62	19 – 23 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles	M62/M60/M62	25 - 28 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles	M62/M60/M67	25 - 28 miles

Table 3. Gap reductions table

4.7. The diagram confirms that **outside** of this Optimal Search Area, all **FOUR** gaps could not be satisfied:-

- MSA provision within the M62 and M6 corridor to the west of the Optimal Search Area could only meet two of the public safety gaps and hence two public safety gaps would still exist (Birch to Charnock Richard and Birch to M58 Terminus);
- MSA provision within the M62 corridor to the east of the Optimal Search Area could also only meet two of the public safety gaps and hence two public safety gaps would still exist (Charnock Richard to M67 Terminus and Charnock Richard to Birch); and

- MSA provision within the M60 corridors north and south of the M62 / M60 interchange could only meet two of the public safety gaps and hence three public safety gaps would still exist (Charnock Richard to M67 Terminus and Charnock Richard to Birch).

4.8. Since the public safety need has been established within the North West area and it equates to **FOUR** clearly defined corridors then it is appropriate to initially consider alternative sites that could meet the full need (i.e. all **FOUR** gaps). This will have the benefits of:-

- Meeting all gaps and hence satisfying the full public safety need;
- Delivering a single MSA to meet this full need that has been established since 2010 and which remains unmet;
- Being located within the key M62 stretch of motorway that links the Liverpool and Manchester conurbations.
- Providing a single MSA to meet all gaps to optimise its viability and deliverability.

4.9. **On this basis, the Alternative Sites Assessment will focus upon the Optimal Search Area and hence other areas within the M62 / M6 corridors to the west; M62 corridor to the east; and the M60 corridor to the north and south of M62 Junction 12 have been excluded from the initial area of search for the purposes of this Alternative Sites Assessment.**

4.10. A high level assessment of these areas (outside of the Optimal Search Area) has been undertaken to ascertain whether an on-line MSA facility could be accommodated with regard to the minimum desirable weaving lengths identified in TD22/06 "Layout of Grade Separated Junctions".

4.11. The high level assessment shows that the whole of M62 corridor to the east of the Optimal Search Area and the M60 corridors north and south of the M62 / M60 interchange fail to meet the minimum weaving length requirements and hence this reconfirms that they should be excluded from any further assessment. It also shows that the whole of the M62 corridor to the west of the Optimal Search Area does not meet the minimum weaving length requirements as does the majority of the M6 corridor other than one short section between Junction 25 and 26. This area has complications with regard to the existing slip-road

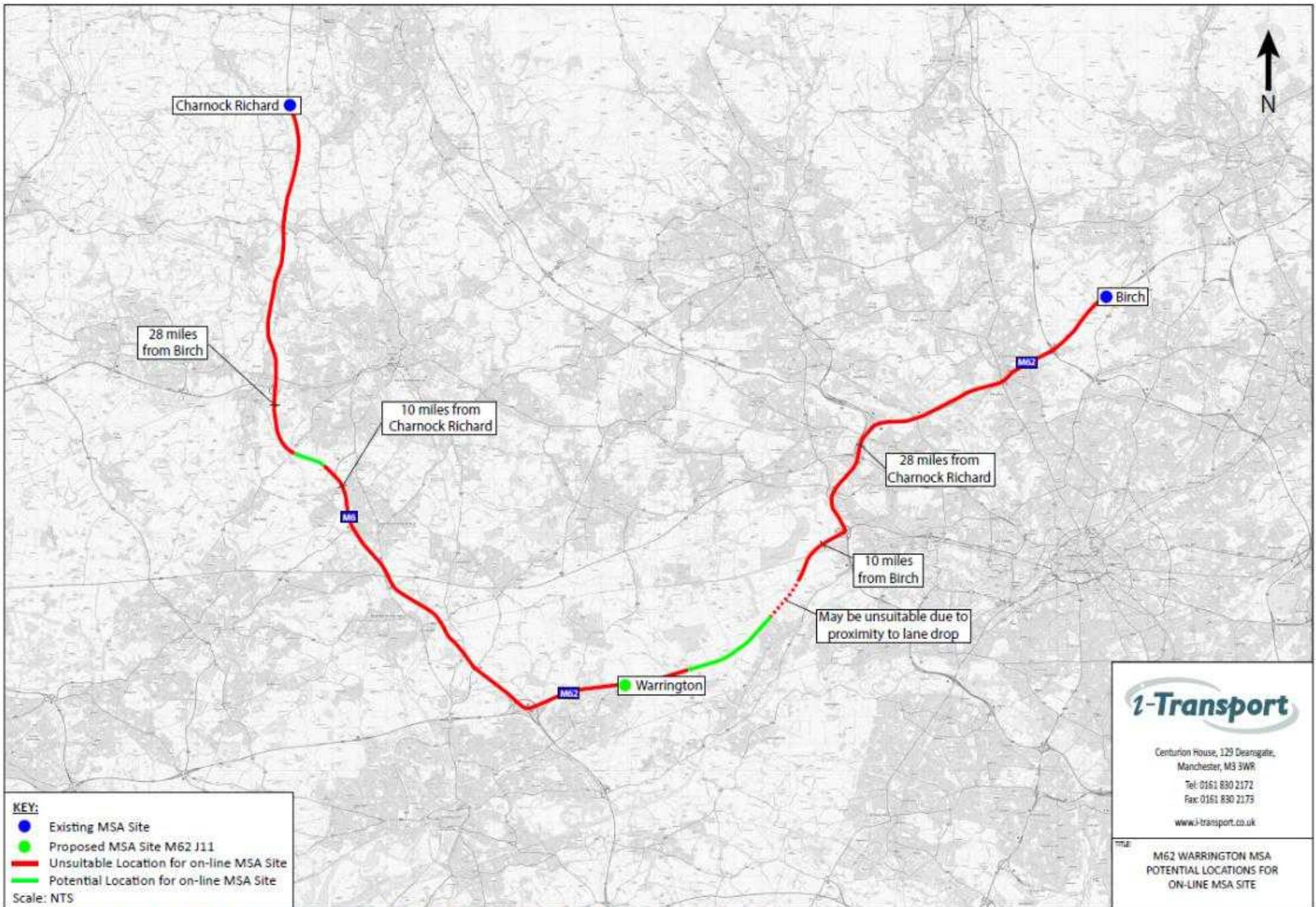
arrangements at Junction 25 and any potential new MSA junction slip-road lengths. Since this is only a very short stretch (3 miles); has potential DMRB complications; and could only meet two of the gaps (leaving two unmet) then this potential on-line opportunity is not taken forward in this Assessment.

4.12. Any potential off-line MSA sites at the M6 / M62 / M60 junctions to the east or west of the Optimal Search Area would be less beneficial than an off-line facility within the Optimal Search Area as they could only accommodate two, one or none of the gaps. For this reason, no potential off-line (Junction) sites outside of the Optimal Search Area have been taken forward in this assessment at this stage. This may be revisited if no suitable site for an off-line (Junction) MSA can be identified within the Optimal Search Area.

4.13. **Following consideration of the above as the means to meet all FOUR gaps, it is determined that it is only possible to meet all FOUR gaps by siting an MSA in the Optimal Search Area identified on the plan below. At present this encompasses the potential for:-**

1. **an on-line location area between Junction 11 and J12 of the M62;**
2. **an off-line location at Junction 11 of the M62 Motorway; and**
3. **The potential for a new Junction 11A off-line facility.**

4.14. **This catchment therefore forms the Optimal Search Area for the purposes of this Alternative Sites Assessment and the appraisal therefore proceeds on this basis.**



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Plan 4: Optimal Search Area Plan

## 5. On-line Vs Off-line (Junction) Sites

- 5.1. In identifying an appropriate location for a new MSA, it is also relevant to consider the requirements of national planning policy guidance having regard to on-line and off-line (Junction) sites. In this respect, Paragraphs B13 – B15 of Circular 02/2013 are of relevance as is the advice within the NPPF (2019).
- 5.2. Circular 02/2013 advises that on-line (between junctions) service areas are considered to be more accessible to road users and as a result are more attractive to and conducive to encouraging drivers to stop and take a break. They also avoid the creation of any increase in traffic demand at existing junctions. Paragraph B14 notes that *“on the assumption that all other factors are equal, the Highways Agency has a preference for new facilities at on-line junction”*. Paragraph B15 notes however that *“where an on-line service area cannot be delivered due to planning, safety, operational or environmental constraints, a site sharing a common boundary with the highway at a junction with the Strategic Road Network is to be preferred to the continued absence of facilities”*. The latter is an off-line facility.
- 5.3. The NPPF (2019) confirms that the primary function of roadside services should be to support the safety and welfare of the road user but it also seeks to promote sustainable transport, and hence it requires that the environmental impacts of traffic and transport infrastructure, and opportunities to promote walking, cycling and public transport use are also important through the location of significant development on locations which are or can be made sustainable, thereby limiting the need to travel and offering a genuine choice of transport modes. In this regard the NPPF (2019) seeks to balance economic, social and environmental considerations to further the objective of sustainable development.
- 5.4. Leading Counsel instructed by Extra MSA Group (14th May 2019 – paragraphs 12 – 14) has considered this issue and concludes as follows:

*“12. Annex B of the Circular at B13 to B15 provides that where competing MSA sites are under construction, the Highways Agency has a preference for on-line locations over off-line locations. It must however be noted that, firstly, this is a “preference” only (i.e. it is not a mandatory requirement that an on-line location must always be selected over an off-line location); and secondly the preference is subject to the very important caveat “on the assumption that all other factors are equal”.*

*“13. All other factors are rarely equal in life, and the sphere of planning is no exception. So, for example, the Circular itself at B15 acknowledges that an on-line facility may simply not be possible because of safety, operational or environmental constraints. We would go further and add that such a facility may be available, but the safety, operational or environmental disbenefits of such a location may outweigh the advantages that flow from being on-line as opposed to off-line, such that the latter location is considered preferable once regard is had to all matters that are relevant to what is ultimately a planning decision”.*

***“14. If there is a choice to be made between on-line and off-line facilities, the planning authority must have regard to all material considerations relevant to that choice, and that will include not only the Highways Agency “preference” (understood subject to the express caveats provided in the Circular itself), but also all of the benefits that a particular off-line location may provide when compared with a particular on-line location. So, for example, on the specific facts of a case, the off-line location may provide the broader sustainability benefits when compared with the only on-line location that is in contention”.***

### **On-line Sites**

- 5.5. As noted above, the Highways Agency (now Highways England) have a preference for on-line locations. Older MSA facilities traditionally provided separate facilities for travellers on either side of the carriageway. However, in order to avoid the duplication of facilities and reduce the amount of land required for development, the majority of recent MSAs provide a Facilities Building and car park on one side of the Motorway with access from both sides of the carriageway.
- 5.6. Consideration should be given with any on-line sites to maximize the opportunity for accessibility by non-car borne modes for staff. Opportunities could include alternative modes of travel for staff (usually accessible from lower order roads / paths / cycleways with restricted access into the on-line MSA) to ensure that all staff movements will not have to be undertaken via the Strategic Road Network.

### **Junction (Off-line) Sites**

- 5.7. The Highways Agency recognise that *'in circumstances where an on-line service area cannot be delivered due to planning, safety, operational or environmental constraints, a site sharing a common boundary with the highway at a junction with the strategic road network is to be preferred to the continued absence of facilities'*.
- 5.8. In considering off-line locations, the impact of any additional traffic using the junction to access an MSA will need to be fully assessed to ensure that the residual cumulative impact on the road network would not be severe. Such locations should also seek to ensure that they maximize the opportunity for non-car borne modes of travel for staff journeys.

### **The Adopted Approach**

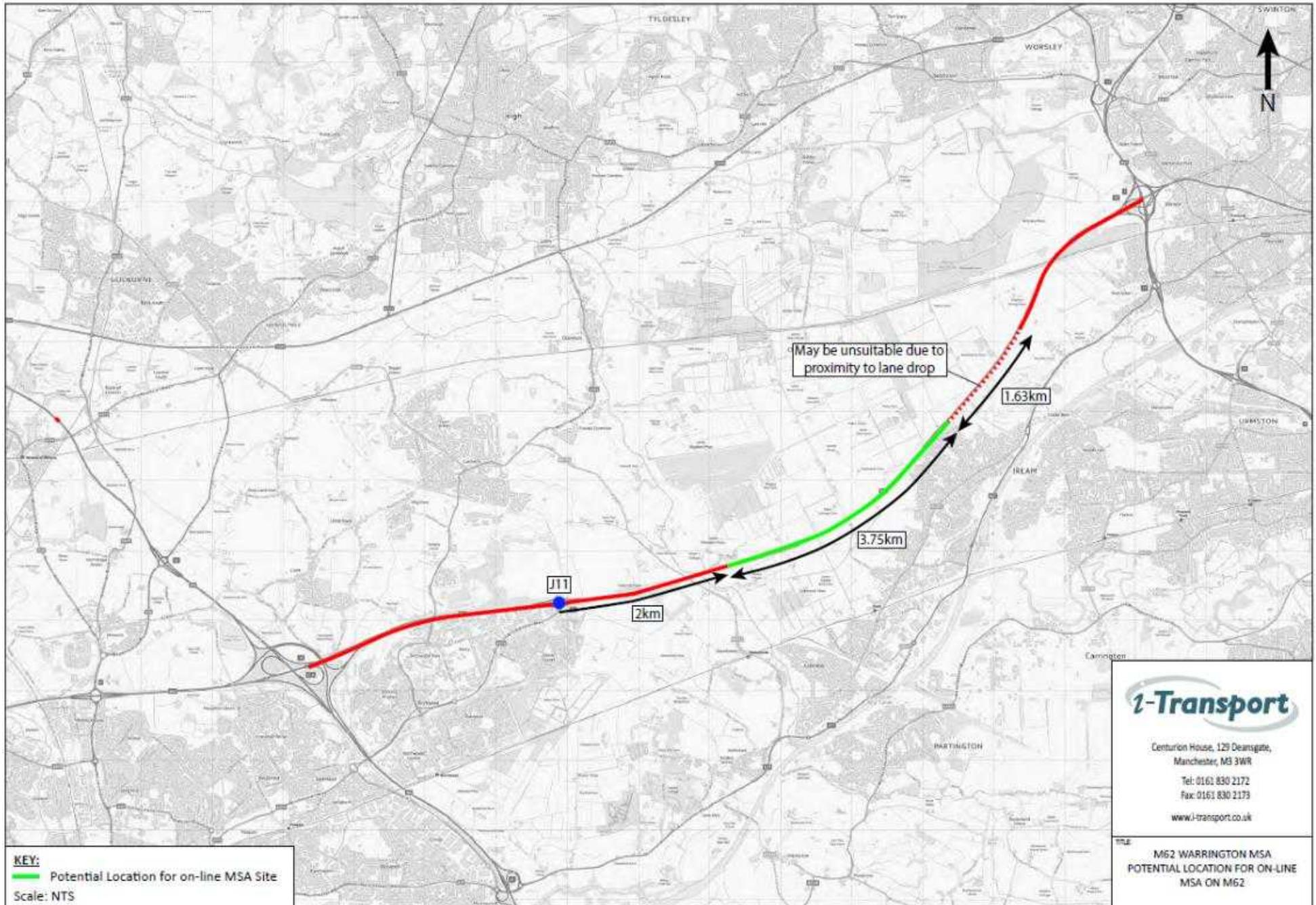
- 5.9. In undertaking this Alternative Sites Assessment, the advantages and constraints of both on-line and off-line (Junction) locations within the Optimal Search Area have been considered in order to robustly identify the most appropriate location in which to site an MSA to meet the acknowledged need. This Assessment has been undertaken within the context of both paragraphs B13 to B15 of Circular 02/2013 which gives preference to on-line locations subject to all other factors being equal, and the requirements of NPPF (2019) in relation to sustainable development principles. This Assessment is set out at Section 8 of this Report.

## 6. Identifying Potential On-Line Sites

- 6.1. This section considers whether there are any suitable on-line locations within the Optimal Search Area identified along the 4 mile (6km) corridor of the M62 Motorway from Junction 11 to 3 miles west of the M62 / M60 junction where a new MSA could be accommodated.

### Safety and Operational Considerations

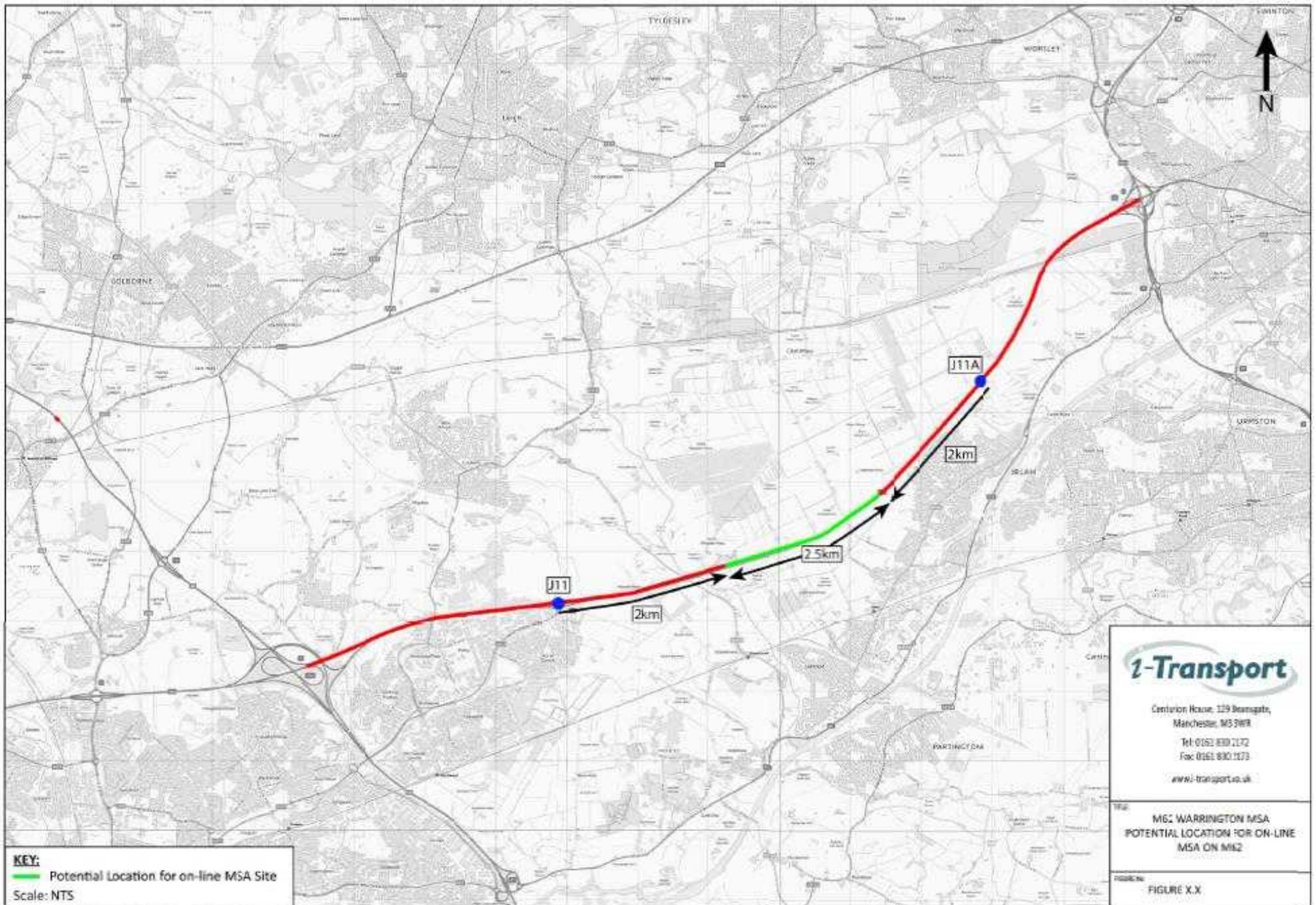
- 6.2. There are a number of safety and operational constraints relating to the Strategic Road Network that need to be met in order for an on-line location to be deemed appropriate to accommodate a new MSA. Locations that do not meet prevailing standards must therefore be excluded from the site search process.
- 6.3. TD22/06 'Layout of Grade Separated Junctions' (DMRB, Volume 6, Section 2, Part 1) recommends minimum desirable weaving lengths of 2km. Where weaving lengths are less than this minimum desirable length then Departures from Standard are needed which has the potential to complicate delivery. In this context, sites which do not meet the minimum desirable weaving lengths have been excluded from further analysis.
- 6.4. There is an area east of Junction 11 of the M62 which can potentially meet the DMRB requirements for a new motorway service area. This area is shown on Plan 5 below



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Plan 5 – On line opportunities within the Optimal Search Area

- 6.5. This area is approximately 4 miles (6.5 km) in extent as noted above. Outside of this area both to the east and west, a potential new motorway service area would not meet the minimum weaving length requirements of Design Manual for Roads and Bridges.
  
- 6.6. This area has however been further refined as shown on Plan 6 to reflect the potential for a new Junction 11A on the M62. The potential for this Junction will be addressed in more detail in the next section but analysis by i-transport has shown that an area of approx. 1.5m (2.5km) of the M62 could accommodate a potential on-line motorway service area even with a new Junction 11A in place.



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Plan 6: On line potential within Optimal Search Area

- 6.7. The area shown on Plan 6 is therefore confirmed as the only area with potential to become an on-line motorway service area within the Optimal Search Area.

### Conclusions

- 6.8. Paragraph B6 of the Circular 02/2013 indicates that the requirements of the Design Manual for Roads and Bridges must be met in respect of junction separation.

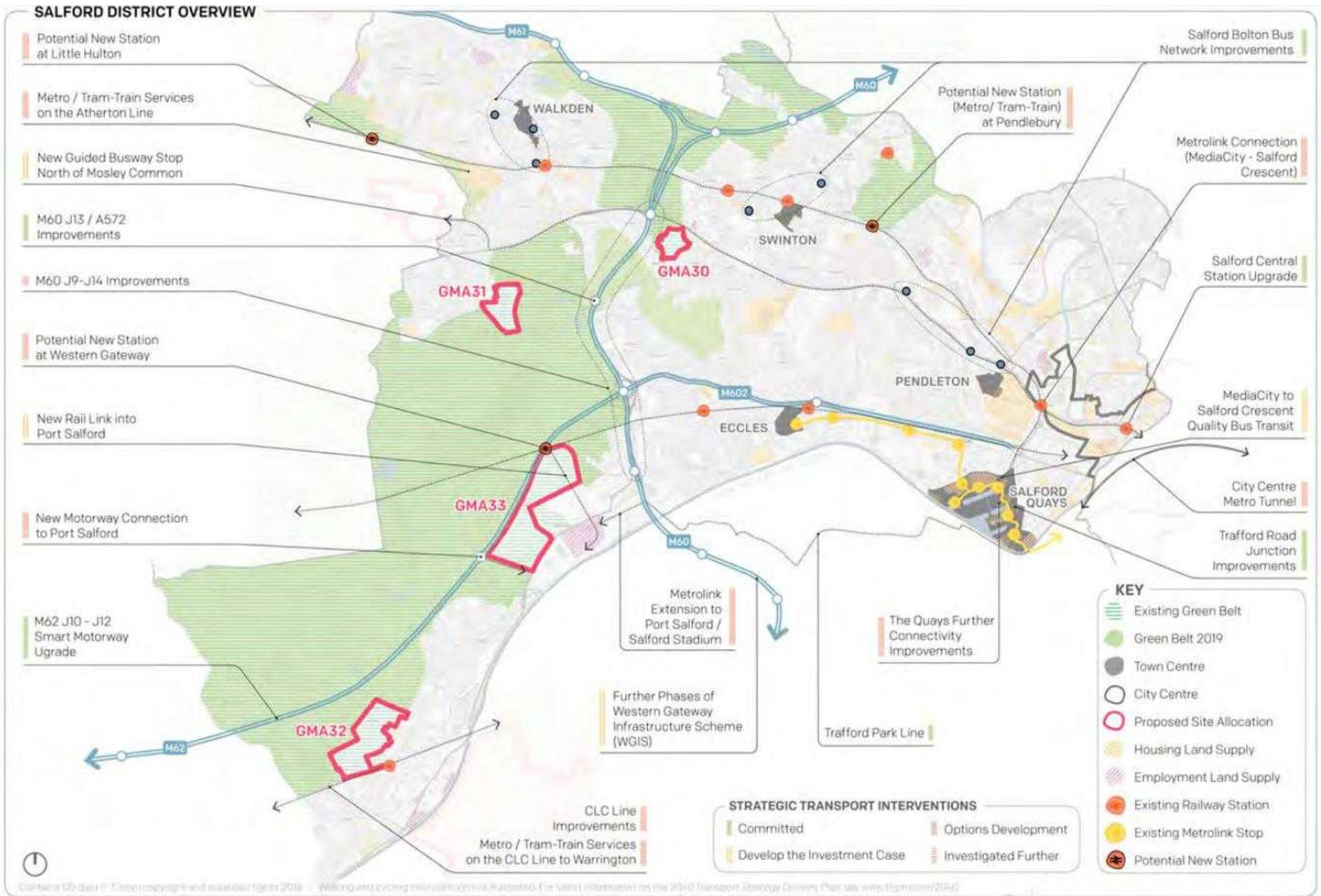
*“The Highways Agency therefore recommends that the maximum distance between motorway service areas should be no more than 28 miles. The distance between services can be shorter, but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation” (emphasis added).*

- 6.9. **The above assessment shows that within the Optimal Search Area, there is a stretch of the M62 that could in principle provide an on-line MSA and still comply with the requirements of the Design Manual for Roads and Bridges which must be met in respect of junction separation.** This is however complicated by the Greater Manchester Spatial Framework (Jan 2019) proposals which identify the potential for a new junction in this location which would change the separation distances between junctions. I-transport have given consideration to this potential new Junction IIA and have refined the potential on-line area of potential further as shown on Plan 6. **This refined area of potential is taken forward for consideration within the Alternative Sites Assessment in Section 8 of this Report. All areas to the east and west of this area do not comply with the requirements of the Design Manual for Roads and Bridges and hence are not taken forward in the Alternative Sites Assessment.**

## **7. Identifying Potential Off-line (Junction) Sites**

- 7.1. Following the consideration of on-line locations in Section 6, this Section now considers whether there are any suitable off-line (Junction) locations within the Optimal Search Area. Within the Optimal Search Area there is only one current junction of the M62 (Junction 11) where a new MSA could be accommodated. Off-line (Junction) locations are defined in Paragraph B15 of Circular 02/2013 as sites that share a common boundary with the highway at a junction with the Strategic Road Network.
- 7.2. The Greater Manchester Spatial Framework (January 2019) however identifies the potential for a new motorway junction on the M62 to the east of Junction 11 to serve Port Salford. We have referred to this as Junction 11A for the purposes of this assessment and identified it on Plan 6 (earlier). Whilst this junction does not currently exist, for completeness, it too is assessed.

Figure 11.8 Illustrative overview of proposals in Salford



## Junction 11

7.3. Junction 11 is an all movements roundabout providing access to the south to the A574 (Birchwood Way), a closed stub access to the north and Silver lane as a fifth arm.

The following four quadrants of land have been identified around Junction 11:

- Land North East of M62 (NE Quadrant)
- Land North West of M62 (NW Quadrant)
- Land South East of M62 (SE Quadrant)
- Land South West of M62 (SW Quadrant)

7.4. **The North East Quadrant** has the benefit of a stub access onto Junction 11 and is agricultural land free from any buildings. It **has therefore been taken forward into the Alternative Sites Assessment in Section 8 of this Report.**

7.5. **The North West Quadrant** also has the benefit of a stub access onto Junction 11. It is a former landfill site that has been restored and is the subject of ongoing aftercare. **It has therefore been taken forward into the Alternative Sites Assessment in Section 8 of this Report.**

7.6. **The South West Quadrant** is fully developed as part of the Birchwood Technology Park and hence it cannot accommodate an MSA. **This SW Quadrant has not been taken forward for further assessment.**

7.7. **The South West Quadrant** is bounded by the Gorse Covet residential area (Inglewood Close) and comprises the Gorse Covet Mounds which are owned and looked after by the Woodland Trust. Whilst the environmental quality of the quadrant and its ownership by the Woodland Trust as well as its recreational use by the public is unlikely to mean that it can be developed as an MSA, **this SE Quadrant has been taken forward for further assessment for completeness.**



## New Junction IIA

7.9. Junction IIA does not currently exist but the potential for a new junction to support Port Salford is being considered as part of the Greater Manchester Spatial Framework (GMSF - Jan 2019). We have made efforts to understand more about the rationale for and nature of this junction from Highways England and also from the Greater Manchester Combined Authority. It is understood that the potential for a new Junction IIA is being promoted by the landowners, Peel Holdings, and Salford Council as a means of enabling development at Port Salford. It is further understood from Highways England that the new junction has no status within their activities and that they have seen nothing more than the schematic representation in the GMSF. They have not had sight of any preliminary feasibility engineering drawings, and hence they have not undertaken any technical consideration of the concept. They indicate that a Transport Study Task Group has been set up to consider the implications of the various GMSF proposals and their implications on the Strategic Road Network. The potential new junction has no funding support from Highways England (HE). The general location of the new junction is shown on the GMSF (Jan 2019) Salford District Overview plan (page 290- extract shown earlier in this Report).

7.10. In light of the above, we consider that a realistic potential process and timeline for delivery of a new Junction at this point is as follows:-

1. Evaluation of need for the new junction to support the Port Salford draft allocation (GMA 33) as part of the GMSF process – 2019 – 2021.
2. Consideration of the benefits of the new Junction as part of the North West Quadrant Study – 2019 – 2021.
3. Confirmation of the justification for the new junction (scheme objectives) – 2021.
4. Outline Business Case; Scheme development; Full Business Case; Design development; Planning Permission / Development Consent Order; consultation; Procurement; Build; Completion and Opening – 2021 – 2028 (based upon experience from Junction 7a of M11)

7.11. The likely cost of such a Junction could be £40 - £50m and at present it has no Highways England funding support. Such funding support could potentially be in the form of Highway

England's Road Investment Scheme (RIS) Programme. The next RIS period runs from 1 April 2020 to 31 March 2025 and finalization of that programme is occurring during 2019. In light of HE's comments on the status of the new Junction scheme it is unlikely to be part of the next RIS package (RIS 2) and hence it would have to seek to be part of RIS 3 which runs from 2025 – 2030. **Whilst it may be possible for this timescale to be accelerated if no public sector funding was sought and design work was pursued at risk, the above would indicate that an appropriate assumption for the completion of a new junction at J11A is likely to be around 2028. It is recognised that this could either be advanced or slipped and hence for the purposes of this Assessment, we consider this Junction potential to be in the medium term (i.e. at least 5 years away).**

7.12. The following three quadrants of land have been identified around Junction 11A:

- Land North of M62 (N Quadrant)
- Land South East of M62 (SE Quadrant)
- Land South West of M62 (SW Quadrant)

7.13. **The Northern Quadrant** is agricultural land with scattered farm buildings. It **has therefore been taken forward into the Alternative Sites Assessment in Section 8 of this Report.**

7.14. **The South East Quadrant** is bounded by the M62 to the north, and Barton aerodrome to the south. It comprises part of the Barton Golf Course. It **has therefore been taken forward into the Alternative Sites Assessment in Section 8 of this Report.**

7.15. **The South West Quadrant** is bounded by the M62 to the north, and residential properties to the south. It comprises part of the Barton Golf Course. It **has therefore been taken forward into the Alternative Sites Assessment in Section 8 of this Report.**



## Conclusions

- 7.16. Access can be gained to/from the Strategic Road Network at Junction 11 of the M62 and this is the only current Junction within the Optimal Study Area. Four sites (Quadrants) have been identified around Junction 11 of the M62 Motorway but the SW Quadrant has been rejected at this stage as incompatible with accommodating an MSA due to it being fully developed. The NE, NW and SE Quadrants have however been taken forward for more detailed consideration in the next stage of the assessment.
- 7.17. The potential for a new junction on the M62 east of Junction 11 (referred herein as Junction 11A) is being considered as part of the Greater Manchester Spatial Framework (GMSF Jan 2019). Whilst it does not currently exist, the N, SE and SW Quadrants have however been taken forward for more detailed consideration in the next stage of the assessment.
- 7.18. These potential sites will be considered in more detail in the following section in order to establish whether they are suitable to accommodate an MSA.

## 8. Alternative Sites Assessment

- 8.1. Section 7 has identified an on-line section of the M62 (east of Junction 11); the NE, NW and SE Quadrants of Junction 11 of the M6 Motorway; and the N, SE and SW Quadrants of a potential new junction 11A on the M62 as potentially being capable of accommodating an MSA to meet the need identified. This Section will now consider the characteristics and potential of these sites to accommodate a new MSA to identify the most sequentially preferable location upon which to site such a facility.

### Assessment Methodology

- 8.2. In order to assess the potential alternative sites, the following four stage methodology has been adopted:

**Stage 1** considers the ability of the identified locations to meet the policy defined need having regard to the maximum distances between MSAs set out in Circular 02/2013.

**Stage 2** considers whether there are any key planning or environmental constraints that could prevent the development of any of these sites unless no other sites are available.

**Stage 3** considers whether there are any other planning, highways, engineering safety, operational or environmental constraints that would preclude development on any of these sites having regard to the list of criteria set out in Circular 02/2013.

**Stage 4** draws together all of the above information and identifies a preferred location for a new MSA to meet the identified policy need. This is the site that best meets the need with the least development constraints.

### Sites to be Assessed

Based upon the analysis undertaken in Sections 6 and 7, the following sites will be considered as part of this assessment:

On-Line Locations:

- Section of the M62 east of Junction 11 (Site 1).

Existing Junction Locations:

- Junction 11 North East Quadrant (Site 2)
- Junction 11 North West Quadrant (Site 3)
- Junction 11 South East Quadrant (Site 4)

Potential new Junction locations:-

- Junction 11A Northern Quadrant (Site 5)
- Junction 11A South East Quadrant (Site 6)
- Junction 11A South West Quadrant (Site 7)

## Alternative Sites Assessment

### Stage 1 – Ability to Meet the Identified Need: Locational Requirements

- 8.3. Circular 02/2013 sets out that MSAs should be located at a maximum distance of 28 miles which can typically be a maximum of 30 minutes travelling time but on busy and congested sections of the Strategic Road Network is often much less. The starting point for this exercise is therefore to establish maximum distances between existing and potential MSAs locations in order to identify whether the potential sites are able to address the policy defined need. This exercise is set out in Table 3 below. Distances that exceed 28 miles are not fully policy compliant as they would not meet all of the identified need.

<b>From</b>	<b>To</b>	<b>Current Route</b>	<b>Current Distance</b>	<b>On-line (Site 1) Proposed Distance</b>	<b>Junction 11 MSA (sites 2, 3 and 4) Proposed Distance</b>	<b>New Junction 11A (sites 5, 6 and 7) Proposed Distances</b>
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles	26 – 28 miles	24 miles	28 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles	21 – 23 miles	19 miles	24 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles	26 – 28 miles	24 miles	28 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles	25 – 27 miles	28 miles	24 miles

*Table 4: Maximum distances between existing MSAs and potential new MSA locations (miles)*

8.4. Upon consideration of the above information, it is concluded that a new MSA in an on-line location within Site 1; an off-line location at Junction 11 (Sites 2, 3 and 4); or an off-line location at a potential new Junction 11A (Sites 5, 6 and 7) would meet the identified policy need to provide a new MSA to serve the North West area. On this basis, no sites have been excluded from Stage 1 of this assessment and all are carried forward for further review at Stage 2.

## Stage 2 – Identifying Potential Sites for Assessment: Key Characteristics

8.5. Paragraph B15 of Circular 02/2013 establishes that planning, safety, operational and environmental constraints are all factors that need to be taken into account when determining whether on-line locations are most suitable to accommodate a new MSA or whether any off-line Junction locations perform better against these requirements. Paragraph 16 of Circular 02/2013 also recognizes the need to promote sustainable transport solutions through Local Plans and paragraphs 28 – 30 confirm that robust travel plans should be prepared to promote the use of sustainable transport modes such as walking, cycling and public transport.

8.6. The following planning and environmental constraints have been identified as potentially **precluding** development on a site unless no other more suitable sites are available:

### Planning:

- Land with an existing use (other than agricultural land).
- Land with planning permission that is committed for alternative development and is likely to come forward.
- Land containing Heritage Asset / Listed Structures or located within the curtilage of a Listed Structure.

### Environmental:

- Sites located within Flood Zone 3.
- Other significant environmental designations e.g. SSSIs.

### Site area:

- Sites of less than 12 ha have also been excluded from the assessment as it is not possible to accommodate an MSA with the necessary facilities on sites of less than this.

8.7. It has been established in Section 6 that there is one potentially suitable on-line location (Site 1) along the M62 corridor within the Optimum Search Area where a new MSA could be

accommodated. Stage 2 of this assessment therefore focuses upon this location. This exercise is therefore set out below.

### Stage 2 Assessment of Potential Site

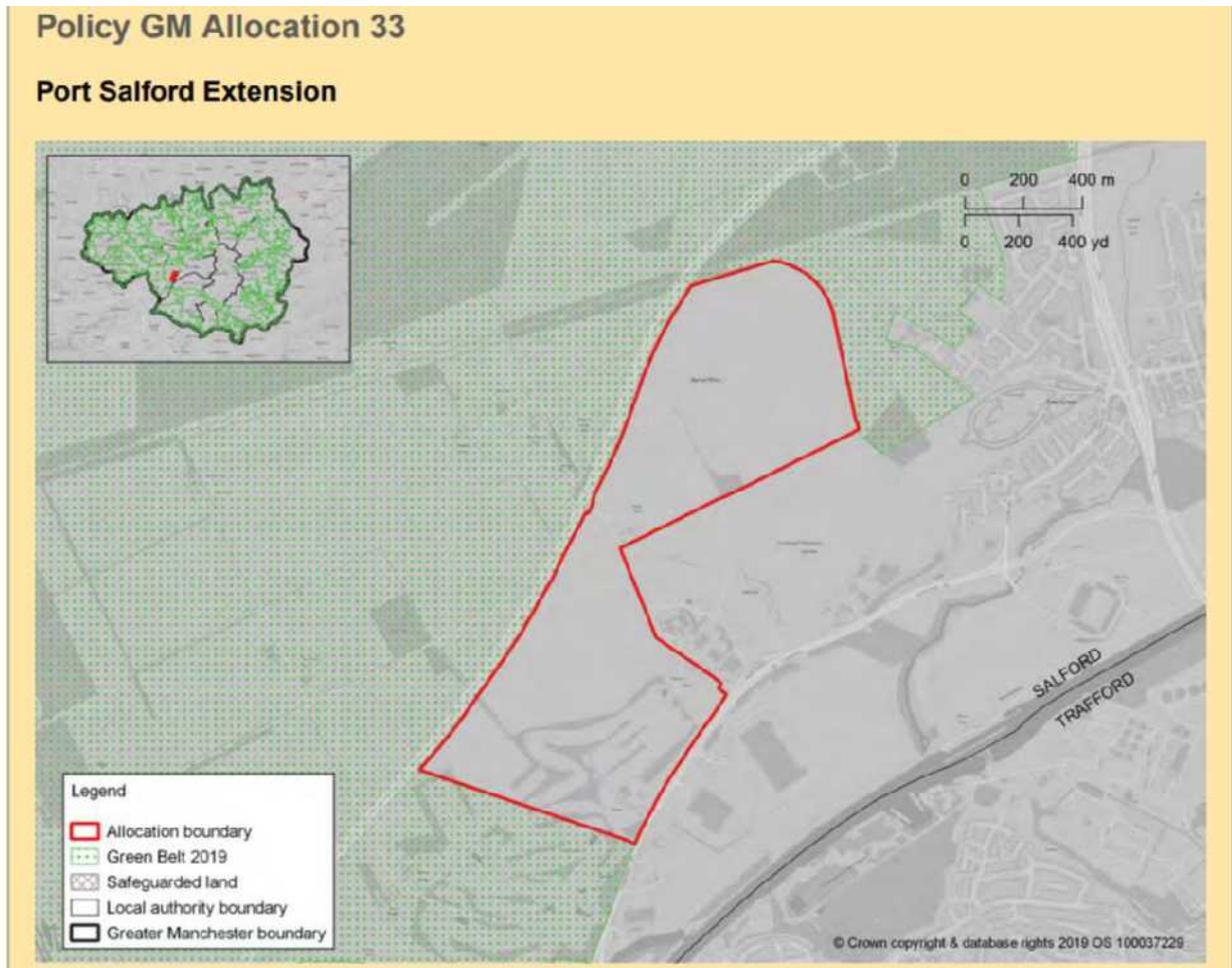
- 8.8. The following paragraphs consider Site 1 against these planning and environmental constraints that have been identified as potentially **precluding** development. This will establish if any areas within Site 1 should be set aside at this stage of the Assessment.

#### Planning: Land with an Existing Use

- 8.9. None of the areas within Site 1 are built out and hence none of the site is therefore unavailable.

#### Planning: Land with a Committed Use

- 8.10. Land within the Southern Quadrant of Site 1 forms part of the draft Greater Manchester Spatial Framework (GMSF Jan 2019) housing allocation (GM Allocation 33) to provide for 1600 new dwellings. On this basis this part of the Site 1 is unlikely to be available to accommodate an MSA. On this basis, this element of land within this Site is excluded at Stage 2 and will not be assessed any further.



### **Planning: Heritage Constraints**

- 8.11. None of Site 1 falls within a Grade II Registered Park and Garden. Grade II Listed Great Woolden Hall and Scheduled Ancient Monument are located approx. 360m to the south of the site across the M62. Grade II Listed Glazebrook Station is located approx. 440m to the west of the site. These are not considered showstoppers at this stage.

### **Environmental: Flood Zone 3**

- 8.12. Site 1 is located within Flood Zone 1.

### **Environmental: Other Significant Environmental Designations e.g. SSSI**

- 8.13. Part of the southern quadrant of Site 1 is within the Holcroft Moss SSSI Impact Risk Zone, approx. 770m to the west but this is not considered to be a showstopper at this stage.

### **Site Area**

- 8.14. Site 1 is of the requisite site area to accommodate an MSA.

### **Stage 2 Assessment Summary**

- 8.15. Site 1 is not currently being promoted as an MSA and hence further assessment is required of its delivery potential. One part of Site 1 is being promoted for an alternative use (residential) and hence it has been discounted, but the remainder of Site 1 will be taken forward for more detailed assessment to ascertain whether it is deliverable to meet the identified need and whether in comparison to any off-line (Junction) sites, it is the most appropriate location to accommodate an MSA.

## **Stage 3 – Alternative Sites Assessment**

- 8.16. Following the Stage 1 and 2 assessments, the following sites have been taken forward for Stage 3 assessment:

#### **On-Line Locations:**

- Section of the M62 east of Junction 11 (Site 1) (reduced site area).

#### **Junction Locations:**

- Junction 11 North East Quadrant (Site 2)
- Junction 11 North West Quadrant (Site 3)

- Junction I I South East Quadrant (Site 4)

Potential new Junction locations:-

- Junction I I A Northern Quadrant (Site 5)
- Junction I I A South East Quadrant (Site 6)
- Junction I I A South West Quadrant (Site 7)

These sites are illustrated on the plan below:



### Assessment Criteria

- 8.17. The Stage 3 assessment will now consider whether there are any planning, highways, engineering safety, operational or environmental constraints that would preclude development on each of these sites having regard to the following criteria set out in Circular 02/2013:

#### Planning Criteria

- Green Belt Status – whether there are any non-Green Belt alternatives to meet the MSA need within the Optimal Search Area. It is essential to establish each site's Development Plan status at an early stage in order to ensure that non-Green Belt sites are prioritised for development before Green Belt sites are considered for development.
- Existing Use – sites that are unavailable or committed for alternative development have been excluded at Stage 2. The existing use of the site is however also an important consideration for Stage 3.
- Planning Policy Position – consideration of the existing and emerging planning policy position can be useful in determining whether land may be considered to be an appropriate development site.
- Impact on Adjacent Uses – consideration needs to be given as to whether an MSA would be compatible with surrounding land uses and whether any sensitive uses need to be taken into account.
- Proximity of Residential Properties – given the 24 hour nature of an MSA, consideration needs to be given to the location of any existing properties in relation to any potential site.
- Impact on Heritage Assets – consideration needs to be given as to whether an MSA would have any significant adverse impact upon any surrounding Listed Buildings or Scheduled Ancient Monuments; albeit recognising that the M62 Motorway will already have a degree of impact upon setting.

- Relevant Planning History – consideration needs to be given as to whether planning permission has already been granted for alternative development upon any of the sites and if so, whether there are reasonable prospects of this development coming forward.
- Minimising the need for car borne travel – consideration needs to be given to whether sites can offer modal choice for staff in terms of public transport, walking or cycling alternatives to the private car or whether staff trips will be made by car which will require local trips being made on the Strategic Road Network.

### **Engineering, Safety and Operational Issues**

- Highways Engineering – the potential of a site to be able to provide an appropriate access to an MSA in highway engineering terms needs to be considered.
- The ability of a site to provide safe access to an MSA is a key consideration. Key considerations include the layout of the junction and connecting roads; capacity on the Road Network; whether safe and suitable access can be achieved at a reasonable cost; the convenience of access / egress; and any impact of additional vehicular movements upon the Road Network.

### **Environmental Considerations**

- Other Environmental Constraints – these include matters such as Flood Zone / Risk; Ecology and Bio-diversity; topography; ground conditions; existing infrastructure; agricultural land grade and any landscape and visual impacts.

8.18. This assessment is intended to provide a high level strategic comparison of sites which can then be used to prioritise suitable locations for a new MSA. Detailed site appraisals and potential layouts have not been produced for each site at this stage and full account has not been taken as to how any impacts could be mitigated although some consideration has been given to these matters where possible.

## On-line Sites

### Site I – Section of M62 East of Junction 11



<b>Planning</b>	<b>Comment</b>
Green Belt Impact	All the land is within the Green Belt within the Salford Unitary Development Plan (UDP). The Green Belt in this location is expansive and generally open in character. Development of an MSA in this location would have an adverse impact upon this openness. In terms of Green Belt purposes, development of the site for an MSA could result in sprawl of the built up area of Caddishead (dependent upon where the MSA was sited); and development will result in encroachment into the countryside. It is not considered that it would result in neighbouring towns merging into one another nor would it affect the setting and special character of historic towns.
Existing Use	The existing uses are predominantly agricultural.
Planning Policy Position	All the land is within the Green Belt within the Salford UDP. It is also subject to policy EN11 in relation to Mosslands. The Revised Draft Salford Local Plan proposes to retain the majority of the Site within the Green Belt (other than the proposed GMSF housing allocation (Allocation 32)).
Impact on Adjacent Uses	The Site is large and there are opportunities to mitigate impact upon residential properties (subject to detailed design).
Proximity of Residential Properties	The northern Quadrant accommodates scattered farm buildings and houses. The southern Quadrant abuts housing to the south and east.
Impact on Heritage Assets	Grade II Listed Great Woolden Hall and Scheduled Ancient Monument are located approx. 250m to the west and Grade II Listed Glazebrook Station is located approx. 440m to the west of the of the southern Quadrant of the Site.
Relevant Planning History	None applicable
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: likely to be achievable with appropriate weaving distances to J11 and J12. Would require some land either side of the M62 and new bridge over mainline to access site (at significant cost).
Highways Safety and Impact on the Road Network	Impacts: Likely to be acceptable following completion of Smart Motorway improvements.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	The Site is within Flood Zone 1.

Other Constraints	The western half of the Site is within Holcroft Moss SSSI Impact Risk Zone, approx. 680 - 770m to the west and Bedford Moss SAC approx. 1.8km to the north (of the northern quadrant).
<b>Conclusion</b>	
<p>Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. Development of an MSA in this location could have a significant adverse impact upon the openness of the Green Belt in this location as well as adverse impact upon two of the purposes of Green Belt (unrestricted sprawl of large built up areas; and safeguarding countryside from encroachment). Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.</p>	
<p>There are no other environmental or operational constraints that could not be addressed at a more detailed stage. As such the site is in principle capable of accommodating an on-line MSA.</p>	

Table 5: Site 1

### On-Line Site Summary- Site 1

- 8.19. The Site lies within the Green Belt and due to its open character, there would be policy harm related both to impact upon openness and to two Green Belt purposes from the development of this site as an MSA. There is sufficient land to accommodate an MSA within Site 1 and it may be possible to mitigate the environmental and heritage issues raised with this Site.
- 8.20. Site 1 is in several ownerships. There is no evidence at this stage that their interests are aligned nor that they would support an MSA on the Site. Whilst the Site has the potential to accommodate an MSA, there is no evidence that it will be brought forward as a potential MSA in the near future. The multiple ownership delivery constraints associated with this Site and the significant highway engineering costs are relevant material considerations in this Alternative Sites Assessment.
- 8.21. In light of the above assessment, it can be concluded that:-
- Whilst Site 1 has the potential to accommodate an on-line MSA there will be adverse Green Belt impacts which would need to be overcome by very special circumstances but it is **unlikely to be delivered in the short term** to meet the identified need

due to multiple ownerships and significant highway reengineering costs associated with the Site.

## Off-Line (Junction) Sites

### Site 2 - Junction 11 North East Quadrant



<b>Planning</b>	<b>Comment</b>
Green Belt Impact	The Site lies within the Green Belt in the adopted Warrington Local Plan Core Strategy. In the Green Belt Assessment (June 2017) that supports the draft Warrington Local Plan the site is shown as part of Parcel 2B which has a “moderate contribution” to the Green Belt but Appendix B subdivides Parcel 2B and identifies the site as WR14. WR14 is identified as having a “weak” contribution to Green Belt.
Existing Use	The Site is currently in agricultural use.
Planning Policy Position	The Site is Green Belt within the adopted Warrington Local Plan Core Strategy. It is proposed to be retained as Green Belt in the submission draft Warrington Local Plan (2017 – 2037).
Impact on Adjacent Uses	The adjacent uses are open in nature and hence an MSA would not present a constraint on adjacent uses. The alignment of HS2 is proposed along the northern boundary of the Site.
Proximity of Residential Properties	There are no existing residential properties in close proximity to the site.
Impact on Heritage Assets	Grade II Listed Hope Farmhouse is located approx. 1.6km from the western boundary of the site and hence an MSA will have no impact upon this heritage asset.
Relevant Planning History	Planning permission was refused and an appeal dismissed (August 2008) for the extension of the adjacent Risley Landfill onto the Site. The Inspector considered that “very special circumstances” had not been proven in that case.
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: access could be taken via northern stub arm of M62 J11. Should be possible to create a safe access at reasonable cost. Convenience of access / egress: access directly available from circulatory carriageway of M62 J11 roundabout.
Highways Safety and Impact on the Road Network	Impacts: MSA traffic could be accommodated at roundabout junction, with some potential improvements (signalisation) required.
<b>Environmental</b>	<b>Comment</b>

Flood Zone	All the Site is within Flood Zone I.
Other Constraints	<p>The Site is agricultural land with a public footpath running along its western edge. The site also accommodates a gas pipeline running north to south towards its eastern edge. There are no nationally or local nature designations on the site.</p> <p>A detailed Environmental Assessment of the Site and MSA proposal has been undertaken which shows that there are no significant environmental issues that cannot be suitably mitigated.</p>
<b>Conclusion</b>	
<p>Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. The Site has been shown in the Warrington Local Plan Green Belt assessment to have a “weak” contribution to the Green Belt. It does not lie within a strategic gap between settlements and its existing boundaries will preclude both unrestricted sprawl and the level of encroachment into the open countryside. The Site is visually well contained by the existing adjacent landforms and hence development of it as an MSA will not have a significant impact upon Green Belt openness. Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.</p> <p>A full Transport Assessment has been undertaken to show that there are no highways engineering, safety and operational issues that would preclude development.</p> <p>A detailed Environmental Assessment of the Site and MSA proposal has been undertaken which shows that there are no significant environmental issues that cannot be suitably mitigated.</p> <p>There are no over-riding planning considerations that would preclude development of the Site as an MSA.</p>	

Table 6: Site 2

### Site 3 - Junction 11 North West Quadrant



Planning	Comment
Green Belt Impact	The Site lies within the Green Belt in the adopted Warrington Local Plan. In the Green Belt Assessment (June 2017) that supports the draft Warrington Local Plan the site is shown as part of Parcel 2B which has a “moderate” contribution to the Green Belt.
Existing Use	The Site is a former landfill operated by Biffa.
Planning Policy Position	The Site is Green Belt within the adopted Warrington Local Plan Core Strategy. It is proposed to be retained as Green Belt in the submission draft Warrington Local Plan (2017 – 2037).

Impact on Adjacent Uses	The adjacent uses are open in nature and hence an MSA would not present a constraint on adjacent uses. The alignment of HS2 is proposed along the northern boundary of the Site.
Proximity of Residential Properties	There are no existing residential properties in close proximity to the Site.
Impact on Heritage Assets	<p>The Site has been the subject of landfill and restoration and hence it is unlikely to have any remaining below ground heritage assets.</p> <p>Grade II Listed Hope Farmhouse is located approx. 645m from the western boundary of the Site and hence an MSA will have no impact upon this heritage asset.</p>
Relevant Planning History	The Site has the benefit of planning permission (2008 / 13753) for waste disposal operations and restoration of the Site. The permission was the subject of a Section 106 Agreement and conditions requiring landscape restoration of it. The Section 106 Agreement also precludes any further landfilling or waste treatment development. The landscape restoration and wetland areas scheme has been approved pursuant to the discharge of conditions and the Section 106. The restoration works are now complete and aftercare obligations are in place during the site life required for the waste in the landfill to become inactive (currently 30 years).
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	<p>Safe access: access could be taken via northern stub arm of M62 J11. Should be possible to create a safe access at reasonable cost.</p> <p>Convenience of access / egress: access directly available from circulatory carriageway of M62 J11 roundabout.</p>
Highways Safety and Impact on the Road Network	Impacts: MSA traffic could be accommodated at roundabout junction, with some potential improvements (signalisation) required.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	All the Site is within Flood Zone 1.

Other Constraints	<p>The landscape restoration scheme creates a new woodland, grassland and wetland habitat along with controlled recreational use through new paths within the development.</p> <p>The Site has been the subject of landfill and is being monitored for both settlement and gas.</p>
<b>Conclusion</b>	
<p>Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. The Site has been shown in the Warrington Local Plan Green Belt assessment to have a “moderate” contribution to the Green Belt. It does not lie within a strategic gap between settlements and its existing boundaries will preclude both unrestricted sprawl and the level of encroachment into the open countryside. The Site comprises a large mound in what is an otherwise relatively flat landscape. Development of an MSA on raised land will have an adverse impact upon the openness of the Green Belt. Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.</p> <p>From the above assessment, it is clear that the Site cannot be developed as an MSA due to its former use as a landfill which would mean very difficult ground conditions and highly expensive stabilisation and also its recent restoration and ongoing aftercare (including controlled public access) obligations mean that it is unavailable as it is now a landscape, bio-diversity and recreational asset. The impact of development of an MSA upon Green Belt openness and purposes would be greater for this Site than for Site 2.</p>	

Table 7: Site 3.

## Site 4 - Junction 11 South East Quadrant



Planning	Comment
Green Belt Impact	The Site lies partially within the Green Belt and partially within an area identified as a Local Wildlife Site in the adopted Warrington Local Plan. In the Green Belt Assessment (June 2017) that supports the draft Warrington Local Plan the Site is shown as part of Parcel 3A which has a “Strong” contribution to the Green Belt.
Existing Use	The Site comprises in part, the Gorse Covert Mounds which is a bio-diversity and recreational area owned by the Woodland Trust. The rest of the site is agricultural land.
Planning Policy Position	The Site is partially Green Belt within the adopted Warrington Local Plan Core Strategy and it is proposed to be retained as Green Belt in

	the submission draft Warrington Local Plan (2017 – 2037). The rest of the site is a Local Wildlife Site in the adopted Warrington Local Plan Core Strategy and it is proposed to be retained as such in the Submission Draft Warrington Local Plan (2017 – 2037).
Impact on Adjacent Uses	The adjacent uses are residential properties on Inglewood Close. The 24 hour uses at an MSA could have a significant adverse amenity effect on them. Similarly the Gorse Covert Mound contains statutorily protected species such as Great Crested Newts and hence a new access from Junction 11 of the M62 could adversely affect these protected species.
Proximity of Residential Properties	There are existing residential properties in close proximity to the Site which could be adversely affected by an MSA.
Impact on Heritage Assets	Grade II Listed Hope Farmhouse located approx. 1.8km from the western boundary of the Site and hence an MSA will have no impact upon this heritage asset.
Relevant Planning History	The Pestfurlong Mounds which form part of Gorse Covert Mounds are manmade, created from spoil heaps formed from the demolition of a bomb factory in the 1960s.
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: Realignment and upgrade of Silver Lane required to form 5 <sup>th</sup> arm to roundabout. Would likely require a dual carriageway access, in addition to the future dualled Birchwood Way immediately adjacent, which will be difficult to achieve requisite standards. Convenience of access / egress: access directly available from circulatory carriageway of M62 J11 roundabout
Highways Safety and Impact on the Road Network	Impacts: will create a relatively heavily trafficked roundabout arm in very close proximity to westbound slip-road, Birchwood Way (dual carriageway) and westbound slip-road. This would lead to several conflicting traffic movements needing to be accommodated within a limited space; adequate mitigation potentially difficult to identify and provide.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	All the Site is within Flood Zone 1.

Other Constraints	<p>The Gorse Covert Mounds provide recreational walks as well as providing woodlands, ponds and meadows. The Gorse Covert Mounds also include Pestfurlong Hill and Moss which are protected as a Site of Importance for Nature Conservation. The Woodland Trust confirm that the area contains bog land, woodland, ponds and meadow. They also confirm that it contains marsh marigolds, Great Crested Newts, orchids and many bird species. The Site is owned by the Woodland Trust and maintained for bio-diversity and public access.</p> <p>Part of the Site has been created from demolition material from a former bomb factory and hence may suffer from settlement and landfill gas.</p>
<b>Conclusion</b>	
<p>The Gorse Covert Mounds are protected for their bio-diversity value. They also provide public access for recreational purposes. They are owned by the Woodland Trust for the above uses. These uses are incompatible with an MSA and its access from Junction 11 of the M62. Residential properties lie immediately adjacent to the Site which could also be incompatible with a 24 hour MSA.</p> <p>Access from Junction 11 of the M62 is difficult to achieve due to the junction arrangements of the Birchwood Way and its recent improvements. Any access corridor from the Junction could have adverse impacts upon the Gorse Covert Mounds area.</p> <p>Since part of the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. The Site has been shown in the Warrington Local Plan Green Belt assessment to have a “strong” contribution to the Green Belt. It forms part of the strategic gap between Warrington and Caddishead. It has no strong western boundaries and hence development of it could result in both unrestricted sprawl and a level of encroachment into the open countryside. Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.</p> <p>In light of the above assessment, the Site cannot be developed as an MSA due to the restricted access opportunities; environmental quality of the land in question, ownership by the Wildlife Trust, current use for recreation and public access; and the proximity to existing residential properties.</p>	

Table 8: Site 4.

### Off-line Site Summary – Sites 2, 3 and 4.

8.22. In light of the above assessment, it can be concluded that:-

- **Site 2 (NE Quadrant of Junction I I) can accommodate an MSA** without any planning, highways, engineering safety, operational or environmental constraints that would preclude development.
- **Site 3 (NW Quadrant of Junction I I) cannot accommodate an MSA** due to the former landfill activities within the Site and the restoration and aftercare proposals that will be retained in place during the Site life required for the waste in the landfill to become inactive (currently 30 years).
- **Site 4 (SE Quadrant of Junction I I) cannot accommodate an MSA** due to the environmental quality of the land in question, ownership by the Wildlife Trust, current use for recreation and public access; and the proximity to existing residential properties.

## **Potential Off-Line (Junction I I A) Sites**

### **Site 5 - Junction I I A Northern Quadrant**



Planning	Comment
Green Belt Impact	The Site lies within the Green Belt in the adopted Salford Unitary Development Plan. The Green Belt in this location is expansive and generally open in character. Development of an MSA in this location would have an adverse impact upon this openness. In terms of Green Belt purposes, development of the site for an MSA will result in unrestricted sprawl of large built up areas and in encroachment into the countryside. It is not considered that it would result in neighbouring towns merging into one another nor would it affect the setting and special character of historic towns.
Existing Use	The Site is currently in agricultural use as well as accommodating Chat Moss Peat Works and a fishing lake.

Planning Policy Position	The Site is Green Belt within the adopted Salford Unitary Development Plan. It is proposed to be retained as Green Belt in the Revised Draft Salford Local Plan and the Greater Manchester Spatial Framework.
Impact on Adjacent Uses	The adjacent uses are open in nature and hence an MSA would not present a constraint on adjacent uses.
Proximity of Residential Properties	There are no existing residential properties in close proximity to the site.
Impact on Heritage Assets	Grade II Listed buildings at Barton Aerodrome are located approx. 1km from the eastern boundary from the Site and hence an MSA would have no impact upon this heritage asset.
Relevant Planning History	Planning permission was approved (LPA ref. 10/58869/FUL) at Moss Farm for change of use of land to farm visitors' centre and fishing lake.
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: weaving distances for eastbound traffic may not be acceptable due to proximity to lane drop on approach to interchange with M60 at J12, but potential for engineering solution. Would require some land either side of the M62 to form the junction and a new bridge over mainline to access site (at significant cost).
Highways Safety and Impact on the Road Network	Impacts: Likely to be acceptable.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	All the Site is within Flood Zone 1.
Other Constraints	The Site is agricultural land and a fishing / visitor centre.  The Site is within the Astley & Bedford Mosses SSSI Impact Risk Zone, approx. 1.6km to the north-west and the Manchester Mosses SAC lies approx. 1.6km to the north-west
<b>Conclusion</b>	
Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of	

inappropriateness, and any other harm, is clearly outweighed by other considerations. Development of an MSA in this location could have a significant adverse impact upon the openness of the Green Belt in this location as well as adverse impact upon two of the purposes of Green Belt (unrestricted sprawl of large built up areas; and safeguarding countryside from encroachment). Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.

The above assessment shows that the GMSF has identified the potential for a new motorway junction adjacent to this Site but that such a new junction is tied into the GMSF process and the North West Quadrant Study. The GMSF process is expected to take until at least 2021 to be adopted and the North West Quadrant Study timescale is of a similar timescale. No detailed new junction designs are in the public domain and there is no evidence that such detailed feasibility and design work has been undertaken. From the adoption of the GMSF and the completion of the North West Quadrant Study in 2020 / 21, it is reasonable to assume that planning and procurement processes to deliver such a new junction would mean that an MSA would not be open for use until the medium term (i.e. at least 5 years away).

On this basis any potential that this off-line site may have for an MSA cannot be progressed until the uncertainty created by the GMSF proposal and the North West Quadrant Study is completed in 2020 / 21. If such a new Junction is supported then an MSA would be unlikely to be available until the medium term.

*Table 9: Site 5.*

## **Site 6 - Junction 11A South East Quadrant**



Planning	Comment
Green Belt Impact	The Site lies within the Green Belt in the adopted Salford Unitary Development Plan. The Green Belt in this location is less open in nature than to the north. Development of an MSA in this location would therefore have a less adverse impact upon this openness. In terms of Green Belt purposes, development of the site for an MSA will result in encroachment into the countryside and unrestricted sprawl of large built-up areas. It will also extend the urban area of Irlam to the east which is a key gap between it and Peel Green / Barton. It is not considered that it would affect the setting and special character of historic towns.
Existing Use	The Site is currently in agricultural use as well as accommodating part of a Golf course.

Planning Policy Position	The Site is Green Belt within the adopted Salford Unitary Development Plan. It is proposed to be re-allocated in the Revised Draft Salford Local Plan and the Greater Manchester Spatial Framework for employment purposes as an expansion to Port Salford.
Impact on Adjacent Uses	The adjacent uses are open in nature and hence an MSA would not present a constraint on adjacent uses.
Proximity of Residential Properties	There are no existing residential properties in close proximity to the site.
Impact on Heritage Assets	Grade II Listed buildings at Barton Aerodrome are located approx. 520 – 640m from the northern boundary from the site and hence an MSA would have little impact upon this heritage asset.
Relevant Planning History	None applicable
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: weaving distances for eastbound traffic may not be acceptable due to proximity to lane drop on approach to interchange with M60 at J12, but potential for engineering solution. Would require some land both sides of the M62 and new bridge over mainline to access site in the form of a new Junction (at significant cost).
Highways Safety and Impact on the Road Network	Impacts: Likely to be acceptable.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	All the Site is within Flood Zone I.
Other Constraints	The Site is within the Astley & Bedford Mosses SSSI Impact Risk Zone, which is approx. 3.2km to the north-west and the Manchester Mosses SAC lies approx. 3.2km to the north-west.
<b>Conclusion</b>	

Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. Development of an MSA in this location could have an adverse impact upon the openness of the Green Belt in this location as well as adverse impact upon two of the purposes of Green Belt (unrestricted sprawl of large built up areas; and safeguarding countryside from encroachment). Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.

The Site is proposed to be allocated for employment uses (320,000 m<sup>2</sup>) to take advantage of the new port facilities, rail link and highway improvements that have been completed as part of Port Salford. The GMSF allocation 33 notes “this will provide one of the most well-connected and market-attractive industrial and warehousing locations in the country, with a strong focus on logistics activities but also incorporating high quality manufacturing floorspace”.

The above assessment shows that the GMSF has identified the potential for a new motorway junction adjacent to this Site but that such a new junction is tied into the GMSF process and the North West Quadrant Study. The GMSF process is expected to take until at least 2021 to be adopted and the North West Quadrant Study timescale is of a similar timescale. No detailed new junction designs are in the public domain and there is no evidence that such detailed feasibility and design work has been undertaken. From the adoption of the GMSF and the completion of the North West Quadrant Study in 2020 / 21, it is reasonable to assume that planning and procurement processes to deliver such a new junction would mean that an MSA would not be open for use until the medium term (i.e. at least 5 years away).

On this basis any potential that this off-line site may have for an MSA cannot be progressed until the uncertainty created by the GMSF proposal and the North West Quadrant Study is completed in 2020 / 21. If such a new Junction is supported then an MSA would be unlikely to be available until the medium term. Notwithstanding the timescale for delivery of the new Junction, the Site is seen as being strategically important as an extension to Port Salford and hence irrespective of the delays associated with the GMSF and North West Quadrant Study processes, this Site is not available for an MSA, as it is being promoted as an expansion to Port Salford.

*Table 10: Site 6.*

## Site 7 - Junction IIA South West Quadrant



Planning	Comment
Green Belt Impact	The Site lies within the Green Belt in the adopted Salford Unitary Development Plan. The Green Belt in this location is less open in nature than to the north. Development of an MSA in this location would therefore have a less adverse impact upon this openness. In terms of Green Belt purposes, development of the site for an MSA will result in encroachment into the countryside and unrestricted sprawl of large built-up areas. It is not considered that it would affect the setting and special character of historic towns.
Existing Use	The Site is currently in agricultural use as well as accommodating a Golf Course.

Planning Policy Position	The Site is Green Belt within the adopted Salford Unitary Development Plan and it is proposed to be retained in the Green Belt in the Revised Draft Salford Local Plan and the Greater Manchester Spatial Framework.
Impact on Adjacent Uses	The adjacent uses to the south are residential and hence an MSA may present a constraint on these adjacent uses.
Proximity of Residential Properties	There are existing residential properties in close proximity to the Site as above.
Impact on Heritage Assets	Grade II Listed buildings at Barton Aerodrome are located approx. 520 – 640m from the northern boundary from the site and hence an MSA would have little impact upon this heritage asset.
Relevant Planning History	None applicable
<b>Highways, Engineering, Safety and Operational Issues</b>	<b>Comment</b>
Highways Engineering	Safe access: weaving distances for eastbound traffic may not be acceptable due to proximity to lane drop on approach to interchange with M60 at J12, but potential for engineering solution. Would require some land both sides of the M62 and new bridge over mainline to access site in the form of a new Junction (at significant cost).
Highways Safety and Impact on the Road Network	Impacts: Likely to be acceptable.
<b>Environmental</b>	<b>Comment</b>
Flood Zone	All the Site is within Flood Zone 1.
Other Constraints	The Site is within the Astley & Bedford Mosses SSSI Impact Risk Zone, which is approx. 3.2km to the north-west and the Manchester Mosses SAC lies approx. 3.2km to the north-west.
<b>Conclusion</b>	
Since the Site lies within the Green Belt, then the development of an MSA would be considered to be inappropriate development and as such, very special circumstances would need to be provided to show that the potential harm to the Green Belt by reason of	

inappropriateness, and any other harm, is clearly outweighed by other considerations. Development of an MSA in this location could have an adverse impact upon the openness of the Green Belt in this location as well as adverse impact upon two of the purposes of Green Belt (unrestricted sprawl of large built up areas; and safeguarding countryside from encroachment). Location within the Green Belt would not preclude development if such very special circumstances were demonstrated.

The Site is proposed to be retained in the Green Belt even though the adjacent site is proposed to be released from the Green Belt as an extension of Port Salford within the GMSF.

The above assessment shows that the GMSF has identified the potential for a new motorway junction adjacent to this Site but that such a new junction is tied into the GMSF process and the North West Quadrant Study. The GMSF process is expected to take until at least 2021 to be adopted and the North West Quadrant Study timescale is of a similar timescale. No detailed new junction designs are in the public domain and there is no evidence that such detailed feasibility and design work has been undertaken. From the adoption of the GMSF and the completion of the North West Quadrant Study in 2020 / 21, it is reasonable to assume that planning and procurement processes to deliver such a new junction would mean that an MSA would not be open for use until the medium term (i.e. at least 5 years away).

On this basis any potential that this off-line site may have for an MSA cannot be progressed until the uncertainty created by the GMSF proposal and the North West Quadrant Study is completed in 2020 / 21. If such a new Junction is supported then an MSA would be unlikely to be available until the medium term.

*Table 11: Site 7.*

### **Potential Off-line Junction IIA Site Summary – Sites 5, 6 and 7.**

- 8.23. Although there is sufficient land to accommodate an MSA within Sites 5, 6 and 7 and it may be possible to mitigate the environmental and heritage issues raised with these Sites, there is significant uncertainty in delivery associated with them due to the GMSF process and the potential for a new motorway junction adjacent to the sites. The GMSF process is expected to take until at least 2021 to be adopted and the North West Quadrant Study timescale is similar. No detailed new junction designs are in the public domain and there is no evidence that such detailed feasibility and design work has been undertaken. From the adoption of the GMSF and the completion of the North West Quadrant Study in 2020 / 21, it is reasonable to assume that planning and procurement processes to deliver such a new junction could mean that an MSA would not be open for use until the medium term.

8.24. In addition, in respect of Site 6, the GMSF proposes an extension to Port Salford (GM Policy 33) to accommodate 320,000m<sup>2</sup> of employment space and hence this Site is unavailable irrespective of whether a new motorway junction is brought forward.

8.25. As a result of this uncertainty Sites 5, 6 and 7 cannot be delivered in the short term to meet the identified need.

8.26. In light of the above assessment, it can be concluded that:-

- **Site 5 (N Quadrant of Junction IIA)** has the potential to accommodate an off-line MSA but there will be adverse Green Belt impacts and it is **unlikely to be delivered in the short term** without the delivery of a new motorway junction which is being promoted through the GMSF and being considered within the North West Quadrant Study and which is unlikely to be available for use until the medium term. In light of this there are planning, highways and engineering safety constraints that would preclude development.
- **Site 6 (SE Quadrant of Junction IIA)** has the potential to accommodate an off-line MSA but there will be adverse Green Belt impacts and it is **unlikely to be delivered in the short term** without the delivery of a new motorway junction which is being promoted through the GMSF and being considered within the North West Quadrant Study and which is unlikely to be available for use until the medium term. In addition the Site is in the draft Salford Local Plan and GMSF as an employment allocation as a strategic extension to Port Salford. In light of this there are planning, highways and engineering safety constraints that would preclude development.
- **Site 7 (SW Quadrant of Junction IIA)** has the potential to accommodate an off-line MSA but there will be adverse Green Belt impacts and it is **unlikely to be delivered in the short term** without the delivery of a new motorway junction which is being promoted through the GMSF and being considered within the North West Quadrant Study and which is unlikely to be available for use until the medium term. In light of this there are planning, highways and engineering safety constraints that would preclude development.

## Stage 4 – Identification of a preferred location for a new MSA to meet the identified need

8.27. In undertaking this Alternative Sites Assessment, Stage 1 has identified a broad range of search locations that would satisfy the identified, policy defined need for a new MSA within the North West Region. Stage 2 has identified and set aside any sites that have key constraints that could preclude development unless no other more suitable sites are available. These sites will only be reconsidered if no other suitable sites can be found. Stage 3 has assessed each of the remaining sites on a high level basis against a set range of criteria. Stage 4 will now draw together the above information in order to identify a preferred location for a new MSA to meet the identified policy defined need on the M62 / M60 / M6 / M67 and M58 corridors in the North West Region. This is the site that best meets the need with the least development constraints.

8.28. **In reaching a conclusion on which is the best site to meet the identified need it is also important to ensure that such a site is deliverable as the public safety need exists now and has been identified since at least 2010. Where sites reflect similar characteristics but one site has fewer delivery constraints than another, then preference will be given to that which can come forward in the shortest timescale to meet the need.** Such delivery constraints will equate to:-

- Is the site in multiple ownerships or a single ownership?
- Does the site require significant infrastructure delivery that will take a significant length of time to deliver and / or may make it unviable?
- Is the site backed by a Developer who can deliver an MSA?

8.29. Table 4 below summarises the findings of Stage 3 and cross references these against the locational requirements set out at Stage 1 and more substantial constraints identified in Stage 2 as well as the planning, highways / operational and environmental considerations of Stage 3. **The locations highlighted in green best meet these criteria.** The conclusions of the Stage 2 and 3 assessments are summarised against each location.

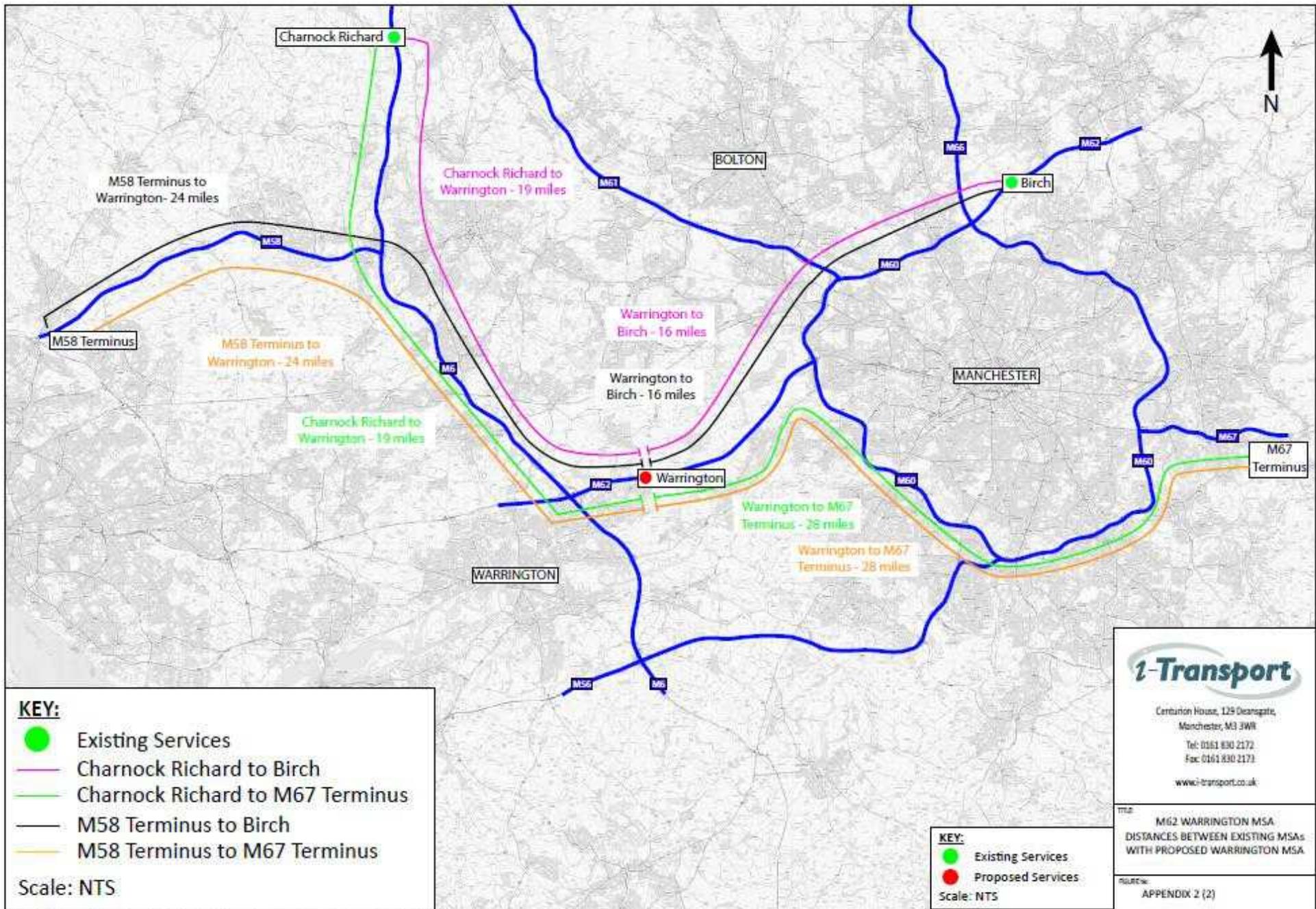
Site Number	Location	Meeting the Need	Planning constraints (including Impact upon Green Belt)	Transportation Constraints	Environmental Constraints	Delivery Constraints	Overall Conclusion
1	On-line (M62)	Meets all 4 gaps.	Has significant impact upon Green Belt Openness and Purposes.	Requires a new pedestrian bridge over the motorway and slip roads.	Environmental constraints are mitigatable.	Multiple ownerships and not backed by a MSA Developer.	Potentially suitable (medium term)
2	J11 NE	Meets all 4 gaps.	Site makes a “weak” contribution to the Green Belt.	Requires localised improvements to Junction 11.	Environmental constraints are mitigatable.	MSA Developer has option on all land required to deliver an MSA and is preparing a planning application for an MSA.	Most suitable (short term)
3	J11 NW	Meets all 4 gaps.	Site makes a “moderate” contribution to the Green Belt.	Requires localised improvements to Junction 11.	Insurmountable environmental constraints.	Owned by Biffa with long term management and maintenance obligations. Not backed by a MSA Developer.	Not suitable
4	J11 SE	Meets all 4 gaps.	Site makes a “strong” contribution to the Green Belt.	Requires localised improvements to Junction 11.	Insurmountable environmental constraints.	Owned by Woodland Trust for environmental purposes. Not backed by a MSA Developer.	Not suitable

Site Number	Location	Meeting the Need	Planning constraints (including Impact upon Green Belt)	Transportation Constraints	Environmental Constraints	Delivery Constraints	Overall Conclusion
5	Potential J11A N	Meets all 4 gaps.	Has significant impact upon Green Belt Openness and Purposes.	Requires the delivery of a new motorway Junction which is unlikely until the medium term.	Environmental constraints are mitigatable.	Requires the delivery of a new Junction at significant cost and timescale.	Potentially suitable (medium term)
6	Potential J11A SE	Meets all 4 gaps.	Has significant impact upon Green Belt Openness and Purposes.	Requires the delivery of a new motorway Junction which is unlikely until the medium term.	Environmental constraints are mitigatable.	Requires the delivery of a new Junction at significant cost and timescale.	Potentially suitable (medium term)
7	Potential J11A SW	Meets all 4 gaps.	Has significant impact upon Green Belt Openness and Purposes.	Requires the delivery of a new motorway Junction which is unlikely until the medium term.	Environmental constraints are mitigatable.	Requires the delivery of a new Junction at significant cost and timescale.	Potentially suitable (medium term)

Table 12: Summary of assessment of potential on line and off-line (Junction) locations

- 8.30. **All the Sites (Sites 1 – 7) are within the Green Belt in the currently adopted Local Plans (Warrington and Salford). In this regard all the Sites are subject to the same “very special circumstances” test and there are no non-Green Belt alternatives that could meet the identified need. It is therefore clear that to meet the need for an MSA in the Optimum Search Area, a Green Belt site will need to be developed.**
- 8.31. Site 1 is the only on-line opportunity for an MSA within the Optimal Search Area. Whilst it has the potential to accommodate an MSA, there is no evidence that it is capable of being brought forward to meet the currently identified need. It is within multiple ownerships and is not backed by a MSA Developer, and hence it is unlikely to be deliverable in the short term.
- 8.32. All other sites are off-line opportunities. Sites 3 and 4 are ruled out due to environmental constraints and hence cannot accommodate an MSA.
- 8.33. Sites 5, 6 and 7 have the potential to accommodate an MSA but a new M62 Junction 11A will be required to facilitate their delivery. There is considerable uncertainty associated with the delivery of such a new motorway junction, the potential for which has been identified in the GMSF and within the North West Quadrant Study, but which is unlikely to be open for public use until the medium term. There is no evidence that these sites can come forward any earlier to meet the currently identified need. In addition Site 6 is further constrained by also being in the draft Salford Local Plan and GMSF as an employment allocation as a strategic extension to Port Salford.
- 8.34. **In this context, the Assessment identifies that land within the NE Quadrant of Junction 11 (Site 2) is the most sequentially preferable location upon which to site a new MSA having regard to the specific locational requirements to meet the identified need along with the consideration of planning, engineering, safety, operational and environmental factors. The Assessment also shows that of the Sites identified, it has the least Green Belt impact, being classified as having a “weak” contribution with the emerging Warrington Local Plan evidence base.**
- 8.35. Given that a suitable site (Site 2) has been identified, it is not necessary at this stage to revisit any of the sites that were provisionally set aside as part of the Stage 2 assessment. It is also unnecessary to undertake a further search for locations outside of the Optimal Search Area.

8.36. **The plan below incorporates a new MSA strategically and optimally located at M62 Junction 11 and demonstrates beyond doubt that the FOUR unmet gaps on the M6 / M62 / M60 / M67 / M58 within the North West Region will be fully addressed by a new MSA at M62 J11.**



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Plan xx: Preferred location that meets all FOUR gaps

8.37. As is shown in Table 13 below, the 40 mile non-compliant gap between M58 Terminus and Birch Services will be reduced to 24 miles; the 35 mile non-compliant gap from Charnock Richards Services to Birch Services will be reduced to 19 miles; the 52 mile non-compliant gap between M58 Terminus and M67 Terminus will be reduced to 16 miles; the 47 mile non-compliant gap from Charnock Richards Services to M67 Terminus will be reduced to 28 miles. All of these distances are below or comply with the 28 mile maximum.

From	To	Current Route	Current Distance	New Route	Proposed Distance
M58 Terminus (Switch Island)	Birch Services	M58/M6/M62/M60/M62	40 miles	M58/M6/M62	24 miles
Charnock Richard Services	Birch Services	M6/M62/M60/M62	35 miles	M6/M62	19 miles
M58 Terminus (Switch Island)	M67 Terminus (Hattersley Roundabout)	M58/M6/M62/M60/M67	52 miles	M62/M60/M62	16 miles
Charnock Richard Services	M67 Terminus (Hattersley Roundabout)	M6/M62/M60/M67	47 miles	M62/M60/M67	28 miles

Table 13: Policy compliant MSA Provision in the North West Region

8.38. Following the identification of a 'preferred site', MSA Extra have now progressed site investigations and detailed design works in order to inform the layout, scale, form and boundaries of any future scheme, along with any necessary mitigation measures. Viability and land ownerships issues are key factors that may prevent the preferred site from coming forward. The Developer has secured an option from the landowner to bring the preferred site forward. Following design work, the Developer considers that a commercially and

operationally viable MSA can be delivered on the preferred site. Should it ultimately prove not to be the case, then it would be necessary to revisit alternative options as the public safety 'need' would still remain unmet.

## 9. Summary and Conclusions

- 9.1. The Strategic Road Network plays a key role in the movement of goods and people around the country and its safe and efficient operation is critical to the performance of the economy. It is also essential in helping to facilitate planned economic growth.
- 9.2. The approach to determining 'need' for an MSA on the Strategic Road Network is set out in Circular 02/2013. The 'need' for an MSA is established wherever spacing between MSAs on any stretch of the Strategic Road Network is a greater distance than 28 miles (equating to a maximum travelling time of 30 minutes). As paragraph B8 of the Circular makes explicit, once such a gap is shown to exist, it is not necessary to have regard to other considerations in determining whether a need exists (i.e. the existence of a gap is in, and of, itself conclusive evidence of need for planning purposes). A 'need' either exists, or it does not.
- 9.3. The application of the policy tests set out in Circular 02/2013 clearly and unequivocally demonstrates that a 'need' exists for a new MSA located for routes from the M58, M62, M6, M60 and M67. It is in the national and local interest to ensure that this need is addressed as soon as possible.
- 9.4. This Document outlines the Alternative Sites Assessment process that has been undertaken to identify a preferred site which best meets the need for a new MSA on this stretch of the Strategic Road Network with the least number of planning, engineering and environmental constraints having regard to both on-line and off-line (Junction) locations and the policy guidance contained in Circular 02/2013 and the NPPF 2019.
- 9.5. In undertaking this assessment, the broad locations that would satisfy the identified need for a new MSA within the North West Region were first identified. This appraisal concluded that there is an Optimal Search Area which is the best performing location to meet all **FOUR** identified gaps in the network of MSA provision. This Optimal Search Area is situated on the M62 stretch of the Strategic Road Network running from M62 Junction 11 and eastwards for 4 miles.
- 9.6. At Stage 2, sites that were already in beneficial use; committed for alternative development; predominantly in Flood Zone 3; contain listed structures or have other significant environmental designations were then set aside. These sites would only be reconsidered if no

other suitable sites could be found. At this stage, no sites were put aside but part of Site 1 was excluded.

- 9.7. Each remaining site was then considered on a high level basis against a set range of criteria. At this stage it was not possible to identify any necessary mitigation measures, design features required to address identified constraints, infrastructure requirements or the costs associated with these without detailed site investigations and discussions with landowners and other stakeholders. This would take place at the detailed design stage of development. Known site constraints were however considered where possible and a basic comparison was made between sites. At this stage it became clear that Sites 3 and 4 were constrained by environmental considerations; that sites 1, 5, 6, and 7 were constrained by delivery considerations; and that site 2 was relatively free from constraint.
- 9.8. Stage 4 considered the findings of Stages 1, 2 and 3 in order to identify a preferred location for a new MSA to meet the identified need. This is the site that best meets the need with the least development constraints.
- 9.9. **The Assessment identifies that land within the North East Quadrant of Junction 11 of the M62 Motorway (Site 2) is the most sequentially preferable location to meet the identified need having regard to the locational requirements of the new MSA and a wider range of environmental, planning and engineering constraints. This site lies within the Optimal Search Area of public safety need identified having regard to the policy requirements set out in Circular 02/2013 and will fully address the FOUR unmet gaps on the M6 / M62 / M60, M58 and M67 corridors in the North West Region, reducing distances between MSAs to at or below the 28 mile maximum.**
- 9.10. **Whilst the preferred site is in Green Belt so are all the other sites that have been assessed through this Alternative Sites Assessment. Any MSA brought forward to meet the need within the Optimal Search Area would therefore have to be accommodated within the Green Belt.**
- 9.11. Any planning application for an MSA on a site within the Green Belt would have to demonstrate “very special circumstances” (VSC). Extra MSA Group has obtained Leading Counsel’s Opinion on the role of “need” for an MSA with regard to the “very special

circumstances” test for inappropriate development within the Green Belt. Counsel advised that *“In order to establish VSC it is necessary to demonstrate that the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations (NPPF, para. 144). The question of whether VSC exist for any given proposal is decided on a case by case basis, and whether a matter or combination of matters constitute VSC sufficient to outweigh the harm by reason of inappropriateness and any other harm is quintessentially a matter of planning judgment for the decision-maker. “Need” generally, and the specific need for an MSA to meet the strategic need for road side facilities in accordance with Government policy, has long been accepted as a matter that can either by itself or in combination with other matters outweigh the harm to the Green Belt by reason of inappropriateness and any other harm. Many existing MSAs are situated in the Green Belt, and were justified by reference to “need”. Whether a particular proposal for an MSA meets the test of VSC has to be decided by reference to a range of factors, which will include need, whether the proposal causes “other harm”, the extent of such “other harm” and the availability or otherwise of alternative sites where the need can be met without causing such harm or causing less harm”* A copy of the full advice is included in Appendix I.

9.12. The preferred Site adjoins the M62 Motorway and has safe and convenient access from M62 Junction 11. Provision of an MSA in this location can be designed to be compatible with the Birchwood Park employment area and the adjacent Risley landfill restoration scheme. It is therefore compatible with current neighbouring land uses, and it can also be designed such that it does not preclude the future potential HS2 alignment to the north. Discussions are ongoing with HS2 to accommodate access to their potential compound for construction activities. In these circumstances, the North East Quadrant of land at M62 Junction 11 is the optimal location in which to provide a bespoke MSA to meet the needs of motorists in a sustainable and accessible location that is central to the identified gap in provision in the North West Region.

9.13. Following the identification of a ‘preferred Site’ the Developer has now progressed site investigations and detailed design works in order to inform the layout, scale, form and boundaries of a future scheme, along with any necessary mitigation measures.

## Appendices

## **Appendix I – Counsel’s written opinion on Highway Need**

IN THE MATTER OF:

**WARRINGTON MOTORWAY SERVICE AREA  
JUNCTION 11 OF THE M62**

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**OPINION**

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**Introduction**

1. Extra Motorway Service Area Group (“Extra”) is in the process of preparing an outline planning application proposing the erection of a “New Concept” Motorway Service Area (“MSA”) within the north eastern quadrant of Junction 11 of the M62 Motorway situated approximately 5.6km (3.5 miles) to the north of Warrington Town Centre. The proposal is for an off-line MSA on a site extending to approximately 16ha of land, and will comprise of facilities building, hotel, fuel filling station, parking facilities, landscaping and amenity area. The proposals will be fully compliant with the minimum requirements for an MSA as set out in Table B1 of Annex B to Department of Transport Circular 02/2013. Drivers will have indirect access to the M62, which runs along the southern boundary of the proposed site and connects through to the M6 and M60, and onwards to the M58 and M67. The MSA will be known as Warrington Services.
2. The site currently comprises agricultural land in arable use, and is designated as Green Belt in the adopted development plan for the area.
3. We are asked to advise on:

- a. how the question of whether or not there is a “need” for an MSA should be resolved;
- b. the relevance of off-line versus on-line MSA provision;
- c. whether, if there is a need, this need is capable of constituting the very special circumstances (“VSC”) needed to justify what Extra accepts would constitute inappropriate development in the Green Belt.

### **Need**

4. The method for establishing a need for an MSA is set out in DfT Circular 02/2013. This Circular and the National Planning Policy Framework (February 2019) (“the Framework”) are the only documents to which reference is necessary to establish what the test is for demonstrating need.
5. The starting point is paragraph 104(e) footnote 42 of the Framework. This provides that “The primary function of roadside services should be to support the safety and welfare of the road user.” It is clear from this that the purpose of an MSA is to ensure the safety of drivers on the strategic road network (“SRN”). This point is reinforced in Annex B of the Circular, which states at paragraph B4

*“Motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Government advice is that motorists should stop and take a break of at least 15 minutes every 2 hours. Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements.”*

6. The Circular then goes on to explain (at B5) how decisions regarding the location of MSAs on the SRN have been informed by the need to ensure this safety objective is realized by giving drivers the opportunity to stop and take a break every two hours:

*“The network of service areas on the strategic road network has been developed on the premise that opportunities to stop are provided at intervals of approximately half an hour. However the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer.”*

7. The requirement, or “need”, to ensure driver safety through the provision of an MSA at intervals of approximately half an hour leads directly to the recommendation of the Highways Agency that there should be an opportunity for drivers to stop and rest at a MSA every 28 miles (at B6):

*“The Highways Agency therefore recommends that the maximum distance between motorway service areas should be no more than 28 miles. The distance between services can be shorter, but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation” (emphasis added).*

8. It follows from the above that if the Government’s objective of ensuring the safety and welfare of road users is to be realised, there is a “need” to provide an MSA on those stretches of the SRN where there is a gap of 28 miles. In other words, a “need” for an MSA is established wherever any particular stretch of the SRN has a gap of more than 28 miles (i.e where drivers are currently driving for more than 28 miles before they have the opportunity to stop at a MSA).
9. There are currently four MSAs located on the SRN in and around the Warrington area: on the M6 there are Charnock Richard Services and Lymm Services, and on the M62 there are Birch Services and Burtonwood Services.

However, having regard to terminus points of the M58 and M67 and the ability of drivers to leave one motorway and join another through the various junctions around this area, it is quite clear that some drivers will be driving for more than 28 miles (and significantly longer than 30 minutes) on the SRN before they encounter a MSA. There are four such “gaps”:

- a. A driver taking the route from the M58 Terminus to Birch Services on the M62 will drive 40 miles (M58/M6/M62/M60/M62);
- b. A driver taking the route from Charnock Richard Services on the M6 to Birch Services on the M62 will drive 35 miles (M6/M62/M60/M62);
- c. A driver taking the route from the M58 Terminus to the M67 Terminus will drive 52 miles without encountering a MSA (M58/M6/M62/M60/M67);
- d. A driver leaving Charnock Richard Services on the M6 and driving to the M67 Terminus will drive 47 miles with no opportunity to stop at a MSA (M6/M62/M60/M67).

10. It can be seen from the above that the existence of Burtonwood Services and Lymm Services do not address the identified gaps, for the simple reason that some drivers will take a journey whereby despite the existence of these two MSAs they will drive for more than 28 miles (and significantly longer than 30 minutes) before they encounter a MSA. How many such drivers there will be is irrelevant for the purposes of applying the Government’s policy on need - as paragraph B8 of the Circular makes explicit, once such a gap is shown to exist, it is not necessary to have regard to other considerations in determining whether a need exists (i.e. the existence of the gap is in and of itself conclusive evidence of need for planning purposes):

*“The distances set out above are considered appropriate for to (sic) all parts of the strategic road network and to be in the interests of and for the benefit of all road*

*users regardless of traffic flows or choice. In determining applications for new or improved sites, local planning authorities should not need to consider the merits of the spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their specific planning merits.”*

11. The 2013 Circular was a deliberate departure from previous policy in that the Government decided to make clear that once a gap of more than 28 miles has been identified, the need for an MSA will be established (i.e the absence of an MSA in such a situation frustrates the Government’s objective of supporting the safety and welfare of the road user). The local planning authority in such a situation should not concern itself with the merits of spacing beyond asking itself whether (a) the proposed MSA will help ensure that the maximum distance of 28 miles is not breached, and (b) that the new facility will not breach the requirements set out in the Design Manual for Roads and Bridges. For the purposes of applying the policy on “need” as set out in the Circular, it is not permissible to take a graduated approach to need by reference to the number of drivers using a particular stretch of the strategic road network or any other considerations such as route choice or the nature of the journeys. The existence of the requisite gap is conclusive evidence of need, and in the particular circumstances of this case it removes any necessity to debate how many drivers will choose a particular route (for example M6 South – M62 East, in preference to any other route).

### **On-line versus Off-line**

12. Annex B of the Circular at B13 to B15 provides that where competing MSA sites are under consideration, the Highways Agency has a preference for on-line locations over off-line locations. It must however be noted that, firstly, this is a “preference” only (i.e it is not a mandatory requirement that an on-line location must always be selected over an off-line location); and secondly the preference is subject to the very important caveat “on the assumption

that all other factors are equal”.

13. All other factors are rarely equal in life, and the sphere of planning is no exception. So, for example, the Circular itself at B15 acknowledges that an on-line facility may simply not be possible because of safety, operational or environmental constraints. We would go further and add that such a facility may be available, but the safety, operational or environmental disbenefits of such a location may outweigh the advantages that flow from being on-line as opposed to off-line, such that the latter location is considered preferable once regard is had to all matters that are relevant to what is ultimately a planning decision.
14. If there is a choice to be made between on-line and off-line facilities, the planning authority must have regard to all material considerations relevant to that choice, and that will include not only the Highways Agency “preference” (understood subject to the express caveats provided in the Circular itself), but also all of the benefits that a particular off-line location may provide when compared with a particular on-line location. So, for example, on the specific facts of a given case, the off-line location may provide broader sustainability benefits when compared with the only on-line location that is in contention.

### **Green Belt**

15. In order to establish VSC it is necessary to demonstrate that the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations (NPPF, para. 144). The question of whether VSC exist for any given proposal is decided on a case by case basis, and whether a matter or combination of matters constitute VSC sufficient to outweigh the harm by reason of inappropriateness and any other harm is quintessentially a matter of planning judgment for the decision-maker.

16. “Need” generally, and the specific need for an MSA to meet the strategic need for road side facilities in accordance with Government policy, has long been accepted as a matter that can either by itself or in combination with other matters outweigh the harm to the Green Belt by reason of inappropriateness and any other harm. Many existing MSAs are situated in the Green Belt, and were justified by reference to “need”.
17. Whether a particular proposal for an MSA meets the test of VSC has to be decided by reference to a range of factors, which will include need, whether the proposal causes “other harm”, the extent of such “other harm” and the availability or otherwise of alternative sites where the need can be met without causing such harm or causing less harm.

### **Conclusion**

18. We have addressed the matters raised in our Instructions. If additional matters arise we would be pleased to assist further.

**MARTIN KINGSTON QC**  
**SATNAM CHOONGH**  
Number 5 Chambers

14 May 2019

IN THE MATTER OF:

**WARRINGTON MOTORWAY SERVICE AREA  
JUNCTION 11 OF THE M62**

---

**ADVICE NOTE**

---

Counsel: Martin Kingston QC  
Satnam Choongh

YOUR REF: PO-TP-SPA-LT-P4151-0002-A

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## **Appendix 2 – Email from Highways England confirming gapping**

Our ref:  
Your ref:

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Senior Policy Advisor  
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Manchester  
M1 2WD

**By Email**

Alison Gough  
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Economic Regeneration, Growth and Environment  
Directorate  
Warrington Borough Council  
New Town House  
Buttermarket Street  
Warrington  
WA1 2NH

[www.highwaysengland.co.uk](http://www.highwaysengland.co.uk)

Direct Line: 0300 470 5293

11 June 2019

**Dear Sirs,**

**RE: Proposed Motorway Service Area - M62 Junction 11**

I understand that you are in Pre-Application dialogue with Extra MSA Group and their retained Transport Consultant, i-Transport, about Extra's proposed Planning Application for the development of a new Motorway Service Areas ("MSA") on land immediately adjacent to M62 J11 (northeast quadrant and accessible from and to the Motorway Junction).

I understand you have specifically requested guidance on the approach that Highways England will adopt when responding to Planning Applications.

I can confirm that Extra has engaged with Highways England and have provided preliminary details for the new MSA proposal. Most recently this has included a meeting with Extra MSA Group and i-Transport.

Any consultation response Highways England makes in respect of any forthcoming application for new MSA facilities at the above site will be informed by the guidance set out in the National Planning Policy Framework ("NPPF") and DfT Circular 02/2013 ("the Circular").

Paragraph 31 of the NPPF states that:

**'The primary function of roadside facilities for motorists should be to support the safety and welfare of the road user.'**

Annex B of the Circular expands on this point. Paragraph B4 of the Circular states that:

**‘Motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Government advice is that motorists should stop and take a break of at least 15 minutes every 2 hours. Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements.’**

Paragraph B5 of the Circular then explains how decisions regarding the location of MSAs on the strategic road network have been informed by the need to ensure this safety objective is realised by giving drivers the opportunity to stop and take a break every two hours:

**‘The network of service areas on the strategic road network has been developed on the premise that opportunities to stop are provided at intervals of approximately half an hour. However, the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer.’**

Highways England therefore recommends (as identified at Paragraph B6 of the Circular) that the maximum distance between MSAs should be no greater than 30 minutes travelling time, which subject to traffic congestion is typically 28 miles. The distance and travelling time between MSA facilities can be shorter than 30 minutes/28 miles, subject to access and egress arrangements complying with the requirements of the Design Manual for Roads and Bridges (DMRB), including its provisions in respect of junction spacing.

Paragraph B8 of the Circular concludes that the maximum travelling time of 30 minutes (maximum distance of typically 28 miles) identified above is:

**‘...in the interests and for the benefit of all road users regardless of traffic flows or route choice.’**

The same paragraph concludes that:

**‘In determining applications for new or improved sites, local planning authorities should not need to consider the merits of spacing of sites beyond conformity with the maximum and minimum spacing requirements established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their specific planning merits.’**

In 2010, Highways England produced a report titled ‘Spatial Planning Framework: Review of Strategic Road Network Service Areas’. The report

identified MSA gaps on the Strategic Road Network including the Northwest Region.

Gap analysis presented by i-Transport during our meeting reflected the same gaps identified in the 2010 report and is summarised below:

<u>From</u>	<u>To</u>	<u>Route</u>	<u>Distance</u>
M58 Terminus	Birch Services	M58/ M6/ M62/ M60/ M62	40 miles
Charnock Richard Services	Birch Services	M6/ M62/ M60/ M62	35 miles
M58 Terminus	M67 Terminus	M58/ M6/ M62/ M60/ M62	52 miles
Charnock Richard Services	M67 Terminus	M6/ M62/ M60/ M67	47 miles

The provision of a new MSA at M62 J11 (“Warrington Services”) would result in the following reduced separation distances on the respective sections of the Motorway Network described above:

<u>From</u>	<u>To</u>	<u>Route</u>	<u>Distance</u>
M58 Terminus	Warrington MSA	M58/ M6/M62	24 miles
Charnock Richard Services	Warrington MSA	M6/M62	19 miles
Warrington MSA M62 J11	Birch Services	M62/M60/M67	16 miles
Warrington MSA	M67 Terminus	M62/M60/M67	28 miles

In this context and not pre-empting any formal Highways England’s response in relation to Extra’s proposed Planning Application, I can confirm that Highways England would have no objection in principle to the proposed development of a new MSA at M62 J11 (“Warrington Services”) on the grounds of spacing.

Notwithstanding the above, Highways England will need to review and be satisfied in transport modelling terms that the proposed access/egress arrangements meet with the requirements of Design Manual for Roads and Bridges and that any further mitigations that may be needed can be met.

I trust this provides you with the clarification you are seeking at this early stage in your decision-making process.

Yours Sincerely

*Julie Prince*

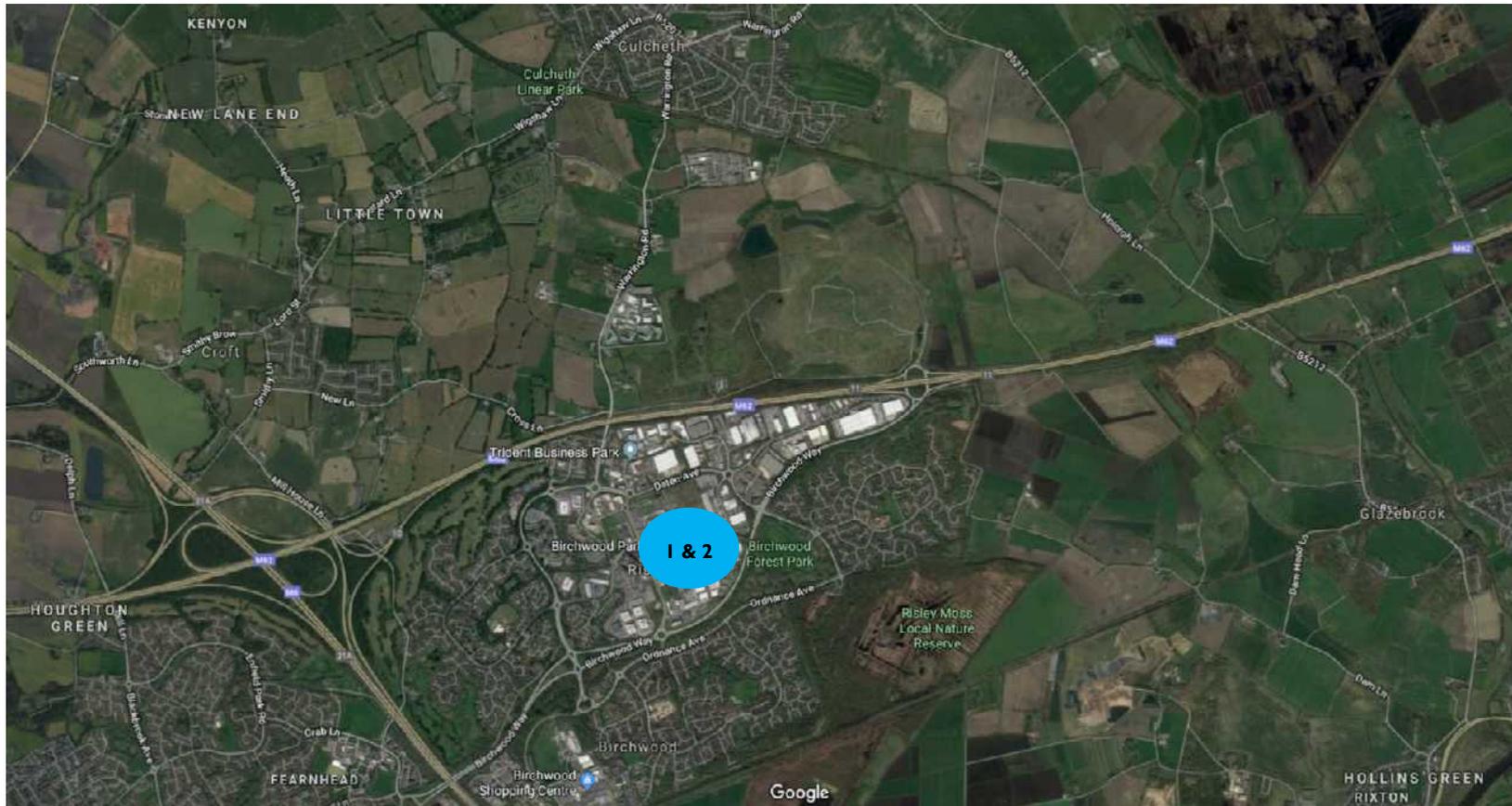
**Julie Prince, Senior Policy Advisor**

## ES Part I Appendix I4

	Cumulative Development	Status	Technical Areas to consider cumulative development	Technical Areas where cumulative development is not relevant
1	The Quadrant, Cavendish Avenue, Birchwood Park, Warrington, WA3 6AE  Application Ref: 2014/23358	Seven units for general industry and/or warehouse/distribution (Use Class B2 and/or B8) Area 7 of 3.64ha site area 12,225m <sup>2</sup> of development Within area 7 of original outline permission g Planning Permission Granted 12-08-2014		Traffic and Transport, Noise and Air Quality consider the impacts of traffic associated with the committed development within the main assessment, so it is not reconsidered as part of the cumulative assessment.
2	Eastern Edge of Birchwood Park Plots 107, 300, 501-502, 611-612, 701-702 and Quadrant, Birchwood Park, Warrington, WA3 6AE  Application Ref: 2015/26044	Part developed. Outline Planning Permission Granted 29-10-2015 (10 year permission) Demolition of existing buildings and erection of new buildings for a combination of offices (B1); light and general industrial (B1/B2); warehousing development (B8) and ancillary retail/ financial & professional services/ non-residential institutions/ assembly and leisure (A1/A2/D1/D2) floor space.	<ul style="list-style-type: none"> <li>- Socio Economic</li> <li>- Waste</li> <li>- Air Quality (dust and PM<sub>10</sub> during construction)</li> <li>- Noise (during construction)</li> </ul>	<p>Given the distance from the site, its detachment from the site and context set within an industrial estate, it is not relevant to the following technical areas:</p> <ul style="list-style-type: none"> <li>- Ground Conditions and Contamination</li> <li>- Water Resources</li> <li>- LVIA</li> <li>- Ecology and Nature Conservation</li> <li>- Cultural Heritage and Archaeology</li> <li>- Agricultural Land and Soils</li> <li>- Climate Change</li> </ul>
3	HS2 (adjacent to the Site)	Land safeguarded for the HS2 route Government consultation.  Current programme: Advanced works Q4 2022 Development Q4 2024 Commissioning Q4 2031- Q3 2033	<ul style="list-style-type: none"> <li>— Water Resources</li> <li>— Ecology and Nature Conservation</li> <li>— Agricultural Land and Soils (construction)</li> <li>— LVIA</li> <li>— Cultural Heritage (construction)</li> <li>— Socio Economic</li> <li>— Air Quality (construction)</li> </ul>	<ul style="list-style-type: none"> <li>— Traffic and Transport (construction — lack of available information for traffic movements)</li> <li>— Air Quality and Noise (in respect of traffic movements associated with construction due to the lack of information available)</li> <li>— Noise (HS2 is considered in main assessment, so not reconsidered as part of the cumulative)</li> <li>— Waste</li> <li>— Geology and Ground Conditions</li> <li>— Climate Change</li> </ul>

<u>Cumulative Development</u>	<u>Status</u>	<u>Technical Areas to consider additional HS2 cumulative development information</u>	<u>Technical Areas where cumulative development remains as assessed within the original ES (August 2019)</u>
HS2	<p>Land safeguarded for the HS2 route (2020 and additional Map Book plans 2021)</p> <p>Current programme: Advanced enabling works 2025-2027 Construction 2025-2035/2040 Operation 2035-2040</p>	<ul style="list-style-type: none"> <li>- Geology and Ground Conditions</li> <li>- Traffic and Transport</li> <li>- Water Resources</li> <li>- Ecology and Nature Conservation</li> <li>- Agricultural Land and Soils (construction phase only)</li> <li>- LVIA</li> <li>- Cultural Heritage</li> <li>- Noise</li> <li>- Air Quality</li> <li>- Climate Change</li> </ul>	<p>No change to the Cumulative Development Assessment:</p> <ul style="list-style-type: none"> <li>- Socio Economic</li> </ul> <p>Cumulative Development Assessment not relevant:</p> <ul style="list-style-type: none"> <li>- Waste (lack of available information)</li> <li>- Noise Operational (undertaken as part of the assessment of the Application Site)</li> </ul>

Warrington MSA, J11 M62 – Cumulative Developments



## ES Part I Appendix I4a



## **ES Part I Appendix I4b**

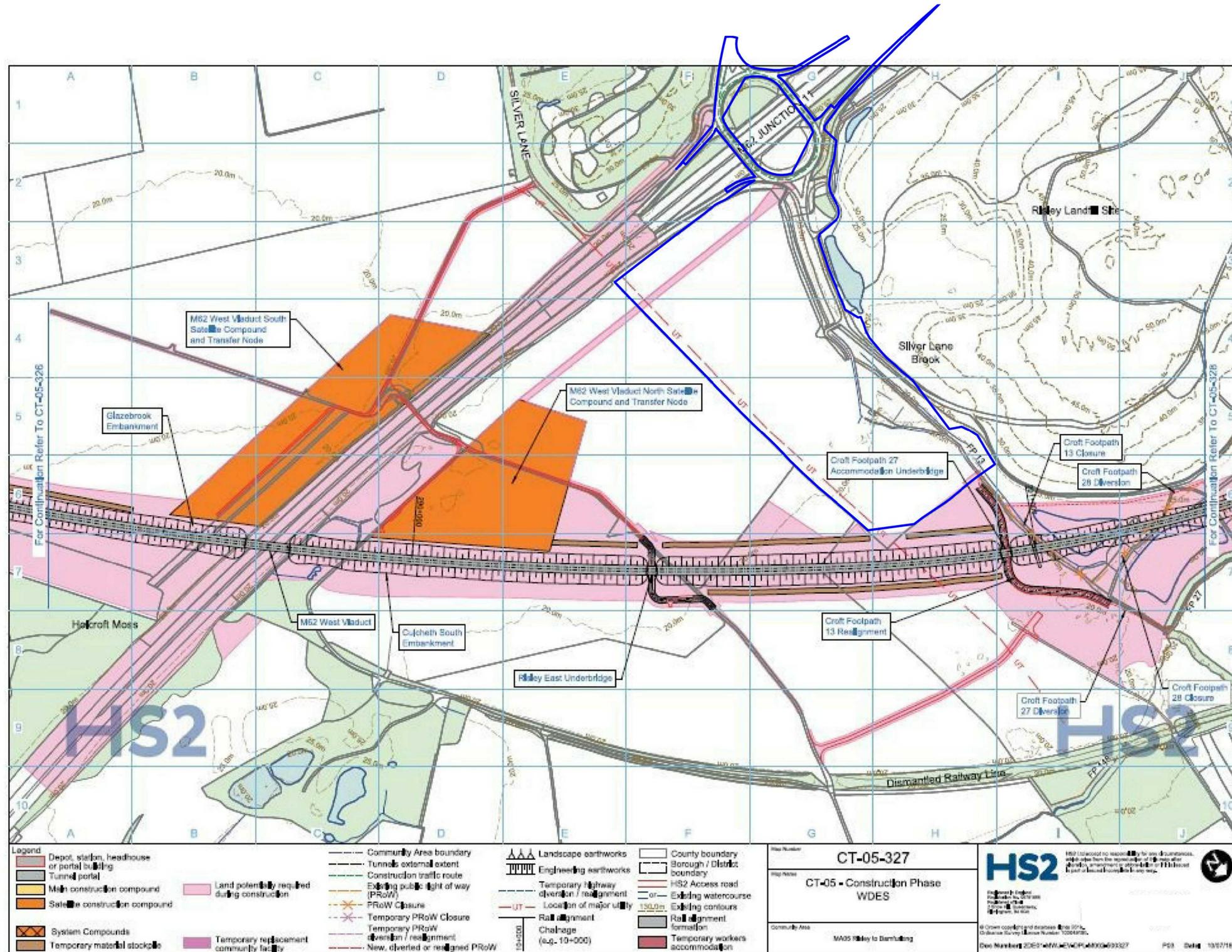
NOTES:

This drawing is not to scale, and is based on HS2 Ltd drawing (DRAWING NUMBER AND DATE UNKNOWN)

For detailed information and a drawing to scale, please refer to the HS2 Ltd drawing.

KEY

— Warrington MSA Site Boundary



WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

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<p>Project: WARRINGTON MOTORWAY SERVICE AREA, J11 M2</p> <p>Document Reference: RMS - 519 - ZZ - XX - DR - A - SK100</p> <p>HS2 Construction 2018 Safeguarding - Red Line Overlay</p>	
<p>Client: EXTRA MSA GROUP</p> <p>Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M2</p>	<p>Scale: A3</p> <p>Revision: P1</p> <p>Created By: NB</p> <p>Reviewed By: NB</p> <p>Date: 16/11/21</p> <p>Scale: As indicated</p>

NOTES:

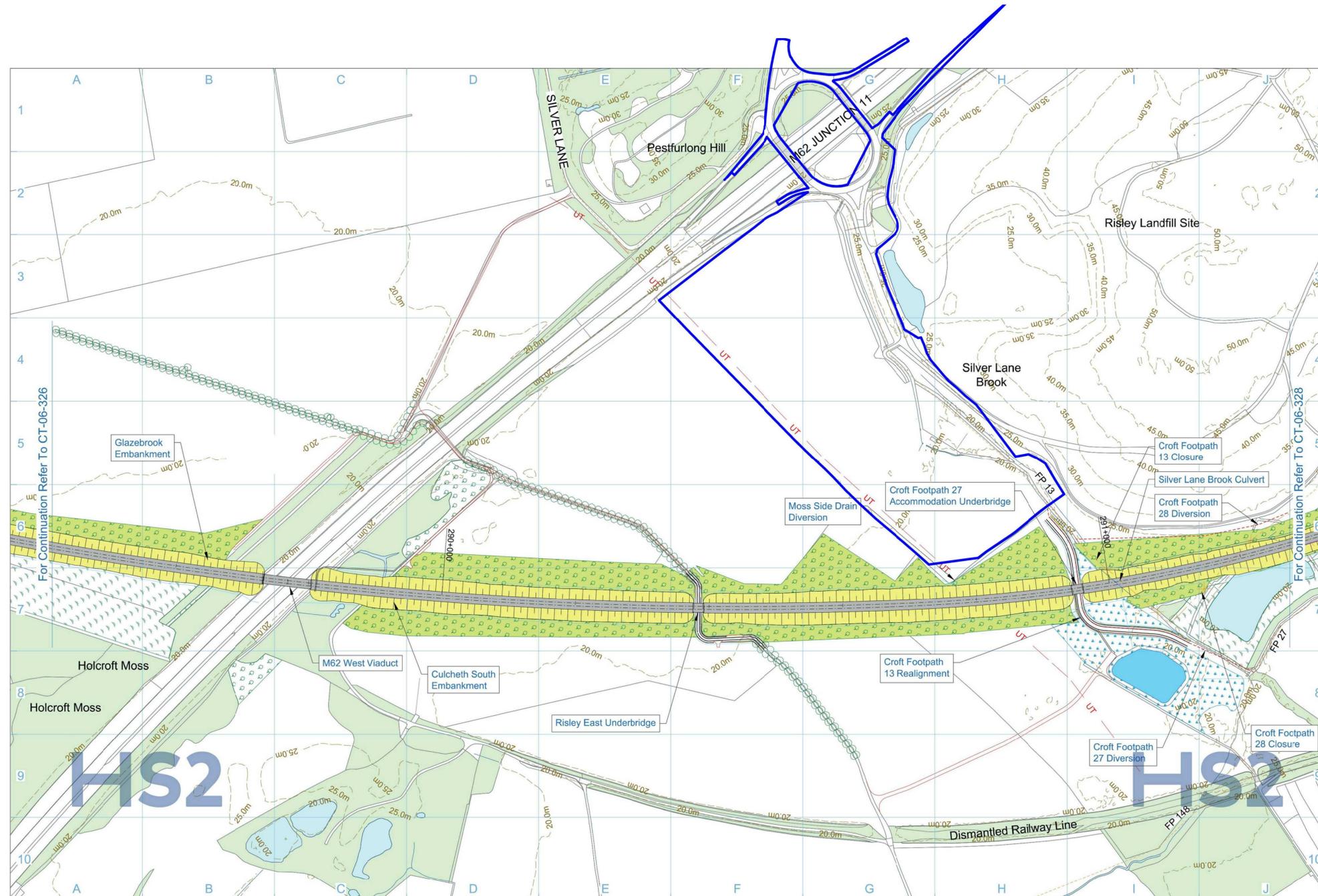
This drawing is not to scale, and is based on HS2 Ltd drawing:

"2DE01-MWJ-EV-DPL-M002-600327 P03" dated 09/07/18

For detailed information and a drawing to scale, please refer to the HS2 Ltd drawing.

KEY

Warrington MSA Site Boundary



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Depot, station, headhouse or portal building</li> <li>Tunnel portal</li> <li>Electricity substation</li> <li>Ecological mitigation pond</li> <li>Replacement floodplain storage</li> <li>Pumping Station</li> <li>Woodland habitat creation</li> <li>Wetland habitat creation</li> <li>Grassland habitat creation</li> <li>Landscape mitigation planting (scrub / woodland)</li> <li>Grassed areas</li> <li>Public realm</li> <li>Engineering earthworks</li> <li>Landscape earthworks</li> <li>Rail alignment formation</li> <li>Tunnels external extent</li> <li>Community Area boundary</li> <li>Watercourse diversion</li> <li>Existing watercourse</li> <li>Ditches - new</li> <li>Hedgerow habitat creation</li> <li>Location of major utility</li> <li>Existing public right of way (PRoW)</li> <li>New, diverted or realigned PRoW</li> <li>PRoW Closure</li> <li>County boundary</li> <li>Borough / District boundary</li> <li>Existing contours</li> <li>HS2 access road</li> <li>Noise fence barrier</li> <li>Rail alignment</li> <li>Chainage (e.g. 10+000)</li> </ul>	<p><b>Map Information</b></p> <p>Map Number: <b>CT-06-327</b></p> <p>Map Name: <b>CT-06 - Proposed Scheme WDES</b></p> <p>Community Area: <b>MA05 Risley to Bamfurlong</b></p> <p>Doc Number: 2DE01-MWJ-EV-DPL-M002-600327 P03 Date: 09/07/18</p>	<p><b>HS2</b></p> <p>Registered in England Registration No: 56751686 Registered Office: 2 Silver Hill, Chatterworth, Birmingham, B4 6GA</p> <p>© Crown copyright and database rights 2018. Ordnance Survey Licence Number 100049190.</p> <p>HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abridgement or if it is issued in part or issued incomplete in any way.</p>
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519 architecture

Client: EXTRA MSA GROUP

Project No: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference: RMS - 519 - ZZ - XX - DR - A - SK101

HS2 Operation 2018 Safeguarding - Red Line Overlay

Status: S0 Work In Progress

Revision: P1

Created By: MJ Date: 16/11/21

Reviewed By: NB Date: As indicated

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## ES Part I Appendix I4c

NOTES:

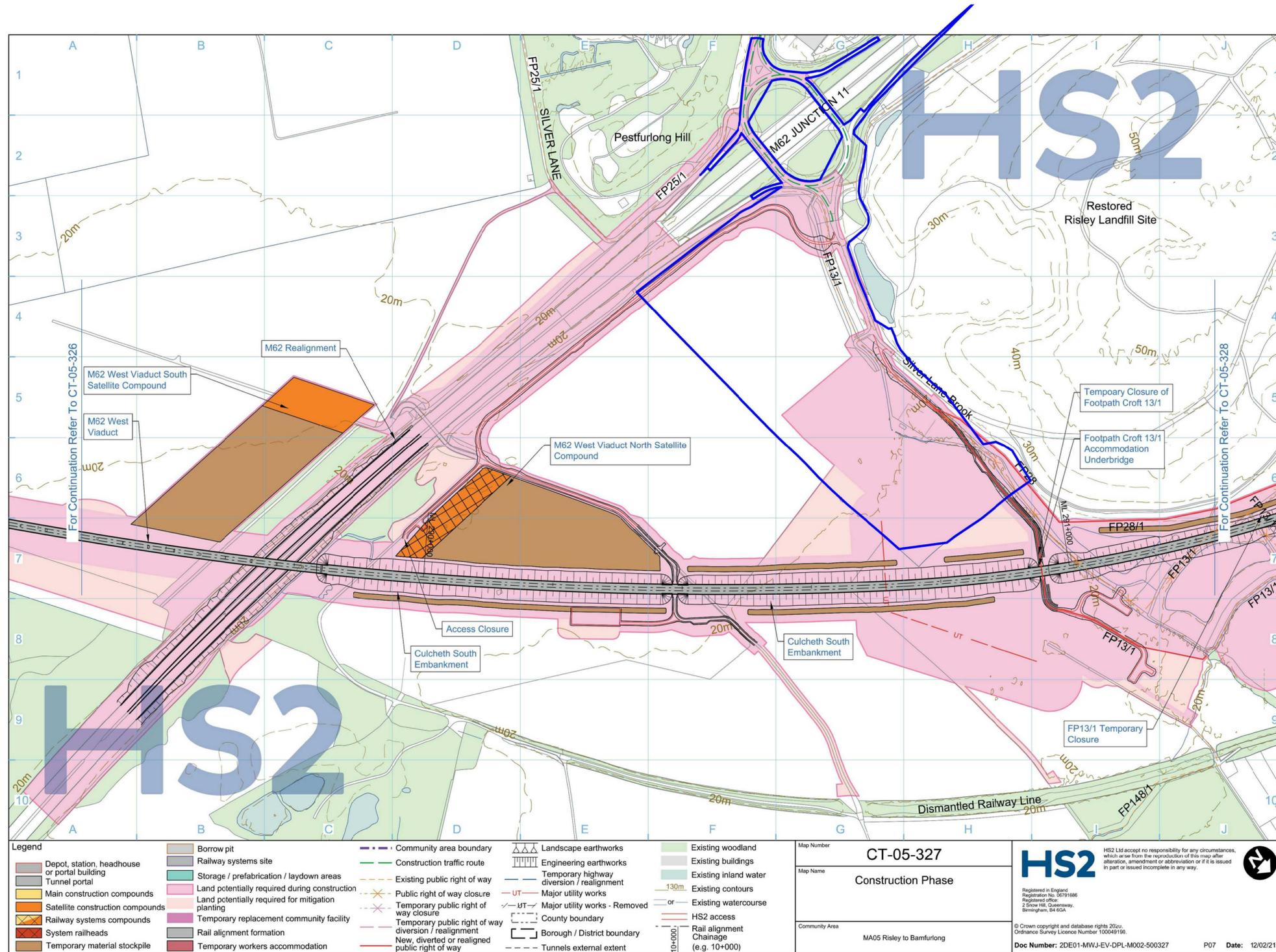
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KEY

Warrington MSA Site Boundary



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WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

Project No: 2502 WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:

Project - Originator - Volume - Level - Type - Role - Number

**RMS - 519 - ZZ - XX - DR - A - SK098**

HS2 Map Book Feb 2021 Construction - Red Line Overlay

Status: **S0** Work in Progress

Revision: **P1**

Created By: MJB Reviewed By: NB Date: 16/11/21 Scale: As indicated

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NOTES:

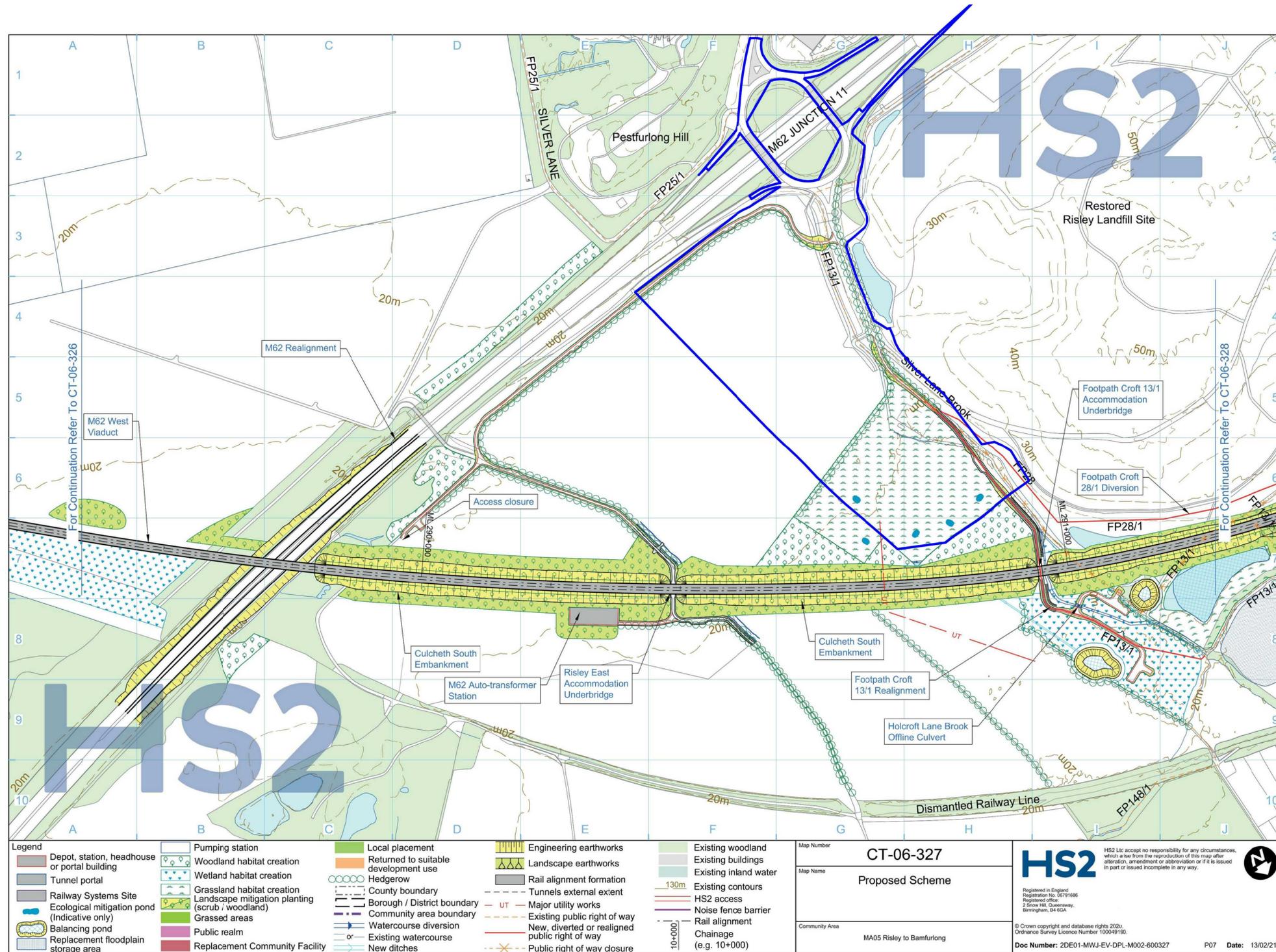
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"2DE01-MWJ-EV-DPL-M002-600327 P07" dated 13/02/21

For detailed information and a drawing to scale, please refer to the HS2 Ltd drawing.

KEY

— Warrington MSA Site Boundary



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WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

Project No: 2502  
 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62  
 Client: EXTRA MSA GROUP  
 Project: 519  
 Document Reference: RMS-519-ZZ-XX-DR-A-SK099  
 HS2 Map Book Feb 2021 Operation - Red Line Overlay  
 Status: S0 Work in Progress  
 Revision: P1  
 Created By: NB  
 Reviewed By: NB  
 Date: 16/11/21  
 Scale: As indicated

NOTES:

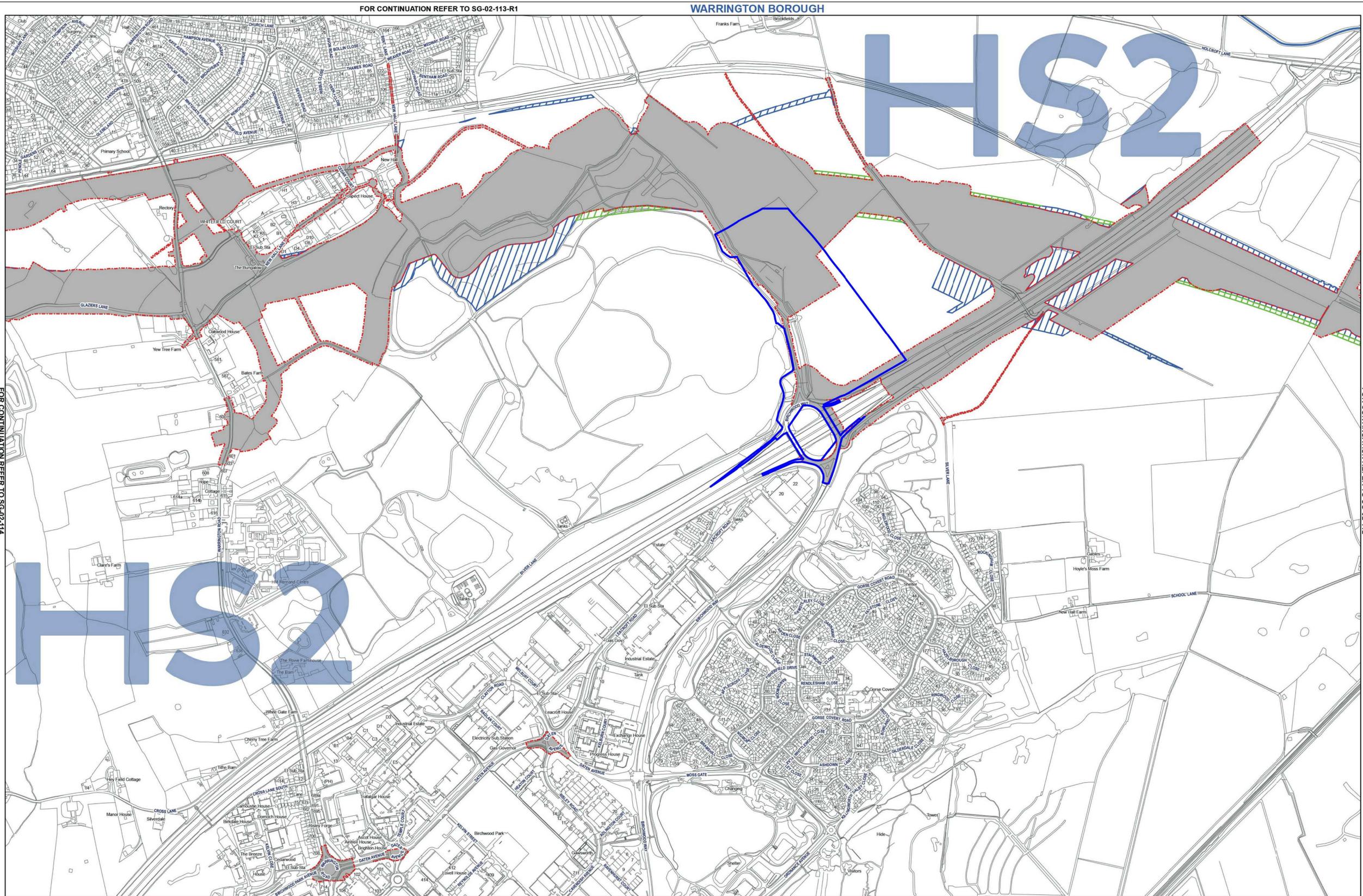
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"P2B-HS2-PL-MAP-M000-000022-P02" dated 21/09/20

For detailed information and a drawing to scale, please refer to the HS2 Ltd drawing.

KEY

Warrington MSA Site Boundary



FOR CONTINUATION REFER TO SG-02-113-R1

WARRINGTON BOROUGH

FOR CONTINUATION REFER TO SG-02-114

FOR CONTINUATION REFER TO SG-02-112

**Legend**

- Limits of Land Subject to Safeguarding Direction
- Safeguarded Area: Surface
- Safeguarded Area: Sub-surface
- Extended Homeowner Protection Zone 1
- Extended Homeowner Protection Zone 2
- Extended Homeowner Protection Zone 3
- Local Authority boundary

Map Number: **SG-02-113**

Map Name: **High Speed Two Phase 2b: Crewe to Manchester Safeguarding Directions**

Date of Issue: **OCTOBER 2020**

**HS2**

Scale at A1: 1:5,000  
Scale at A3: 1:10,000

Dec Number: P2B-HS2-PL-MAP-M000-000022-P02  
Date: 21/09/20

519

Client: **EXTRA MSA GROUP**

Project No: **2502**

Project Name: **WARRINGTON MOTORWAY SERVICE AREA, J11 M62**

Document Reference: **RMS - 519 - ZZ - XX - DR - A - SK102**

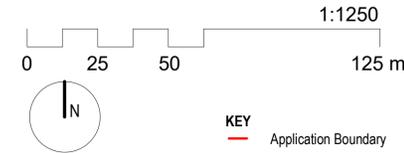
Subsidiary description: **HS2 2020 Safeguarding - Red Line Overlay**

Status: **S0**

Revision: **P1**

Created By: **MJ**  
Reviewed By: **NB**  
Date: **16/11/21**  
Scale: **As indicated**

## ES Part I Appendix I4d



NOTES:

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

KEY

A-B Southern Construction Access Right and Southern Operational Access Right

A-D&E North West Construction Access Right



HS2 Construction Access Zone, Silver Lane Brook diversion corridor, existing and proposed landscaping, ecological features and drainage

Restored Risley Landfill Site

20m

P1 11.11.21 Overlays updated following consultant comments MU NB

Rev: Date: Description: By: Rvw:

architecture **519**

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Client: EXTRA MSA GROUP

Project No: 2562 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:

Project - Originator - Volume - Level - Type - Role - Number

**RMS - 519 - ZZ - XX - DR - A - SK093**

**ES Cumulative (Indicative) - HS2 Construction Phase - Indicative Site Plan**

Status: Code S0 Subtitle description Work In Progress

Revision: Code P1 Revision status

Created By: MU Reviewed By: NB Date: 04/11/21 Scale at A1: 1:1250

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NOTES

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

All legal boundaries to be confirmed by the client.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432

Area of restored landfill site amended to reflect current site conditions

KEY

- Red line boundary
- Spot Height - Proposed Level - With +/-0.5m tolerance to allow for scheme evolution

RESTRICTIVE ZONES

- Position of gas pipeline as Wardell Armstrong survey drawing SH11739-019-B
- Extents of 24m wide gas pipeline easment zone
- Extents of HSE 96m Inner Consultation Zone from gas pipeline
- Location of HS2 safe guarding zone as Wardell Armstrong drawing SH11739-003

DEVELOPMENT CELLS

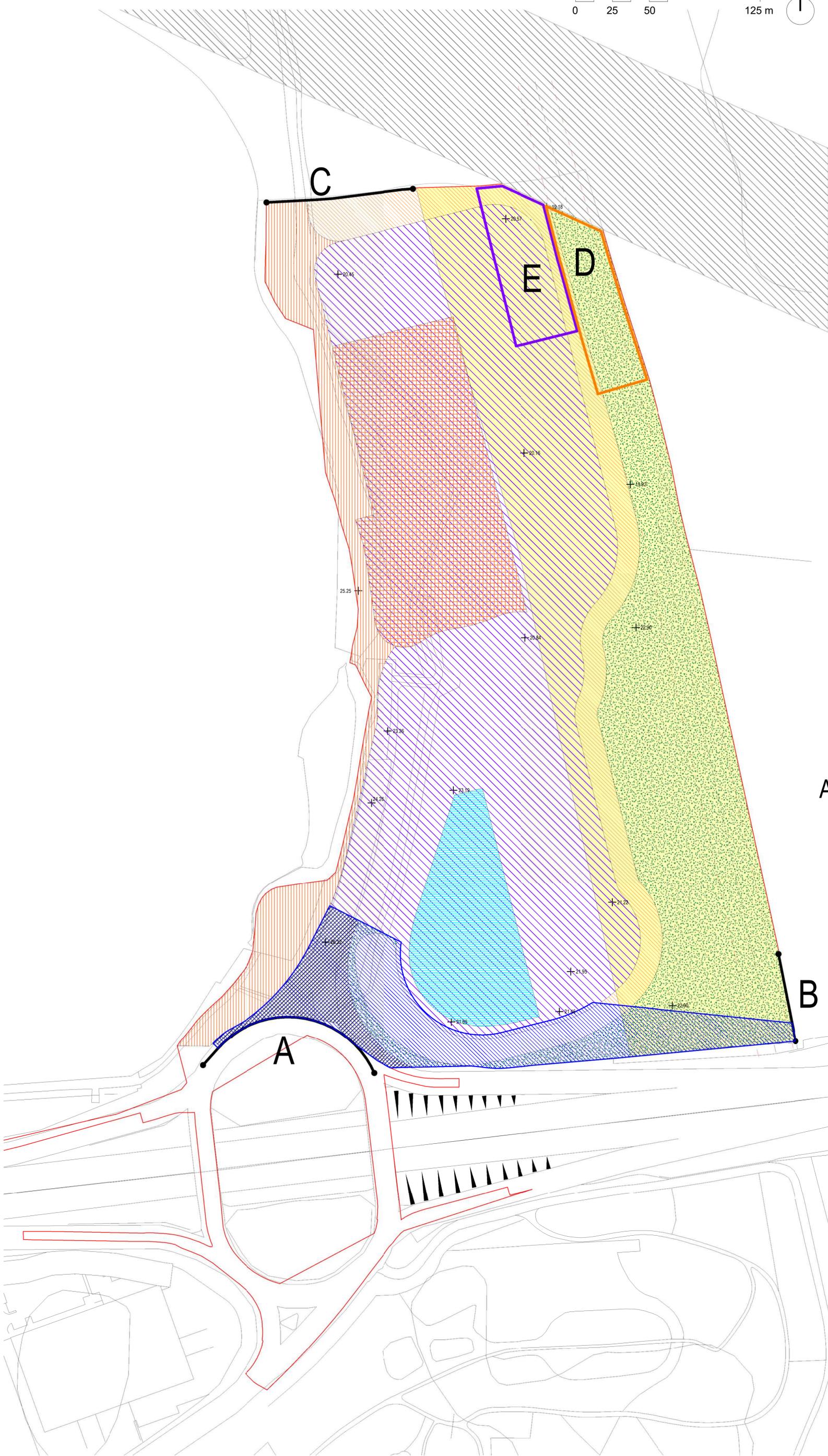
- Zone of Facilities and Hotel Buildings (including incidental landscaped areas) - Max building height 15m. This area also includes the service yard and external amenity spaces. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 37.65m AOD)
- Zone of Fuel Filling Station and internal vehicular circulation (including incidental landscaped areas) - Max building height 6.5m. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 31.05m AOD)
- Landscaped vehicle parking and circulation zone including drainage and ecological features
- Extent of proposed access in and out of the site area
- Extent of proposed HS2 access zones

GREEN INFRASTRUCTURE

- Existing and proposed landscaping, including ecological habitats and drainage
- Diverted footpath zone and associated ecological habitat and landscaping
- Corridor for Silver Lane Brook Diversion and associated ecological habitat and landscaping

HS2

- A-B Southern Construction Access Right and Southern Operational Access Right
- A-D&E North West Construction Access Right
- HS2 Construction Access Zone, Silver Lane Brook diversion corridor, existing and proposed landscaping, ecological features and drainage



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WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

P1	11.11.21	Overlays updated following consultant comments	MU	NB
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Rev.	Date	Description	By	Rvw.
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**architecture 519**

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Client: EXTRA MSA GROUP

Project No: 2562 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:				
Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - XX - DR - A - SK092</b>				
<b>ES Cumulative (Indicative) - HS2 Construction Phase - Parameters Plan</b>				
Status:	Code	Suitability description		
	S0	Work In Progress		
Revision:	Code	Revision status		
	P1			

Created By:	Reviewed By:	Date:	Scale at A1:
MU	NB	04/11/21	1 : 1250

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NOTES

The site boundary is based on Wardell Armstrong drawing no SH11739-006 with amendments discussed with Wardell Armstrong, Shoosmiths, Spawforths and i-transport and approved by Extra.

This red line boundary is to be used for planning purposes only.

All legal boundaries to be confirmed by the client.

Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432

Area of restored landfill site amended to reflect current site conditions

KEY

- Red line boundary
- Spot Height - Proposed Level - With +/-0.5m tolerance to allow for scheme evolution

RESTRICTIVE ZONES

- Position of gas pipeline as Wardell Armstrong survey drawing SH11739-019-B
- Extents of 24m wide gas pipeline easment zone
- Extents of HSE 96m Inner Consultation Zone from gas pipeline
- Location of HS2 safe guarding zone as Wardell Armstrong drawing SH11739-003

DEVELOPMENT CELLS

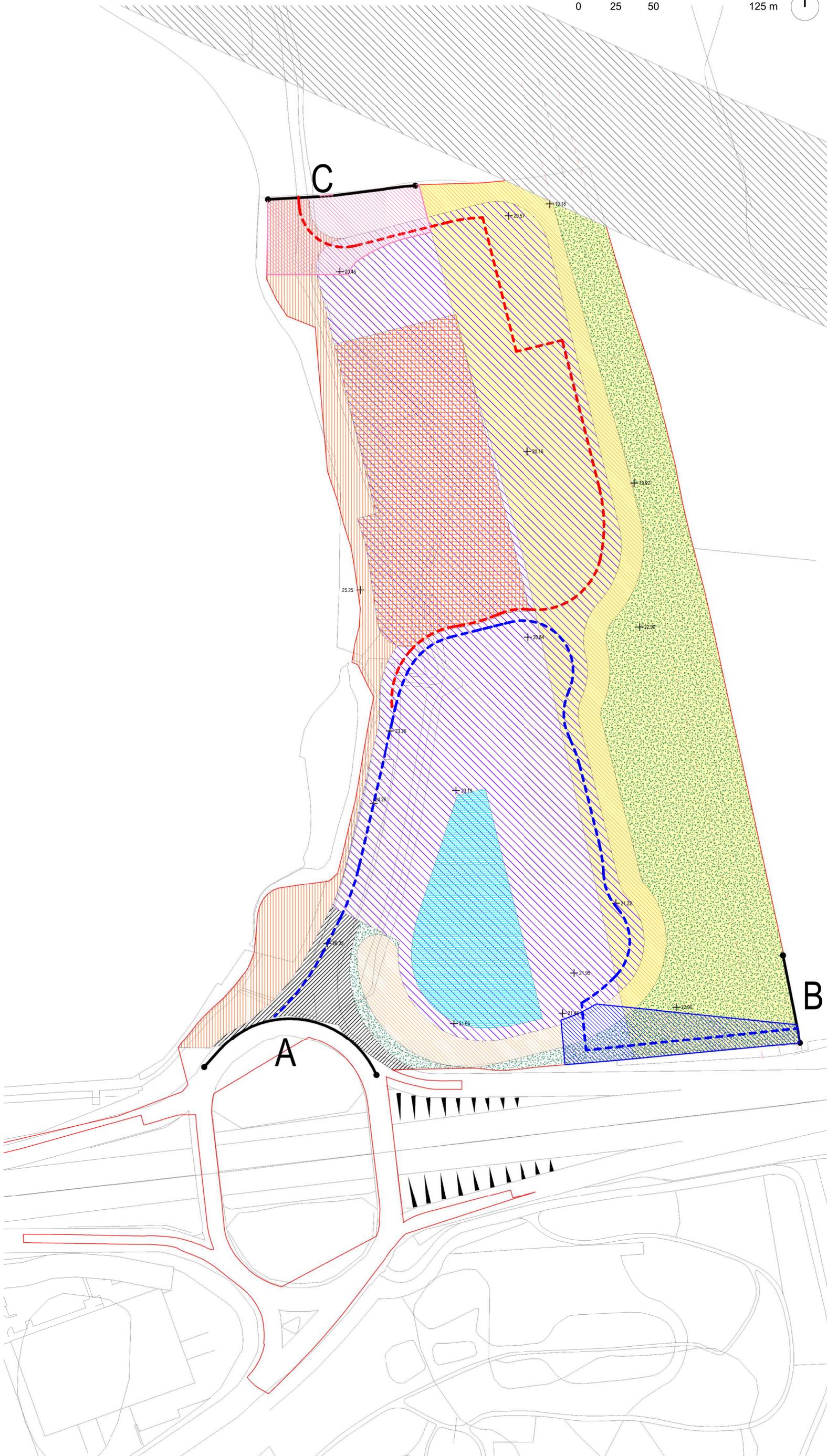
- Zone of Facilities and Hotel Buildings (including incidental landscaped areas) - Max building height 15m. This area also includes the service yard and external amenity spaces. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 37.65m AOD)
- Zone of Fuel Filling Station and internal vehicular circulation (including incidental landscaped areas) - Max building height 6.5m. With +/-2.0m tolerance to allow for scheme evolution and datum level adjustments. (Maximum 31.05m AOD)
- Landscaped vehicle parking and circulation zone including drainage and ecological features
- Extent of proposed access in and out of the site area
- Extent of proposed HS2 access zones

GREEN INFRASTRUCTURE

- Existing and proposed landscaping, including ecological habitats and drainage
- Diverted footpath zone and associated ecological habitat and landscaping
- Corridor for Silver Lane Brook Diversion and associated ecological habitat and landscaping

HS2

- A-B Southern Construction Access Right and Southern Operational Access Right
- A-C Northern Operational Access Right
- Indicative Internal Access Road
- Indicative Northern Access Road
- Zone 2 - For HS2 Southern Operational Access, Silver Lane Brook diversion corridor, existing and proposed landscaping, ecological features and drainage
- Zone 3 - For HS2 Northern Operational Access, Silver Lane Brook diversion corridor and diverted footpath



WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

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P1 11.11.21 Overlays updated following consultant comments MU NB

Rev: Date: Description: By: Rvw:

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Client: EXTRA MSA GROUP

Project No: 2562 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:

Project	Originator	Volume	Level	Type	Role	Number
RMS - 519 - ZZ - XX - DR - A - SK094						

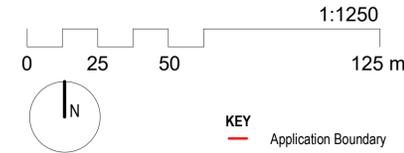
ES Cumulative (Indicative) - HS2 Operation Phase - Parameters Plan

Status	Code	Suitability description
S0	Work In Progress	

Revision	Code	Revision status
P1		

Created By: MU Reviewed By: NB Date: 04/11/21 Scale at A1: 1:1250

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NOTES:

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This red line boundary is to be used for planning purposes only.

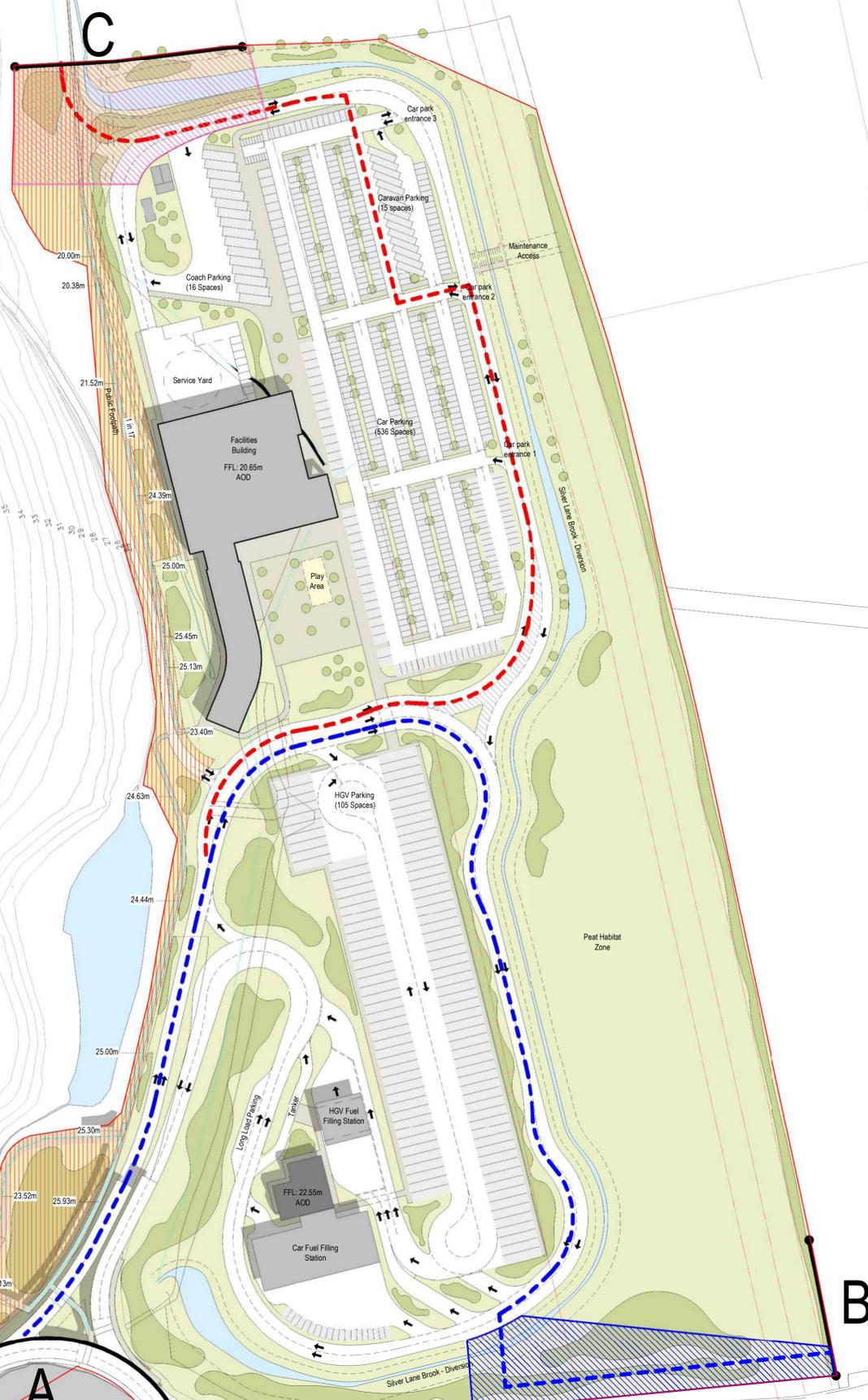
Site and surrounding information based on Ordnance Survey Plan Information supplied by Spawforths. Licence no. 100022432.

Area of restored landfill site amended to reflect current site conditions.

This drawing is indicative and the plan, elevation, massing and detailing are all subject to change within the bounds of the parameter drawings submitted as part of this application.

- Key
- A-B** Southern Construction Access Right and Southern Operational Access Right
  - A-C** Northern Operational Access Right
  - Indicative Internal Access Road
  - Indicative Northern Access Road
  - Zone 2 - For HS2 Southern Operational Access, Silver Lane Brook diversion corridor, existing and proposed landscaping, ecological features and drainage
  - Zone 3 - For HS2 Northern Operational Access, Silver Lane Brook diversion corridor and diverted footpath

Restored Rislely Landfill Site



20m

B

A

J11

M62

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P1 11.11.21 Overlays updated following consultant comments MU NB

Rev: Date: Description: By: Rvw:

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Client: EXTRA MSA GROUP

Project No: 2562 Project Name: WARRINGTON MOTORWAY SERVICE AREA, J11 M62

Document Reference:

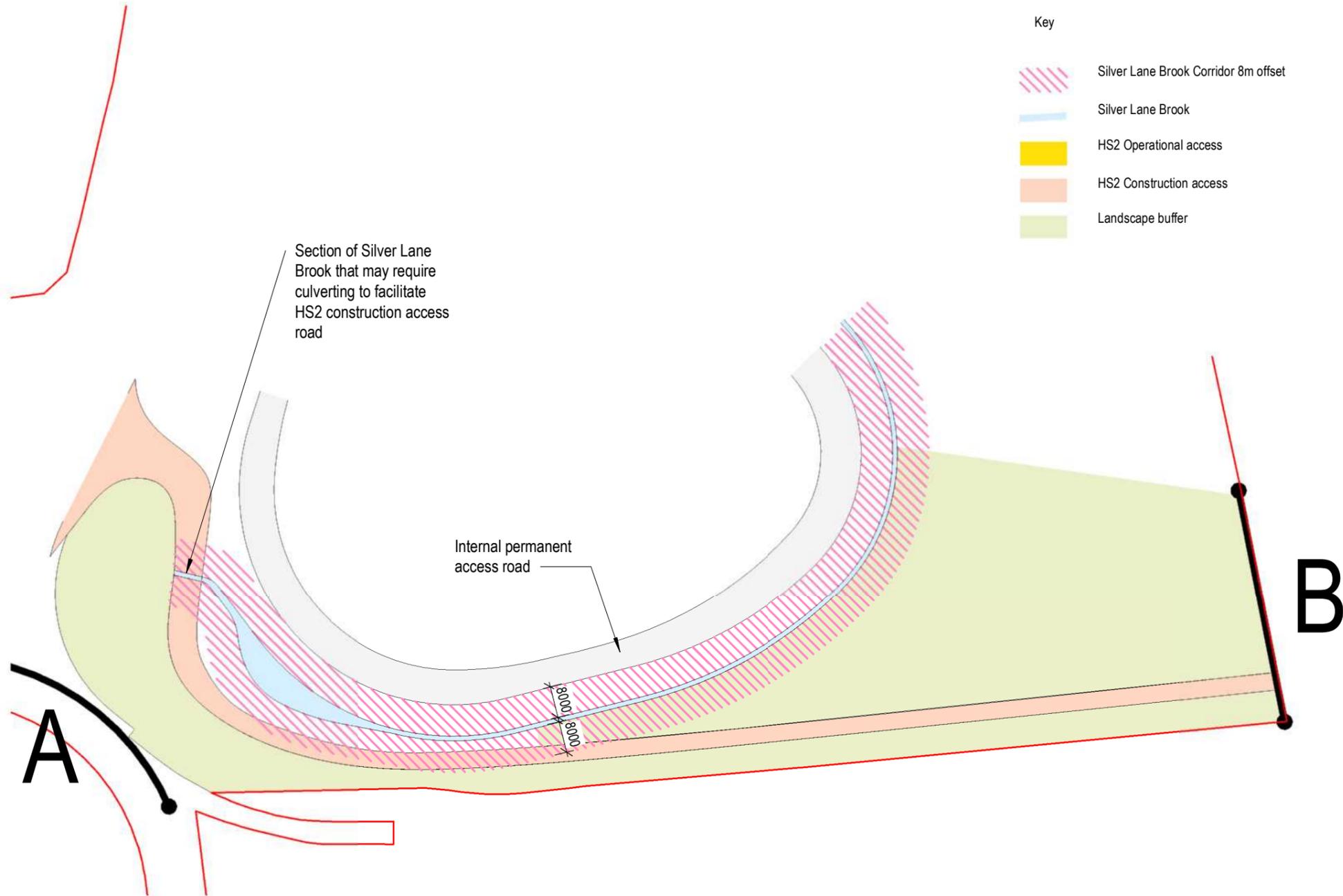
Project	Originator	Volume	Level	Type	Role	Number
RMS - 519 - ZZ - XX - DR - A - SK095						

ES Cumulative (Indicative) - HS2 Operation Phase - Indicative Site Plan

Status:	Code	Suitability description
	S0	Work In Progress
Revision:	Code	Revision status
	P1	

Created By: MU Reviewed By: NB Date: 04/11/21 Scale at A1: 1:1250

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Key

-  Silver Lane Brook Corridor 8m offset
-  Silver Lane Brook
-  HS2 Operational access
-  HS2 Construction access
-  Landscape buffer

Section of Silver Lane Brook that may require culverting to facilitate HS2 construction access road

Internal permanent access road

A

B

Rev:	Date:	Description:	By:	Rvw:
P2	25.11.21	Sketch updated in line with comments	MU	MU
P1	24.11.21	Sketch updated and drawing name/sheet size amended	MU	MU

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 EXTRA MSA GROUP

Project No: WARRINGTON MOTORWAY SERVICE  
 2562 AREA, J11 M62

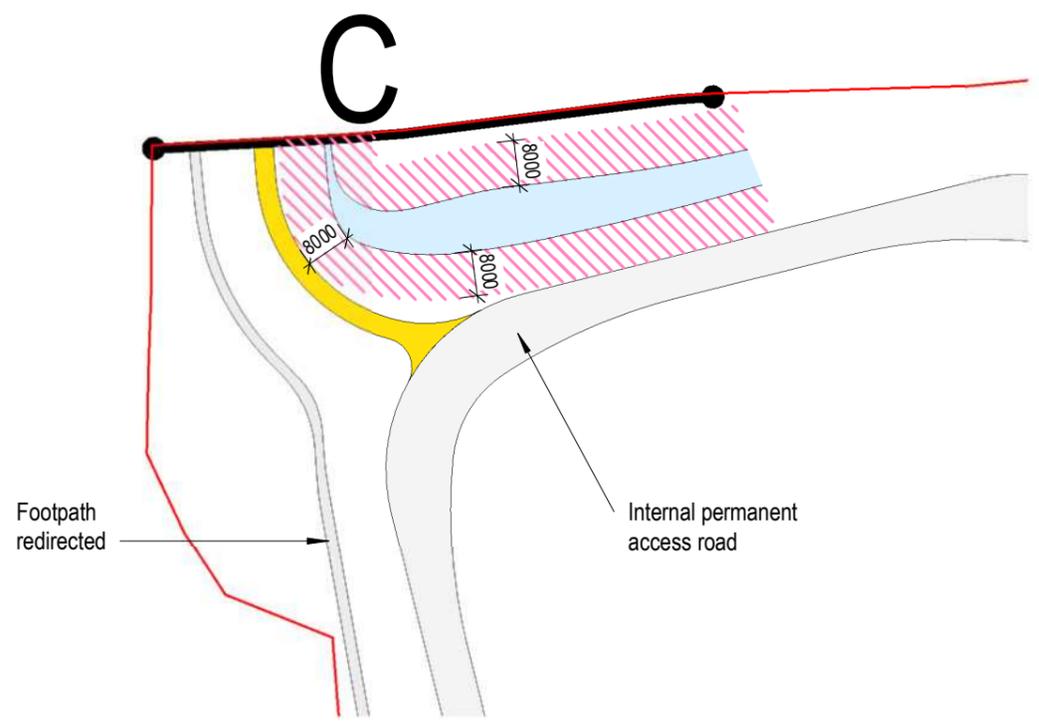
Document Reference:

Project	Originator	Zone	Level	Type	Role	Number
RMS - 519 - ZZ - XX - DR - A - SK096						
ES Addendum Plans - Sketch 1 - HS2 southern access - Construction Indicative)						
Status:	Code	Suitability description				
	S0	Work In Progress				
Revision:	Code	Revision status				
	P2					

Created By:	Reviewed By:	Date:	Scale at A3:
MU	NB	12/11/21	1 : 1250

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- Key
-  Silver Lane Brook Corridor 8m offset
  -  Silver Lane Brook
  -  HS2 Operational access
  -  HS2 Construction access
  -  Landscape buffer



P1 24.11.21 Sketch updated and drawing name/sheet size amended MU MU

Rev: Date: Description: By: Rvw:

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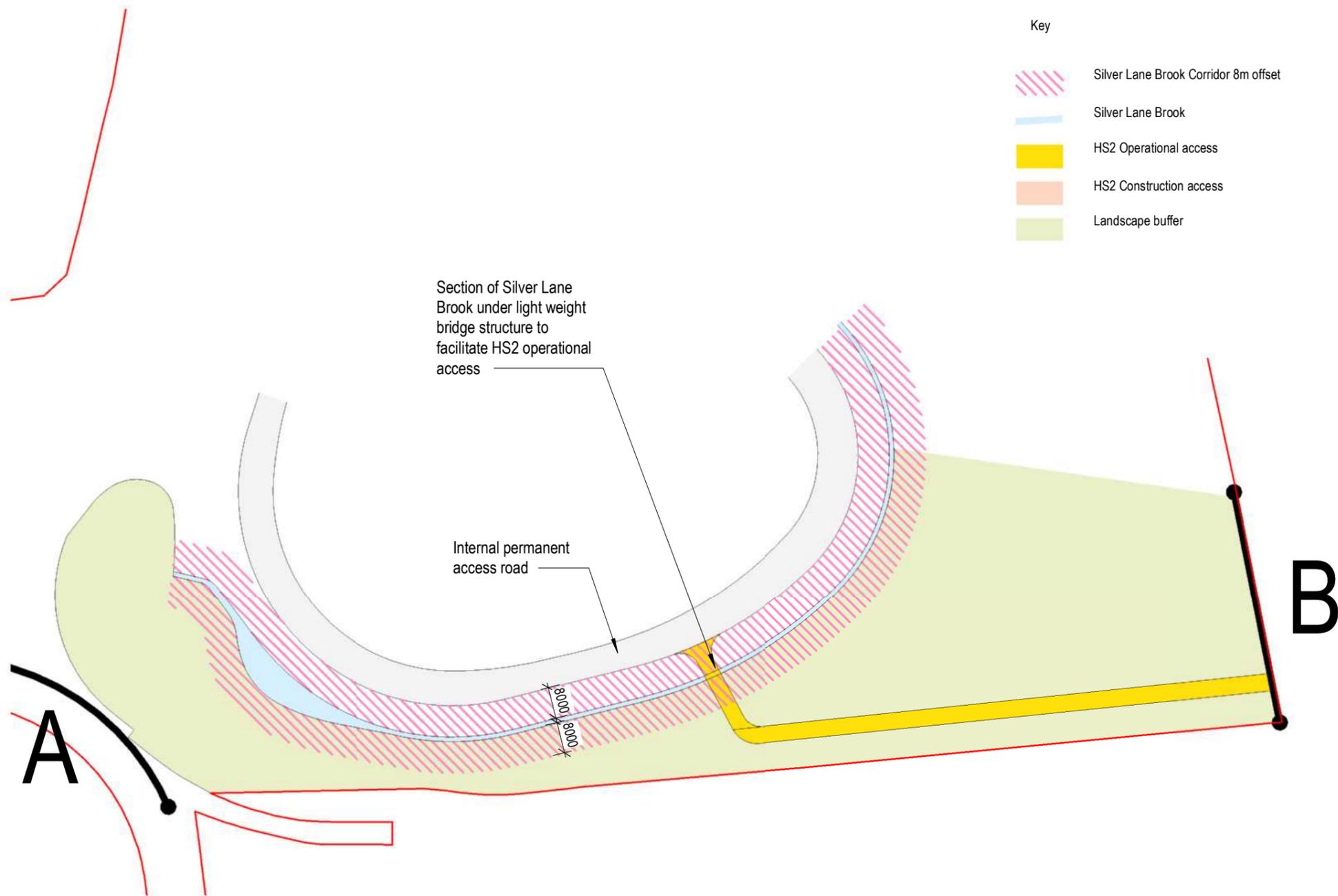
Project No: WARRINGTON MOTORWAY SERVICE  
2562 AREA, J11 M62

Document Reference:

Project	Originator	Zone	Level	Type	Role	Number
RMS - 519 - ZZ - A - SK097						
ES Addendum Plans - Sketch 2 - HS2 northern access (Indicative)						
Status:	Code	Suitability description				
	S0	Work In Progress				
Revision:	Code	Revision status				
	P1					

Created By: Reviewed By: Date: Scale at A3:  
Author Approver 1 : 1250

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P1 25.11.21 Sketch updated in line with comments MU MU

Rev:	Date:	Description:	By:	Rvw:
P1	25.11.21	Sketch updated in line with comments	MU	MU

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Client:  
**EXTRA MSA GROUP**

Project No: **WARRINGTON MOTORWAY SERVICE**  
**2562 AREA, J11 M62**

Document Reference:

Project	Originator	Zone	Level	Type	Role	Number
RMS - 519 - ZZ - XX - DR - A - SK0103						

ES Addendum Plans - Sketch 3 - HS2 southern access - Operation (Indicative)

Status: Code Suitability description  
 S0 Work In Progress

Revision: Code Revision status  
 P1

Created By:	Reviewed By:	Date:	Scale at A3:
MU	MU	24.11.21	1 : 1250

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## ES Part I Appendix I4e

Land to the North of Junction 11, of M62,  
Warrington

## HS2 Statement of Common Ground

***“Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas, ecological mitigation, pumping station(s), substation(s), retaining structures and associated infrastructure and earthworks.”***

Application Ref: 2019/35726

Spawforths ref:- P0-TP-SPA-NT-P4151-0068-03

Date: 16 November 2021

## Contents

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<b>SECTION 2</b>	<b>Matters of Agreement</b>	<b>4</b>
<b>SECTION 3</b>	<b>Declaration</b>	<b>13</b>

## SECTION 1 Introduction

### 1.1 This Document

- 1.1.1 This document is a Statement of Common Ground agreed between the Appellant (Extra MSA Group) and High Speed Two (HS2) Limited (herein after referred to as HS2SoCG).
- 1.1.2 It relates to an appeal against refusal of planning permission by Warrington MBC (WBC) (in its capacity as the Local Planning Authority) in respect of planning application ref: 2019/35726. The Applicant is appealing this decision.
- 1.1.3 A Public Inquiry is expected to be held in Spring 2022.

### 1.2 Appeal Proposal

- 1.2.1 The site address is:

***Land North of Junction 11, M62, Warrington.***

- 1.2.2 The description of development is:

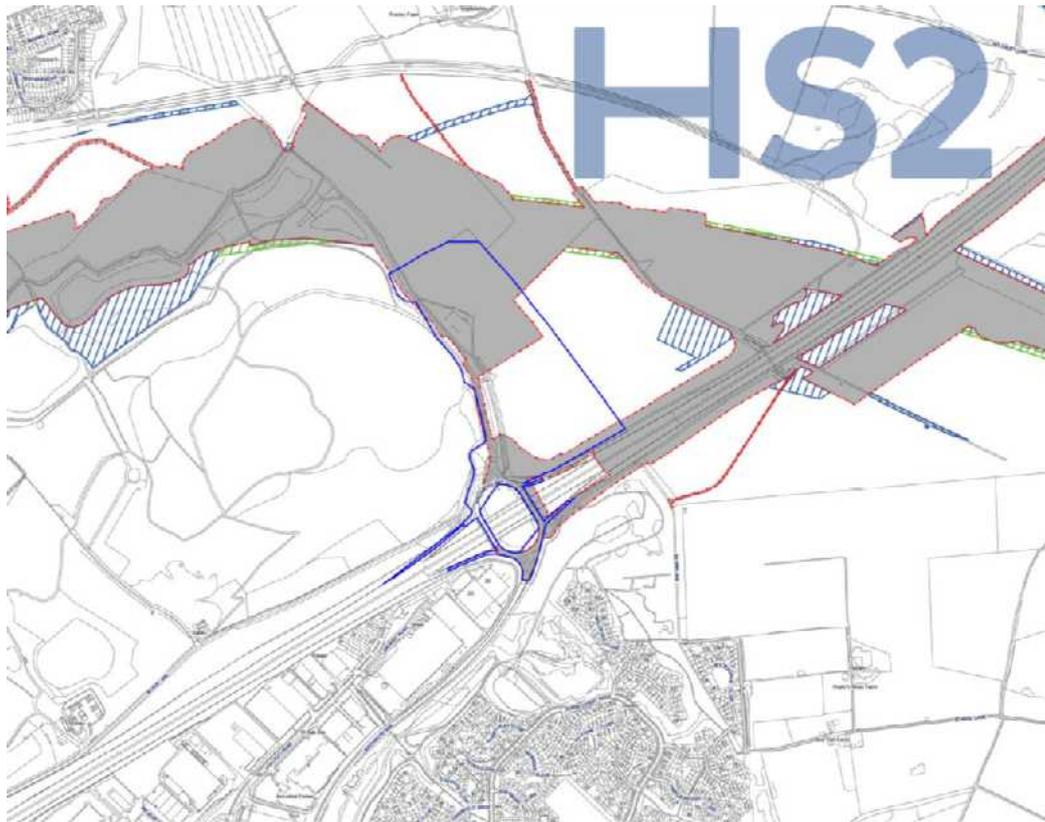
***'Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas, ecological mitigation, pumping station(s), substation(s), retaining structures and associated infrastructure and earthworks.'***

- 1.2.3 The Decision Notice confirming refusal of the application was issued on 17<sup>th</sup> June 2021.
- 1.2.4 Appendix A comprises the Site Location Plan; Appendix B comprises the Application Proposals Parameters Plan; Appendix C comprises the Application Proposals Illustrative Masterplan; Appendix D is the HS2 Rights of Access Plan; and Appendix E is a copy of the HS2 Ltd withdrawal of the objection to the Application Proposals.

### 1.3 HS2 Background

- 1.3.1 The HS2 Working Draft Environmental Statement dated October 2018 included a strip of land for a construction access for HS2 through the Application Site (edged blue) as shown below.





**Legend**

	Limits of Land Subject to Safeguarding Direction		Extended Homeowner Protection Zone 1		Local Authority boundary
	Safeguarded Area: Surface		Extended Homeowner Protection Zone 2		
	Safeguarded Area: Sub-surface		Extended Homeowner Protection Zone 3		

1.4 **HS2 Ltd comments upon the Application Proposals**

1.5 HS2 Ltd issued a holding response in September 2019 in respect of the Application proposals which confirmed its intention to investigate the interfaces between HS2 and the Application proposals.

1.6 In January 2020 WBC consulted HS2 Ltd on amended plans received in relation to the application. On 19 February 2020 HS2 Ltd responded that discussions were ongoing with the developer and as such it was not yet in a position to remove the original holding response.

1.7 On 19 June 2020 HS2 Ltd responded to WBC with a procedural holding objection, as whilst discussions continued with the developer, there was not yet an agreed way forward to ensure the proposed development would not conflict with the ability to construct and/or operate the railway.

- 1.8 HS2 Ltd issued an updated response on 11<sup>th</sup> February 2021 which confirmed HS2 Ltd's intention to formally lift the holding objection subject to the inclusion of the 3 planning conditions requested by HS2 Ltd that were drafted in consultation with the developer and subsequently agreed by WBC on 8 March 2021 (wording as set out in Section 2), and completion of a legal agreement to ensure that the objectives of the safeguarding directions are not compromised.
- 1.9 HS2 Ltd issued a further updated response on 19<sup>th</sup> May 2021 to confirm that matters have been agreed between the developer and HS2 regarding the interfaces with safeguarded land but that a legal agreement was still awaiting execution and until formal confirmation of this process is received HS2's objection to the application stands.
- 1.10 At the time of determination of the Application Proposals by WMC (17<sup>th</sup> June 2021), HS2 Ltd retained an objection to the Application Proposals.
- 1.11 On 29<sup>th</sup> July 2021 HS2 Ltd confirmed the legal agreement had been completed and their withdrawal of their procedural holding objection (see Appendix E).

1.12 **Structure**

- 1.13 The remainder of this HS2SoCG sets out:
- Section 2.0 – Matters of Agreement;
  - Section 3.0 - A signed declaration between HS2 Ltd and Spawforths (on behalf of the Appellant).

## SECTION 2 Matters of Agreement

2.1 Agreement has been reached between the Appellant and HS2 Ltd (“the Parties”) in respect of the matters set out in the following table.

2.2 There are no matters still to be resolved in relation to the Application Proposals, nor are there any matters of disagreement between the Parties.

Item	Appellant	HS2 Ltd
Agreement that HS2 Ltd have no objection (subject to specified planning conditions) to the Application Proposal.	Following a period of detailed engagement between the Appellant and HS2 Ltd, agreement has been reached between all the Parties which allowed HS2 Ltd to withdraw their objection to the Application Proposals subject to the imposition of three planning conditions plus the legal agreement to provide mechanisms to ensure that the objectives of the safeguarding directions are not compromised.	Agreed
Agreement that the Application Proposals do not prejudice the delivery of HS2.	All the Parties have agreed that the Application Proposals will not prejudice the delivery of HS2 or compromise the objectives of the safeguarding directions provided that the processes outlined in the three planning conditions plus the legal agreement are followed.	Agreed

Item	Appellant	HS2 Ltd
<p>Agreement over the need for and wording of the HS2 Access condition:-</p> <p><i>43. "No development hereby permitted shall take place in any part of the area shown edged red on the Safeguarding plans [Plan SG-02-113] being an area subject to safeguarding directions dated 7 October 2020 made by the Secretary of State for Transport unless and until detailed design and method statements for all works, proposed to be constructed on the Site to provide access to the HS2 compound from Junction 11 of the M62 have been submitted to, and approved in writing by, the local planning authority in consultation with HS2 Limited. The detailed design for the works on the Site must be supported by appropriate traffic modelling which demonstrates that Junction 11 of the M62 will [safely] accommodate the overall level of traffic anticipated during the construction of HS2 works, including the HS2 construction traffic which will access Junction 11 from the Site and from the compound off Silver Lane South, and that waiting times at the proposed traffic signals on the Junction will be acceptable to the local highway authority [and Highways England]. The Development shall be carried out in accordance with the detailed design and method statements so approved"</i></p> <p><i>Reason: In the interests of the interfaces with the HS2 safeguarded area.</i></p>	<p>HS2 require the ability to cross the Application Site for both construction and operational purposes. Agreement has been reached that the Application Proposals and HS2 construction and operational access activities can operate effectively within the Application Site to facilitate such temporary construction access and permanent operational accesses. The HS2 Access condition establishes a framework for more detailed design and method statements to be evolved as the Reserved Matters scheme for the Application Proposals are worked up. The condition requires such detailed design and method statements (including appropriate traffic modelling of Junction 11 of the M62) to be agreed by the Local Planning Authority in consultation with HS2 Ltd and for the Application Proposals to be carried out in accordance with those approved details.</p>	<p>Agreed</p>

Item	Appellant	HS2 Ltd
<p>Agreement over the need for and wording of the HS2 Utility condition:-</p> <p>44. <i>"No development hereby permitted shall take place in any part of the area shown edged red on the Safeguarding Plans [SG-02-113] being an area subject to safeguarding directions dated 7 October 2020 made by the Secretary of State for Transport ("the Utility Safeguarded Area") unless and until the Utility Construction Zone Assessment undertaken by National Grid on behalf of HS2 Ltd has been completed and either:</i></p> <p><i>(a) HS2 has confirmed in writing that the Utility Safeguarded Area is not required for any works relating to HS2; or</i></p> <p><i>(b) Detailed design and method statements for all works proposed in respect of the Utility Construction Zone Assessment affecting the Site which allow for the necessary HS2 Utilities Works to be undertaken have been submitted to, and approved in writing by, the local planning authority in consultation with HS2 Limited. The Development shall be carried out in accordance with the detailed design and method statements so approved."</i></p> <p><i>Reason: In the interests of the interfaces with the HS2 safeguarded area.</i></p>	<p>HS2 require the ability to utilise part of the Application Site as a temporary Utility Construction Zone should National Grid need to establish a storage compound / working area whilst they undertake diversion works for the high pressure gas pipe that runs through the Application Site and under the proposed HS2 rail line. Agreement has been reached in principle that the Application Proposal and HS2 utility construction activities can operate effectively within the Application Site to facilitate such temporary activities. The Utility Condition establishes a framework for more detailed design and method statements to be evolved as the Reserved Matters scheme for the Application Proposals are worked up. The condition requires such detailed design and method statements to be agreed by the Local Planning Authority in consultation with HS2 Ltd and for the Application proposals to be carried out in accordance with those approved details.</p>	<p>Agreed</p>

Item	Appellant	HS2 Ltd
<p>Agreement over the need for and wording of the Ecological Mitigation Area condition:-                      45. <i>"No development hereby permitted shall take place in any part of the area shown edged red on the Safeguarding Plan [SG-02-113] being an area subject to safeguarding directions dated 7 October 2020 made by the Secretary of State for Transport ("the Ecology Safeguarded Area") unless and until the Ecological Mitigation Assessment undertaken on behalf of HS2 Ltd has been completed and either:</i>                      (a) <i>HS2 has confirmed in writing that the Ecology Safeguarded Area is not required for any works relating to HS2; or</i>                      (b) <i>Detailed design and method statements for all works proposed in respect of the Ecological Mitigation Assessment affecting the Site which allow the necessary HS2 ecological mitigation works to be carried out have been submitted to, and approved in writing by, the local planning authority in consultation with HS2 Limited.</i>  <i>The Development shall be carried out in accordance with the detailed design and method statements so approved."</i>                      Reason: <i>In the interests of the interfaces with the HS2 safeguarded area.</i></p>	<p>HS2 require the potential opportunity to utilise part of the Application Site as an Ecological Mitigation Area for HS2. Agreement has been reached in principle that the Application Proposals are not prejudiced by the HS2 Ecological Mitigation Area requirements which are agreed by HS2 Ltd to be accommodated outside of the Application Site. Should this not be the case, the Ecological Mitigation Area condition establishes a framework for more detailed design and method statements to be evolved as the Reserved Matters scheme for the Application Proposals are worked up if any HS2 Ecological Mitigation Areas are required within the Application Site. The condition requires such detailed design and method statements to be agreed by the Local Planning Authority in consultation with HS2 Ltd and for the Application proposals to be carried out in accordance with those approved details.</p>	<p>Agreed</p>

Item	Appellant	HS2 Ltd
<p>Agreement that the “reasonable worst case” implications of HS2 on the Application Proposals are shown on the HS2 Rights of Access Plan below (See Appendix D for larger scale plan)</p> 	<p>The Appellant and HS2 have entered into a Legal Agreement to ensure that the Application Proposals and HS2 can both be delivered without prejudicing each other.</p> <p>The Legal Agreement includes a HS2 Rights Of Access Plan which confirms:-</p> <p><u>The Access Rights:-</u></p> <ul style="list-style-type: none"> <li>• A-B – Southern construction Access Right and Southern Operational Access Right.</li> <li>• A-C – Northern Operational Access Right.</li> <li>• A-D&amp;E – North West Construction Access Right.</li> </ul> <p>The Access Rights to satisfy the HS2 Access condition are set out above and indicative routes to achieve these rights are shown on the Plan but these routes are agreed to be indicative only.</p> <p><u>The Utility Rights.</u></p> <p>The Utility Connection and Construction Zones are shown within the Plan:-</p> <ul style="list-style-type: none"> <li>• Area D – Utility Connection Zone.</li> <li>• Area E – Utility Construction Zone.</li> </ul> <p>Areas D and E are the maximum areas within the Application Site that could be utilised by HS2 Ltd on a temporary basis to satisfy the Utility condition.</p> <p><u>Ecological Mitigation areas.</u></p>	<p>Agreed</p>

Item	Appellant	HS2 Ltd
	<p>No areas are reserved within the HS2 Rights Of Access Plan for HS2 Ecological Mitigation as it is agreed that the HS2 Ecological Mitigation Assessment referred to in the Ecological Mitigation Area condition does not require any of the Application Site to mitigate the ecological impact of HS2.</p> <p><u>Reasonable worst case requirements.</u> It is agreed that the HS2 Rights of Access Plan represents the "reasonable worst case" implications of HS2 on the Application Proposals.</p>	
Planning Obligations	There are no planning obligations relevant to HS2.	Agreed

### SECTION 3 Declaration

3.1 This HS2 Statement of Common Ground is agreed by:

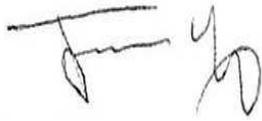
Signed on behalf of HS2 Ltd by:

Name: James Fox

Position: Safeguarding Planning Manager

Date: 17<sup>th</sup> November 2021

Signature:



Signed on behalf of the Appellant by:

Name: Dave Rolinson

Position: Chairman, Spawforths

Date: 16<sup>th</sup> November 2021

Signature:



# APPENDICES

# APPENDIX A. SITE LOCATION PLAN









# APPENDIX E. HS2 WITHDRAWAL OF OBJECTION TO APPLICATION PROPOSALS.



Town Planning <town.planning@hs2.org.uk>

[Deborah](#) [Hughes, Martha](#) [David Robinson](#) [Allison Baines](#) [David Wile](#) [James Fox](#)

26/07/20

Planning Application: 2019/35726 - Land to the North of Junction 11, of the M62, Warrington (Withdrawal of Holding Objection)

You replied to this message on 26/07/2021 14:54.

Our ref: HS2-WBC-SC-006

Dear Martha,

I am pleased to confirm that the legal agreement addressing the interface between the proposed development and the Phase 2b safeguarding directions has now been completed and therefore HS2 Ltd removes the procedural holding objection to the application, which I understand was recently refused by Warrington Council's planning committee.

I trust this response is sufficient for your records but should you require any further information do not hesitate to contact me at: [town.planning@hs2.org.uk](mailto:town.planning@hs2.org.uk) and you will note I have also copied the applicant in to this response for awareness.

Kind regards

Peter Attwell | Phase 2a Town Planning Manager | Infrastructure Directorate | HS2 Ltd

Mob: 07909932933 | [peter.attwell@hs2.org.uk](mailto:peter.attwell@hs2.org.uk) | [Facebook](#) | [Twitter](#)

High Speed Two (HS2) Limited, Two Snowhill, Snow Hill Queensway, Birmingham, B4 6GA | [www.gov.uk/hs2](http://www.gov.uk/hs2)

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## ES Part I Appendix I5



**EXTRA MSA GROUP**

**MOTORWAY SERVICES, WARRINGTON**

**CHAPTER 14: ARBORICULTURAL IMPACT ASSESSMENT**

**JULY 2019**

**DATE ISSUED:** July 2019  
**JOB NUMBER:** SH11739  
**REPORT NUMBER:** 0014

**EXTRA MSA GROUP**

**MOTORWAY SERVICES, WARRINGTON**

**ARBORICULTURAL IMPACT ASSESSMENT**

**JULY 2019**

**PREPARED BY:**

Scott Reid

Senior Arboriculturist



**REVIEWED BY:**

Moray Simpson

Principal Arboriculturist



**APPROVED BY:**

Tim Palmer

Technical Director



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<b>DRAWINGS</b>	<b>TITLE</b>	<b>SCALE</b>
SH11739-033 Rev. B	Tree Protection Plan	1:1000@A1

## 1 INTRODUCTION

### 1.1 Brief

- 1.1.1 Wardell Armstrong LLP (WA) was commissioned by Extra MSA Group to undertake a BS 5837 tree survey on the site and to assess and report on the impacts on the trees and hedgerows in connection with the construction of a new motorway service area, located to the north of junction 11 on the M62 (Ordnance Survey grid reference SJ 670936). For the purpose of this report this will be referred to as the 'Site' hereafter.
- 1.1.2 The purpose of this report is to provide an Arboricultural Impact Assessment (AIA), in order to evaluate the direct and indirect effects of the proposed development on the trees surveyed. These include trees identified within the Site, as well as those located off-site but within influencing distance of the Site. Where there are impacts from the development proposal, this report recommends, where feasible, mitigation measures to be taken to ensure that important trees and hedgerows are adequately considered during the design process. Where trees and hedgerows must be removed to enable the development, potential mitigation measures are proposed.
- 1.1.3 The BS5837 tree survey was undertaken by Scott Reid (Senior Arboriculturist) of Wardell Armstrong on 1<sup>st</sup> April 2019. This, in combination with the proposed layout, supporting documents/drawing and any liaison we have had with the design team and the LPA, forms the basis of our assessment.
- 1.1.4 If planning permission is granted for the proposal assessed in this report, it is usual for Local Planning Authority (LPA) to condition an Arboricultural Method Statement (AMS). An AMS would set out the specifications and methodologies for the tree protection measures implementation and would also provide a methodology for any proposed works that either encroach within the root protection areas (RPAs) of retained trees and/ or that have the potential to result in loss or damage to them.
- 1.1.5 This AIA report and attached Tree Protection Plan (TPP) accords with the methodologies and guidance set out in British Standard BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* (The British Standards Institution, 2012).
- 1.1.6 This AIA report and the associated TPP is based on a topographical survey plan prepared by WA on 21.01.2019 (Ref. SH11739-019 Rev B). Where tree stem locations are not shown on the topographical survey, these are plotted using GPS plotting and/ or the utilisation of site features to manually plot the tree stem locations and canopy

spreads for tree groups. Aerial photography is also utilised to plot tree group canopy spreads, where utilisation of GPS is not feasible. These methods provide a good representation of the surveyed trees; however, please note that the GPS used is not sub-metre accurate.

## **1.2 Site Context**

1.2.1 The Site is located in an area of arable farmland to the north of junction 11 off the M62. It also incorporates a vehicular access drive which links to the M62 junction 11 roundabout, a linear footpath along the west boundary, areas of boundary trees, shelterbelts and scrub vegetation. Ground levels within the main part of the site are generally level, however; earth banking is present along the west boundary which slopes upwards from east to west.

1.2.2 The surrounding area is characterised mainly by arable farmland (with typical boundary hedgerows and trees). Along the southern boundary is the M62 motorway and further to the south/south west is the district of Birchwood. This includes an area of residential housing and a sizeable commercial development (Birchwood Technology Park).

## **1.3 Development Proposal**

1.3.1 The project description is as follows:

*The erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, boundary fencing, surface water drainage areas, ecological mitigation, pumping station(s), substation(s), retaining structures and associated infrastructure and earthworks.*

## **1.4 Trees and the Planning Process**

1.4.1 Under s197 of the Town & Country Planning Act 1990, LPAs have a legal duty to consider the protection of trees and the planting of new trees on development sites when granting planning permission. LPAs must also consider the potential effects, whether detrimental or positive, that proposed developments will have on retained trees, and the effect that these trees will have on the users of the development.

1.4.2 The Site is located within the administrative boundaries of Warrington Borough Council. The LPA's Local Plan Core Strategy was adopted July 2014. This is currently being reviewed although a new plan has not yet been adopted. Supplementary Planning Documents (SPDs) are also available from the LPAs website<sup>1</sup> and of these 'Design and Construction' provides advice in regarding to trees and development under section 10 'Protection of Trees on Development Sites'. The SPD highlights the need to conduct a tree survey in accordance with BS5837 and the provision of a plan which shows the location of protective fencing for retained trees. If an approved development is sited within the vicinity of retained trees and has the potential to cause damage to them, the SPD highlights that an arboricultural method statement may be needed and that this will usually be conditioned where necessary.

1.4.3 Table B.1 taken from British Standard BS 5837:2012 gives guidance on the level of information required by LPAs in order to make an informed decision on the impact of development on trees. The production of an Arboricultural Constraints Report and Plan is the first stage of assessment in the context of the planning process.

In this case we have not been instructed to prepare a Constraints Report and Plan to inform the proposed layout. However, we have conducted a tree survey in accordance with BS5837 and have plotted the trees on the proposed layout so that the specific impacts on the trees can be assessed. This Arboricultural Impact Assessment (AIA) and the associated TPP fulfils the requirement to present the impacts of the proposed development layout on the trees that are located on or immediately adjacent to the Site.

1.4.4 If the proposed development is approved, it is common for the LPA to condition the protection of the retained trees and hedgerows on Site during the proposed development. This will usually take the form of an Arboricultural Method Statement (AMS) and an updated TPP. These will show how the trees and hedgerows will be protected and will provide a methodology for any works within the RPAs of retained vegetation. These steps accord with the recommendations in BS 5837:2012 as detailed in Table B.1 as shown in Figure 1 overleaf.

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<sup>1</sup> [https://www.warrington.gov.uk/info/200564/planning\\_policy/2089/supplementary\\_planning\\_documents](https://www.warrington.gov.uk/info/200564/planning_policy/2089/supplementary_planning_documents)

Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

Figure 1: BS 5837:2012 Table 1

## 1.5 Statutory Legal Protection

- 1.5.1 The two main sources of protection afforded to trees are i) Conservation Area (CA) control and ii) Tree Preservation Orders (TPO).
- 1.5.2 Trees within Conservation Areas are protected under the *Town & Country Planning Act 1990 (as amended)*, which affords blanket<sup>2</sup> protection to trees with a stem diameter of 75 mm and above when measured at 1.5 m from ground level.
- 1.5.3 Trees may also be protected by a TPO under the Town & Country Planning Act 1990 (as amended), The Town and Country Planning (Tree Preservation) (England) Regulations 2012.
- 1.5.4 It is a criminal offence to carry out any unauthorised works to trees that are either protected by a TPO or located within a CA, including:
- Cutting down, uprooting or wilfully destroying a tree, or wilfully damaging, topping or lopping a tree in such a manner as to be likely to destroy it;
  - Any works that contravene the provisions of a TPO; and/or
  - Any works in contravention to the regulations.

<sup>2</sup> Protection is similar to that afforded to trees protected by TPO.

1.5.5 Penalties for non-compliance of a TPO and/or CA can be unlimited, if tried in a County Court, and up to £20,000 if tried in a Magistrates Court.

1.5.6 It should be noted that the felling of trees prior to receiving full planning permission may also require a felling licence under the *Forestry Act 1967*. This requires that any persons wishing to fell 5 m<sup>3</sup> of trees within any three-month period (i.e. January to March, April to June, July to September and October to December) apply for a felling licence from the Forestry Commission. There are a number of exemptions to this requirement, with some of the more relevant exemptions including:

- Pruning trees;
- Felling fruit trees or trees growing in a garden, orchard, churchyard or designated public open space;
- Felling trees that, when measured at a height of 1.3 m from the ground, have a diameter of 8 cm or less;
- Felling trees immediately required for the purpose of carrying out development authorised by full planning permission;
- Felling necessary for the prevention of danger or the prevention or abatement of a nuisance<sup>3</sup> (e.g. threat/danger to a third party); and
- Felling necessary to prevent the spread of a quarantine pest or disease.

1.5.7 Other legislation that affords a lesser or indirect level of protection to trees includes the following:

- *The Wildlife & Countryside Act 1981 (as amended)*;
- *Conservation of Habitats and Species (amendment) Regulations 2017*; and
- *Hedgerow Regulations (1997)*.

1.5.8 All of the above provide for the identification and safeguarding of flora and fauna that may be found in association with trees and woodlands.

## **1.6 Protected Species**

1.6.1 Trees can contain features such as cavities, cracks, splits and loose bark which can offer potential habitat to species such as bats. Bats and their roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) as well as the Conservation of Habitats and Species Regulations 2018 (as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006.

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<sup>3</sup> NB - This only applies when a real and/or immediate danger is present.

1.6.2 Trees provide potential nesting habitat for birds and all UK birds and their active nests are protected under the *Wildlife & Countryside Act 1981 (as amended)*. Bird species that are listed on Schedule 1 of *The Act* are also protected against disturbance of their active nest(s).

## 2 THE SURVEY

### 2.1 Tree Preservation Orders or Conservation Areas

2.1.1 WA utilised Warrington Borough Council's online interactive mapping tool<sup>4</sup> on the 9<sup>th</sup> April 2019 to ascertain whether any trees within and/or immediately adjacent to the Site are protected by TPO and/or CA status.

2.1.2 This search revealed that there are no TPOs or CAs are present on/immediately adjacent to the Site on the date of the investigation. However; this situation is liable to change as LPA's can assign these designations at any time. Therefore, we advise that the protective status of these trees is checked again prior to undertaking any planned works.

### 2.2 Survey Methodology

2.2.1 The arboricultural survey was undertaken by Scott Reid on 1<sup>st</sup> April 2019 using the methodology set out in BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations* (see Appendices 3 and 4). Weather conditions during the survey were bright and clear.

2.2.2 Each individual surveyed tree (T), tree group (G), woodland (W) and hedgerow (H) was given a sequential reference number.

2.2.3 The surveyed trees and hedgerows were then identified by their common name. Where a number of surveyed trees formed a cohesive feature, such as groups, woodland compartments or whole woodlands, they were recorded, assessed and plotted as groups (G) or as woodland (W). Whilst not every tree within groups are surveyed, a representative sample of the largest edge trees were measured in order to be able to plot the group or woodland crown spreads and RPAs. Where detailed plans show development proposed within a group or woodland, all trees within influencing distance of the development proposals are recorded, plotted and assessed.

2.2.4 A series of measurements were taken where appropriate, including:

- Stem diameters measured at 1.5 m above ground level with a standard diameter measuring tape to enable RPAs to be calculated;

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<sup>4</sup> [http://mapping.warrington.gov.uk/wml/Map.aspx?MapName=Planning\\_and\\_LLC\\_External](http://mapping.warrington.gov.uk/wml/Map.aspx?MapName=Planning_and_LLC_External)

- Tree height, crown height and direction of first significant branch in the crown above ground level measured using a Truepulse 200L laser to inform on ground clearance, crown/stem ratio and shading; and
- Crown (branch) spreads measured with a Truepulse 200L at the four cardinal points (i.e. north, east, south and west) to enable an accurate representation of the crowns to be plotted on the TPP.

2.2.5 A description of the life stage of each surveyed tree is identified as follows:

- Young – Newly planted trees and self-seeded trees;
- Semi-mature – Large nursery stock that can be newly planted or self-seeded trees still in the early stages of establishment;
- Early mature – Trees in the first third of their life cycle which is characterised by their quickness of growth and subsequently significant increase in size;
- Mature – Trees in the second third of their life cycle, characterised by reaching their ultimate size and slowing of annual incremental growth;
- Late mature – Trees in the final third of their life cycle, often characterised by showing signs of decline; and
- Veteran – Trees that show ancient tree characteristics irrespective of their age, such as crown retrenchment and decaying wood habitat.

2.2.6 An assessment of each tree's physiological and structural condition is identified as G (good), F (fair), P (poor) or D (dead). An estimated remaining contribution in years within the context of the current Site usage was identified as <10, 10+, 20+ or 40+.

2.2.7 The trees were then classified in accordance with the BS5837:2012 tree quality assessment categories 'A', 'B', 'C' and 'U' (see category criteria and grading within Appendix 3). 'A' and 'B' category trees are considered as 'high' and 'moderate' quality, respectively, and are considered as a constraint to development. As such, these trees should be retained and afforded appropriate protection during development. 'C' category trees are considered to be of 'lower' quality due to their condition or 'lower' amenity value and are, therefore not usually considered a constraint to development. 'U' category trees are those in such a 'poor' condition that they cannot usually be retained within the current Site context for longer than ten years. It should be noted that in some cases, category 'U' trees may have valuable habitat/ecological value despite being in poor condition. In such cases, where it is safe to do so, these trees may be recommended for retention and/or pruning works. Where relevant, we will bring such trees to your attention. Where trees are located outside of the red and blue line Site boundaries, irrespective of their BS 5837 categorisation, these should be considered as a constraint during the Site layout design process and protected during construction, as such trees are not within the control of the Site owner.

- 2.2.8 Root Protection Areas (RPAs) are calculated for individual trees utilising the methodology set out in BS 5837:2012, which is calculated by multiplying the stem diameter (measured at 1.5 m from ground level) by twelve for single-stemmed trees and a variant on this for multi-stemmed trees. For surveys in England (and outside England where it is a Local Planning Policy requirement), individual veteran trees are given a standard BS 5837 RPA and also a secondary veteran tree RPA, to accord with government's standing advice 'Ancient woodland, ancient trees and veteran trees: protecting them from development's and local planning policy, which is based on a calculation of fifteen times the stem diameter or five metres beyond the crown spread, whichever is greater.
- 2.2.9 For tree groups, woodlands and hedgerows, the calculated RPAs are based on a set distance from the canopy edge of the tree groups, woodlands and hedgerows. This calculation is based on the largest stem diameter of the trees on the edge of the tree groups and woodlands and the crown spread measurement for these edge trees. A variant of the tree group and woodland RPA calculation is used to calculate hedgerow RPAs, with the calculation based on the largest stem diameter of the hedgerow woody plants and the hedgerow width.
- 2.2.10 Further details for each tree, and the groups of trees surveyed are set out in the Arboricultural Survey Schedule (see Appendix 1) and on the Tree Protection Plan Ref. No. SH11739-033 Rev. B.

## **2.3 Report Limitations**

- 2.3.1 Trees are influenced by a variety of environmental variables, which can affect the health of trees causing biomechanical and physiological changes. All comments made on tree health reflects their physical condition at the time of the survey. Due to the changeable nature of trees and other site/environmental conditions, which may influence trees, the preliminary management recommendations/ further works for the surveyed trees undertaken, which can be found in Appendix 1 of this report, are only valid for a period of 12 months from the date of the Site survey (1<sup>st</sup> April 2020). These recommendations relate specifically to the general maintenance of tree health and safety and do not affect the implications of this Arboricultural Impact Assessment and therefore, the results of the survey remain valid.

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<sup>5</sup> <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

- 2.3.2 Although comments and recommendations on the safety of particular trees may have been made, this survey is not a Tree Risk Management Survey and thus should not be treated as such. All trees were surveyed from ground level only and in a solely visual nature. However, where trees have been identified as presenting an imminent safety risk due to structural defects, this has been brought to the attention of the client and treated as a separate matter. Should trees require further detailed assessment (decay detection, aerial inspections) and do not present an imminent safety risk, the information will be detailed within the survey schedules.
- 2.3.3 Any management recommendations have been made in accordance with BS3998: 2010 Tree Works – Recommendations; and/or industry best practice. Works have been recommended in accordance with any statutory obligations on the landowners or occupiers.
- 2.3.4 For the purpose of this report no samples were obtained from Site for analysis or any other reason.
- 2.3.5 The Phase 1 Environmental Assessment prepared by WA (ref.SH11739 RPT-004) identifies some of the soil as sandy clay. At the time of writing we do not have advice from structural engineers on the shrinkability of soil or the foundation design. Given the distance of the proposed structures to the retained trees, we consider the risk of tree related subsidence to be low; however, this should be confirmed by an engineer. The species list at Appendix 1 and the location of the trees shown on the Tree Protection Plan (SH11739-033 Rev A) should be used against the current National House Building Council (NHBC) guidelines (chapter 4.2) to inform the foundation design.

### 3 SURVEY RESULTS AND EVALUATION

#### 3.1 Tree Population

3.1.1 The trees assessed included sixteen individual trees and thirteen tree groups which were surveyed on and immediately adjacent to the Site.

3.1.2 Following the survey, 62% of the individual trees were classified as category 'B' quality and 38% were classified as category 'C' quality. None of the individual trees were classified as category 'A' or 'U' quality during the assessment. Category 'C' trees are those of low quality and so generally are not considered to be a major constraint to development.

3.1.3 In terms of tree groups, 46% were classified as category 'B' quality and 54% were classified as category 'C' quality. None of the groups or woodlands were classified as category 'A' or 'U' quality during the assessment.

3.1.4 An assessment of the age class of the individual tree population on Site, reveals that the population is predominantly made up of early-mature trees, with these accounting for 81% of the individual tree population. The remaining individual tree population is made of semi-mature trees, accounting for 6% of the population and mature trees accounting for 13% of the population. On this occasion, no young, late-mature or veteran individual trees were found during the survey. A summary of the age class assessment for individual trees is shown in the graph below in Figure 2.



Figure 2: Individual trees age class assessment summary.

3.1.5 A detailed description of all trees and groups of trees surveyed and recommended works can be found in the Tree Survey Schedule in Appendix 1. Table 1 and Table 2 below summarises the BS 5837 quality grading of the trees found on Site, with these figures represented in graph format in Figures 3 and 4.

Table 1: Individual Trees Quality Assessment Summary				
Tree quality	A	B	C	U
Individual Trees Identification		T5,T6,T7,T8,T9,T10,T11, T12,T13,T16	T1,T2,T3,T4,T14,T15	
<b>Totals</b>	<b>0</b>	<b>10</b>	<b>6</b>	<b>0</b>

Table 2: Tree Groups Quality Assessment Summary				
Tree quality	A	B	C	U
Tree Groups and Woodland Identification		G1,G2,G3,G4,G10,G12	G5,G6,G7,G8,G9,G11, G13	
<b>Totals</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>0</b>

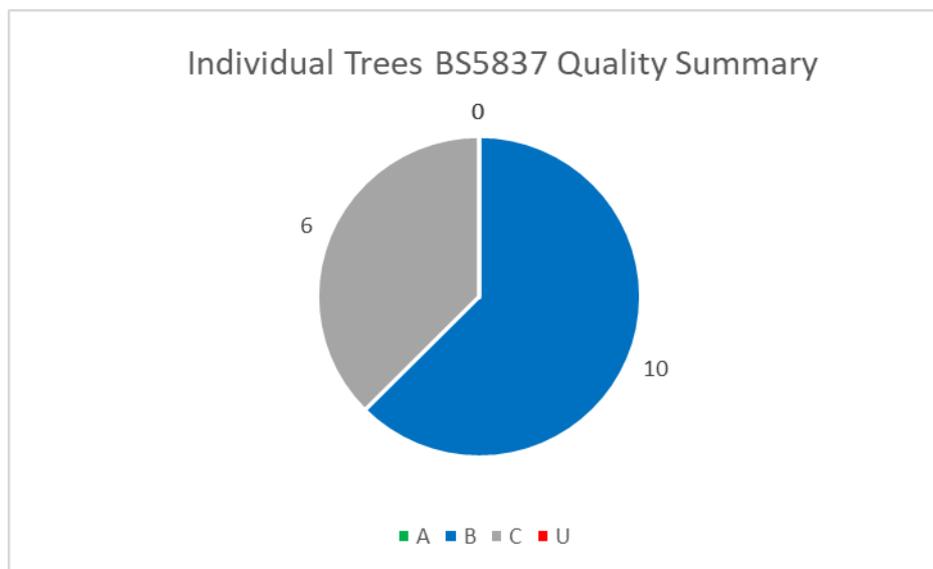


Figure 3: Overview of the BS 5837 quality of individual trees found on Site

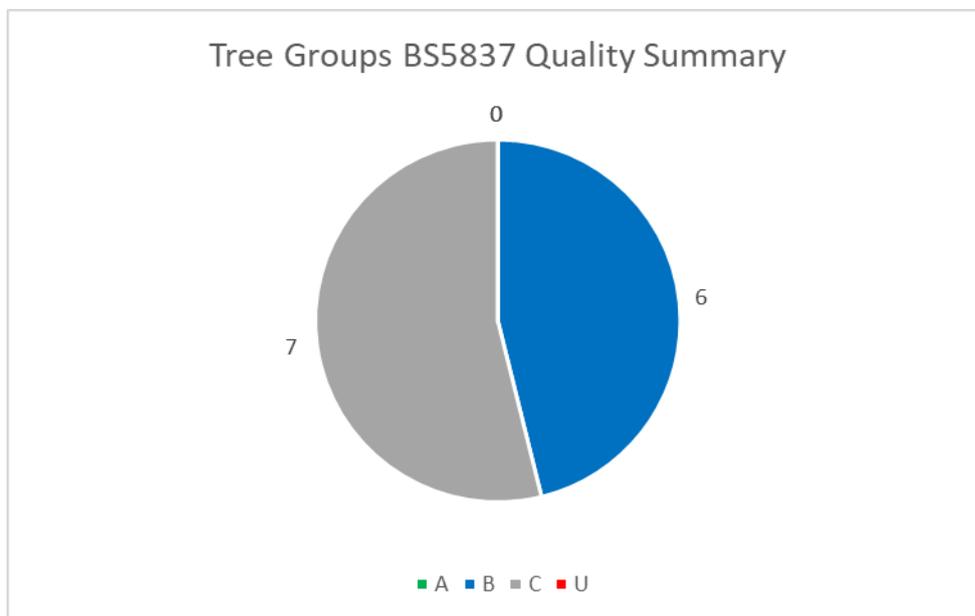


Figure 4: Overview of the BS 5837 quality of tree groups found on Site

3.1.6 WA have conducted a search using the Woodland Trust’s Ancient Tree Inventory<sup>6</sup>, DEFRA’s Magic Map Application<sup>7</sup> and Natural England’s Ancient Woodland Inventory<sup>8</sup> to ascertain whether any veteran trees or ancient woodland are located within influencing distance of the Site. This search revealed no ancient woodlands or currently recorded veteran trees within influencing distance of the proposed site.

### 3.2 General Tree Constraints

3.2.1 Tree impose a constraint to development in a variety of ways. These principally include their rooting areas, referred to as Root Protection Areas (RPAs), their current and future crown spread, and their species characteristics (e.g branch and fruit drop, production of ‘honey dew’, density of foliage etc). Where located on shrinkable clay soils, trees can also contribute to subsidence damage to buildings.

3.2.2 Consideration should be given during the design stage for any incompatibilities between the design and tree retention. These include (but are not limited to) the

<sup>6</sup> <https://ati.woodlandtrust.org.uk/>

<sup>7</sup> <https://magic.defra.gov.uk/magicmap.aspx>

<sup>8</sup> <https://naturalengland-defra.opendata.arcgis.com/datasets/ancient-woodlands-england?geometry=-29.201%2C48.076%2C26.302%2C57.349>

effects on the amenity value provided by existing trees, working space required during construction, infrastructure/utility requirements, highway visibility requirements and foundation design to prevent the effects of subsidence.

- 3.2.3 The RPA is calculated using the tree's diameter at 1.5m and represents the minimum area which should be left undisturbed around each retained tree to enable its survival following development.
- 3.2.4 Tree root morphology is influenced by many factors including, but not limited to; past land use, the presence of roads, structures and underground services, drainage and soils. Any of these factors may result in non-uniform root growth and therefore result in a RPA represented as a polygon RPA that reflects suitable protection of the root system.
- 3.2.5 The majority of tree roots are generally found within the top 600mm of soil, depending on soil types and profiles. Any disturbance or sudden changes to the rooting environment can result in damage being caused to roots and alterations to the roots physiological ability to absorb water, nutrients and undertake gaseous exchange.
- 3.2.6 Where alterations have been made within the trees' rooting environment, the damage can often be observed within the crown of the trees, reduced vitality and increased deadwood production. Trees are likely to decline progressively, or in some circumstances may become a hazard where stability and structural integrity has been compromised by Site operations.
- 3.2.7 The RPA must be protected by the installation of tree protection fencing prior to the commencement of development work on Site. The fencing provides a physical barrier that is secured, to prohibit activities considered detrimental to the retention of healthy trees (e.g. excavations, soil stripping, discharge of substances harmful to trees, storage of materials, fires). In addition to this, it may be necessary to install specialist temporary ground protection which enables access within the RPA, without causing long-term detriment to the health of the tree/s.
- 3.2.8 No traditional construction works should take place within the RPA of retained trees. However, in some circumstances and where there is an overriding requirement for construction and the retention of trees, it may be appropriate to employ techniques and use materials that allow trees to be retained, whilst enabling the construction. For hard surfacing, such as drives, roads and footways, utilising no-dig construction techniques and using three-dimensional geogrids and permeable wearing course

materials may be appropriate. For built structures within RPAs, the use of pile and above ground level beam foundations and/or cantilevered engineering solutions can enable structures to be constructed within RPAs. The project arboriculturist should be consulted on the appropriateness of building within retained tree RPAs, as this is not appropriate for all trees and soil types.

- 3.2.9 Where aerial parts of the tree crowns extend beyond the edge of the RPA, consideration should be given to protection of these parts, allowing for protection during development processes including working space. It may be appropriate to consider pruning of aerial parts to allow construction clearances and future nuisance abatement, this however must be considered by the project arboriculturist and the LPA. Where development proposals identify a need for working within the RPA/crown spread of retained trees and it can be demonstrated that retained trees remain viable, then it is important that the project arboriculturist is contacted to advise and prepare an AMS and identify appropriate stages of supervision.

#### **4 DEVELOPMENT IMPACT TO RETAINED TREES**

- 4.1.1 Implementation of the proposed scheme will necessitate the removal of five individual trees and seven tree groups, as detailed in full in Table 3.
- 4.1.2 In assessing the impacts of the proposed development on the trees on and adjacent to the Site and in proposing mitigation for these impacts, the planning application for development of the Site accords with the requirements of British Standard 5837:2012 and local and national planning policies for trees and development.
- 4.1.3 The proposed scheme will necessitate the removal of trees within the centre of the Site and those adjacent to the entrance/exit where changes in soil levels will occur.

**Table 1: Overview of Arboricultural Impacts and Proposed Mitigation**

Tree/ Group No.	Proposed Works	Impact	Mitigation/Compensation	BS 5837 Quality Categorisation
G3, G4, G5, G6, G7, G8, G9, T1, T2, T3, T4 & T5	The removal of trees to facilitate the proposed development	<p><u>Low Impact</u></p> <p>In order to facilitate the proposed scheme, a number of trees will require removal. These include 1 category 'B' quality and 4 category 'C' quality individual trees. Two category 'B' quality groups and 5 category 'C' quality groups also require removal. The most valuable trees identified in the tree survey have been retained to the margins of the site and will continue to provide amenity and some screening benefit. The proposed removals will have a low impact on local amenity .</p>	Extensive New tree planting forms part of the proposals and this constitutes a substantial net gain in tree numbers, compared to those requiring removal.	B, C
G1, G2, G11, G12, G13, T7, T8, T9, T10, T11, T12, T13 & T16	Construction in general vicinity of retained trees.	<p><u>Potential Impact</u></p> <p>A number of trees and groups of trees are being retained within the scheme. There is potential for damage to retained trees, unless protective fencing is installed at the locations shown on the Tree Protection Plan, prior to construction commencing on Site.</p>	Protective fencing, in accordance with the BS5338 default barrier specification (Appendix 4) will be installed to protect G11, G12, G13, T7, T8, T9, T10, T11, T12, T13 & T16 throughout the construction process. G1 & G2 are set back from the main construction area and will be provided adequate protection by existing post and rail fencing, as will G10 and T6.	B, C

## 5 SUMMARY AND RECOMMENDATIONS

- 5.1.1 The requirements of BS 5837:2012 have been complied with in assessing the arboricultural impacts arising from the proposed Motorway Service Area in this report.
- 5.1.2 None of the surveyed vegetation is covered by TPO or CA protection, nor are there any recorded veteran trees or ancient woodland within influencing distance of the proposed development at the time of writing.
- 5.1.3 The proposed scheme will necessitate the removal of some trees, the majority of which are low quality category 'C'. The most significant trees and groups on the site are category 'B' and located to the northern and eastern boundaries of the site. These are being retained and protected within the scheme. Furthermore, extensive new tree planting forms part of the proposals which will comprise a significant net gain in tree cover compared with the losses required to facilitate the layout.
- 5.1.4 The trees that are to be retained on the Site will be protected during the proposed works with tree protection fencing. Unless otherwise stated in an Arboricultural Method Statement (AMS), the protective fencing will comprise the default barrier described in BS5837:2012. An example of this is included at Appendix 4, with the location of the protective barrier shown on the Tree Protection Plan SH11739-033 Rev B. Signage on the fencing will also be required and an example of this is included at Appendix 5. This will be fixed to the fencing at 8 m intervals and should be A3 in size at a minimum.
- 5.1.5 An AMS and an updated TPP may be required by the LPA prior to commencement of the proposed development, to ensure tree protection measures are fully specified and implemented, which can be conditioned by the LPA if required.

## 6 REFERENCES

1. British Standard, BS 3998:2010 Tree work. Recommendations. (The British Standards Institution, 2010).
2. British Standard, BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. (The British Standards Institution, 2012).
3. NJUG Volume 4 - Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (Issue 2:16th November 2007).
4. Quantified Tree Risk Assessment User Manual, (QTRA User\_Manual\_V5.1.4\_2015\_01). (Incorporating extracts).
5. Ministry of Housing, Communities and Local Government (2014) Tree Preservation Orders and Trees in Conservation Areas.  
<https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>
6. Forestry Commission (2007) Tree Felling – Getting Permission.
7. Claus Mattheck (2007) Updated field guide for Visual Tree Assessment.
8. Forestry Commission & Natural England (Updated 4<sup>th</sup> January 2018) Ancient Woodland and Veteran Trees: Protecting them from Development – Guidance.  
<https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences#veteran-trees>

**Appendix 1**  
**Tree Survey Schedule**

Location: Warrington Motorway Services (Job. No. SH11739)

Surveyor: SR  
Weather: Bright and Clear

Estimated Stem Diameters & Other Measurements highlighted in this colour

Survey Date: 01.04.2019



Item type: T (tree), G (group), H (hedge), W (woodland)	Tree/ Group Ref. No.	Botanical Name	Height(m)	Crown Clearance (m) & compass direction	Crown Spread (m)				Stem Diameter @ 1.5m (mm)	Number of stems (if more than 5)	Age Class: Y (Young), SM (Semi-Mature), EM (Early-Mature), M (Mature), LM (Late-mature), V (Veteran)	Condition			Estimated Remaining Contribution: (<10, 10+, 20+, 40+)	BS5837 Categorisation Grading	Sub Category	Comments	Preliminary management recommendations/ further works	BS 5837 Root Protection Area (m <sup>2</sup> )	BS 5837 Root Protection Radius (m)
					North	East	South	West				Physiological Condition: G (Good), F (Fair), P (Poor), D (Dead)	Structural Condition: G (Good), F (Fair), P (Poor)								
G	1	Lombardy poplar, ash, blackthorn, goat willow, hawthorn, Scots pine, downy birch, sessile oak, Rowan, alder & hazel.	20	0 N/A	As per GPS plotting				420		SM-EM	G	G	40+	B	2	Typical planted shelterbelt of mixed species. A decent landscape buffer to the adjacent motorway roundabout.	No action required.	N/A	RPA 2.4m beyond canopy extent	
G	2	Lombardy poplar, downy birch, hazel, goat willow, crack willow, hybrid black poplar, red oak & English oak.	21	0 N/A	As per GPS plotting				360		SM-EM	G	G	40+	B	2	Typical, mixed species shelterbelt planting providing some screening to the adjacent fields. Multiple dead stems noted to the west of group, surrounding an area of standing water.	If land use intensifies near group, re-inspect trees for safety/risk management objectives.	N/A	RPA 0.3 beyond canopy extent	
G	3	Downy birch, hazel, ash, alder, goat willow, Lombardy poplar, rowan & red oak.	18	0 N/A	As per GPS plotting				400		SM-EM	G	G	40+	B	2	A small, typical mixed shelterbelt group. Offers limited screening to the adjacent fields.	No action required.	N/A	RPA 2.8m beyond canopy extent	
G	4	Lombardy poplar, hybrid black poplar & ash.	20	2 N/A	As per GPS plotting				400		SM-EM	G	G	40+	B	2	Small group of poplar and ash adjacent to a field boundary ditch. Small deadwood noted. One small snapped stem noted (acceptable condition at this time).	No action required.	N/A	RPA to canopy extent	
G	5	Crack willow & elder.	10	0 N/A	As per GPS plotting				180		SM-EM	F	P	10+	C	1	A small cluster of snapped/collapsing willow stems and small elder trees. Of limited arboricultural value.	No action required.	N/A	RPA to canopy extent	
T	1	Crab Apple	6	0 N/A	2	2	2	1	100		EM	G	G	10+	C	1;2	Small, self-set specimen, flailed over footpath for clearance. No major visible defects. Of limited arboricultural value.	No action required.	4.5	1.2	
G	6	English oak, blackthorn, goat willow, crack willow, hawthorn & alder.	6	0 N/A	As per GPS plotting				75		SM	G	G	20+	C	1	Linear group of scrub vegetation and small trees along ditch. Of limited arboricultural value.	No action required.	N/A	RPA to canopy extent	
G	7	Common Alder	9	0 N/A	As per GPS plotting				120		SM	G	G	40+	C	1	An establishing group of alder surrounding a field ditch.	No action required.	N/A	RPA to canopy extent	
T	2	Goat Willow	6	0 N/A	4	4	4	4	240		EM	F	F	10+	C	1	Small tree of limited arboricultural value. Partially uprooted at base. Insect boring holes also at base (species unknown).	No action required.	26	2.9	

G	8	Alder, goat willow & elder.	11	0 N/A	As per GPS plotting				180							SM-EM	G	G	40+	C	2	A small planted group of trees beyond fence line (one self-set specimen is present on site side of fence). Occasional small deadwood noted. Acceptable condition at this time.	No action required.	N/A	RPA to canopy extent
T	3	Crack Willow	13	0 N/A	6	5	7	10	430	440					M	F	F	20+	C	1	Bifurcated specimen from base with a well proportioned crown . Multiple branch snap-outs present (typical of species) and more are expected in future due to the genetic propensity of the species to do so.	No action required.	171	7.4	
G	9	Elder & willow.	6	0 N/A	As per GPS plotting				150						SM-EM	F	F	10+	C	1	Areas of self-set scrub vegetation of limited arboricultural value. Some dead standing stems noted.	No action required.	N/A	RPA to canopy extent	
T	4	Goat Willow	7	0.5 N/A	5	2.5	5	3	160				6	EM	G	G	10+	C	1	And open grown specimen with a well developed crown . Two stems rubbing at base. No major visible defects.	No action required.	70	4.7		
T	5	Downy Birch	10	0.5 N/A	3	4	4	1.5	300					EM	G	G	20+	B	1	A self-set specimen with no major visible defects.	No works required.	41	3.6		
G	10	Alder, Scots pine, willow, hawthorn, silver birch, ash & hazel.	15	0 N/A	As per GPS plotting				330						EM	G	G	40+	B	2;1	A typical mixed, maturing shelter belt on the far side of boundary fence line. It continues off-site further to the north.	No works required.	N/A	RPA to canopy extent	
T	6	Common Oak	10	2.5 SE	4	4	4	6	600					EM	G	G	20+	B	2;1	A larger tree within wider shelter belt, worthy of individual classification. Multiple pruning wounds and dead stubs within crown. Minor ivy on stem. Medium sized deadwood within crown.	No works required.	163	7.2		
T	7	Downy Birch	11	1 N/A	5	5	4	4	300	250				EM	G	G	20+	B	1;2	Bifurcated specimen from 1m with a well developed crown. Minor ivy to stem . One snapped branch stub in crown.	No works required.	69	4.7		
T	8	Downy Birch	11	1 N/A	5	6	5	6	500					EM	G	F	20+	B	1;2	An open grown specimen with a well balanced crown. The lowest branch is partially snapped. A small cavity is present on the underside of a branch at 4m. Ivy on stem.	No works required.	113	6.0		
T	9	Downy Birch	8	1 N/A	4	4	3	4	260	130				EM	G	G	20+	B	2	Multiple pruning wounds due to previous crown lifting, back to stubs works. Bifurcated specimen from 1m, with a well proportioned crown.	No works required.	38	3.5		
T	10	Downy Birch	10	1 N/A	4	5	2	4	410					EM	G	G	20+	B	2;1	Minor wound at base with onset of decay. Multiple stubs due to previous crown lifting over field. Acceptable condition at this time.	No works required.	76	4.9		
T	11	Downy Birch	10	1.5 E	4	5	4	3	330					EM	G	G	20+	B	1;2	And open grown specimen with a well developed crown. Small wound at base with onset of decay. Multiple stubs in lower crown due to previous crown lifting.	No works required.	49	4.0		

T	12	Downy Birch	9	1 W	4	4	3	4	270						EM	G	G	20+	B	2	Small column of decay forming at base of stem. Occasional branch stubs in crown due to previous lifting.	No works required.	33	3.2	
T	13	Downy Birch	11	1 N	4	4	2	3	260	240					EM	G	F	20+	B	2	And open grown tree with a well balanced crown. Multiple cavities forming in the crown due to wounding. Stubs in crown due to previous crown lifting.	No works required.	57	4.2	
G	11	Common Elder	6	0 N/A	As per GPS plotting				120						7	EM	F	F	10+	C	1	A group of self-set trees of limited arboricultural value. Some uprooted specimens within the group.	No works required.	N/A	RPA to canopy extent
G	12	Downy Birch	16	0 N/A	As per GPS plotting				490							EM	F	F	40+	B	1;2	A large, cohesive landscape feature comprising of a linear group of birch with an occasional understory of elder. The birch are situated along the far side bank of the boundary ditch and the root plates of many trees are gradually becoming eroded/undermined. Occasional decay noted on some specimens. Occasional dead standing stems within the group. Acceptable condition at this time, given the current land usage.	Re-inspect for safety/ risk management objectives, post development.	N/A	RPA to canopy extent
T	14	Common Ash	6	0 S	3	4	4	4	260						SM	G	G	40+	C	1;2	A small self-set specimen situated off site on the motorway embankment. Of limited arboricultural value. No major visible defects. Occasional Pruning wounds due to crown previous lifting.	No works required.	31	3.1	
T	15	Hawthorn	7	0 N/A	4	4	4	4	270						M	G	G	10+	C	1	Situated off site on the motorway embankment. A self-set, open grown specimen with a balanced crown. Of limited arboricultural value.	No works required.	33	3.2	
G	13	Hawthorn, elder & blackthorn.	8	0 N/S	1	1	1	1	200						M	G	G	10+	C	1	A group of maturing boundary trees, likely originally part of a now lapsed hedgerow. situated off site on the motorway embankment. One elder has split out towards the slip road and should be removed.	Remove elder that has split out towards the slip road (marked on the Tree Protection Plan) - as soon as practically possible.	N/A	RPA to canopy extent	
T	16	Sycamore	13	2.5 N/A	5	5	5	6	300	270	170				EM	G	G	40+	B	1	Trifurcated specimen from base with a well developed crown. Occasional Pruning wounds due to previous crown lifting. No major visible defects.	No works required.	87	5.3	

## Appendix 2

### Survey Methodology

The following features of each tree, group of trees or woodland have been recorded in the Arboricultural Data Sheets:

- Species includes common names.
- Height measured in metres from the stem base. Where the ground has a significant slope, the higher ground is selected.
- Crown height is measured in metres and is an indication of the average height at which the main crown begins.
- Stem diameter is measured in millimetres at 1.5m above the adjacent ground level (upslope on sloping ground).
- Crown spread is measured in metres and taken at the four cardinal points to derive an accurate representation of the crown.
- Age class of the tree is described as young, semi-mature, early-mature, late-mature, mature or veteran.
- Physiological condition is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vitality, presence of disease and dieback.
- Structural condition is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.
- Life expectancy is classed as: less than 10 years (<10), at least 10 years (10+), at least twenty years (20+) or at least 40 years (40+). This is an indication of the number of years before the removal of the tree is likely to be required.
- Comments include a brief description of the tree with comments on the form, vitality, health and any significant defects that may be present.

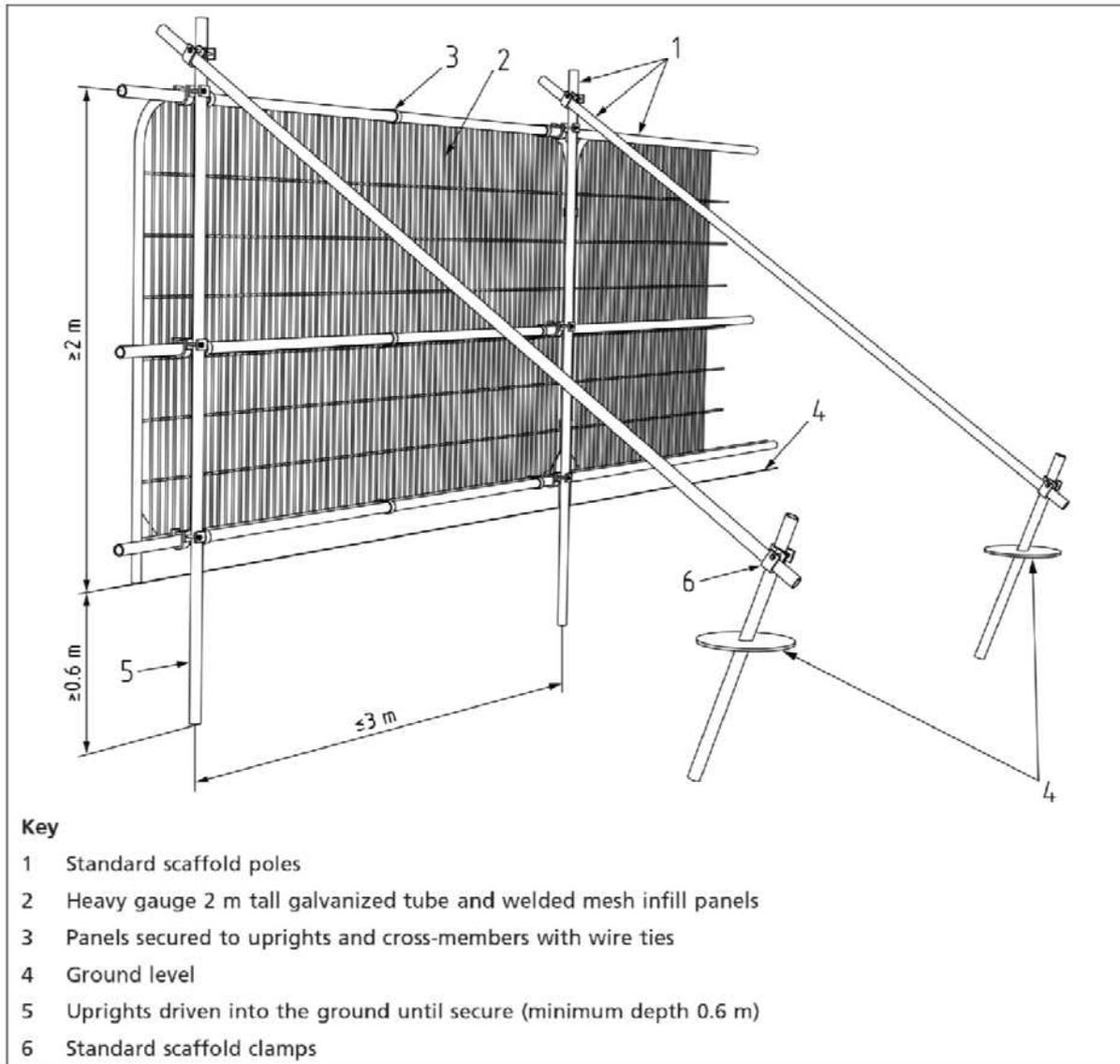
## Appendix 3 Tree Categorisation Method

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
<b>Trees unsuitable for retention</b> (see Note)		
<b>Category U</b> Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> <li>Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>	See Table 2
	1 Mainly arboricultural qualities      2 Mainly landscape qualities      3 Mainly cultural values, including conservation	
<b>Trees to be considered for retention</b>		
<b>Category A</b> Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	See Table 2
<b>Category B</b> Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	See Table 2
<b>Category C</b> Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	See Table 2

A single tree, group or woodland can come under one or more sub-headings. This does not confer on it a higher value than a tree with a single value. For the purposes of this report.

**Appendix 4**  
**Tree Protection Fencing**



**Appendix 5**  
**Tree Protection Signage**



**Appendix 6**  
**Glossary of Common Terms Used in Arboriculture**

<b>Abscission.</b> The shedding of a leaf or other short-lived part of a woody plant.
<b>Abiotic.</b> Pertaining to non-living agent's e.g. environmental factors.
<b>Absorptive Roots.</b> Non-woody short-lived roots, generally having a diameter less than one millimetre, the primary function of which is the uptake of water and nutrients.
<b>Access Facilitation Pruning.</b> One off pruning operation to provide access for development operation. Pruning that will not be detrimental to trees health or amenity.
<b>Arboricultural Method Statement (AMS).</b> A methodology for the implementation of development where encroachment within the RPA has the potential to cause damage or loss of retained trees.
<b>Arboriculturist.</b> Someone who through relevant training and experience has gained knowledge in the expertise of trees.
<b>Adaptive Growth.</b> The process by where wood formation rates increasing in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium.
<b>Adaptive Roots.</b> The adaptation of existing roots; or a production of new roots in response to damage or decay.
<b>Adventitious Buds, Roots, Shoots.</b> Which grow in other than primary apical control.
<b>Anchorage.</b> The process in which a tree uses its roots system to support itself within the soil structure.
<b>Ancient:</b> A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species.
<b>Arisings.</b> Parts of the tree that has been removed for disposal, branches, leaves, roots etc.
<b>Canker.</b> Area of dead cambium killed by overlying pathogenic tissues.
<b>Cavity.</b> A hole in the woody structure of the tree; often caused through decay.
<b>Cleaning Out.</b> The removal of dead, diseased crossing branches, damaged branches and alien structures.
<b>Competent Person.</b> Person with training and experience in accordance with the proposed matter being addressed, having an understanding of a particular matter being approached.
<b>Condition.</b> An indication of the physiological vitality of a tree, but not the stability of a tree.
<b>Construction.</b> A Site based operation that has the potential to affect retained trees.
<b>Construction Exclusion Zone.</b> An area based on the RPA from which construction activity is prohibited.
<b>Coppicing.</b> Removal of all aerial parts of the tree leaving a stump for regeneration of new shoot.
<b>Crown/Canopy.</b> The parts of the tree that supports the leaves.
<b>Crown Lifting.</b> The removal of limbs and small branches to a specified height above ground level.
<b>Crown Thinning.</b> The removal of a proportion of secondary branch growth throughout the crown to produce an even density well balanced crown structure.
<b>Crown Reduction/Reshaping.</b> Removal in the height to a specified description to maintain a flowing crown structure.
<b>Deadwood.</b> Non-functional branches which no longer support natural growing conditions of the tree but may be beneficial for the support of habitats and species, possibly including rare saproxylic invertebrates. Thus, may also be referred to as 'Decaying Wood Habitat' or 'Dysfunctional wood'. Size ranges for deadwood referred to in this report and/or Appendix 1: - Small (<75 mm diameter), Medium (76 – 150 mm), Large (151-300) mm and Very large >301 mm. For some species such as oak etc, the risk of deadwood falling from the tree can be lesser than for other species, due to the variety of wood strengths of different tree species.

<b>Defect.</b> Any area of the tree that longer has an optimal mechanical uniformity of stress, making the tree unsuitable for its location.
<b>Dieback.</b> Death of woody parts of the tree starting at distal ends of the tree.
<b>Disease.</b> Damage occurring to living organisms as a result of pathenogenic micro-organisms.
<b>Distal.</b> Furthest distance away from the main body of the tree.
<b>Dysfunction.</b> In woody tissues, the loss of physiological function, especially water conduction, in sapwood.
<b>Epicormic Growth.</b> Growth from dormant or adventitious buds, not developing from the first shoot.
<b>Girdling Roots.</b> A circling root which constricts the stem or roots, with the potential to cause death and the restriction of flow within the phloem.
<b>Heartwood.</b> Dysfunctional xylem which no longer has conductive properties, but which has become an integral structural part of the tree.
<b>Heave.</b> The swelling of shrinkable clay soils, often when vegetation has been removed allowing soil rehydration to develop, with the potential for listing structures (e.g. walls).
<b>Included Bark/Acute Forks.</b> Face to face contact of bark usually at fork unions, or branch unions.
<b>Lopping/Topping.</b> A term used to describe the removal of large sized branches
<b>Monolith.</b> Removing some or most of the trees crown and sometimes the upper stem, in order to retain as much of the tree as standing deadwood habitat for ecological reasons.
<b>Pathogen.</b> A micro-organism that causes disease within another organism.
<b>Phytotoxic.</b> Toxic to plants.
<b>Pollarding.</b> The removal of the tree canopy to produce knuckles where new growth develops and is removed cyclically usually performed on young trees.
<b>Pruning.</b> Selective removal of parts of the tree to achieve a desired outcome.
<b>Root Protection Area(RPA).</b> An area around a tree identified by multiplying the stem diameter at 1.5 m from ground level by 12 to produce a radial area or rooting volume around a tree to be protected Ref. BS 5837: 2012.
<b>Service.</b> Any above and below ground structure or apparatus for utility provision.
<b>Size of part.</b> Relating to risk assessments, identifying the size of the hazard, or parts of a tree which may cause harm if failure occurs.
<b>Stem(s).</b> The main structure from the ground up supporting the crown.
<b>Stress.</b> In plants, the physiological depletion as a result of environmental influences.
<b>Structure.</b> A manufactured object, such as building, roads, path, wall or excavated structures.
<b>Structural Roots.</b> The primary larger diameter roots which hold and support the aerial parts of the tree.
<b>Subsidence.</b> The shrinkage of soil through the absorption of water via vegetation and the sinking effects on surrounding architectural structures.
<b>Targets.</b> In risk assessment, persons or property at risk of harm as a result of a hazard (falling tree, branch, etc.).
<b>Tree Protection Plan (TPP).</b> A scaled drawing informed by descriptive text where necessary, based upon finalised Site proposals, showing trees for retention and illustrating the tree and landscape protection measures.

**Veteran Tree.** Tree that, by recognized criteria, shows features of biological, cultural or aesthetic characteristics of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

**Windthrow.** The blowing over a tree at its roots.

**DRAWING**

DO NOT SCALE FROM THIS DRAWING

- KEY**
- RED LINE BOUNDARY
  - HEDGE
  - TREES REMOVED DUE TO CONDITION AND/OR TO ENABLE DEVELOPMENT
  - LOCATION OF TREE PROTECTION FENCING
  - CATEGORY A CROWN SPREAD
  - CATEGORY B CROWN SPREAD
  - CATEGORY C CROWN SPREAD
  - CATEGORY U CROWN SPREAD
  - ROOT PROTECTION AREA
- T1/G1/ TREE/TREE GROUP/  
W1/H1 WOODLAND/HEDGE NUMBER

**TREES**  
QUALITY CATEGORIES BASED ON BS5837:2012 TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION - RECOMMENDATIONS RPA - ROOT PROTECTION AREA WHERE RPA IS NOT VISIBLE IT EXTENDS TO THE SAME DISTANCE AS THE CANOPY. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.



REVISION	DETAILS	DATE	ISSUED BY	APPROVED BY
C	Drawing revised to include building layout from RMS-519-ZZ-XX-DR-A-0751	02.04.19	HP	
B	Revised with updated red line boundary.	22.07.19	HP	
A	First Issue	16.04.19	YK	MS

CLIENT: EXTRA MSA GROUP

PROJECT: MOTORWAY SERVICES, WARRINGTON

DRAWING TITLE: TREE PROTECTION PLAN

DWG No:	SH11739-033	REV:	C
DWG SIZE:	A1	SCALE:	1:1000
DRAWN BY:	MAB	CHECKED BY:	MS
DATE:	08/04/2019	APPROVED BY:	MS

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<input type="checkbox"/> BOLTON	<input type="checkbox"/> LONDON
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## ES Part I Appendix I6

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**BRENTWOOD**  
LIGHTING DESIGN

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## **Extra MSA Group**

**Warrington Motorway Service Area, J11 M62**

**Lighting Assessment**

August 2019



<b>Revision</b>	<b>Description</b>	<b>Issued by</b>	<b>Date</b>	<b>Checked by</b>
-	Draft Issue	LG	11/04/19	LG/SM
P01	Draft Issue	LG	27/06/19	LG/SM
P02	Draft Issue	LG	19/07/19	LG/SM
P03	Review Issue	LG	02/08/19	LG/SM
P04	Review Issue	SM	07/08/19	LG/SM
P05	Final Issue	LG	22/08/19	LG/SM

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## 0 Executive Summary

This report examines the existing lighting environment and assesses any adverse effects of the obtrusive light effect of the Proposed Development. In particular, it considers the potential effects of horizontal and vertical light trespass, glare and direct sky glow.

Where:

- Light Trespass: The spilling of light beyond the boundary of a property which may cause nuisance to others - Horizontal (ground level) and Vertical (residential windows and ecology zones);
- Glare: The uncomfortable brightness of the light source against a dark background which results in dazzling the observer, which may cause nuisance to residents and a hazard to road users;
- Direct Sky Glow: The direct upwards spill of light into the sky which can cause a glowing effect and is often seen above cities when viewed from a dark area.

### Overview of the Site and Adjacent Area

The Proposed Site is located near Birchwood, between Culcheth and the M62 Motorway within Cheshire. The landscape setting of the Site is characterised by an extensive unlit patchwork of mixed agriculture and farmed landscape to the North & East, with an industrial park to the South West and M62 motorway areas to the South (both of which are artificially illuminated).

Taken on a regional scale, existing saturated sky glow is notable from bordering major urban development associated with nearby locations (e.g. Birchwood, Birchwood Park (Industrial), Culcheth, Warrington, Manchester, and the M62 Motorway).

Within the Site boundary, the environment is generally unlit. However, notable light spill from the motorway does encroach on to the southern boundary and associated land area. A study has been undertaken to identify relevant legislation, good practice guidance, local designations and relevant planning policy in relation to lighting following the CIE 126 (1997), Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011 and CIE 150 (2017) guidance.

**Appendix 1.0** provides an overview of the measured survey undertaken.

The Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011 provides reference for the Environmental Zone Criteria for light nuisance into windows (measured in Lux) defined as:

- E0: Protected surroundings, dark landscapes – UNESCO Starlight reserves, IDA Dark Sky Parks;
- E1: Intrinsically dark landscapes - National Parks, Areas of Outstanding Natural Beauty etc.;
- E2: Low district brightness areas – Village or relatively dark outer suburban locations;
- E3: Moderate district brightness – Small town centres or suburban locations; and
- E4: High district brightness – Town/city centres with high levels of night-time activity.

This guidance then provides limiting obtrusive light thresholds for the respective zone.

Due to the presence of local skyglow, existing artificial urban and highway lighting bordering the Proposed Development, it is considered that this area is typical of an E2 / partial E3 zone. However, due to the rural nature of the location and areas of natural conditions, on a precautionary approach the thresholds are based on E2 Zone classification (Low district brightness).

### **Sensitive Receptors included within this Assessment**

The study area includes sensitive receptors within and outside the boundaries of the Site which are likely to have a direct line of sight towards the Proposed Development and which may therefore be affected during the operational phase. The likelihood of obtrusive light impact (Lux) is subject to distance and can exclude some potential receptor locations.

- Residential
- Ecology – Light Sensitive
- Viewpoints
- Silver Brook Diversion
- Dark Sky

### **Completed Development (Operational) Lighting Parameters**

External Operational Lighting Parameters have been prepared for the purposes of this application. Detailed lighting design, which will be prepared within these parameters and any mitigation recommended within this report, will be completed as a subsequent detailed submission.

**Appendix 2.0** provides the parameters for the assessment lighting arrangements (MSA and Access Roundabout).

Quantified assessment provides the obtrusive light effect of the operational phase for the Proposed Development. This forms the basis of information for relevant chapters of the Environmental Statement.

Regarding ecological and viewpoint receptors the significance of effect as a result of operational lighting is not determined within this report. However, assessment results are provided to advise and inform the assessment within each respective chapter.

### **Quantitative Assessment - Completed Development (Operational) Phase**

The intention of the assessment is to convey how the Proposed Development will fit into the existing Illumination profile of the area and how that will comply with relevant legislation requirements and best practise Design Guidance.

In terms of adverse effects, it is noted that this predominately relates to ecology locations to the western, southern and south westerly boundaries, where light spill from the new roundabout lighting proposals and the proposed perimeter lighting causes light trespass toward proximity areas. This is

also the case for the proposed Silver Brook diversion (primarily within the eastern area of the Site). However, it should be noted that the majority of southern boundary locations already experience existing baseline conditions in excess of natural conditions as a result of the current motorway and roundabout lighting.

In relation to minimising adverse effects to landscape viewpoints, the MSA operational lighting proposals are limited in height and intensity to achieve the required illumination standards. This effectively controls the possibility of glare (being the key indicator for observer locations) for all distant viewpoints, however proximity viewpoints may suffer from a slight adversity unless mitigated accordingly.

With respect to the proposals for the new roundabout lighting (due to height), unless screened it is likely that glare will be experienced from a number of viewpoint locations and proximity residential R04 – Birchwood Residential Area - Rear Aspect to South of Site (Inglewood Close).

### **Mitigation**

In general, it is considered that the above potential adverse effects can be effectively mitigated to a degree of minimal significance over the current baseline condition.

With due regards to the outlined embedded good practise measures, the following mitigation measures (operational) should be considered in the detailed lighting design / installation:

- Where practical, adopting an appropriate control strategy for the operational lighting so that, when not required and subject to Health and Safety assessment and site security requirements, non-essential lighting is switched off (occupancy sensing) at a pre-determined time in order to further reduce the effect.
- Where feasible, all luminaires used around the perimeter of the site should be mounted within the Site, so that the main photometric distribution of the luminaire will be towards the task area, keeping all light within the boundary of the development and preventing artificial light spilling outside of this;
- Wherever possible consideration should be given to the need for lighting in areas where ecology habitat crosses or is situated directly adjacent to. Should H&S require artificial lighting to these areas all luminaires should be directed away from the habitat area and shielded appropriately (light shields applied post installation in addition to being integral to the luminaire). Being particularly relevant to the Site perimeter ecology areas the Silver Brook diversion and proximity viewpoints.
- Wherever possible and subject to landscape design, the retention of trees to the Site perimeter.
- Wherever possible and subject to landscape design, the implementation of new / supplementary dense natural screening (treelines, foliage etc.) / buffer zones where applicable to minimise light spill and luminaire visibility. Being particularly relevant to the Site perimeter ecology areas the Silver Brook diversion and proximity viewpoints.

## 1 Introduction

The intent for this Lighting Assessment is to provide a quantified assessment of potential obtrusive light impact to confirmed sensitive receptor locations in relation to published guidance limiting thresholds, policy and specialist discipline recommendation.

Where applicable, this will outline the requirements of mitigation measures (over standard embedded measures) to be implemented at design and operational stages in order to reduce or remove this potential impact.

The potential impacts of obtrusive light are categorised as follows:

- Light Trespass: The spilling of light beyond the boundary of a property which may cause nuisance to others - Horizontal (ground level) and Vertical (residential windows and ecology zones);
- Glare: The uncomfortable brightness of the light source against a dark background which results in dazzling the observer, which may cause nuisance to residents and a hazard to road users;
- Direct Sky Glow: The direct upwards spill of light into the sky which can cause a glowing effect and is often seen above cities when viewed from a dark area.

It is intended that this Lighting Assessment supports the forthcoming planning application.

**Note: The Assessment and Parameters currently exclude future lighting alterations and additions to the motorway, slip roads, roundabout and primary access routes.**

## 2 Relevant Policy and Guidance

### Legislation

#### *Clean Neighbourhoods and Environment Act (CNEA) 2005*<sup>1</sup>

The Clean Neighbourhoods and Environment Act (CNEA) 2005 gives Local Authorities additional powers to deal with artificial lighting by classifying artificial light emitted from defined premises as a statutory nuisance (from April 2006). Guidance produced on Sections 101 to 103 of the CNEA extends the duty on local authorities to ensure their areas are checked periodically for existing and potential sources of statutory nuisances including nuisances arising from artificial lighting. Local authorities must take reasonable steps to investigate complaints of such nuisances from artificial light.

#### *Empowerment to Light Roads - The Highways Act 1980*<sup>2</sup>

Section 97 empowers a Highway Authority to provide lighting for any highway or proposed highway for which they are or will be the Highway Authority. District Councils and many Parish or Town Councils also have the power to provide lighting as local lighting authorities

## **National Planning Policy**

*The National Planning Policy Framework 2019*<sup>3</sup>

The National Planning Policy Framework (NPPF) encourages good design with planning policies and decisions limiting the effect of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

*National Planning Practice Guidance – Light pollution*<sup>4</sup>

The National Planning Practice Guidance (NPPG) advises on how to consider light within the planning system, specifically focusing on:

- When light pollution is relevant to planning;
- What factors should be considered when assessing whether a development proposal might have implications for light pollution;
- What factors are relevant when considering where, when and how much light shines;
- What factors are relevant when considering possible ecological effect.

## **Regional Planning Policy**

*Warrington Borough Council – Local Plan Core Strategy – Adopted July 2014*<sup>5</sup>

This policy report (Section 10, Policy QE 6) notes that the Council, in consultation with other Agencies, will only support development which would not lead to an adverse impact on the environment or amenity of future occupiers or those currently occupying adjoining or nearby properties, or does not have an unacceptable impact on the surrounding area. The Council will take into consideration the following:

- Levels of light pollution and impacts on the night sky.

Policy MP 5 also states that proposals should demonstrate that they would not have an adverse impact in terms of;

- Unacceptable problems of noise, vibration, lighting, emissions, or other pollution for neighbouring occupiers.

*Warrington Borough Council – Environmental Protection Supplementary Planning Document – Adopted May 2013*<sup>6</sup>

This supplementary planning document sets out in detail, the Council's approach to dealing with Environmental Protection issues, including lighting pollution, and identifies associated impacts that could affect public health and wellbeing.

Under Section 5 – Light Pollution, the document states that by establishing the objectives of any lighting scheme and agreeing guidelines a compromise can be met to reduce the impact of any scheme and potentially save energy and expense to the Applicant/Developer.

The Council would advise prospective Developers/Applicants to check with the LPA before installing any lighting scheme. Developers/Applicants are encouraged to submit details of lighting schemes (nature and extent), including light scatter diagrams, as part of the planning application in order to demonstrate that the proposed scheme is appropriate in terms of its purpose and setting. In so doing, the LPA aims to minimise potential pollution from glare and spillage to neighbouring properties, roads and rural areas. It may be necessary to condition a planning approval to allow the LPA to monitor the development and enforce the condition if necessary, this is discussed in Section 5.3.3.

To achieve the necessary minimisation of obtrusive light the Applicant/Developer should adhere to the general principles taken from the Institute of Lighting Professionals, Guidance Notes for the Reduction of Obtrusive Light, GN01: 2011.

### **Obtrusive Light and Design Guidance**

*Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01:2011* <sup>7</sup>

This Guidance provides measurable design guidance limits and recommendations to ascertain acceptability of obtrusive light levels at night.

*CIE – 150:2017 - Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations* <sup>8</sup>

The purpose of this Guide is to help formulate guidelines for assessing the environmental effects of outdoor lighting and to give recommended limits for relevant lighting parameters to contain the obtrusive effects of outdoor lighting within tolerable levels. As the obtrusive effects of outdoor lighting are best controlled initially by appropriate design, the guidance given is primarily applicable to new installations; however, some advice is also provided on remedial measures which may be taken for existing installations. This Guide refers to the potentially adverse effects of outdoor lighting on both natural and man-made environments for people in most aspects of daily life, from residents, sightseers, transport users to environmentalists and astronomers.

*CIE 126 (1997) Guidelines for Minimising Sky Glow* <sup>9</sup>

This Guide gives general guidance for lighting designers and also policy makers about the ways the interference by light of astronomical observations can be reduced or even avoided. The report gives guidance for the design of lighting installations and lighting equipment. Practical implementation of the general guidance is left to National Regulations.

*CIE Technical Report Document 129 - 1998 Guide for lighting exterior work areas* <sup>10</sup>

The purpose of this Guide is to provide guidance for the design of lighting for exterior work areas. The objectives of lighting for exterior work areas are to ensure:

- Efficient working conditions;
- Safe movement and traffic; and
- Safety and security of people and property.

*BS5489-1: 2013 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity area*<sup>11</sup>

This part of BS 5489 gives recommendations on the general principles of road lighting, and its aesthetic and technical aspects, and advises on operation and maintenance.

*BS EN 13201-2: 2015 – Road lighting – Part 2: Performance requirements*<sup>12</sup>

This part of this European Standard defines, according to photometric requirements, lighting classes for road lighting aiming at the visual needs of road users, and it considers environmental aspects of road lighting.

*BS EN 12464-2: 2014 – Lighting of Work Places – Part 2: Outdoor Work Places*<sup>13</sup>

This European standard specifies lighting requirements for outdoor work places, which meet the needs for visual comfort and performance. All usual visual tasks are considered.

*Campaign to Protect Rural England (CPRE) – Night Blight 2016*<sup>14</sup>

CPRE – Night Blight data (2016) gives a broad-brush indication of upwards light (sky glow) experienced within the UK. The interactive mapping tool allows specific areas and locations to be assessed with regards to a baseline condition.

### **Bats and Lighting Guidance**

*BCT / ILP – Guidance Note 08/18 – Bats and Artificial Lighting in the UK*<sup>15</sup>

This document is aimed at lighting professionals, lighting designers, planning officers, developers, bat workers/ecologists and anyone specifying lighting. It is intended to raise awareness of the impacts of artificial lighting on bats, and mitigation is suggested for various scenarios.

### 3 Baseline Conditions

The Proposed Site is located near Birchwood, between Culcheth and the M62 Motorway within Cheshire. The landscape setting of the Site is characterised by an extensive unlit patchwork of mixed agriculture and farmed landscape to the North & East, with an industrial park to the South West and motorway areas to the South (both of which are artificially illuminated).

Within the Site boundary, the environment is generally unlit. However, notable light spill from the motorway does encroach on to the southern boundary and associated land area. A study has been undertaken to identify relevant legislation, good practice guidance, local designations and relevant planning policy in relation to lighting following the CIE 126 (1997), Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011 and CIE 150 (2017) guidance.

**Appendix 1.0** provides an overview of the measured survey undertaken.

The study area includes sensitive receptors within and outside the boundaries of the Site which are likely to have a direct line of sight towards the Proposed Development and which may therefore be affected during the operational phase. The likelihood of obtrusive light impact (Lux) is subject to distance and can exclude some potential receptor locations. The following provides an overview of the sensitivities included / not included within this assessment.

#### **Sensitive Receptors included within this Assessment:**

- **Residential**

There are a number of existing residential locations beyond the perimeter of the Site.

- **Ecology – Light Sensitive**

In terms of ecology, the applicant ecologist has identified a number of potential roosting and flight path areas within the vicinity of the Proposed Site location. Relating to other nocturnal species, no other populations have been identified.

- **Viewpoints**

As part of the LVIA, these are notable landscape locations where the view of the Proposed Development is assessed. In support of this, assessment is given towards potential notable glare from the Proposed Development towards observer positions at these locations.

- **Silver Brook Diversion**

In addition, consideration is given towards the proposed Silver Brook diversion and assessment is made for the likely maximum adverse locations on the proposed brook passage.

- **Dark Sky**

When considering sky glow, as a result of direct upwards light, there is the possibility of a site wide impact being visible from darker environments.

Taken on a regional scale, existing saturated sky glow is notable from bordering major urban development associated with nearby locations (e.g. Birchwood, Birchwood Park (Industrial), Culcheth, Warrington, Manchester, and the M62 Motorway).

On a local scale, sky glow is visible and is comparable to that received on the regional scale.

### **Sensitive Receptors excluded from this Assessment**

- **Lit and Unlit Highway**

With respect to the nature of the Site, embedded mitigation (flat glass, controlled glare, minimal mounting height and tilt etc.) and the expected luminaire types predominately being highway and associated area lighting (inherent glare control) based on professional judgement disability glare is not considered to present any significant impact and is therefore excluded from the future assessment.

- **Landscape**

Due to distance and/or landscape topology interference landscape sensitivities are excluded from this assessment.

- **Public Rights of Way**

Relating to obtrusive light and unless ecologically / view point designated, Public Rights of Way are considered to be nil in terms of sensitivity due to limited frequencies and durations of night time human use and activity. As such, are not included as part of the future assessment.

- **Rail**

In terms of the surrounding rail, the Liverpool to Glazebrook (Cheshire Lines Cmte) rail track runs approximately 1.65km to the South of the Proposed Development. Due to distance, it is unlikely that obtrusive light will be the cause of any significance and it therefore excluded from this assessment.

- **Heritage**

There are a small number of Grade 2 listed buildings located approximately 1.25 – 2 km from the Site. Due to distance from the Proposed Development the potential for obtrusive light trespass and luminaire source visibility (based on embedded mitigation) is considered to be nil and an increase in obtrusive light condition is unlikely. As such, these locations are not considered further within this assessment.

- **Other Locations**

Due to the expected type and nature of light effect, in relation to the likely activities and periods of occupation existing commercial, industrial and employment developments are considered to have a nil sensitivity and are therefore excluded from this assessment.

### Environmental Zone Classification

Assessment of the designation, use, habitat and external lighting condition dictates the classification of Environmental Zones across the Site and surrounding areas. The Environmental Zones relate to limiting guidance published by the Institute of Lighting Professionals ILP for obtrusive light (residential and highway) - ILP Guidance Notes for the Reduction of Obtrusive Light (2011).

Due to the type of sensitive receptors, although not wholly applicable, the Environmental Zone classification provides a context towards the assessment.

Due to the presence of local skyglow, existing artificial urban and highway lighting bordering the Proposed Development, it is considered that this area is typical of an E2 / partial E3 zone. However, due to the rural nature of the location and areas of natural conditions, on a precautionary approach the thresholds are based on E2 Zone classification (Low district brightness).

The ILP guideline values for the Environmental Zones are outlined in **Table 3.1**.

**Table 3.1: ILP Guidance Notes for the Reduction of Obtrusive Light (2011)**

Environmental Zone	Sky Glow ULR (Max %) (1)	Light into Windows EV (2)		Source Intensity I (cd) (3)		Building Luminance (4) L (cd/m <sup>2</sup> ) Ave. Before Curfew
		Pre Curfew	Post Curfew	Pre Curfew	Post Curfew	
E0	0	0	0	0	0	0
E1	0	2	0 (1*)	2500	0	0
<b>E2</b>	<b>2.5</b>	<b>5</b>	<b>1</b>	<b>7500</b>	<b>500</b>	<b>5</b>
E3	5	10	2	10000	1000	10
E4	15	25	5	25000	2500	25

Where:

ULR (Upward Waste Light Ratio) = Maximum permitted percentage of luminaire flux that goes directly into the sky.

EV = Vertical Illuminance in Lux - measured flat on the glazing at the centre of the window.

I = Light intensity in Candelas

L = Luminance cd/m<sup>2</sup>

Curfew = The time after which stricter requirements (for the control of obtrusive light) will apply.

\* Permitted only from Public road lighting installations

1 - Upward Light Ratio – Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights, festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments.

2 - Light Intrusion (into Windows) – These values are suggested maxima and need to take account of existing light intrusion at the point of measurement. In the case of road lighting on public highways where building facades are adjacent to the lit highway, these levels may not be obtainable. In such cases where a specific complaint has been received, the Highway Authority should endeavour to reduce the light intrusion into the window down to the post curfew value by fitting a shield, replacing the luminaire, or by varying the lighting level.

3 - Luminaire Intensity – This applies to each luminaire in the potentially obtrusive direction, outside the area being lit. The figures given are for general guidance only and for some sports lighting applications with limited mounting heights, may be difficult to achieve.

4 - Building Luminance – This should be limited to avoid over lighting and related to the general district brightness. In this reference building luminance is applicable to buildings directly illuminated as a night-time feature as against the illumination of a building caused by spill light from adjacent luminaires or luminaires fixed to the building but used to light an adjacent area.

## 4 External Lighting Parameters and Mitigation

**Appendix 2.0** provides an overview of the lighting parameters that have been used within this assessment.

With respect to constraints and internal site allocation, lighting shall only be included where essential to the safe night use of the Proposed Development. This includes activities in relation to development access / internal roadways and activities in relation to the Proposed Development. All other areas, which are currently unlit, will remain as being unlit in the interests of maintaining the current baseline condition to identified local constraints.

With respect to the lighting parameters the following good practice embedded measures are to be included, which are intended as being the base principals for the future light developments of the Site:

- Wherever possible, ensuring the use of controlled light distribution, optimised optics (flat glass - controlled light distribution below the horizontal) minimal inclination and considered luminaire positioning / minimal heights are employed;
- Where possible, modern LED luminaires should be employed throughout the site to minimise the obtrusive light spill footprint and be as energy efficient as possible;
- Where feasible, all luminaires used around the perimeter of the site should be mounted within the Site, so that the main photometric distribution of the luminaire will be towards the task area, keeping all light within the boundary of the development and preventing artificial light spilling outside of this;
- Wherever possible, adopting a light quality that minimises disruption to existing ecological systems in the form of 'LED' light sources (<2700K and >550 nm) which emit minimal UV and blue light.

The following mitigation measures will be considered and, where appropriate, shall be incorporated into the detailed lighting design / installation:

- Where practical, adopting an appropriate control strategy for the operational lighting so that, when not required and subject to Health and Safety assessment and site security requirements, non-essential lighting is switched off (occupancy sensing) at a pre-determined time in order to further reduce the effect.
- Where feasible, all luminaires used around the perimeter of the site should be mounted within the Site, so that the main photometric distribution of the luminaire will be towards the task area, keeping all light within the boundary of the development and preventing artificial light spilling outside of this;
- Wherever possible, consideration should be given to the need for lighting in areas where ecology habitat crosses or is situated directly adjacent to. Should H&S require artificial lighting to these areas all luminaires should be directed away from the habitat area;

- Wherever possible and subject to landscape design, the retention of trees to the Site perimeter;
- Wherever possible and subject to landscape design, the implementation of new / supplementary dense natural screening (treelines, foliage etc.) / buffer zones where applicable to minimise light spill and luminaire visibility;
- Where applicable, and not integral to the luminaire type, additional glare controlling louvres and light shields to be applied post installation.

## 5 Scope and Methodology of Assessment

### Impact Assessment

The calculated impact from the new lighting proposals (all operational) is modelled quantitatively and, where applicable to existing baseline measurements, a cumulative impact is provided.

With respect to relative sensitivities the following methodology applies:

- **Residential**

In terms of common locations, orientation and aspects relating to the Proposed Development, individual residential premises are grouped into representative receptor zones.

For occupied residential receptors the lighting assessment to the vertical plane (window locations) has followed the methodology outlined in CIE 126 (1997) and CIE 150 (2017) guidance.

Similarly, obtrusive light effects are also related to glare (luminaire source intensity) from the observer location.

The criteria used to assess the effects of the proposed lighting are derived from CIE 150 (2003), with consideration also given to the Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011.

- **Ecology – Light Sensitive**

The applicant ecologist has advised the bat commuting, foraging and potential roost locations to be surveyed and the relative light effect calculation measurement criteria and heights to support the ecological light effect assessment provided within Ecology and Nature Conservation Chapter.

Currently there is a lack of evidence regarding the light levels below which there are no/reduced effects on bats. Responses of bats to light levels are likely to vary between species and between behaviours. A “light threshold” below which there is little effect on bats may not exist for some species which may be light averse regardless of intensity.

Therefore, light levels at the site are considered in the context of the lux data recorded during pre-development lighting and bat surveys. Where possible post-development light levels should be as close to the light levels recorded at key areas of bat use on the site pre-development.

In support of the Ecology assessment, relative to species, obtrusive light effects are provided on the peak horizontal and vertical effect condition for representative heights (vertical being the more relevant indicator and maximum adverse effect to bat flight) for ecology zones. Where a potential significant effect is possible, tabulated baseline, effect and resultant values are provided for locations on the centre line of the respective ecology zone.

- **Silver Brook Diversion**

Consideration is given towards the proposed Silver Brook diversion and assessment of the resultant horizontal and vertical impact is undertaken at the maximum adverse locations noted along the proposed brook passage.

- **Landscape Viewpoints**

In respect to viewpoint locations, other than visual appearance (at night), the primary adverse effect would be relating to glare (luminaire source intensity) received at the observer location. The criteria used to assess the effects of the proposed lighting are derived from CIE 150 (2003), with consideration also given to the Institute of Lighting Professionals – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011.

The baseline data presents observed conditions at the relevant landscape viewpoints and supports the assessment of the night-time appearance presented within the LVIA chapter (supplemented by the content within **Appendix 1.0 – Baseline** and **Appendix 2.0 – External Lighting Parameters**).

- **Dark Sky**

When considering direct sky glow, as a result of direct upwards light, there is the possibility of a site wide effect being visible from darker environments. Direct Sky Glow cannot be measured. The baseline is professionally judged relative to visual baseline survey conditions and published CPRE – Night Blight data.

The ILP Guidance Notes for the Reduction of Obtrusive Light (2011) provides limiting sky glow percentages relative to the Environmental Zone. This is assessed on a Site wide basis relative to the overarching Environmental Zone classification for intended and existing artificially lit areas.

### **Assumptions / Limitations**

External Operational Lighting Parameters have been prepared for the purposes of this assessment, refer to **Appendix 2.0**.

For the purposes of demonstrating a robust assessment, the following standard industry precautionary measures are applied to the assessment calculation:

- Assessment is usually provided for a pre and post curfew condition. Where curfew is defined as being the time at which non-essential lighting is turned off (subject to Health and Safety approval). However, due to the Proposed Development being 24-hour operation the assessment is based on full lighting being operational at all times;
- A unity maintenance factor of 1.0 is applied to represent the maximum adverse condition from initial installation (maximum light output not including for light losses through light source degradation and dirt accumulation);

- As per standard industry practice and for the demonstration of maximum effects existing and proposed landscape bunding and planting / trees are not been included within the assessment calculations.

### **Reflective Properties of Illuminated Surfaces**

Guidance is expressed in terms of the direct illuminance component. However, where the surface is relatively light in colour and typically >30% the reflected light component should be taken into account. In the case of this assessment it is assumed that the typical landscape reflectance value is <30% and will not provide significant contribution, by reflection, to the illuminance at the measured point.

## 6 Assessment

The following provides an obtrusive light assessment, in tandem with the Planning Application, which gives assessment of the exterior operational lighting impact on the surrounding environment.

The intention of the assessment is to convey how the Proposed Development will fit into the existing Illumination profile of the area and how that will comply with relevant legislation requirements and best practise Design Guidance.

### **Note:**

The baseline survey values include for contributory effects from lighting scheduled due for replacement (roundabout and access road).

Due to the future proposals for replacement lighting to the roundabout, through simulation, the current contributory effect from the existing lighting has been excluded for the purposes of establishing the future resultant effect.

Therefore, the tabulated future resultant effect comprises of the following contributory elements:

- 1 – Proposed lighting within the MSA Site
- 2 – Proposed replacement lighting to the roundabout
- 3 – Existing and retained lighting to the motorway and slip roads

### **Overview**

Alongside baseline data provided within **Appendix 1.0**, the illustrated horizontal illuminance effect contours within **Figure 4.1** (proposed development only) are provided to inform the application.

### **Obtrusive Light Effects to Sensitive Receptors**

- **Residential**

The data represented in **Tables 4.1 and 4.2** is relevant to identified **Residential Locations** where vertical illuminance to windows (as opposed to horizontal illuminance) and luminaire source intensity (glare) are the recognised key indicators.

- **Ecology – Light Sensitive**

The data represented in **Tables 4.3 and 4.4** is relevant to identified **Ecology – Light Sensitive** where, with reference to the baseline and a resultant value, assessment is provided on the peak horizontal and vertical effect condition for representative ecology zones.

In respect to species, these are assessed within the corresponding Ecology Chapter.

- **Silver Brook Diversion and Landscape View Points**

**Table 4.5** provides the effects for horizontal and vertical light trespass to principally affected locations of the Silver Brook Diversion.

In respect to Landscape Viewpoints, these are assessed in terms of glare (luminous source intensity) to the observer location (**Table 4.6**) and within the corresponding LVIA Chapter.

- **Dark Sky**

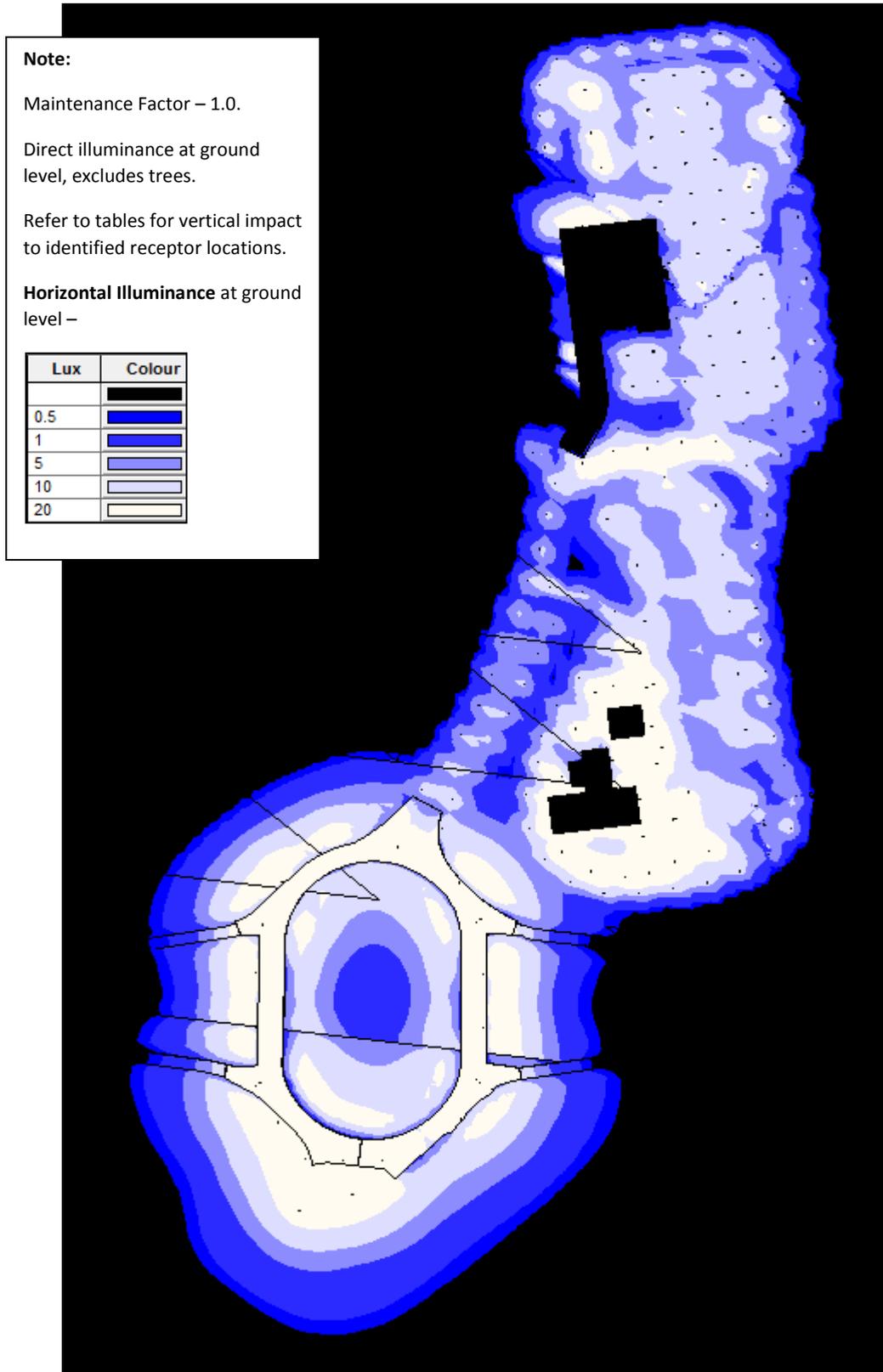
Direct Sky glow is assessed as a Site Wide effect and is based on a scenario where the most onerous of lighting impact is applied relative to the potential uses within each area. In accordance with CIE 150 Section 5.5.2 the Upward Direct Light Ratio is calculated and referenced against ILP sky glow guidance.

**Figure 4.2** illustrates the horizontal illuminance levels (Edown) at 1.0m below the lowest luminaire within the Application Site. **Figure 4.3** illustrates the horizontal illuminance levels (Eup) at 1.0m above the highest luminaire.

The data represented in **Table 4.7** is relevant to identified **Direct Sky Glow** where the calculated direct sky glow is assessed as the key indicator.

**Overview**

**Figure 4.1: Graphical representation of horizontal obtrusive illuminance (from the Proposed Development)**



**Residential****Table 4.1: Vertical Illuminance (Lux)****Note:**

The peak vertical illuminance to the window locations of residential premises for an E2 zone is 1 Lux post curfew (ILP Guidance Notes 2011).

<b>Residential</b>	<b>Vertical Illuminance (Lux) at time of Baseline Survey</b>	<b>Future Baseline - Simulated vertical illuminance EXCLUDING lighting scheduled as being subject to replacement (Lux) (1.5m AFL)</b>	<b>Calculated Max. Vertical Illuminance (Lux), the sum of: – Proposed lighting within the MSA Site; – Proposed replacement lighting to the roundabout; – Existing and retained lighting to the motorway and slip roads.</b>	<b>Resultant Calculated Max. Vertical Illuminance (Lux) (maximum value to elevation)</b>
R01 – Birchwood Residential Area - Rear Aspect to South of Site (Rockingham Close)	0.06	0.06	0	<b>0.06</b>
R02 – Moss C&G Farm (School Lane)	0.06	0.06	0	<b>0.06</b>
R03 – Birchwood Residential Area - Rear Aspect to South of Site (Hamsterley Close)	0.06	0.06	0	<b>0.06</b>
R04 – Birchwood Residential Area - Rear Aspect to South of Site (Inglewood Close)	0.06	0.06	0.09	<b>0.15</b>
R05 – Wareing H & Son Farm	0.06	0.06	0	<b>0.06</b>
R06 – Culcheth Residential Area - Rear Aspect to North West of Site (Severn Road)	0.06	0.06	0	<b>0.06</b>
R07 – Ratcliffe House Farm	0.06	0.06	0	<b>0.06</b>
R08 – Private House on B5212	0.06	0.06	0	<b>0.06</b>

R09 – Hanging Birch Farm	0.07	0.07	0	<b>0.07</b>
R10 – Franks Farm	0.06	0.06	0	<b>0.06</b>
R11 – Mole Hill Farm	0.06	0.06	0	<b>0.06</b>

**Table 4.2: Peak Source Intensity (Glare)**

<b>Residential</b>	<b>Source Intensity Max. (ILP Guidance Notes 2011) (cd)  Post Curfew</b>	<b>Calculated Max. Peak Viewed Source Intensity (cd)</b>
R01 – Birchwood Residential Area - Rear Aspect to South of Site (Rockingham Close)	500	<b>26</b>
R02 – Moss C&G Farm (School Lane)	500	<b>22</b>
R03 – Birchwood Residential Area - Rear Aspect to South of Site (Hamsterley Close)	500	<b>29</b>
R04 – Birchwood Residential Area - Rear Aspect to South of Site (Inglewood Close)	500	<b>584 (as a result of new Roundabout Lighting)</b>
R05 – Wareing H & Son Farm	500	<b>11</b>
R06 – Culcheth Residential Area - Rear Aspect to North West of Site (Severn Road)	500	<b>14</b>
R07 – Ratcliffe House Farm	500	<b>62</b>
R08 – Private House on B5212	500	<b>71</b>

R09 – Hanging Birch Farm	500	73
R10 – Franks Farm	500	78
R11 – Mole Hill Farm	500	17

**Note:****Adversely Affected Receptors**

**Text** denotes noticeable increase in obtrusive light due to the Development Proposals

**Text** denotes noticeable existing baseline condition exceeding natural conditions

**Text** denotes noticeable existing baseline condition and a noticeable increase in obtrusive light due to the Development Proposals

## Ecology – Light Sensitive

Table 4.3: Horizontal Illuminance (Lux) @ Ground Level

Ecology	1) Horizontal Illuminance (Lux) at time of Baseline Survey	2) Amended Baseline - Simulated horizontal illuminance EXCLUDING lighting scheduled as being subject to replacement (Lux)	Calculated Max. Horizontal Illuminance (Lux), the sum of: – Proposed lighting within the MSA Site – Proposed replacement lighting to the roundabout – Existing and retained lighting to the motorway and slip roads	Resultant Max. Horizontal Illuminance (Lux)
E01 – Bat Foraging & Commuting - North West Site Area	0.06	0.06	18.28	18.34
E02 – Bat Foraging & Commuting - North West Site Area	0.06	0.06	6.04	6.10
E03 – Bat Foraging & Commuting – West Site Area	0.06	0.06	0.43	0.49
E04 – Bat Foraging & Commuting – West Site Area	0.06	0.06	18.92	18.98
E05 – Bat Foraging & Commuting - South Site Area	0.12	0.06	35	35.06
E06 – Bat Foraging & Commuting - South Site Area	1.95	1.95	10.3	12.25
E07 – Bat Foraging & Commuting - South Site Area	1.95	1.42	0.58	2.00
E08 – Bat Foraging & Commuting - South Site Area	1.93	1.93	0.06	1.99
E09 – Bat Foraging & Commuting - South Site Area	1.97	1.97	0.01	1.98
E10 – Bat Foraging & Commuting - South East Site Area	2.71	2.71	0	2.71
E11 – Bat Foraging & Commuting - South East Site Area	0.08	0.08	0	0.08
E12 – Bat Foraging & Commuting - East Site Area	0.06	0.06	0	0.06

E13 – Bat Foraging & Commuting – East Site Area	0.06	0.06	0	<b>0.06</b>
E14 – Bat Foraging & Commuting – North East Site Area	0.06	0.06	0	<b>0.06</b>
E15 – Bat Foraging & Commuting – North East Site Area	0.06	0.06	0.04	<b>0.1</b>
E16 – Bat Foraging & Commuting – South West Site Area	0.06	0.06	16.51	<b>16.57</b>
E17 – Bat Foraging & Commuting – South West Site Area	2.71	0.06	31.4	<b>31.46</b>
E18 – Bat Foraging & Commuting – South West Site Area	0.08	0.07	0.45	<b>0.52</b>
E19 – Bat Foraging & Commuting – South West Site Area	0.06	0.06	3.93	<b>3.99</b>
E20 – Bat Foraging & Commuting – North Site Area	0.06	0.06	0.01	<b>0.07</b>

**Note:****Adversely Affected Receptors**

Text denotes noticeable increase in obtrusive light due to the Development Proposals

Text denotes noticeable existing baseline condition exceeding natural conditions

Text denotes noticeable existing baseline condition and a noticeable increase in obtrusive light due to the Development Proposals

Table 4.4: MOST RELEVANT FOR BAT FLIGHT - Vertical Illuminance (Lux) @ 2.0m, 5.0m, 10.0m High

Ecology	1) Vertical Illuminance (Lux) at time of Baseline Survey						Calculated Max. Vertical Illuminance (Lux), the sum of:			Resultant Vertical Illuminance (Lux)		
	2) Amended Baseline -Simulated vertical illuminance EXCLUDING lighting scheduled as being subject to replacement (Lux)						1 – Proposed lighting within the MSA Site	2 – Proposed replacement lighting to the roundabout	3 – Existing and retained lighting to the motorway and slip roads	2m high	5m high	10m high
	2m high		5m high		10m high							
1	2	1	2	1	2	2m high	5m high	10 m high	2m high	5m high	10m high	
E01 – Bat Foraging & Commuting - North West Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.31	0.01	0	0.37	0.07	0.06
E02 – Bat Foraging & Commuting - North West Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.01	0	0	0.07	0.06	0.06
E03 – Bat Foraging & Commuting – West Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.01	0	0.13	0.07	0.06
E04 – Bat Foraging & Commuting – South West Site Area	0.09	0.09	0.06	0.06	0.06	0.06	2.35	0.12	0	2.44	0.18	0.06
E05 – Bat Foraging & Commuting - South West Site Area	0.22	0.22	0.13	0.13	0.06	0.06	0.07	0	0	0.29	0.13	0.06
E06 – Bat Foraging & Commuting - South Site Area	3.13	3.13	1.89	1.89	0.06	0.06	6.29	7.04	1.6	9.42	8.93	2.2
E07 – Bat Foraging & Commuting - South Site Area	3.13	3.11	1.89	1.87	0.06	0.06	0.17	0.09	0.02	3.28	1.96	0.08
E08 – Bat Foraging & Commuting - South Site Area	3.1	3.1	1.86	1.86	0.06	0.06	0.14	0.03	0	3.24	1.89	0.06
E09 – Bat Foraging & Commuting - South Site Area	3.12	3.12	1.87	1.87	0.06	0.06	0.02	0.01	0	3.14	1.88	0.06
E10 – Bat Foraging & Commuting - South Site Area	3.87	3.87	2.32	2.32	0.06	0.06	0.01	0	0	3.88	2.32	0.06
E11 – Bat Foraging & Commuting - South East Site Area	0.13	0.12	0.08	0.07	0.06	0.06	0.03	0.02	0.01	0.15	0.09	0.07
E12 – Bat Foraging & Commuting - South East Site Area	0.07	0.07	0.06	0.06	0.06	0.06	0.02	0.01	0.01	0.09	0.07	0.07

E13 – Bat Foraging & Commuting – East Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.01	0.01	0	0.07	0.07	0.06
E14 – Bat Foraging & Commuting – North East Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0	0	0	0.06	0.06	0.06
E15 – Bat Foraging & Commuting – North East Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.01	0	0.13	0.07	0.06
E16 – Bat Foraging & Commuting – North Site Area	0.06	0.06	0.06	0.06	0.06	0.06	15.84	21.23	1.50	15.9	21.29	1.56
E17 – Bat Foraging & Commuting – North Site Area	3.87	1.6	2.32	0.06	0.06	0.06	21.71	23.13	12.97	23.31	23.19	13.03
E18 – Bat Foraging & Commuting – North Site Area	0.13	0.12	0.08	0.07	0.06	0.05	0.41	0.17	0.03	0.53	0.24	0.08
E19 – Bat Foraging & Commuting – North Site Area	0.07	0.06	0.06	0.06	0.06	0.06	0.11	0.01	0	0.17	0.07	0.06
E20 – Bat Foraging & Commuting – North Site Area	0.06	0.06	0.06	0.06	0.06	0.06	0.01	0	0	0.07	0.06	0.06

**Note:**

**Adversely Affected Receptors**

**Text** denotes noticeable increase in obtrusive light due to the Development Proposals

**Text** denotes noticeable existing baseline condition exceeding natural conditions

**Text** denotes noticeable existing baseline condition and a noticeable increase in obtrusive light due to the Development Proposals

**Silver Brook Diversion****Table 4.5: Horizontal and Vertical Illuminance for Proposed Silver Brook Diversion (Lux)**

Silver Brook Diversion	Horizontal Illuminance (Lux)			Vertical Illuminance (Lux) @ 1.5m		
	Baseline	Calculated	Resultant	Baseline	Calculated	Resultant
SB01 – Northern Section	0.06	0.49	0.54	0.06	0.04	0.10
SB02 – Eastern Section	0.06	2.86	2.92	0.07	2.08	2.15
SB03 – Southern Section	1.42	3.12	4.54	2.66	1.53	4.19

**Note:****Adversely Affected Receptors**

Text denotes noticeable increase in obtrusive light due to the Development Proposals

Text denotes noticeable existing baseline condition exceeding natural conditions

Text denotes noticeable existing baseline condition and a noticeable increase in obtrusive light due to the Development Proposals

**Table 4.6: Peak Source Intensity (Glare) at Identified Viewpoint Locations**

Viewpoint	Source Intensity Max. (ILP Guidance Notes 2011) (cd)	Calculated Max. Peak Viewed Source Intensity (cd)
	Post Curfew	
VP1	500	74
VP2	500	4509 (as a result of new Roundabout Lighting)
VP3	500	53
VP4	500	66
VP5	500	33
VP6	500	200
VP7	500	19
VP8	500	63
VP9	500	44
VP10	500	70
VP11	500	55
VP12	500	23
VP13	500	688 (as a result of new Roundabout Lighting)
VP14	500	352
VP15	500	58
VP16	500	80
VP17	500	75
VP18	500	18592 (as a result of new Roundabout Lighting)
VP19	500	75
VP20	500	14
VP21	500	10

**Note:****Adversely Affected Receptors**

**Text** denotes noticeable increase in obtrusive light due to the Development Proposals

**Text** denotes noticeable existing baseline condition exceeding natural conditions

**Text** denotes noticeable existing baseline condition and a noticeable increase in obtrusive light due to the Development Proposals

## Dark Sky

The upward spill of light into the sky, which can cause a glowing effect and is often seen above cities when viewed from a dark area. Direct Sky glow is assessed as a Site Wide effect and is based on a scenario where the most onerous of lighting effect is applied relative to the potential uses within each area.

The sample area identified reflects the overall Site and provides assessment for all types and variants of luminaire types. In accordance with CIE 150 Section 5.5.2 the Upward Direct Light Ratio is calculated as follows:

The Direct ULR for the installation is calculated from the following equation:

$$\text{ULR} = \text{Eup} / (\text{Edown} + \text{Eup})$$

Eup – Resultant average illuminance taken from a grid 1.0m above the highest luminaire

Edown – Resultant average illuminance taken from a grid 1.0m below the highest luminaire

For the purposes of direct skyglow assessment the majority of the Site is currently considered to be representative Environmental Zone classification of an E2: Low district brightness.

In maintaining a no change / improved environment the ILP Guidance Notes for the Reduction of Obtrusive Light (2011) provides a limiting sky glow percentage of 2.5%.

$$\text{ULR} = \text{Eup} / (\text{Edown} + \text{Eup})$$

$$\text{ULR} = 0.00 / (6.0 + 0.00)$$

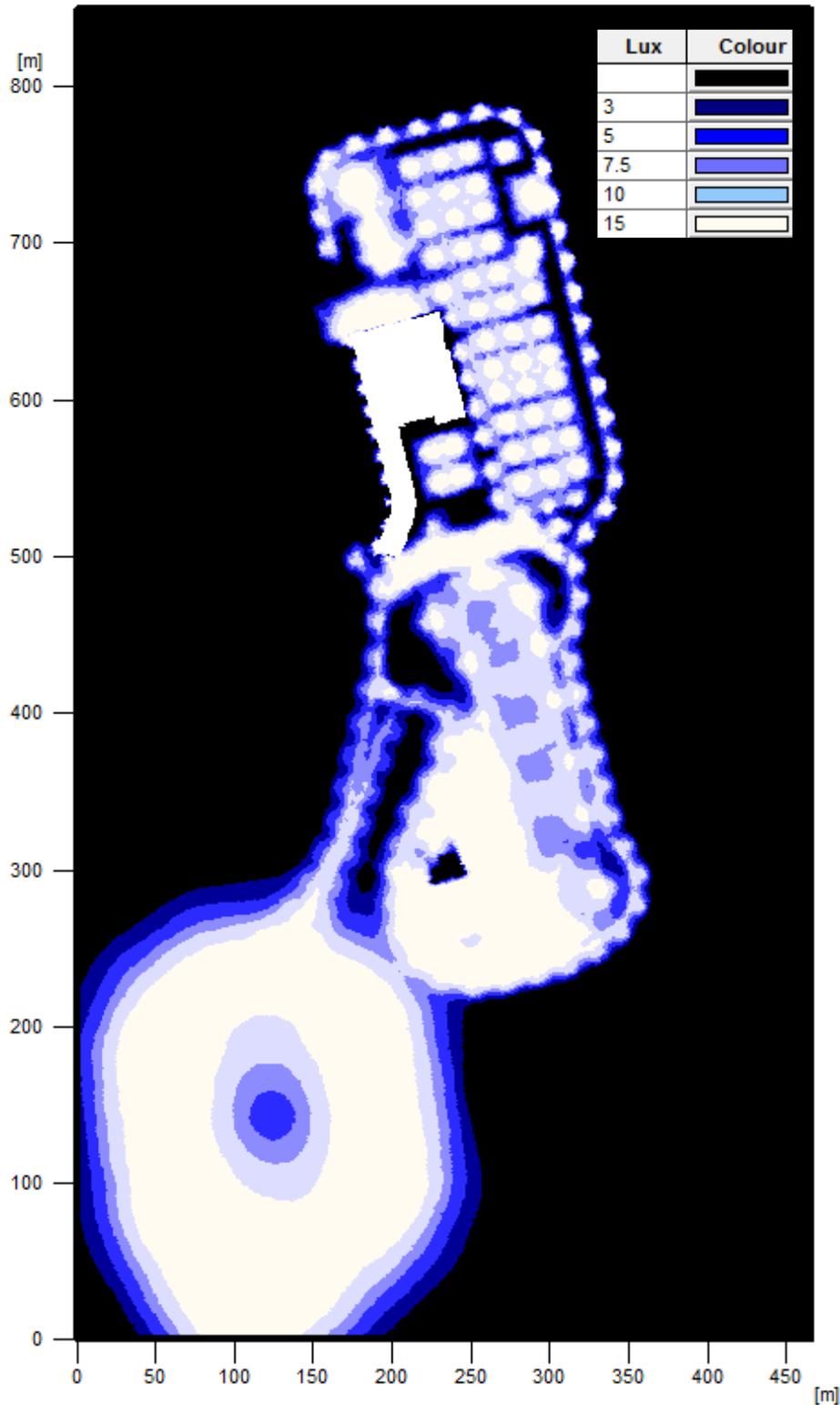
$$\text{ULR} = 0.0\% < 2.5\%$$

**Table 4.7: Direct Sky Glow**

Dark Sky	Direct Sky Glow		
	Existing Condition	Sky Glow ULR (Max. %) (ILP Guidance Notes 2011) (cd)	Calculated Direct Sky Glow %
SG01	Mid / high sky glow category (typical for an E2/E3 environment)	E2 (precautionary) – 2.5%	0.0

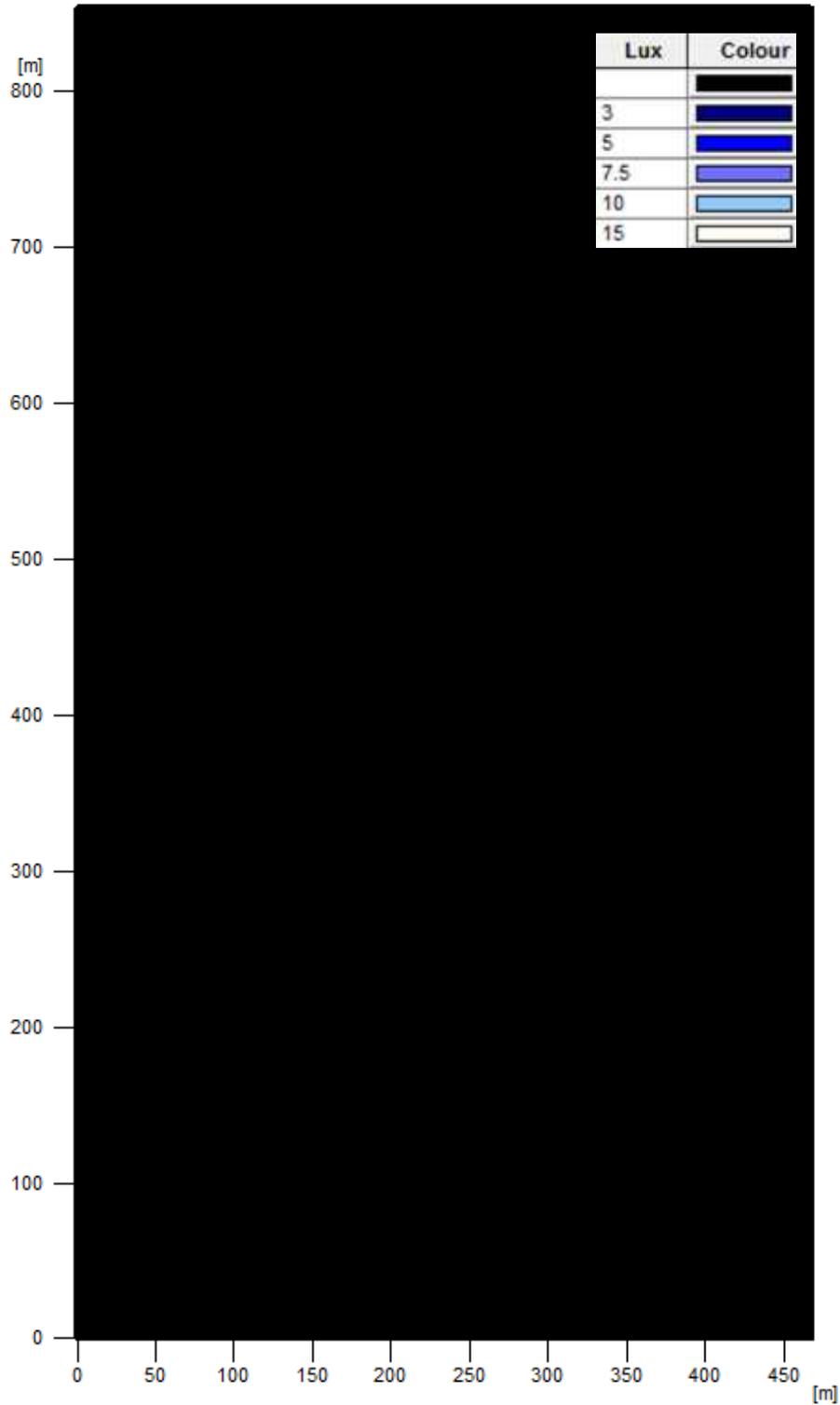
Figure 4.2: The downwards light element as horizontal illuminance levels 1.0 m below the lowest external luminaire

Direct Illuminance DOWN @1.0m below lowest luminaire = 6 lux (average)



**Figure 4.3: The upwards light element as inverted horizontal illuminance levels 1.0 m above the highest external luminaire**

**Direct Illuminance UP @1.0m below lowest luminaire = 0.00 lux (average)**



## Appendix 1.0 – Baseline Survey

### Introduction

This survey reviews the artificial lighting currently installed on the Application Site area and adjacent surrounding areas. Comment is made regarding the resulting lighting levels found, with regards to current standards and guidelines, where relevant. Ecological receptors are assessed relative to their present lighting conditions to enable a future assessment to be made of the potential impact the proposed development may have. The Moon was not visible in the sky when lighting measurements were taken. The unscreened moonlight condition measured as **0.06 Lux** (Horizontal) and **0.06 Lux** (Vertical).

Light Readings (illuminance levels in Lux) were taken on the evening of 13<sup>th</sup> February 2019 using a handheld Minolta T-10A illuminance meter. All horizontal lux readings were taken on the ground, all vertical lux readings were taken at arm's length from a standing position; approximately 1.5m above ground.

### Study Area

The Site and its sensitive receptors have determined the study area for the light pollution assessment.

The study area includes the areas surrounding / adjacent to the Site and ecology and residential sensitive receptors which may have a direct view towards the future external lighting proposals and which may therefore be affected during the construction and operation of the Proposed Development.

### Sensitive Receptors

With input from the project team, the following identifies sensitive receptors which could be at risk of 'effect' from the external lighting of the Proposed Development (**Figure X.1**):

- **R01 to R11 – Residential – Existing Residential Locations**
- **E01 to E20 – Ecological – Existing Bat Foraging and Commuting;**
- **VP1 to VP21 – Landscape Viewpoints**
- **SB01 to SB03 – Silver Brook Diversion**
- **SG01 – Natural – Direct Sky Glow.**

### Identification of Sensitive Receptors

Professional judgement and Applicant Team input has advised the following sensitive receptors which could be at risk of ‘impact’ from the external lighting parameters of the Proposed Development.

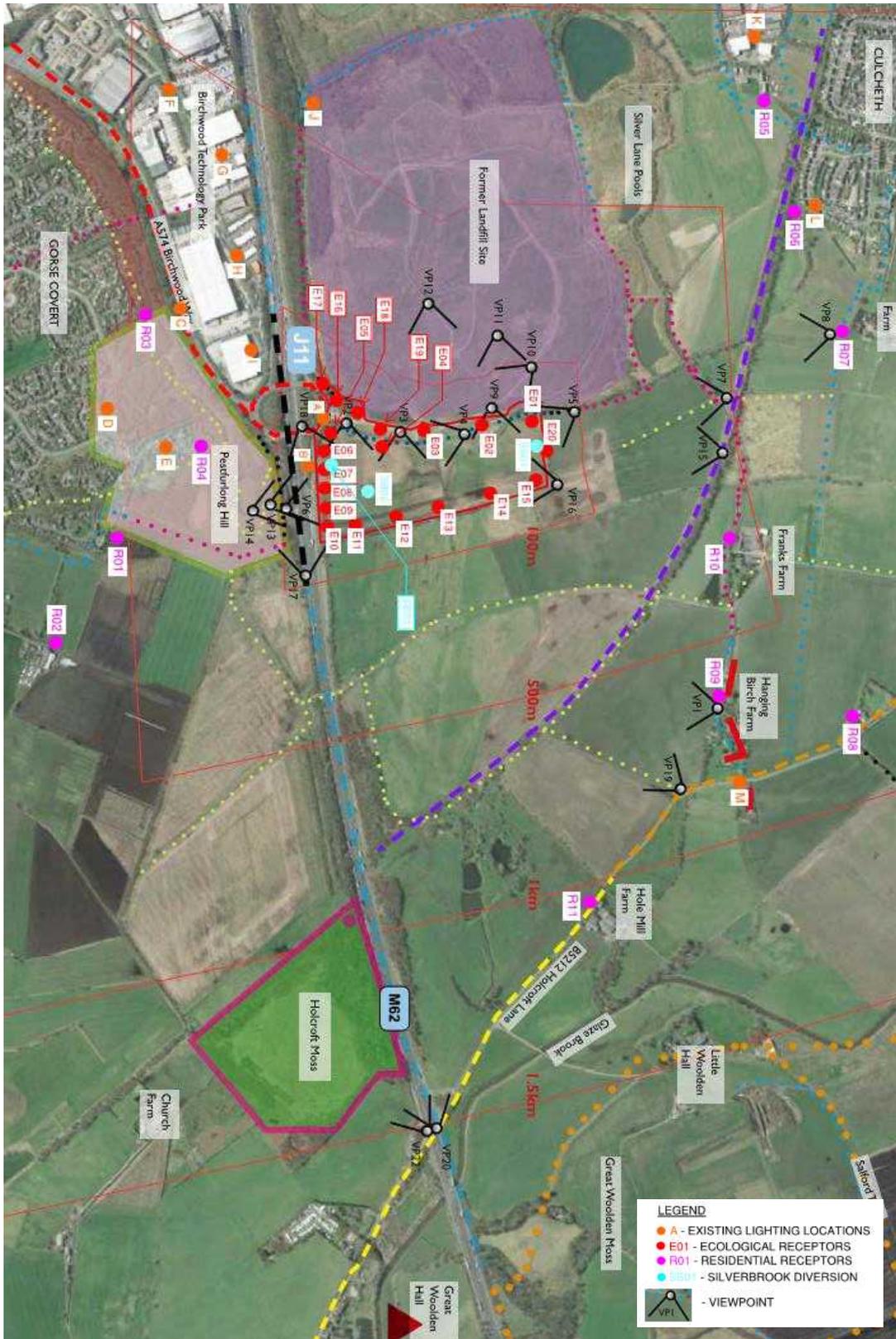
Identified receptors for assessment are listed in **Table X.1** and are illustrated on **Figure X.1** as follows:

Reference	Receptor	Use	Sensitivity	Note	Obtrusive Light Guidance and Assessment
<b>R01 to R11</b>	Existing Residential Locations	Residential	High		ILP Guidance Notes for the Reduction of Obtrusive Light (2011) <ul style="list-style-type: none"> <li>Peak Vertical Lux value at window location</li> <li>Peak Luminous Source Intensity (Glare) received at observer location</li> </ul>
<b>E01 to E20</b>	Existing Bat Foraging and Commuting	Ecological	Assessed within ES Chapter – Ecology	Assessed within ES Chapter – Ecology	<ul style="list-style-type: none"> <li>Peak Horizontal Lux value at Ground</li> <li>Peak Vertical Lux value at 2.0m, 5.0m and 10.0m high</li> </ul>
<b>SB01 to SB03</b>	Sample locations relating to the Silver Brook diversion	Natural	High		<ul style="list-style-type: none"> <li>Peak Horizontal Lux value at Ground</li> <li>Peak Vertical Lux value at 1.5m high</li> </ul>
<b>VP1 to VP21</b>	Landscape View	Natural	Assessed within ES Chapter - Landscape		ILP Guidance Notes for the Reduction of Obtrusive Light (2011). Taken as the environmental zone limit E2. <ul style="list-style-type: none"> <li>Peak Luminous Source Intensity (Glare) received at observer location</li> </ul>
<b>SG01</b>	Direct Sky Glow	Natural	Moderate		ILP Guidance Notes for the Reduction of Obtrusive Light (2011) <ul style="list-style-type: none"> <li>Sky Glow ULR %</li> </ul>

**Table X.1: Identification and Assessment Parameters of Sensitive Receptors**

Figure X.1: Identification of Sensitive Receptor, Existing Lighting, & Viewpoints – Complete Area

Note: Sensitive Receptor SG01 – Direct Sky Glow is not illustrated

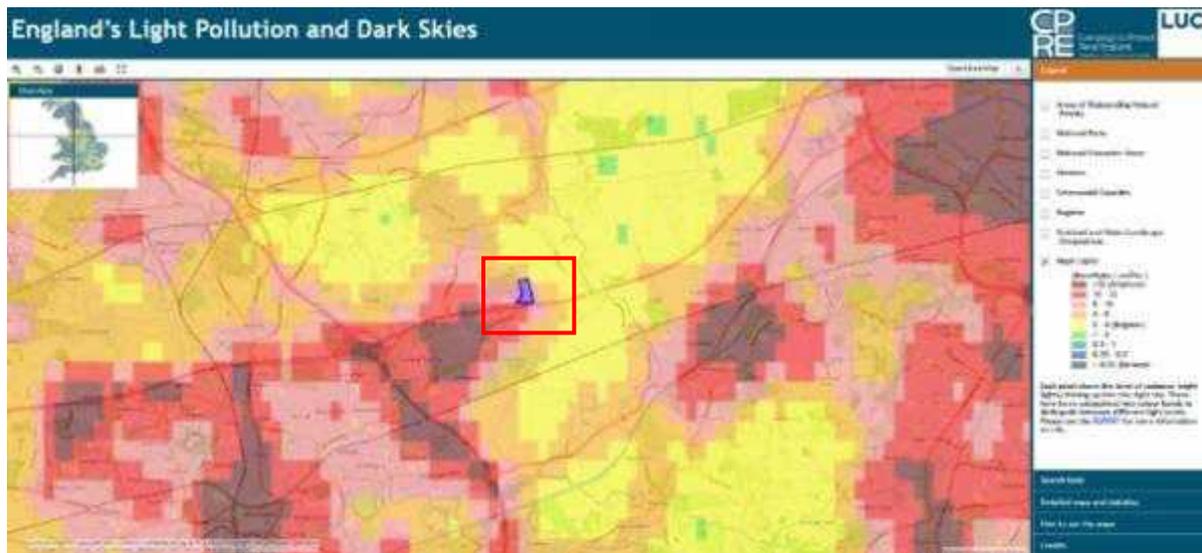


## Sky Glow

When considering sky glow, as a result upwards light, there is the possibility of a site wide impact being visible from darker environments. Taken on a regional scale, existing saturated sky glow is notable from bordering major urban development associated with nearby locations (e.g. Birchwood, Birchwood Park (Industrial), Culcheth, Warrington, Manchester, and the M62 Motorway)

On a local scale, sky glow is visible and is comparable to that received on the regional scale.

The closest sensitive region (Site of Special Scientific Interest - SSSI) is approximately 1.0km from the Site boundary and any stray upwards light, from the Development Site, is unlikely to exceed or contribute to that already received on a local, regional or national scale.



**Figure X.2: Night Sky Brightness (Sky Glow), Warrington District**

**Figure X.2**, CPRE – Night Blight within Warrington District gives a broad-brush indication of the upwards light (sky glow) experienced for the year 2016. Satellite measurements range from 0 (being a dark sky) to 255 (being a saturated bright sky at night). It can be seen that the site and surrounding areas experience a mid / high sky glow category (typical for an E2/E3 environment)

It should be noted that the illustration adjacent includes for the reflected sky glow component which is dependent on the reflective properties of the environment.

Reflected sky glow component should be taken into account where landscape surfaces are relatively light in colour and typically >30%. In the case of this assessment, it is assumed that the typical landscape reflectance value is <30% and will not provide significant contribution, by reflection.

As a result, the Sky glow ULR Max. % of the Site is assessed in terms of Direct light component ILP Guidance Notes for the Reduction of Obtrusive Light (2011).

## X1.0 - Data Sheet – Existing Lighting

Location	A – Illuminated Motorway Roundabout (M62 J11)
Artificial Lighting	SON Road Lantern (12m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – Up to 23.4 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	A number of lighting columns were non-functional at the time of the survey. Resulting in lower light levels than the required maintained illuminance. This resulted in light measurements less than peak at adjacent receptors.

### Photograph of Existing Lighting

M62 J11 roundabout illuminated by SON and SOX road lanterns



## X1.1 - Data Sheet – Existing Lighting

Location	B – Illuminated Motorway Slip Road (M62 J11)
Artificial Lighting	SON Road Lantern (12m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Not Accessible
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable

### Photograph of Existing Lighting

M62 J11 slip road illuminated by SON road lanterns



## X1.2 - Data Sheet – Existing Lighting

Location	C – Illuminated A-Road (A574 Birchwood Way)
Artificial Lighting	LED Road Lantern (10m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 17.39 Lux to 26.85 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Civil works being carried out adjacent the existing carriageway as part of Warrington East Phase 3, this will create a dual carriageway from Daten Avenue/Moss Gate Junction to M62 J11. Typical of roadway lighting an amount of glare and light trespass is notable.

### Photograph of Existing Lighting

Birchwood Way roadway illuminated by LED road lanterns



### X1.3 - Data Sheet – Existing Lighting

Location	D – Illuminated Primary Residential Road (Gorse Covert Road)
Artificial Lighting	LED Road Lantern (8m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 1.84 Lux to 16.92 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E2 (Low district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable.

#### Photograph of Existing Lighting

Residential roadway illuminated by LED road lanterns



## X1.4 - Data Sheet – Existing Lighting

Location	E – Illuminated Primary Residential Road (Inglewood Close)
Artificial Lighting	LED Road Lantern (8m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 0.95 Lux to 9.55 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E2 (Low district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable.

### Photograph of Existing Lighting

Residential roadway illuminated by LED road lanterns



## X1.5 - Data Sheet – Existing Lighting

Location	F – XPO Logistics
Artificial Lighting	SON Floodlights
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 59.5 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Notable glare and light trespass to the surrounding environment.

### Photograph of Existing Lighting

Left - XPO Logistics site entrance, Right - XPO Logistics car park, illuminated by SON Floodlights



## X1.6 - Data Sheet – Existing Lighting

Location	G – Farm Foods Distribution Warehouse
Artificial Lighting	LED Floodlights
Horizontal Measured Illuminance (Lux @ Ground)	50 Lux (approximated due to no access)
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Cool white light LED floodlighting causes upwards light spill, light trespass and glare

### Photograph of Existing Lighting

Farm Foods service yard illuminated by building mounted LED floodlights



## X1.7 - Data Sheet – Existing Lighting

Location	H – Illuminated Industrial Park Road (Leacroft Road)
Artificial Lighting	LED Road Lantern (10m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 4.35 Lux to 12.55 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable.

### Photograph of Existing Lighting

Industrial park roadway illuminated by LED road lanterns



## X1.8 - Data Sheet – Existing Lighting

Location	I – Topgrade Car Park
Artificial Lighting	LED Floodlights
Horizontal Measured Illuminance (Lux @ Ground)	27.3 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	Cool white light LED floodlighting causes upwards light spill, light trespass and glare

### Photograph of Existing Lighting

Left – Topgrade Carpark, Right – Distribution Warehouse Adjacent Topgrade



## X1.9 - Data Sheet – Existing Lighting

Location	J – BIFFA Facility
Artificial Lighting	Floodlights
Horizontal Measured Illuminance (Lux @ Ground)	Not Accessible
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E2 (Low district brightness)
Notes:	Informed by site manager that site is generally unmanned at night and lighting is PIR activated only once past security gates, therefore assume unlit.

### Photograph of Existing Lighting

Aerial phot of Biffa facility adjacent landfill site



## X1.10 - Data Sheet – Existing Lighting

Location	K – Taylor Business Park
Artificial Lighting	LED Floodlights
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 23.08 Lux to 88.2 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E3 (Medium district brightness)
Notes:	LED floodlighting causes upwards light spill, light trespass and glare

### Photograph of Existing Lighting

Service yard at rear of Taylor business park illuminated by pole and wall mounted LED floodlights



## X1.11 - Data Sheet – Existing Lighting

Location	L – Illuminated Residential Road (Severn Road)
Artificial Lighting	LED Road Lantern (8m columns)
Horizontal Measured Illuminance (Lux @ Ground)	Varies – 0.97 Lux to 3.73 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E2 (Low district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable.

### Photograph of Existing Lighting

Residential roadway illuminated by LED road lanterns



## X1.12 - Data Sheet – Existing Lighting

Location	M – Illuminated B-Road Junction (B5212 Holcroft Lane)
Artificial Lighting	Metal Halide Road Lantern (6m columns)
Horizontal Measured Illuminance (Lux @ Ground)	13.53 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	-
Environmental Zone Characteristic	E2 (Low district brightness)
Notes:	Typical of roadway lighting an amount of glare and light trespass is notable.

### Photograph of Existing Lighting

Illuminated junction of Holcroft Lane and private road



## X2.0 - Data Sheet – Sensitive Receptor

Location	R01 – Birchwood Residential Area - Rear Aspect to South of Site (Rockingham Close)
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Private lighting in operation at the time of survey. Rear aspect towards proposed site currently shielded by Pestfurlong Hill.

### Photograph of Sensitive Receptor

View towards rear of residential houses at location R01.



## X2.1 - Data Sheet – Sensitive Receptor

Location	R02 – Moss C&G Farm (School Lane)
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Rear aspect of farm overlooks unlit fields towards proposed site.

### Photograph of Sensitive Receptor

View towards Moss C&G Farm across field at location R02.



## X2.2 - Data Sheet – Sensitive Receptor

Location	R03 – Birchwood Residential Area - Rear Aspect to South of Site (Hamsterley Close)
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Rear aspect towards proposed site currently shielded by Pestfurlong Hill & Birchwood Park.

### Photograph of Sensitive Receptor

View towards rear of residential houses at location R03.



## X2.3 - Data Sheet – Sensitive Receptor

Location	R04 – Birchwood Residential Area - Rear Aspect to South of Site (Inglewood Close)
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Private lighting in operation at the time of survey. Rear aspect towards proposed site currently shielded by Pestfurlong Hill.

### Photograph of Sensitive Receptor

View towards rear of residential houses at location R04.



## X2.4 - Data Sheet – Sensitive Receptor

Location	R05 – Wareing H & Son Farm
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Some light spill from Taylor Business Park to rear of farm outbuildings. Front aspect of farm overlooks unlit fields towards proposed site but is partly shielded by the existing landfill site.

### Photograph of Sensitive Receptor

View towards rear Farm from Taylor Business Park



## X2.5 - Data Sheet – Sensitive Receptor

Location	R06 – Culcheth Residential Area - Rear Aspect to North West of Site (Severn Road)
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Rear aspect towards proposed site currently shielded by disused railway line embankment & treeline.

### Photograph of Sensitive Receptor

View towards rear of residential houses at location R06.



## X2.6 - Data Sheet – Sensitive Receptor

Location	R07 – Ratcliffe House Farm
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Rear aspect towards proposed site currently shielded by disused railway line embankment & treeline.

### Photograph of Sensitive Receptor

View towards Ratcliffe House Farm from South at location R07.



## X2.7 - Data Sheet – Sensitive Receptor

Location	R08 – Private House on B5212
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Rear aspect towards proposed site currently shielded by disused railway line embankment & treeline.

### Photograph of Sensitive Receptor

View towards rear of residential house at location R08.



## X2.8 - Data Sheet – Sensitive Receptor

Location	R09 – Hanging Birch Farm
Use	Residential – Light Sensitive
External Lighting Condition	Lit
Horizontal Measured Illuminance (Lux @ Ground)	0.07 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.07 Lux towards site 0.22 Lux towards property
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Private lighting in operation at the time of survey. Rear aspect towards proposed site currently shielded by disused railway line embankment & treeline.

### Photograph of Sensitive Receptor

View towards rear of residential house at location R09.



## X2.9 - Data Sheet – Sensitive Receptor

Location	R10 – Franks Farm
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Private lighting in operation at the time of survey. Side aspect towards proposed site currently shielded by disused railway line embankment & treeline.

### Photograph of Sensitive Receptor

View towards front (opposite aspect to proposed site) of residential house at location R10.



## X2.10 - Data Sheet – Sensitive Receptor

Location	R11 – Mole Hill Farm
Use	Residential – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Private lighting in operation at the time of survey. Front aspect towards proposed site currently shielded by disused railway line embankment & treeline.

**Photograph of Sensitive Receptor**

View towards front of Mole Hill Farm at location R11.



## X2.11 - Data Sheet – Sensitive Receptor

Location	E01 – Bat Foraging & Commuting – North West Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

### Photograph of Sensitive Receptor

View from VP16 towards E01.



## X2.12 - Data Sheet – Sensitive Receptor

Location	E02 – Bat Foraging & Commuting – North West Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

**Photograph of Sensitive Receptor**

View from VP16 towards E02.



## X2.13 - Data Sheet – Sensitive Receptor

Location	E03 – Bat Foraging & Commuting – West Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

### Photograph of Sensitive Receptor

View from VP4 towards E03.



## X2.14 - Data Sheet – Sensitive Receptor

Location	E04 – Bat Foraging & Commuting - West Site Area
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.09 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

**Photograph of Sensitive Receptor**

View from VP3 towards E04.



## X2.15 - Data Sheet – Sensitive Receptor

Location	E05 – Bat Foraging & Commuting – South West Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	0.12 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.22 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from VP3 towards E05.



## X2.16 - Data Sheet – Sensitive Receptor

Location	E06 – Bat Foraging & Commuting - South Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	1.95 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.13 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E06.



## X2.17 - Data Sheet – Sensitive Receptor

Location	E07 – Bat Foraging & Commuting - South Site Boundary SB03 – Silver Brook Diversion South
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	1.95 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.13 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E07.



## X2.18 - Data Sheet – Sensitive Receptor

Location	E08 – Bat Foraging & Commuting - South Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	1.93 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.10 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

Panoramic view from E08 looking North across the proposed site.



## X2.19 - Data Sheet – Sensitive Receptor

Location	E09 – Bat Foraging & Commuting - South Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	1.97 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.12 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E09.



## X2.20 - Data Sheet – Sensitive Receptor

Location	E10 – Bat Foraging & Commuting - South East Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Lit – M62 Lighting
Horizontal Measured Illuminance (Lux @ Ground)	2.71 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.87 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E010.



## X2.21 - Data Sheet – Sensitive Receptor

Location	E11 – Bat Foraging & Commuting - South East Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.08 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.13 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E11.



## X2.22 - Data Sheet – Sensitive Receptor

Location	E12 – Bat Foraging & Commuting - East Site Boundary SB02 – Silver Brook Diversion East
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.07 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E12.



## X2.23 - Data Sheet – Sensitive Receptor

Location	E13 – Bat Foraging & Commuting - East Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

**Photograph of Sensitive Receptor**

View from E08 towards E13.



## X2.24 - Data Sheet – Sensitive Receptor

Location	E14 – Bat Foraging & Commuting – North East Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

### Photograph of Sensitive Receptor

View from VP16 towards E14.



## X2.25 - Data Sheet – Sensitive Receptor

Location	E15 – Bat Foraging & Commuting - North East Site Boundary
Use	Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

**Photograph of Sensitive Receptor**

View from VP16 towards E15.



## X2.26 - Data Sheet – Sensitive Receptor

Location	E16 – Bat Foraging & Commuting – South West Site Boundary
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

### Photograph of Sensitive Receptor



## X2.27 - Data Sheet – Sensitive Receptor

Location	E17 – Bat Foraging & Commuting - South West Boundary
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	2.71 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.87 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

### Photograph of Sensitive Receptor



## X2.28 - Data Sheet – Sensitive Receptor

Location	E18 – Bat Foraging & Commuting - South West Site Boundary
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.08 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.13 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	Light spill experienced from Motorway / Roundabout lighting
Notes:	

**Photograph of Sensitive Receptor**

## X2.29 - Data Sheet – Sensitive Receptor

Location	E19 – Bat Foraging & Commuting - West Site Boundary
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.07 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

### Photograph of Sensitive Receptor



### X2.30 - Data Sheet – Sensitive Receptor

Location	E20 – Bat Foraging & Commuting - North Site Boundary
Use	Landscape and Ecology – Light Sensitive
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	

#### Photograph of Sensitive Receptor

View from VP16 towards E20.



### X2.31 - Data Sheet – Sensitive Receptor

Location	L01 – Holcroft Moss
Use	Natural - Landscape
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	Site was not accessible at the time of the survey as access permit required from Cheshire Wildlife Trust, however it could be seen from distance that the site is unlit, with no lighting on the M62 at this point.

#### Photograph of Sensitive Receptor

View from VP20 towards Holcroft Moss SSSI.



### X3.0 - Data Sheet – Viewpoint

Location	VP1 – Hanging Birch Farm – North East of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.07 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.07 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the edge of Hanging Birch Farm looking South West towards the proposed site.</p> <p>The viewpoint area is predominantly open fields bordered by hedges &amp; trees, these extend South West towards the proposed site, but are interrupted by a disused railway line embankment and treeline.</p> <p>The viewpoint was unlit with some light fittings installed on private residences in the immediate area, with noticeable skyglow visible from adjacent urban areas.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP1 looking South West towards proposed site



### X3.1 - Data Sheet – Viewpoint

Location	VP3 – Western Edge of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.07 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the Western edge of the proposed site looking East across the proposed site.</p> <p>The viewpoint area is predominantly open fields, these extend North &amp; East away towards the proposed site. The existing landfill is located to the West directly behind the observer, with the M62 motorway to the South.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP3 looking East across proposed site



### X3.2 - Data Sheet – Viewpoint

Location	VP4 – Western Edge of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the Western edge of the proposed site looking South across the proposed site.</p> <p>The viewpoint area is predominantly open fields, these extend North &amp; East away towards the proposed site. The existing landfill is located to the West directly adjacent the observer, with the M62 motorway to the South.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP4 looking South across proposed site



### X3.3 - Data Sheet – Viewpoint

Location	VP6 – Silver Lane – South of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	2.14 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	3.89 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located on Silver Lane directly adjacent the M62 motorway, looking North towards the proposed site.</p> <p>The viewpoint area has the M62 motorway to the North, East and West, and Pestfurlong Hill to the South.</p> <p>The viewpoint was unlit with light fittings installed on the M62 in the immediate area, with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP6 looking North towards the proposed site



### X3.4 - Data Sheet – Viewpoint

Location	VP7 – Field Edge Adjacent Disused Railway Line Embankment – North of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the edge of a field adjacent the disused railway line, looking South towards the proposed site. The viewpoint area is predominantly open fields to the South and West, with the disused railway line embankment located to the North. The open fields extend South towards the proposed site.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP7 looking South towards the proposed site



### X3.5 - Data Sheet – Viewpoint

Location	VP8 – Ratcliffe House Farm – North of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located adjacent Ratcliffe House Farm, looking South towards the proposed site.</p> <p>The viewpoint area is predominantly open fields to the North, with paddocks to the South, East and West. The disused railway line embankment is located to the South and shields the viewpoint location from the proposed site.</p> <p>The viewpoint was unlit with no light fittings in the immediate area, with noticeable skyglow visible from adjacent urban areas.</p> <p>Provided in support of the LVIA</p>

### Photograph of Viewpoint

View from VP8 looking South towards the proposed site



### X3.6 - Data Sheet – Viewpoint

Location	VP13 – Pestfurlong Hill (Mid Height) – South of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.10 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.12 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located halfway up Pestfurlong Hill adjacent the M62 motorway, looking North towards the proposed site.</p> <p>The viewpoint area has the M62 motorway to the North, open fields to the East, and Pestfurlong Hill to the South.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP13 looking North towards the proposed site



### X3.7 - Data Sheet – Viewpoint

Location	VP14 – Pestfurlong Hill (Crest) – South of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.10 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.08 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the crest of Pestfurlong Hill adjacent the M62 motorway, looking North towards the proposed site.</p> <p>The viewpoint area has the M62 motorway to the North, open fields to the East, and Pestfurlong Hill &amp; Gorse Covert to the South.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP14 looking North towards the proposed site



### X3.8 - Data Sheet – Viewpoint

Location	VP16 – Northern Edge of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the Northern edge of the proposed site looking South across the proposed site.</p> <p>The viewpoint area is predominantly open fields, these extend North &amp; East away towards the proposed site. The existing landfill is located to the West, with the M62 motorway to the South.</p> <p>The viewpoint was unlit with no light fittings in the immediate area (the closest being streetlight columns located on the M62), with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP16 looking South across proposed site



### X3.9 - Data Sheet – Viewpoint

Location	VP18 – M62 J11 – South of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	4.05 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	5.02 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the M62 J11 roundabout to the South of the proposed site, looking East along the M62.</p> <p>The viewpoint area is predominantly open fields to the East intersected by the M62, with the proposed site and existing landfill to the North, Birchwood Park to the West, and Pestfurlong Hill &amp; Gorse Covert to the South.</p> <p>The viewpoint was lit by SON road lanterns mounted on 12m columns, with very noticeable skyglow visible from adjacent urban areas &amp; the M62 motorway. A number of lighting columns were not functioning at the time of the survey.</p> <p>Provided in support of the LVIA</p>

#### Photograph of Viewpoint

View from VP18 looking East along the M62 Motorway



## X3.10 - Data Sheet – Viewpoint

Location	VP20 / 22 – B5212 Bridge Over M62 – East of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the B5212 bridge crossing the M62 to the East of the proposed site, looking West along the M62.</p> <p>The viewpoint area is predominantly open fields in all directions, with the M62 motorway intersecting East to West.</p> <p>The viewpoint was unlit with no light fittings in the immediate area, with very noticeable skyglow visible from adjacent urban areas.</p> <p>Provided in support of the LVIA</p>

**Photograph of Viewpoint**

View from VP18 looking East along the M62 Motorway



## X3.11 - Data Sheet – Viewpoint

Location	VP21 – Dam Head Lane Bridge Over Railway Line – East of Proposed Site
Use	Viewpoint
External Lighting Condition	Unlit
Horizontal Measured Illuminance (Lux @ Ground)	0.06 Lux
Vertical Measured Illuminance (Lux @ 1.5m)	0.06 Lux
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	<p>Viewpoint located at the Dam Head Lane bridge crossing the railway line to the South East of the proposed site, looking North West towards the proposed site.</p> <p>The viewpoint area is predominantly open fields in all directions, with the railway line intersecting North East to South West.</p> <p>The viewpoint was unlit with no light fittings in the immediate area, with very noticeable skyglow visible from adjacent urban areas.</p> <p>Provided in support of the LVIA</p>

**Photograph of Viewpoint**

View from VP21 looking North West towards the proposed site.



## X3.12 - Data Sheet – Viewpoint

Location	VP2, VP5, VP9, VP10, VP11, VP12, VP15, VP17, VP19
Use	Viewpoint
External Lighting Condition	-
Horizontal Measured Illuminance (Lux @ Ground)	-
Vertical Measured Illuminance (Lux @ 1.5m)	-
Existing Obtrusive Light Scenario (Receptor Cause)	None
Current Obtrusive Light Impact to Receptor	None
Notes:	On confirmation for the applicant design team, the above viewpoints have been excluded from this baseline survey.

## Appendix 2.0 – External Lighting Parameters

### Lighting Design Development – Design and Associated Mitigation Measures

The detailed lighting design should consider best practice standards and technology, as appropriate. The external lighting specification(s) and design(s) for the proposed development of the Application Site should be prepared by a specialist lighting engineer with due regard to the sensitivities of surrounding receptors. The lighting specification should include the appropriate selection of column heights, light fittings and luminaire design to ensure that the intensity and direction of the lighting is controlled through retaining tilting angles close to the horizontal to ensure that the effects of light spill, glare and sky glow are minimised. Consideration should be given, where applicable, to the measures in appropriate best practice guidance and standards.

Where applicable all lighting should be designed to comply with relevant codes and guidance, as follows:

- BS5489-1: 2013 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity areas;
- BS EN 13201-2: 2015 – Road lighting – Part 2: Performance requirements;
- BS EN 12464-2: 2007 – Lighting of Work Places – Part 2: Outdoor work places;
- CIBSE LG6 – 2016 – Lighting Guide - The Exterior Environment;
- SLL Guide to Limiting Obtrusive Light – 2012; and
- ILP – Guidance Notes for the Reduction of Obtrusive Light GN01: 2011.

As a detailed lighting design is not available at this stage, for the purposes of assessment a 'precautionary' lighting strategy (internal to the Proposed MSA) has been developed. The following pages provide the lighting strategy and intent for the types of lighting within the areas identified.

Where applicable the lighting strategy includes for the following design and associated mitigation measures:

- Where feasible, **typical** lighting product types have been used to minimise cost and specification constraints to the future detailed design.
- The operational lighting, for the Application Site, is based on the use of enhanced lighting technologies (LED) and minimal column heights.
- Where feasible, lamp specification is based on LED <2700K, >550nm peak to minimise UV light distraction to nocturnal ecology.
- Where feasible, all luminaire product uses flat glass technology at minimal inclination.

- Design criteria follows the best practice guidance, as per relevant codes and guidance above.

A comprehensive lighting design for the proposed development of the Application Site will be prepared at the detailed design stages.

### **External Parameters**

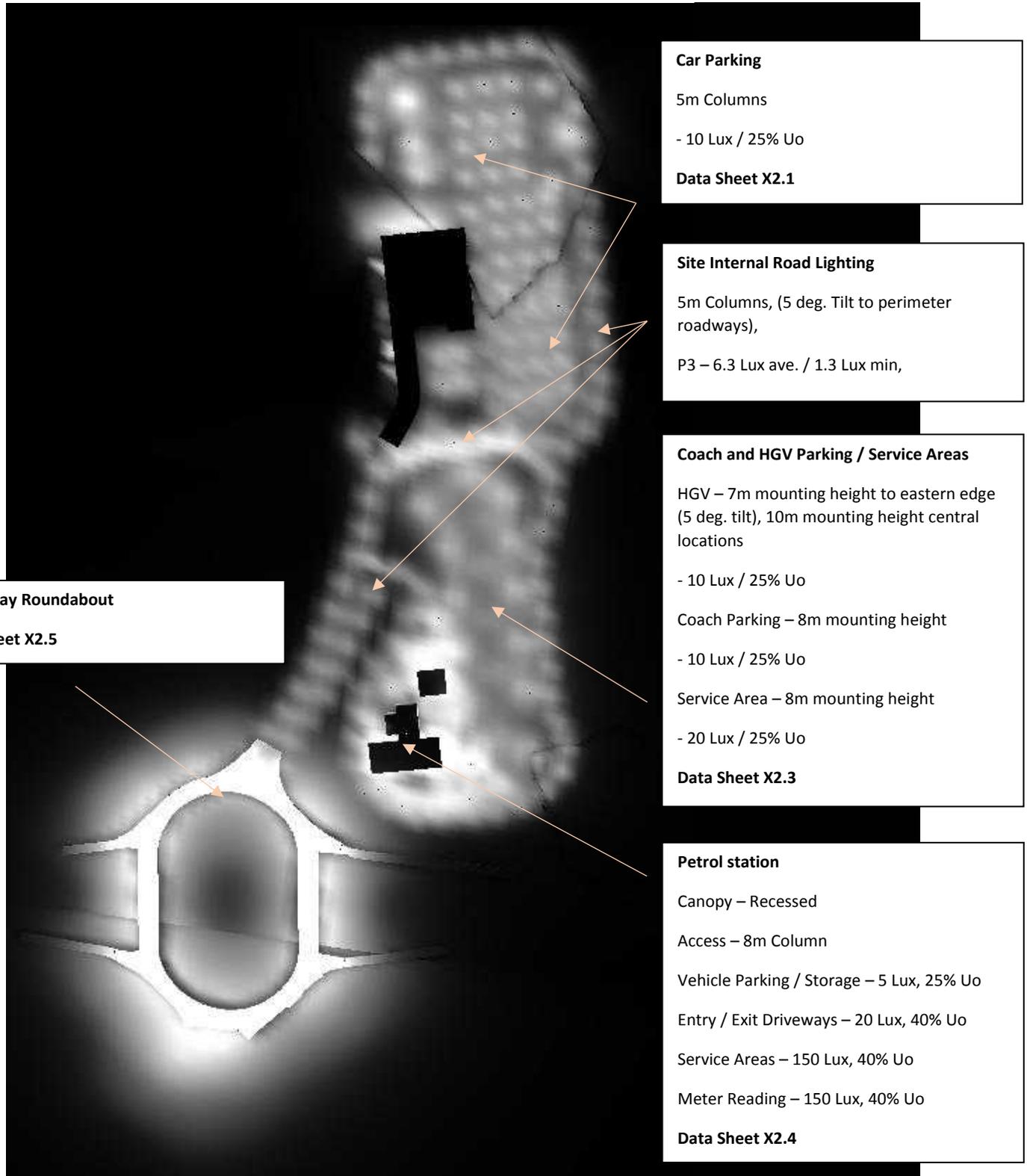
It is expected that the artificial lighting to be installed on the Application Site will be predominantly for:

- Car park Lighting
- Site Internal Access Road Lighting
- HGV Parking Lighting
- Coach Parking Lighting
- Service Areas
- Petrol Station
- Motorway Roundabout

This appendix provides an overview of the precautionary lighting parameters that have been included within the assessment.

**Lighting Design Development – Rendered Overview**

Below illustrates a rendered overview of the operational lighting for assessment, this is based on the lighting equipment and criteria contained within the following pages:



## X2.1 – External Lighting Parameters Data Sheet

### Car Parking

#### Typical Equipment

- DW Windsor Kirium Pro Mini - 16x450mA 2.7K CLO LED Array – C2 Optic  
(One of the advantages of LED lighting is that it can be dimmed. Thus, instead of always lighting an empty street or parking lot at full brightness, LEDs can be turned down, or even off, when they aren't needed and then brought back to full brightness as necessary. This feature both saves on energy and reduces light pollution during the night).
- Flat glass, zero tilt and zero uplight
- 5m mounting height
- Minimum UV / Blue Light
- CCT 2700K, >550 nm Peak (BCT guidance 2018)
- Dusk till dawn operation



#### Typical Design Criteria

- Medium traffic, e.g. parking areas of department stores, office buildings, plants, sports and multipurpose building complexes
- Table 5: BS 5489-1:2013 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity areas
- Table 5.9 – Parking areas: EN 12464-2:2014
- Assessment based on 10.0 Lux (average), 0.25 Uniformity

## X2.2 – External Lighting Parameters Data Sheet

### Site Internal Road Lighting

#### Typical Equipment

- DW Windsor Kirium Pro Mini - 16x450mA 2.7K CLO LED Array – A3 Optic  
(One of the advantages of LED lighting is that it can be dimmed. Thus, instead of always lighting an empty street or parking lot at full brightness, LEDs can be turned down, or even off, when they aren't needed and then brought back to full brightness as necessary. This feature both saves on energy and reduces light pollution during the night).
- Flat glass, and zero uplight, 5 degree tilt to perimeter roadways
- 5m mounting height
- Minimum UV / Blue Light
- CCT 2700K, >550 nm Peak (BCT guidance 2018)
- Dusk till dawn operation



#### Typical Design Criteria

- BS5489-1: 2013 – Code of practice for the design of road lighting. Lighting of roads and public amenity areas
- BS EN 13201-2: 2015 – Road lighting – Part 2: Performance requirements
- In view of the E2 nature of the Site it is intended to illuminate access roadways within the Site as an S3 classification.
- P3 relates to a low ambient luminance (E2) where the traffic speed is less than 30mph and traffic usage is high and can be associated with local amenities such as clubs, shopping facilities, public houses, etc.
- A P3 classification requires an average 6.3 Lux (minimum maintained) and a minimum of 1.3 Lux (maintained).
- Based on Ra>60, S/P ratio = 1.2

## X2.3 – External Lighting Parameters Data Sheet

### Coach and HGV Parking / Service Areas

#### Typical Equipment

- DW Windsor Kirium Pro 2  
(One of the advantages of LED lighting is that it can be dimmed. Thus, instead of always lighting an empty street or parking lot at full brightness, LEDs can be turned down, or even off, when they aren't needed and then brought back to full brightness as necessary. This feature both saves on energy and reduces light pollution during the night).
- Flat glass and zero uplight
  - HGV – 10m, 48 x 1000mA 2.7K CLO LED Array – A3
  - Coach Parking – 8m, 48 x 800mA 2.7K CLO LED Array – C2
  - Service Area – 8m, 48 x 800mA 2.7K CLO LED Array – C2
- Minimum UV / Blue Light
- CCT 2700K, >550 nm Peak (BCT guidance 2018)
- Dusk till dawn operation



#### Typical Design Criteria

##### Coach and HGV Parking

- Medium traffic, e.g. parking areas of department stores, office buildings, plants, sports and multipurpose building complexes
- Table 5: BS 5489-1:2013 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity areas
- Table 5.9 – Parking areas: EN 12464-2:2014
- Assessment based on 10.0 Lux (average), 0.25 Uniformity

##### Service Areas

- Short-term loading and unloading of solid bulk goods
- Table 5.7: BS EN12464-2:2014 – Light and Lighting – Lighting of Work Places, Part 2: Outdoor work places
- Assessment based on 25.0 Lux (average), 0.25 Uniformity

## X2.4 – External Lighting Parameters Data Sheet

### Petrol Station

#### Typical Equipment

- Controlled light distribution minimises obtrusive light
- Colour rendering greater than 80Ra for improved visual acuity (LED only)
- Dusk till dawn operation

#### Canopy Fuel Areas

- 7150 lumen 4000k LED
- ULOR = Zero
- Canopy recessed
- e.g. – Thorlux LEDBAY



#### Fuel Area Access Routes

- DW Windsor Kirium Pro 2 - 48x800mA 2.7K CLO LED Array
- A3 Optic
- Flat glass, zero tilt and zero uplight
- 8m mounting height, perimeter 5-degree tilt
- Minimum UV / Blue Light
- CCT 2700K, >550 nm Peak (BCT guidance 2018)
- Dusk till dawn operation



#### Typical Design Criteria

BS EN 12464-2:2014 – Lighting of Work Places – Part 2: Outdoor work places

- Vehicle Parking / Storage – 5 Lux, 25% uniformity
- Entry / Exit Driveways – 20 Lux, 40% uniformity
- Service Areas – 150 Lux, 40% uniformity
- Meter Reading – 150 Lux, 40% uniformity



## X2.5 – External Lighting Parameters Data Sheet

Note: Preliminary lighting (2 of 2) layout for assessment purposes, subject to detailed design



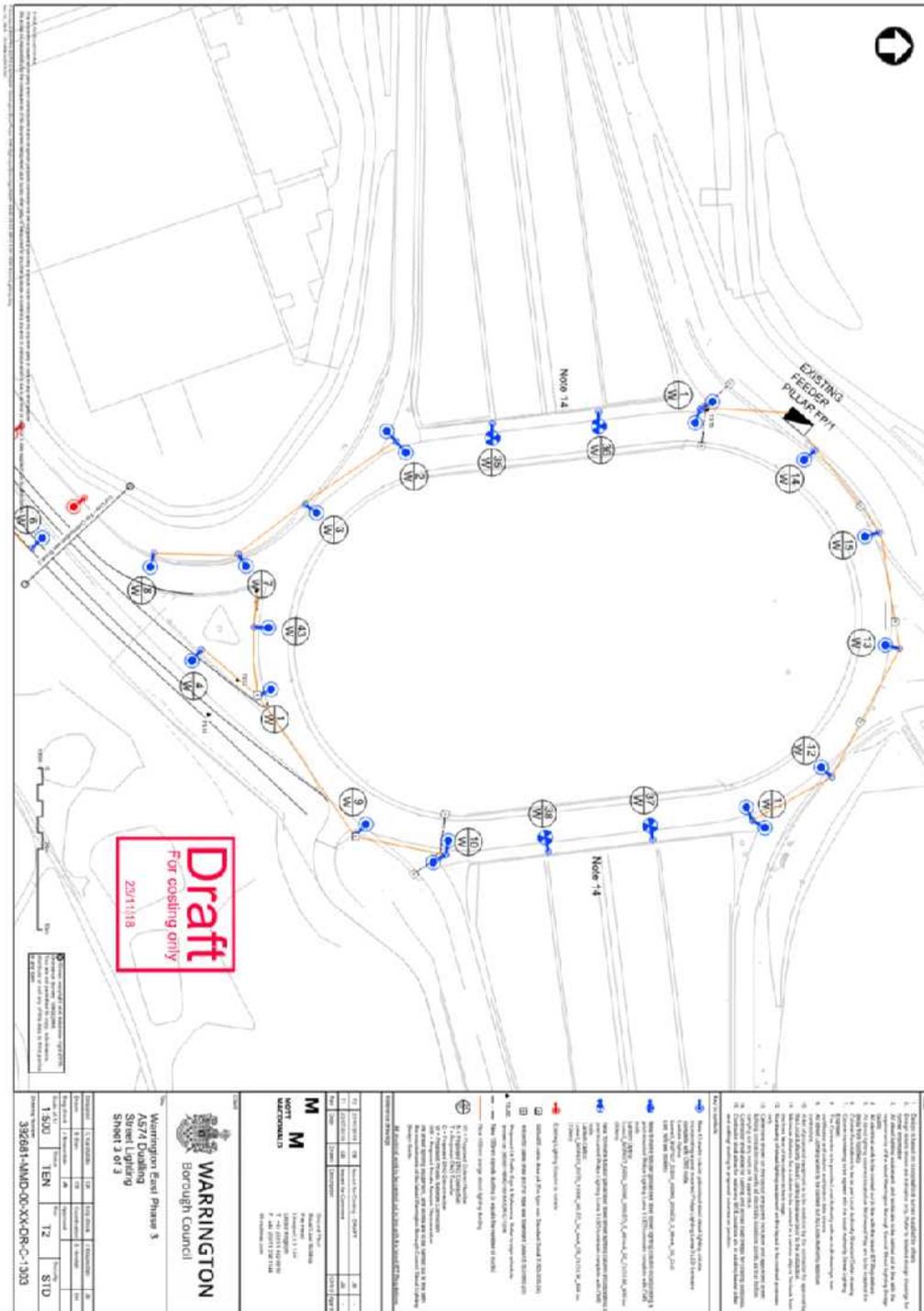
## X2.5 – External Lighting Parameters Data Sheet

Note: Preliminary lighting layout for assessment purposes, subject to detailed design

	<p>REF A, A2:</p> <p>Kirium Pro Mini, Direct Post, 16 x 450mA 2.7K CLO LED Array, C2 Optic, RAL9005 Black Finish, No Photocell.</p> <p>5m TLS Tubular Steel Column, RAL9005 Black.</p> <p>REF A2, Side Entry Twin.</p>
	<p>REF B:</p> <p>Kirium Pro Mini, Direct Post, 16 x 450mA 2.7K CLO LED Array, A3 Optic, RAL9005 Black Finish, No Photocell.</p> <p>5m TLS Tubular Steel Column, RAL9005 Black.</p>
	<p>REF C:</p> <p>Kirium Pro 2, Direct Post, 48 x 800mA 2.7K CLO LED Array, C2 Optic, RAL9005 Black Finish, No Photocell.</p> <p>8m TLS Tubular Steel Column, RAL9005 Black.</p>
	<p>REF D:</p> <p>Kirium Pro 2, Direct Post, 48 x 800mA 2.7K CLO LED Array, A3 Optic, RAL9005 Black Finish, No Photocell.</p> <p>8m TLS Tubular Steel Column, RAL9005 Black.</p>
	<p>REF E:</p> <p>Kirium Pro 2, Direct Post, 48 x 1000mA 2.7K CLO LED Array, A3 Optic, RAL9005 Black Finish, No Photocell.</p> <p>10m TLS Tubular Steel Column, RAL9005 Black.</p>
	<p>REF F:</p> <p>Kirium Wall, Wall Mount @2m AFFL, 16 x 500mA 2.7K CLO LED Array, Narrow Optic, RAL9005 Black Finish, No Photocell.</p>
	<p>REF G:</p> <p>PFS LEDBAY, Recessed within PFS Canopy, 4K, Type TBC By PFS Retailer</p>

X2.6 – External Lighting Parameters Data Sheet

Note: The luminaires shown replace or are in addition to the current arrangement. Where existing luminaires are replaced this is taken into account for the baseline profile.



## Bibliography

1. Department for Environment, Food and Rural Affairs (DEFRA) (2005) *Clean Neighbourhoods and Environment Act* (CNEA) 2005, HMSO, London.
2. *The Highways Act 1980*, HMSO, London.
3. Department for Communities and Local Government (2019) *National Planning Policy Framework*, HMSO, London
4. Department for Communities and Local Government (2014) *National Planning Practice Guidance 2014 – Light Pollution*,  
<http://planningguidance.planningportal.gov.uk/blog/guidance/light-pollution>.
5. Warrington Borough Council (Adopted July 2014) *Local Plan Core Strategy - Warrington Borough Council*
6. Warrington Borough Council (Adopted May 2013) *Environmental Protection Supplementary Planning Document - Warrington Borough Council*
7. Institute of Lighting Professionals (2011) *Guidance Notes for the Reduction of Obtrusive Light GN01*, ILP, Rugby
8. CIE International Commission on Illumination (2017) *CIE 150 - Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations*, Commission Internationale De L'Eclairage, Vienna.
9. CIE International Commission on Illumination (1997) *CIE 126 - Guidelines for Minimising Sky Glow*, Commission Internationale De L'Eclairage, Vienna.
10. CIE International Commission on Illumination (1998) *CIE Technical Report 129 - Guide for lighting exterior work areas*, Commission Internationale De L'Eclairage, Vienna.
11. The British Standards Institution (7th Edition, 2012) *BS 5489-1: 2013 – Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity areas*, BSI Standards, London.
12. The British Standards Institution / CEN (2003) *BS EN 13201-2: 2015 – Road lighting – Part 2: Performance requirements*, BSI Standards, London.
13. The British Standards Institution / CEN (2007) *BS EN 12464-2:2014 – Lighting of Work Places – Part 2: Outdoor work places*, BSI Standards, London
14. Campaign to Protect Rural England Night Blight (2016), <http://nightblight.cpre.org.uk/maps/>
15. BCT / ILP (2018) *Guidance Note 08/18 – Bats and Artificial Lighting in the UK*, ILP, Rugby

## ES Part I Appendix I7

**Extra MSA Group**

# **Warrington Motorway Service Area, J11 M62**

**Environmental Impact Scoping Report**

Revision B 19 December 2018



This Environmental Scoping Request Report is prepared in association with:



Spawforths has been accepted as a registrant to the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark scheme. The EIA Quality Mark demonstrates Spawforths commitment to excellence when providing environmental impact assessment services.

## Revision Record

Revision Reference	Date of Revision	Nature of Revision	Author	Checked By
A	December 2018	Review	JR	PAB, DE
B	19 December 2018	Final Submission	JR	

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**Appendices:**

- Appendix 1 – Glossary and Abbreviations
- Appendix 2 – National and Regional Context Plans
- Appendix 3 - Location Plan and Redline Plan
- Appendix 4 – Site Constraints Plan
- Appendix 5 – Draft Parameters Plans
- Appendix 6 – Key Receptor Plans
- Appendix 7 – AQMA Plan
- Appendix 8 – Phase 1 Desk Study Report
- Appendix 9 – Phase 2 Preliminary Ground Investigation Report
- Appendix 10 – LVIA Viewpoint Survey Document
- Appendix 11 – Preliminary Ecological Appraisal

## Site Specific Glossary

The below table sets out the terminology relevant to the Site. A full Glossary and table of Abbreviations are included at **Appendix I**.

Site Specific Terminology	Description
A574 Birchwood Way	
Applicant	Extra MSA Group
Application Site	Application Site for proposed development - Land at Junction 11 of the M62 Motorway
AQMA	Air Quality Management Area
Birchwood Park	Business Park to the south of Junction 11 of the M62 Motorway
Borough	The authority area is a Borough
Business Centre and Business Lounge	Contained within the Facility Building to provide facilities for business use
CIA	Cumulative Impact Assessment
Client	Extra MSA Group
Core Strategy (July 2014)	Warrington's adopted local planning policy (although currently under review).
Culcheth	Settlement to the north of the Site
ECS	Electric Charging Station
EIA Regulations 2017	The Town and Country Planning (Environmental Impact Assessment ) Regulations 2017. The EIA Regulations the ES is based upon.
emerging Local Plan (Preferred Options July 2017)	Warrington's emerging Local Plan document that was consulted upon in July 2017
EVCP	electric vehicle charging points
Extra MSA Group	Applicant / Client
Facility Building	MSA facility to include food court, ancillary retail, toilets, washing facilities and staff areas as well as Business Centre and Visitor Centre
FFS Fuel Filling Station	Fuel Filling Station
Gorse Covert	Residential area in Birchwood, to the south of the M62 and Birchwood Park
Green Belt	Land designation
GRR	Greenfield run-off rate
HGV	Heavy Goods Vehicle
Hotel	
HS2	High Speed Rail 2
HSE	Health and Safety Executive

Site Specific Terminology	Description
Internal Site Access Road(s)	The access road within the site to facilitate access
LNR	Local Nature Reserve e.g. Risley Moss
Local Plan Core Strategy (July 2014)	Warrington's adopted local planning policy (although currently under review).
LWS	Local Wildlife Sites
M6 Motorway	
M62 Motorway	
MAQMA	Motorway Air Quality Management Area
Means of Access	Details of the vehicular access into the Application Site
MSA	Motorway Service Area
Oakwood	Residential area in Birchwood, to the south of the M62 and Birchwood Park
PADHIZone	Zones where planning advice for developments near hazardous installations is relevant
Parameters / Parameter Plan	A series of parameters fixed as part of the proposals which form the basis of the environmental assessment.
Primary Internal Site Access Road	The primary access road within the site
Proposed Development	Application Site for proposed development
PROW	Public Rights of Way
SAC	Special Area of Conservation e.g. Manchester Mosses
Site	Application Site - Land at Junction 11, M62 Motorway
SSSI	Site of Special Scientific Interest e.g. Holcroft Moss and Risley Moss
The Town and Country Planning (Environmental Impact Assessment ) Regulations 2017	The EIA Regulations the ES is based upon.
Visitor Centre	Area that could be provided within the MSA Facility Building for use as a Visitor Centre in association with the adjacent restored Risley land fill site
Warrington MSA, J11 M62	The Site
WBC	Warrington Borough Council

# I. Overview

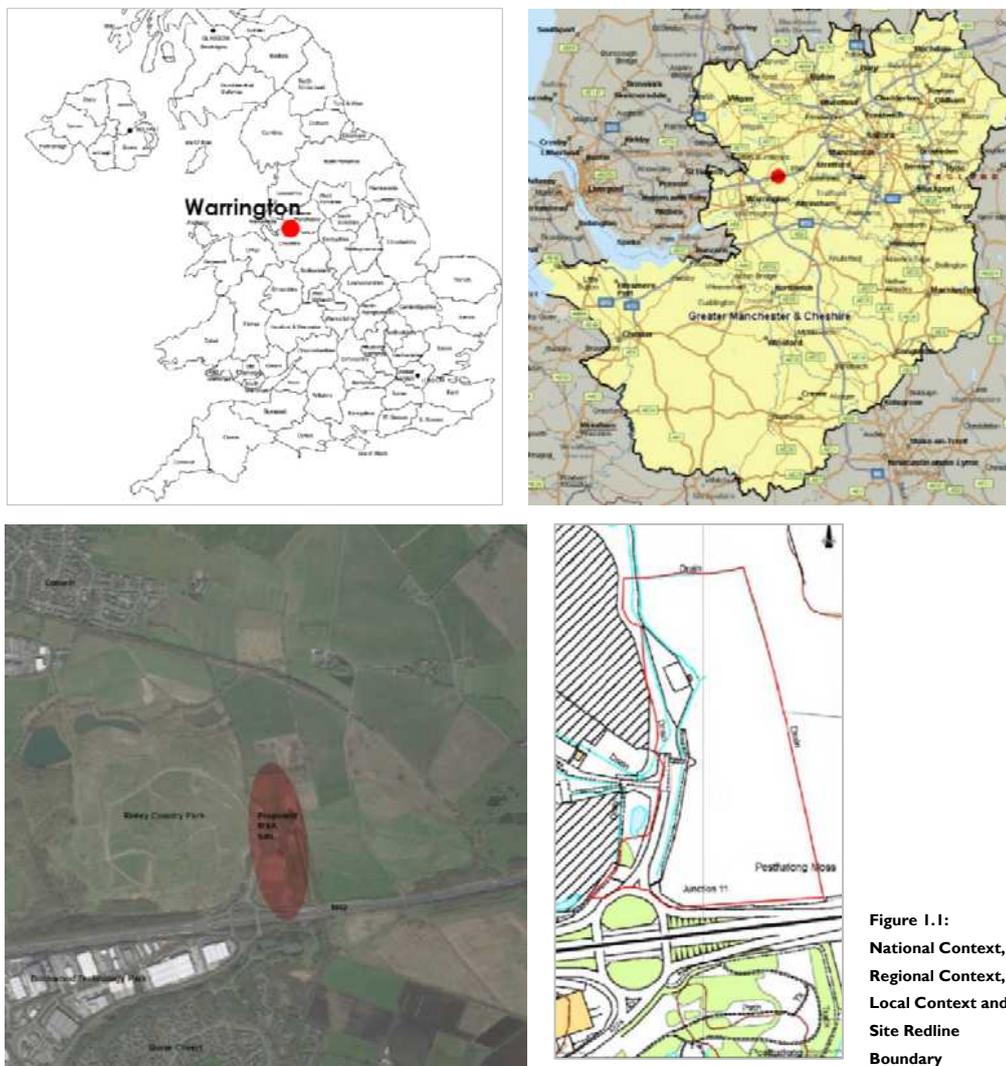
## Summary of Proposals

- 1.1. Spawforths are to submit a planning application for a 'New Concept' Motorway Service Area (MSA) on land at Junction 11 of the M62 Motorway, on behalf of Extra MSA Group. This will be in the form of an outline planning application with all matters reserved for subsequent approval, except for access.
- 1.2. The proposals are considered to be EIA Development and as such, in line with the town and Country Planning (Environmental Impact Assessment) Regulations 2017, will be accompanied by an Environmental Statement (ES).
- 1.3. The description of development is as follows:

Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, Visitor Centre, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, surface water drainage areas, ecological mitigation, pumping station, substation, retaining structures and associated infrastructure and earthworks.

- 1.4. Plans within **Appendix 2** and **3** show the Site location and plans within **Appendix 4** and **5** show the Site constraints and the draft Parameters for the Proposed Development, which is currently being developed and which will evolve as the environmental assessment work is undertaken. Plans at **Appendix 6** show the key receptors relevant to the environmental assessment.
- 1.5. Extra MSA Group is a leading specialist market sector developer, long term investment owner and experienced operator of high quality 'New Concept' MSA properties. They have a portfolio of predominantly 'New Concept' MSA properties with a stable, long-term income profile. They are the largest freehold investment owner in the UK, owning 18 MSA locations, including Junction 2 of the M40 Motorway (Beaconsfield) and Junction 9/10 of the M25 Motorway (Cobham), with its 19<sup>th</sup> MSA under construction at Junction 45 of the M1 Motorway (Leeds Skelton Lake Services), which is due to open in Summer 2019.

- 1.6. The MSA proposals at Junction 11 of the M62 Motorway would result in a £50 million initial capital investment and create opportunities for 400 direct construction jobs and 250-300 full time and part time jobs within the MSA once it is operational (with flexible shift patterns) for the local communities. There would also be approximately £1.2 million per annum in Business Rate Revenue.
- 1.7. The Site is located in the North West of England, within the local authority area of Warrington. It is located to the northeast of the urban area of Warrington, approximately 8.5km (5 miles) from the centre of Warrington.
- 1.8. The Site's location in the national, regional and local context is shown on the plans below and on the plans within **Appendix 2 and 3:**



- 1.9. The Site is located to the northeast of the urban area of Warrington, approximately 8.5km (5 miles) from the centre of Warrington. The M62 Motorway corridor runs in an east/west direction to the north of Warrington. It is the west-east Trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and connects the two City Regions of Liverpool and Manchester.
- 1.10. The Site is located to the north of the M62 Motorway at Junction 11, within its north east quadrant and has direct access to Junction 11 via a spur to the motorway junction roundabout (Birchwood Way).
- 1.11. Junction 11 of the M62 Motorway also provides access to the A574 Birchwood Way and the Birchwood area of Warrington, which is located to the south of the M62 Motorway corridor and consists of Birchwood Park (a business park) and beyond this, residential areas of Gorse Covert and Oakwood, which are suburbs to Warrington.

### **Summary of Approach to EIA**

- 1.12. The Proposed Development does not fall within Schedule 1 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as “the EIA Regulations”) where an Environmental Statement (ES) is mandatory. However, the Proposed Development does fall within part 10(p) of Schedule 2 of the EIA as a “Motorway Service Area” in excess of 0.5 hectares.
- 1.13. Nevertheless, an Environmental Impact Assessment (EIA) is not needed for every Schedule 2 project. However as the Proposed Development is likely to give rise to “significant effects on the environment by virtue of factors such as its nature, size or location” due to the scale and nature of the Proposed Development, the surroundings and the likely cumulative effects with other development, there is a need to fully assess the environmental impacts of the Proposed Development. The proposals are therefore considered to constitute EIA Development and as such, in line with the EIA Regulations, the planning application will be accompanied by an Environmental Statement (ES). On this basis, a Screening Opinion has not been sought from the Local Authority as the Proposed Development is considered to be EIA development.
- 1.14. This report is a request for a Scoping Opinion from the Planning Authority to agree the scope and level of detail of information to be provided within the ES that will be produced for

submission with the planning application. This Scoping Request is submitted in line with Part 4, Regulation 15 (1) and (2) of the EIA Regulations.

## Summary of Items to be ‘Scoped In’ and ‘Scoped Out’ of the ES

- 1.15. Each of the Technical Chapters within this Scoping Request Report (Chapters 7 to 19) set out the likely significant impacts to be considered further through the environmental assessment. A series of plans within **Appendix 6** identify the receptors that are relevant to each of the technical assessments. The summary tables below identify the items to be ‘scoped in’ and those to be ‘scoped out’ and these should be read in conjunction with each of the Technical Chapters of this report.

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>1. Introduction of contamination into ground through spillage/leakage during construction</li> <li>2. Impacts associated with unstable ground, slopes or excavations</li> <li>3. Impacts on construction workers from ground gas</li> <li>4. Impacts associated with the treatment of the Peat</li> </ol> <p>Operation:</p> <ol style="list-style-type: none"> <li>1. Impact on ground from leakage from proposed fuel tanks and pipework or accidental spillage from vehicles</li> <li>2. Impact on site/adjacent sites from unstable ground or instability from treatment of Peat or changes to topography</li> <li>3. Impacts on future Users from ground gas.</li> </ol>	<p><i>The main risks to the site relate to introduction of contamination in both construction and operation; ground gas generated from either Peat or the offsite landfill and stability associated with the Peat or and changes to current site topography. Impacts associated with these risks are scoped in.</i></p>

Environmental Issue	Reason for “scoping in”
<p><b>Traffic and Transport</b></p> <p>Construction:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p> <p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p> <p>Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11</p>	<p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p>
<p><b>Traffic and Transport</b></p> <p>Operation:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p>	<p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p>

Environmental Issue	Reason for “scoping in”	
<p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p> <p>Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11</p>	<p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</i></p>	
<p><b>Water Resources</b></p> <p>Construction:</p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p> <p>Operation:</p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p>	<p><i>The proximity to the restored Risley Landfill Site as well as the potential for the Proposed Development to cause disruption to groundwater flow pathways. In addition, the Proposed Development has the potential to result in releases of pollution materials and sediment into the water environment including the underlying principal aquifer, which is in a SPZ3.</i></p>	
<p><b>LVIA</b></p> <p>Visual receptors as follows:</p> <ul style="list-style-type: none"> <li>- Dwellings</li> <li>- PRoVVs in local open space</li> <li>- Landfill site</li> <li>- Non-designated access tracks</li> <li>- Elevated railway line</li> <li>- Places of work</li> <li>- Motorway</li> <li>- Roads</li> <li>- Holcroft SSSI</li> </ul>	<p><i>Construction</i></p> <p><i>Operational</i></p>	<p>The significance of the effect will potentially be greater than negligible</p>

Environmental Issue		Reason for “scoping in”
identified within an area of 5km from the Site boundary (the Study area).		
Landscape receptors identified within the Study Area especially where there is a distinct change in character or type to the current landscape	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
Security and compound lighting	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
<p><b>Ecology</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>1) Hydrological connectivity to statutory and non-statutory Sites;</li> <li>2) Habitat loss and indirect lighting impacts to bats roosting, foraging and commuting habitats;</li> <li>3) Loss of badger sett creation habitat;</li> <li>4) Impacts to water vole foraging and burrowing habitat;</li> <li>5) Impact on grass snake basking habitat;</li> <li>6) Impacts on great crested newt terrestrial habitat;</li> <li>7) Impacts on barn owl foraging habitat;</li> <li>8) Impacts on wintering bird assemblages; and</li> <li>9) Impacts on breeding bird assemblages.</li> </ol> <p>Operation:</p> <ol style="list-style-type: none"> <li>1) Indirect hydrological impacts to statutory and non-statutory Sites;</li> <li>2) Disturbance to bat roosting, foraging and commuting habitats;</li> <li>3) Disturbance to badgers within sett creation habitat;</li> <li>4) Disturbance to water vole within foraging and burrowing habitat</li> <li>5) Disturbance to reptile (grass snake) within basking habitat</li> <li>6) Disturbance to great crested newt within terrestrial</li> </ol>	<p><i>Information from the Preliminary Ecological appraisal including desk study data has shown that the receptors are likely to be impacted by the development, however further survey is required to assess the level of impact and inform appropriate mitigation.</i></p>	

Environmental Issue	Reason for “scoping in”
7) Disturbance to barn owl foraging habitat; 8) Disturbance of over-wintering birds; and 9) Impacts on breeding bird assemblages.	
<p><b>Socio Economic</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>○ Population and Demographics – the inward migration of people for job opportunities.</li> <li>○ Economic Growth –net increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the construction works as well as in the wider economy and impact on socio-economic challenges in the local economy.</li> <li>○ Retail and Leisure – Increased demand and expenditure in local shops, services, and facilities</li> <li>○ Community Infrastructure – Impact on existing community infrastructure</li> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>○ Population and Demographics – commuting and migration of people for jobs opportunities.</li> <li>○ Economic Growth – long term increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the operation of the MSA and associated development and impact on socio-economic challenges in the local economy.</li> <li>○ Transport – Increase motorway vehicle use; increase public transport and active travel opportunities; reduce accident numbers and mortality rates</li> <li>○ Retail and Leisure – Increased demand and expenditure on local shops, services, and facilities</li> <li>○ Community Infrastructure – creation of new community infrastructure</li> </ul>	<p><i>The Proposed Development has the potential to have significant impact during both the construction and operation stages.</i></p>

Environmental Issue	Reason for “scoping in”
<ul style="list-style-type: none"> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents and workers</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul>	
<p><b>Noise and Vibration</b></p> <p>Construction noise at existing sensitive receptors</p> <p>Operational phase noise at existing and proposed sensitive receptors</p>	<p><i>These effects will need to be assessed to determine the requirements for any mitigation measures as appropriate.</i></p>
<p><b>Air Quality, Odour and Dust</b></p> <p>Construction:</p> <p>Dust and PM10 emissions from construction phase activities (human receptors)</p> <p>NO2 and PM10 emissions from construction phase vehicles (human and ecological receptors)</p> <p>Odour associated with former landfill site</p> <p>Operation:</p> <p>NO2 and PM10 emissions from operational phase vehicles (human receptors)</p> <p>Odour associated with former landfill site</p>	<p><i>Construction:</i></p> <p><i>Representative human receptors located within 350m of where construction activities will take place,</i></p> <p><i>Representative human and ecological receptors potentially located within 200m of construction vehicle routes.</i></p> <p><i>Construction workers may be present at the Site for extended periods of time</i></p> <p><i>Operational:</i></p> <p><i>Representative human receptors located within 200m of where a change in vehicles could occur at Junction 11 due to re-routing.</i></p> <p><i>Potential for sensitive receptors to stay overnight at the proposed Hotel or use outdoor facilities</i></p>
<p><b>Cultural Heritage and Archaeology</b></p> <p>Construction:</p> <p>Direct impacts to buried archaeological remains remaining on site (recorded findspots having been removed)</p> <p>Operation:</p> <p>Potential impact to the setting of Grade II* Holcroft Hall</p>	<p><i>The potential for ground disturbance to remove/truncate buried archaeological remains</i></p> <p><i>The potential for changes within the setting of Holcroft Hall which could affect its significance</i></p>

Environmental Issue	Reason for “scoping in”
<p><b>Agricultural Land and Soils</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>1) Loss of agricultural land either to built development or change of land use to non-agricultural.</li> <li>2) Loss of soil for reuse; and</li> <li>3) Damage to soil resources resulting in impairment of their function, quality and resilience.</li> </ol> <p>Operation:</p> <p>There are not expected to be any impacts for operational phase.</p>	<p><i>Knowledge of the quality and loss of agricultural land is required to determine how the Proposed Development meets the requirements of NPPF 18 and the NPPG.</i></p> <p><i>The main environmental impacts in terms of soils and peat relate to the loss of and damage to these resources and their availability for reuse.</i></p>
<p><b>Utilities</b></p> <p>Construction:</p> <p><i>Provision of the Site with the required utility infrastructure</i></p>	<p><i>Provision of the Site with the required utility infrastructure will require temporary construction works which may have a minor adverse effect on nearby local existing sensitive receptors, including residential dwellings, the local highway network and the local utility network.</i></p>
<p><b>Waste</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>• Inert and recovery waste generation requiring treatment / disposal</li> <li>• Recycling material generation requiring separation and/or further processing</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>• Recycling material generation requiring separation and/or further processing</li> <li>• Litter dispersal in immediate vicinity</li> </ul>	<p><i>Scoped in due to demand placed on regional infrastructure to handle and manage material, and the associated environmental impacts of the available waste management techniques utilised.</i></p>
<p><b>Climate Change</b></p> <p>Construction:</p> <p>None.</p> <p>Operation:</p> <p>CO2 Emissions (associated with electricity use and fossil fuels within buildings)</p>	<p><i>The requirement by EIA regulations for greenhouse gas emissions of developments to be assessed, and the requirements of local policy to ensure developments are energy efficient and contribute</i></p>

Environmental Issue	Reason for “scoping in”
Energy Efficiency (associated with building materials and the utilization of renewable technologies) Sustainable Design	towards the sustainable development of the area.

**Table I.1: Matters Scoped into the ES**

### Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>1. Permanent loss of geological strata (Glacial Till or Helsby Sandstone)</li> <li>2. Impact on construction workers from excavation into contaminated soils.</li> </ol> <p>Operation:</p> <ol style="list-style-type: none"> <li>1. Impact on underground infrastructure/buildings from contaminated soils</li> </ol>	<p>There is unlikely to be significant loss of geological strata.</p> <p>Baseline data indicates that contamination is likely to be minimal and the risk to construction worker and buildings/underground infrastructure is low and as such is not likely to be significant.</p>
<p><b>Traffic and Transportation</b></p> <p>Construction:</p> <p>All other traffic related environmental impacts</p>	<p>Because the Proposed Development is not anticipated to materially increase traffic flows and/or travel movements at other locations.</p>
<p><b>Traffic and Transport</b></p> <p>Operation:</p> <p>All other traffic related environmental impacts</p>	<p>Because the Proposed Development is not anticipated to materially increase traffic flows and/or travel movements at other locations.</p>
<p><b>LVIA</b></p> <p>No Visual receptors within the Study Area will be scoped out at this stage</p>	<p>It is unlikely that receptors over 5km from the Site boundary will be affected by the Proposed Development</p>
<p><b>Ecology</b></p> <p>Construction:</p>	<p>Receptor is of a distance and or lack of ecological connectivity to</p>

Environmental Issue	Reason for “scoping out”
<p>1) Woolston Eyes SSSI            2) Rixton Clay Pits SSSI            3) Covert Mounds LWS            4) Rixton Moss LWS</p> <p>Operation:            5) Woolston Eyes SSSI            6) Rixton Clay Pits SSSI            7) Covert Mounds LWS            8) Rixton Moss LWS</p>	<p>Site. Once further surveys have been concluded it is likely that other receptors may be scoped out.</p>
<p><b>Air Quality, Odour and Dust</b></p> <p>Construction:            Dust and PM10 emissions from construction phase activities (ecological receptors)</p> <p>Operation:            NO2 and PM10 emissions from operational phase vehicles (ecological receptors)</p>	<p>Construction:            No statutory designated ecological receptors located within 50m of where construction activities will take place,</p> <p>Operational:            No significant change in vehicles is expected to occur on the M62 Motorway to the east and west of Junction 11</p>
<p><b>Cultural Heritage and Archaeology</b></p> <p>Assessment of impacts to recorded findspots</p>	<p>Findspots within the site having been removed</p>
<p><b>Agricultural Land- Construction Phase</b></p> <p>The long-term effects to farm business and farm viability as a result of the loss of agricultural land due to the Proposed Development (reduction in the area of farmable land available to the landholding).</p>	<p>This issue is considered to be fully mitigated through the process of discussion and negotiation between the Applicant, the landowners and the agricultural tenant. Therefore, the assessment of potential impacts to farm business will not be included in the impact assessment presented in the ES.</p>

Environmental Issue	Reason for “scoping out”
<p><b>Agricultural Land - Construction Phase</b></p> <p>The short-term effects to farm business and farm viability as a result of land severance or access issues due to the Proposed Development (restrictions to normal farming practices).</p>	<p>The Site comprises a single entire agricultural field, and a field remnant bordered by non-agricultural land, all of which would be permanently removed from agricultural use on commencement of construction. Therefore, there would be no severance of farmable areas or farmland access issues as a consequence of the Proposed Development and these potential impacts will not be included in the impact assessment presented in the ES.</p>
<p><b>Agricultural Land - Operational phase</b></p>	<p>After construction, the soils remaining on Site would most likely only experience very low levels of disturbance due to works connected with the maintenance of landscaped areas. The scale of this disturbance would be lower than is likely currently experienced within the Site due to normal agricultural activities, it is therefore considered that the low scale works which would occur after completion would result in no loss of or damage to soils or impairment of function.</p>
<p><b>Utilities</b></p> <p><i>Operation:</i></p> <p><i>There are not expected to be any significant impacts for operational phase</i></p>	<p><i>Once in place operational phase impacts from utilities are considered unlikely and will not be considered further within the ES. Any maintenance works will be</i></p>

Environmental Issue	Reason for “scoping out”
	<i>occasional and typical of any built environment.</i>
<b>Climate Change</b> Construction: Greenhouse Gas Emissions from: On site Machinery Plant Equipment Welfare Facilities Use of Vehicles Production of Building Materials Operation: Greenhouse gases other than CO <sub>2</sub> .	Carbon emissions associated with these activities are largely tied to actions beyond the applicants reasonable control. It would therefore not be possible to accurately quantify greenhouse gas emissions associated with these activities. These emissions are considered to be minimal in volume by comparison to the operational carbon dioxide emissions and have therefore not been considered significant.

**Table I.2: Matters Scoped out of the ES**

## 2. Introduction and Background

- 2.1. Spawforths have been instructed by Extra MSA Group to prepare and submit an outline planning application for land adjacent to Junction 11 of the M62 Motorway in Warrington. The proposal comprises a 'New Concept' Motorway Service Area (MSA).
- 2.2. The applicants have taken professional advice from a competent development team and supplementary information has been prepared in support of this scoping request by the following consultants:

- Planning – Spawforths
- Environmental Assessment Co-ordination - Spawforths
- Masterplan and Design – Architecture 519
- Geology and Ground Conditions – Wardell Armstrong
- Traffic and Transportation – i-Transport LLP
- Flood Risk and Drainage – Wardell Armstrong
- Landscape and Visual Impact – Spawforths
- Landscape Masterplanning - SLR
- Ecology and Nature Conservation – Wardell Armstrong
- Socio Economic – Spawforths
- Noise and Vibration – Wardell Armstrong
- Air Quality and Dust – Wardell Armstrong
- Cultural Heritage and Archaeology – Wardell Armstrong
- Agricultural Land and Soils - Wardell Armstrong
- Utilities – Wardell Armstrong
- Waste – Wardell Armstrong
- Climate Change – Wardell Armstrong
- Lighting – Brentwood Lighting Design

- 2.3. A statement confirming the relevant experience and qualifications of the development team will be provided with the ES in line with the EIA Regulations (Part 5, Regulation 18(5b)).

### Policy and Guidance

- 2.4. Policy, guidance and legislation relevant to each technical area of the environmental assessment is set out within the Introduction and Baseline Section of Chapters 7 to 19 in this report.

- 2.5. The National Planning Policy Framework, July 2018 (NPPF 18) provides the national planning policy and promotes sustainable economic growth and seeks to support economic recovery through the planning system. National Planning Practice Guidance (NPPG) provides additional guidance.
- 2.6. Local Planning Policy is provided within the Warrington Local Plan Core Strategy (July 2014). Warrington are currently progressing a new Local Plan, for which a further stage of consultation is expected in Spring 2019.
- 2.7. The planning policy context will be set out fully within the Environmental Statement to be submitted with the outline planning application.

## **3. Approach to Scoping**

### **Environmental Impact Regulations**

- 3.1. The Proposed Development does not fall within Schedule 1 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as “the EIA Regulations”) where an Environmental Statement (ES) is mandatory. However, the Proposed Development does fall within part 10(p) of Schedule 2 of the EIA as a “Motorway Service Area” in excess of 0.5 hectares.
- 3.2. Nevertheless, an Environmental Impact Assessment (EIA) is not needed for every Schedule 2 project. However as the Proposed Development is likely to give rise to “significant effects on the environment.
- 3.3. Due to the scale and nature of the Proposed Development, the surroundings and the likely cumulative effects with other development, there is a need to fully assess the environmental impacts of the Proposed Development. The proposals are therefore considered to constitute EIA Development and as such, in line with the EIA Regulations, the planning application will be accompanied by an Environmental Statement (ES). On this basis, a Screening Opinion has not been sought from the Local Authority as the Proposed Development is considered to be EIA development.
- 3.4. This report is a request for a Scoping Opinion from the Planning Authority to agree the scope and level of detail of information to be provided within the ES that will be produced for submission with the planning application. This Scoping Request is submitted in line with Part 4, Regulation 15 (1) and (2) of the EIA Regulations.

### **Scoping Requirements**

- 3.5. As the Proposed Development is considered to require EIA, a Scoping Report can be produced under the EIA Regulations. In line with best practice, this Scoping Report seeks to set out the relevant environmental issues which should be assessed as part of the ES. This will be done through consultation with Warrington Council, statutory consultees and other interested groups. In accordance with Regulations Part 4 (15), this Scoping Report sets out a description of the project (Chapter 4), including the nature and purpose of the development,

including its location and technical capacity. Location plans are included at **Appendices 2** and **3**.

3.6. Further information includes Parameter Plans at **Appendix 5** which identify the initial key parameters to the Proposed Development. These will evolve through further environmental assessment and will inform an indicative masterplan, which will be submitted with the planning application and ES to show how the Site could be developed in line with the parameters set for the Proposed Development.

3.7. Sections 7 through to 19 include a series of topic scoping reports which include an explanation of the likely significant effects of the development on the environment and therefore issues to be assessed as part of the ES which include:

- Chapter 7 – Geology and Ground Conditions
- Chapter 8 - Traffic and Transportation
- Chapter 9 – Water Resources
- Chapter 10 - Landscape and Visual Impact
- Chapter 11 - Ecology and Nature Conservation
- Chapter 12 - Socio Economic
- Chapter 13 - Noise and Vibration
- Chapter 14 - Air Quality, Odour and Dust
- Chapter 15 - Cultural Heritage and Archaeology
- Chapter 16 – Agricultural Land and Soils
- Chapter 17 - Utilities
- Chapter 18 - Waste
- Chapter 19 – Climate Change

3.8. Each of these topic chapters is laid out as follows:

- Introduction
- Baseline Information
- Potential Environmental Impacts
- Methodology for the Environmental Statement
- Significance of Effects
- Mitigation

- Further Work Required
- Summary

3.9. The scoping of matters associated with Human Health are addressed through the Geology and Ground Conditions; Air Quality, Odour and Dust; Noise and Vibration; Traffic and Transport (in respect of highway safety); and Socio Economic Chapters. Matters associated with Climate are addressed within the Climate Change Chapter, as well as Water Resources; and Ecology and Nature Conservation. Matters associated with ground, agricultural land and soils and water resources as interlinked, and as such, each of these technical chapters are clear as to how the various likely environmental impacts and their effects will be assessed within each topic.

3.10. Other information within this Scoping Request includes supporting baseline assessment work.

## **Aims and Process**

3.11. Scoping is the process of determining the content and extent of matters to be covered by the Environmental Impact Assessment and in the resulting Environmental Statement (ES). Scoping is not mandatory for every application, but the EIA Regulations provide a mechanism for developers to agree the scope of the EIA formally through the request for a 'scoping opinion'. Scoping helps to focus minds on the submission and the feedback received from ES consultees may also provide developers and their project teams with a different perspective on likely environmental effects. The benefits of scoping can be summarised as:

- Local Planning Authorities (LPA): an opportunity to influence the ES in the early stages of preparation to ensure that specific concerns, based on local understanding are properly addressed.
- Developers: to identify primary concerns at an early stage in the process that appropriate surveys can be conducted, stakeholders consulted and methods agreed prior to submission of the application.
- Consultees: to ensure that principal concerns appropriate to the local area are addressed comprehensively.

- Overall, a more concise ES focusing on the key issues of concern and one that should minimise the need to request further information thereby accelerating the decision-making process.

3.12. Importantly, the scoping process should seek to discount, or ‘scope out’, those issues where significant effects are unlikely.

### **Methodology for the Assessment of Significant Effects**

3.13. The EIA Regulations stipulate that an ES should, where possible, identify, describe and assess the likely effects of the development on the environment. The methodology has three stages to identify the effects:

- Receptors
- Environmental Impacts
- Significant Effects

### **Receptors**

3.14. The significance of an effect is relative to the sensitivity or quantity of a receptor. Receptors are set out in accordance with the magnitude of their importance. Some receptors are given relatively high levels of importance through legislation, such as designated conservation sites or world heritage sites. Determining the importance of other receptors can be more subjective. To maintain consistency in how receptors are considered, this scoping report assesses each one in relation to the following hierarchy:

- International
- National
- Regional
- County
- Borough/District
- Local/Neighbourhood

3.15. Each environmental topic area within this report has outlined the relevant receptors and how they fit within the above hierarchy. A series of plans showing the receptors are included at

**Appendix 6.** The scoping report provides an opportunity for consultees to have an input into the designation of each receptor.

### **Environmental Impacts**

3.16. This Scoping Report will adopt the standard approach of assessing the impacts of the relevant area of the proposals. These impacts have been developed giving due regard to the following:

- Beneficial and adverse impacts
- Short, medium and long term impacts
- Direct and indirect impacts
- Permanent and temporary impacts
- Cumulative impacts

3.17. Each of the impacts assessed will be categorised as being

- Neutral
- Negligible
- Minor
- Moderate
- High
- Substantial

3.18. These impacts can be classified as being either positive or negative.

### **Significant Effects**

3.19. Once the receptors and impacts have been established they need to be assessed against each other to provide the likely significant effects. Each of these will be considered in relation to the following:

- Extent and magnitude of the effect
- Effect duration (whether short, medium or long term)
- Effect nature (whether direct or indirect, reversible or irreversible)
- Whether the effect occurs in isolation, is cumulative or interactive
- Performance against environmental quality standards or other relevant pollution
- control thresholds

- Sensitivity of the receptor
- Compatibility with environmental policies

3.20. In order to define the magnitude of the effect the matrix in Table 3.1 has been developed. An effect will be categorised as being either:

- Substantial This **will** have a **significant** influence on the environment.
- High This **may** have a **significant** influence on the environment.
- Moderate This **will** have a **slight** influence on the environment.
- Minor This **may** have a **slight** influence on the environment.
- Negligible This **will not** have **any notable** influence on the environment.
- Neutral This **will not** have **any** influence on the environment.

3.21. The interaction or cumulative impact or nature of these effects is also important. In isolation the lower categories may not have a significant influence on decision making however in combination with a number of other effects, the significance may be increased.

		Sensitivity Value of Receptor						
		International	National	Regional	County	Borough	Local	
Magnitude of Effect	Positive	Substantial	Substantial Benefit	Substantial Benefit	Substantial Benefit	High Benefit	Moderate Benefit	Moderate Benefit
		High	Substantial Benefit	Substantial Benefit	High Benefit	Moderate Benefit	Moderate Benefit	Minor Benefit
		Moderate	Substantial Benefit	High Benefit	High Benefit	Moderate Benefit	Minor Benefit	Minor Benefit
		Minor	Moderate Benefit	Moderate Benefit	Moderate Benefit	Minor Benefit	Minor Benefit	Minor Benefit
	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	
	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	
	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	
	Negative Impacts	Minor	Moderate Adverse	Moderate Adverse	Moderate Adverse	Minor Adverse	Minor Adverse	Minor Adverse
		Moderate	Substantial Adverse	High Adverse	High Adverse	Moderate Adverse	Minor Adverse	Minor Adverse
		High	Substantial Adverse	Substantial Adverse	High Adverse	Moderate Adverse	Moderate Adverse	Minor Adverse
Substantial		Substantial Adverse	Substantial Adverse	Substantial Adverse	High Adverse	Moderate Adverse	Moderate Adverse	

Significance Matrix

**Table 3.1 Significance Matrix**

## Impact Prediction Confidence

- 3.22. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

**Table 3.2: Impact Prediction Confidence**

## 4. Project Description

4.1. This section identifies the Site's location and context and describes the Proposed Development.

### Site Location and Context

4.2. The Site is located in the North West of England, within the local authority area of Warrington. The national regional context is shown on the plans below and in **Appendix 2**.



Figure 4.1a: National Context Plan



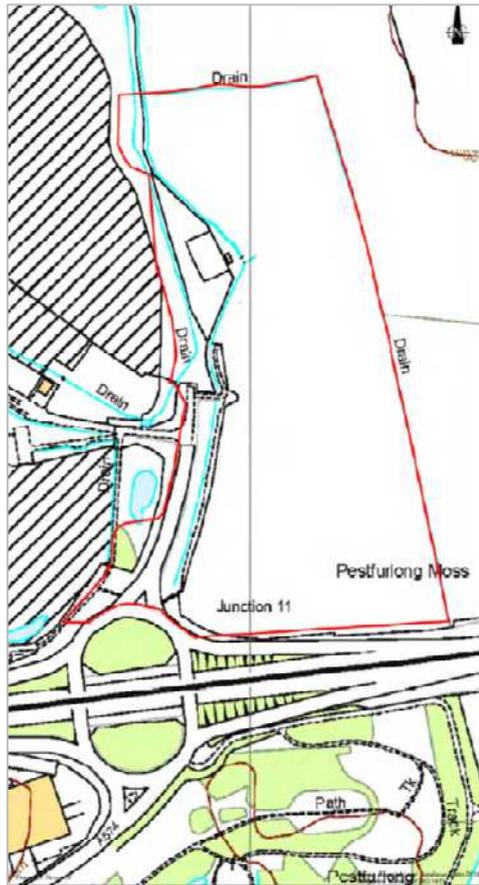
Figure 4.1b: Regional Context Plan

- 4.3. The Site is located to the northeast of the urban area of Warrington, approximately 8.5km (5 miles) from the centre of Warrington. The centre of Manchester is located approximately 17.5km (11 miles) to the east of the Site and the centre of Liverpool, approximately 32 km (20 miles) to the west.
- 4.4. The M62 Motorway corridor runs in an east/west direction to the north of Warrington. It is the west-east Trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and connects the two City Regions of Liverpool and Manchester.

- 4.5. The Site is located to the north of the M62 Motorway at Junction 11, within its north east quadrant and has direct access to Junction 11 via a spur to the motorway junction roundabout (Birchwood Way). The M62 Motorway also provides access to the wider Strategic Road Network, with the M6 Motorway running north/south, approximately 4km (2.5 miles) to the west of the Site, and the M60 Motorway, which runs around Manchester, approximately 10km (6.1 miles) to the east of the Site.
- 4.6. Junction 11 of the M62 Motorway also provides access to the A574 Birchwood Way and the Birchwood area of Warrington, which is located to the south of the M62 Motorway corridor and consists of Birchwood Park (a business park) and beyond this, residential areas of Gorse Covert and Oakwood, which are suburbs to Warrington.
- 4.7. Immediately to the west of the Site is a former landfill site (Risley Landfill), where landfilling began in 1979, but which has now ceased, and the site restored and planted to provide a proposed future Country Park setting. To the east and north is arable farmland. A disused railway line dissects the farmland, and arches to the east and north approximately 0.6km (0.4 miles) from the Site boundary. The settlement of Culcheth lies to the north west of the Site, with its centre approximately 2 km (1.2 miles) from the Site.
- 4.8. The local context is shown in the plans below and in **Appendix 3**.



**Figure 4.2a: Local Context Plan**



**Figure 4.2a and b: Local Context Plan and Site Boundary Plan**

- 4.9. The Site itself, relates to an area of land of approximately 15.33 ha (37.88 acres) in extent. The Site is a greenfield site, currently within agricultural (arable) use. It is located within the Green Belt and is partially underlain with peat.
- 4.10. The Site is set at a lower level than the M62 Motorway Junction 11 and its associated slip roads, but is higher than the M62 Motorway itself. The M62 Motorway Corridor and Junction 11 is lit in the vicinity of the Site. There are trees to the eastern, and part of the southern and south western boundaries. A post and rail fence marks the southern boundary. The Site is bounded to the east, north and part of the western boundary by a water course that is a non-main river. To the western boundary is another water course that is identified by the Environment Agency as a main river. The Site is within Flood Risk Zone 1 and as such at low risk of flooding.
- 4.11. A Public Right of Way (Footpath number 13) runs along the western boundary of the Site and leads north to Silver Lane Pools, and west around the adjacent restored landfill site, before

heading north to Culcheth and east to Holcroft Lane. Footpath number 28 continues around the north of the restored landfill site, connecting to Footpath 14a to the western boundary, which connects to Footpath 25 to the southern boundary, before reconnecting with Footpath 13 adjacent to the Application Site. This also links to a footpath at the spur of the Junction 11 roundabout and around the roundabout, before linking to footpath 25 to the south eastern quadrant of the Junction 11 roundabout in Birchwood.

- 4.12. The HS2 Safeguarded Land corridor arcs around the north eastern corner of the Site. See the Constraints Plan below and at **Appendix 4**.
- 4.13. A 50m Buffer Motorway Air Quality Management Area (MAQMA) runs along the Motorway corridor.
- 4.14. There is a high pressure gas main that runs north to south through the Site and comprises an inner, middle and outer PADHI Zone. Consultation has been undertaken with the HSE (Health and Safety Executive) to discuss the proposals and the extent of development that is acceptable within each of these zones. See the Constraints Plan below and at **Appendix 4**.

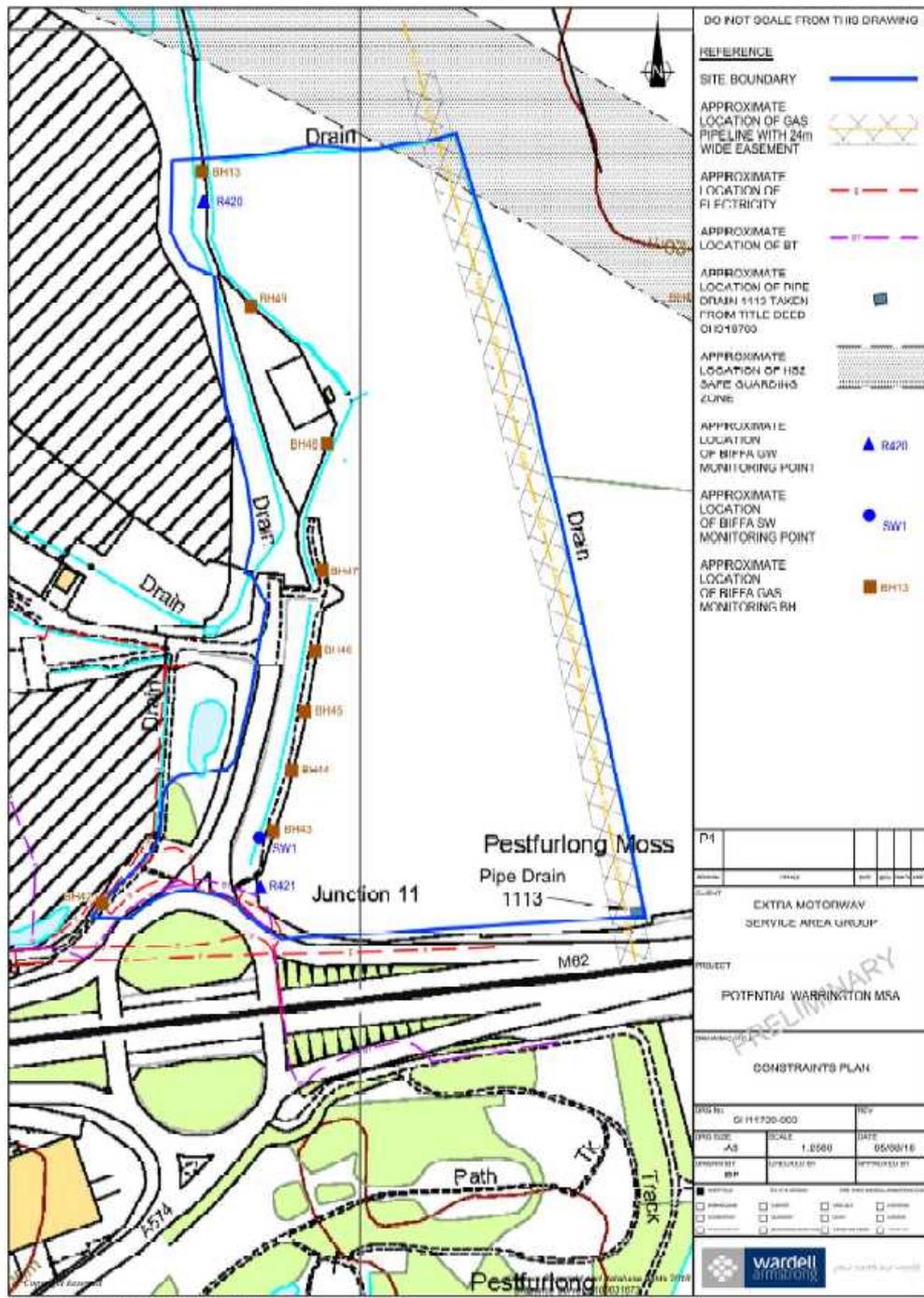


Figure 4.3: Constraints Plan

- 4.15. The Site lies within 5km of Manchester Mosses SAC and within 2km of Risley Moss SSSI and LNR and Holcroft Moss SSSI.
- 4.16. The Glazebrook Timberland Trail (located to the east of the Holcroft Moss SSSI) is a linear signposted recreation route following footpaths close to the Pennington and Glaze Brooks from Pennington Flash Country Park in Leigh, to the Manchester Ship Canal at Cadishead. The route passes the remnant mosslands of Chat Moss, which provide some of the rarest wildlife habitats in the country and extends through areas rich in history including Little and Great Woollen Halls, the Liverpool to Manchester railway, Hope Carr Nature Reserve and Pennington Flash Country Park.

## Development Description

### The Development

- 4.17. The application will be an outline planning application as described below:

Erection of a Motorway Service Area including Facilities Building, up to 100 bedroom Hotel, Visitor Centre, service yard, Fuel Filling Station, Electric Charging Station, parking facilities for each category of vehicle, access and internal circulation roads, structured and natural landscaping with outside amenity space/picnic space and dog walking zone, pedestrian and cycle links, surface water drainage areas, ecological mitigation, pumping station, substation, retaining structures and associated infrastructure and earthworks.

- 4.18. All matters, except for access to the Site will be reserved for consideration at a later date.

### Parameters and Scheme Design

- 4.19. During the evolution of the proposals, a number of parameters will be fixed, and will form the basis of the environmental assessments.
- 4.20. The parameters are to include the following:
- Development Cells – distribution of land uses, quantum of development, maximum building heights and finished ground / floor levels

- Green Infrastructure – retained trees and vegetation, landscaping, landscape buffers, ecological mitigation, amenity space, stand off from water courses
- Access and Circulation – Access to the Site, internal access and circulation and footpath links
- Drainage – surface water drainage features and connections
- Easements around the gas main and any services

4.21. A series of likely maximum parameters have been identified for the Scoping Stage and are illustrated on the plans below and included at **Appendix 4**. These show maximum quantum of development and will evolve with the scheme proposals and through environmental testing. Whilst some of the parameters currently overlap, such as Green Infrastructure and the Development Cells, these will be refined through the scheme evolution to ensure the various parameters complement each other without conflict.

4.22. The key Parameters for the Scoping Stage are as follows:

#### Development cells



**Figure 4.4a: Parameter Plan – Development Cells**

- Zone of Facilities Building and Hotel, including incidental landscape areas service yard and external amenity spaces. Max building height 15m above AOD, with +5m tolerance to allow for scheme evolution and datum level adjustments (maximum approx 40.3m AOD).
- Zone of Fuel Filling Station and internal vehicular circulation, including incidental landscape areas. Max building height 6.5m above AOD with +5m tolerance to allow for scheme evolution and datum level adjustments (maximum approx. AOD 33m AOD).
- Zone of car parking, internal vehicular circulation and HGV parking.
- Extent of proposed access.

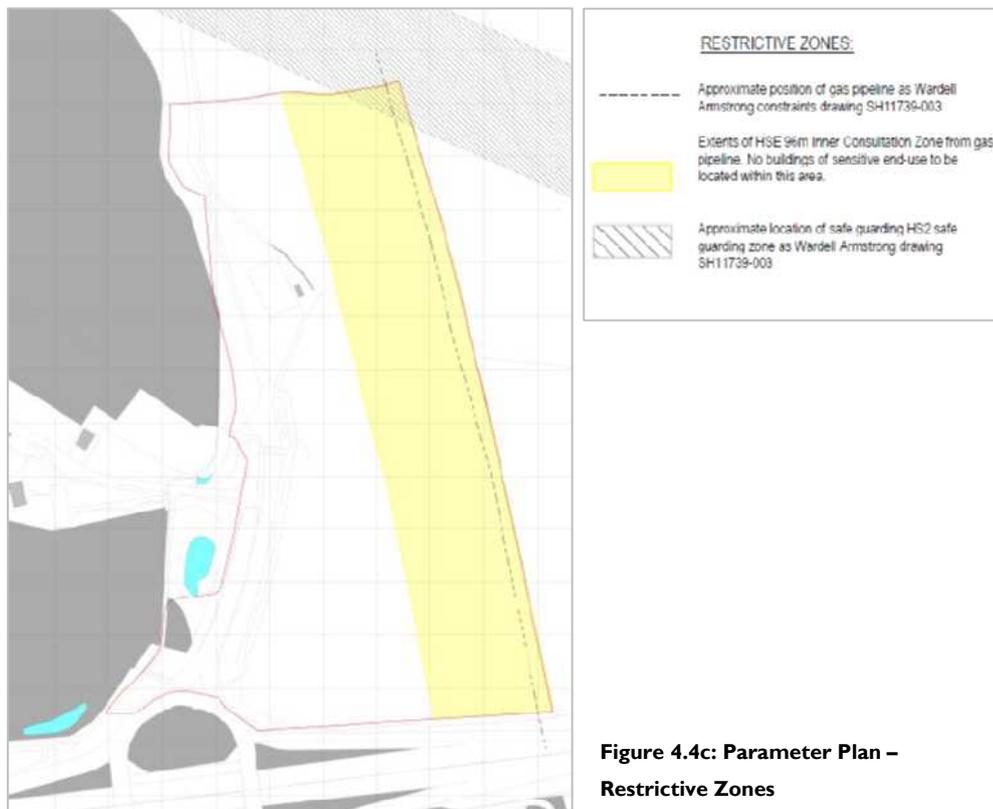
### Green Infrastructure



**Figure 4.4b: Parameter Plan – Green Infrastructure**

- Existing and Proposed landscaping, including ecological habitats, drainage and existing footpaths.
- Route of existing footpath and parameters zone.

## Restrictive Zones



- A 96m easement (HSE Inner Consultation Zone) from the approximate location of the gas pipeline, restricting buildings with a sensitive end-use within this zone.
- HS2 safe guarding zone to the north east of the Site.
- Existing footpaths, watercourses and significant level changes to the east of the Site.

4.23. The design is based on the development of the 'new concept' motorway service area, which offers travelers a break from their journey in a warm and welcoming environment. The building will be designed to create strong links with external amenity spaces and the wider area, particularly the adjacent Restored Risley land fill siteCountry Park. Influence will be taken from the local context, to inform the building development, to relate the design to Warrington and the surrounding area through its form and the treatment of the building elements.

4.24. The development will include a Facilities Building of approximately 5000sqm GIA, with tenant units located around a double height central atrium space. The atrium will open out into an

external amenity space with views and links to the adjacent country park. There will be Hotel with up to 100 bedrooms, which will integrate with the Facilities Building through a separate 'Link' Building. Car parking, HGV parking, Electric Charging Station (ECS) and a Fuel Filling Station are also located on-site, with layouts developed to make the most of the on-site opportunities. Integrating the building design with the landscaping proposals will be key. Landscaping buffers will be created to the extents of the Site and in key locations on-site to screen elements where necessary.

4.25. Access to the Site will be taken from the existing Junction 11 of the M62 Motorway, via the existing spur from the roundabout at Junction 11.

4.26. The Facilities Building will be approximately 5,000m<sup>2</sup> and principally provide:

- A food court and ancillary retail, incorporating facilities for the sale and consumption of hot and cold food and beverages on and off the premises.
- Free toilet, hand washing facilities for all drivers and disabled visitors.
- Free showers and washing facilities for all HGV drivers.
- Staff areas including kitchen, catering storage, staff rooms, retail storage, refuse areas and office space. Some of these areas will be accommodated at first floor level.

4.27. A Business Centre comprising a Business Lounge with a range of different sizes of Meeting Rooms, will also be provided within the Facilities Building.

4.28. Space, if required, will also be provided for community use, which could be used as a Visitor / Education Centre to complement the adjacent Restored Risley land fill site.

4.29. Other complementary uses will include:

- Fuel Filling Station which will include a domestic forecourt and a HGV forecourt and a forecourt shop of approximately 450m<sup>2</sup>. Alternative new technology fuels will be provided (subject to availability, such as hydrogen to contribute to Low Carbon targets).
- Electric Charging Station (ECS) located within the car park

4.30. Parking facilities for:

- 536 light vehicles
- 110 HGV spaces
- 1 abnormal load HGV space
- 16 coach spaces
- 15 car plus caravan / motorhome / vehicle plus trailer spaces
- 15 motorcycle spaces

4.31. Hotel

- Up to 100 bedrooms with supporting ancillary uses.

4.32. Access and circulation roads and footpaths will be provided between the various on-site facilities. Street lighting will be provided to ensure vehicular and pedestrian safety in-line with Highway Standards. The street lighting within the MSA development will conform to the obtrusive light limitations commensurate with the surrounding environmental zone (typically intrinsically dark landscape (E1) / low district brightness area (E2)) as prescribed within the Institute of Lighting Professionals Guidance notes for the reduction of obtrusive light (2011).

4.33. Non-vehicular forms of connectivity will be provided within the Site, with links also being provided to the Public Rights of Way network that currently exists within the Site, thereby allowing linkages to the wider non-definitive and definitive footpath network and the adjacent Country Park.

4.34. There will be amenity areas within the landscaping areas, providing picnic and a dog walking zone. The surface water drainage features will also be included within these landscaped areas.

## **Infrastructure Arrangements and Ground Conditions**

4.35. This section details service arrangements, drainage and flood risk, access and highways and ground conditions.

### **Existing Services Arrangements**

4.36. Plans have been requested from the relevant incumbent utility companies, to identify existing services in the vicinity of the Site. The results of this search are outlined below.

#### **Electricity – Electricity North West**

- 4.37. 11kV underground cables are located within the south east of the Site, adjacent to the motorway junction. 11kV underground cables are also located adjacent to the Sites southern boundary and to the east of the Site, adjacent to the former landfill.
- 4.38. An electricity substation is located approximately 60m south west of the Site.

#### **Gas – Cadent**

- 4.39. A National Gas Transmission pipeline is present within the east of the Site, on a north-south alignment. This pipeline has a total easement of 80ft in width. This is shown on the Parameter Plans at **Appendix 4**.
- 4.40. The pipeline is classified by HSE as a “major accident hazard pipeline”, with current consultation zones of 96m for the inner zone, 190m for the middle zone and 335m for the outer zone.
- 4.41. A medium pressure gas main is located approximately 200m south west of the Site, serving the commercial units in Birchwood Technology Park. Low pressure mains are located approximately 300m south of the Site, serving the existing residential properties. Both the Medium and Low Pressure gas mains are located on the opposite side of the M62 to the proposed development.

#### **Potable Water – United Utilities**

- 4.42. There is no United Utilities potable water apparatus within the Site boundary.
- 4.43. A 160mm Ductile Iron (DI) potable water main is located approximately 250m south west of the Site, serving the commercial units in Birchwood Technology Park. A water main is also present approximately 300m south of the Site, serving the existing residential properties.

#### **Foul Sewerage – United Utilities**

- 4.44. There are no United Utilities foul or surface water sewers located within the Site boundary.
- 4.45. Foul and surface water sewers are located approximately 300m south west of the Site, serving the commercial units in Birchwood Technology Park.

#### **Telecoms – BT and Virgin Media**

- 4.46. BT apparatus is located in the south west of the Site, adjacent to Junction 11 of the M62.
- 4.47. There are no Virgin Media assets located within the Site, or in the vicinity.

## Proposed Services Arrangements

- 4.48. Utilities providers will be contacted to determine the route of new connections for the Site and whether any reinforcement is required.
- 4.49. BT and Electricity North West apparatus located directly to the north of the Junction 11 roundabout of the M62 may need diverting to accommodate the realignment of the existing access road. The costs of these diversions, if required, will be established through liaison with the utility providers.

## Ground Conditions and Contamination

- 4.50. Information relating to Ground Conditions and Contamination is taken from a Phase I Environmental Assessment (November 2018) and a Preliminary Site Investigation (2018).
- 4.51. The Site is currently in agricultural use with some scrub grassland. Historical plans indicate this land use since prior to 1849. Farm buildings were previously located in the south central part of the Site (Pestfurlong Moss Farm, 1880s) but were relocated to the north in the 1960s.
- 4.52. The Site is located adjacent to Risley Landfill and the western part of the Site was previously included within the Permit boundary. The landfill has been subject to a Partial Permit surrender by consolidated notice (ref: EPR/BV78771R/S009) and the area within the boundary of the Site is now excluded. The surrender was effective from 7th August 2018.
- 4.53. It is considered that the Site may potentially have areas of made ground associated with the demolition of former farm buildings however, this was not identified within the preliminary site investigation carried out. The Site is underlain by Peat deposits in the south and east and Glacial Till in the west. The Peat deposits were found in varying thicknesses (0.30m to 1.40m) with increasing thickness toward the south east. The Till deposits were observed in the north west of the Site to comprise cohesive deposits comprising sandy clay with a minor component of fine to coarse gravel with a generally rounded angularity. Lithologies were variable from igneous granite to sedimentary mudstone, shale and red sandstone. Solid strata comprises the Helsby Sandstone which is a Principal Aquifer.
- 4.54. It is not anticipated that there will be significant contamination on the Site based on historical and current use. Contamination risks may be presented by gas generation in the Peat or through migration of Landfill gas and/or leachate from the adjacent landfill.

4.55. The Peat will also present geotechnical issues for the development. It is considered at this stage that two potential options are:

Option 1: Excavation. The Peat would be removed where required within the Site boundary and either re-used on-site or disposed of off-site (through most appropriate means).

Option 2: Stabilisation. The peat would remain in-situ but be subject to an appropriate stabilisation method.

4.56. As the scheme and environmental assessment evolves, one of these options will be pursued and confirmed through the ES.

4.57. A plan of the Key Receptors is included in **Appendix 6**.

### **Agricultural Land and Soils**

4.58. The agricultural land within the Site comprises a large, roughly rectangular, field which available aerial imagery shows to have been in continuous arable use since at least 2005. Additionally, there is a small, triangular, area to the west of Silver Lane Brook, which is a remnant of a larger agricultural field which was removed by the development of the Risley Landfill Site. This land is currently rough grassland. All other land within the Site is considered to be non-agricultural, being either hardstanding or areas of restored landfill, which are to be developed for amenity use.

4.59. The most current and detailed published land quality data covering the Site and the wider WMB is the Provisional Agricultural Land Classification (ALC) mapping provided by Defra (1:250,000 scale). The Provisional mapping is intended for strategic use as it does not identify variations in ALC grade of less than approximately 80 ha and hence is not accurate at the field scale. It therefore cannot be used to accurately define the ALC grading of the Site, but instead provides a general indication of the predominant ALC grading within the wider area. The Provisional mapping identifies all agricultural land within the Site as Grade 1 (excellent quality). The Site is shown as being immediately bordered by units of Provisional Grade 3 (good to moderate quality) land to the east; Grade 5 (very poor quality) land to the west; and Grade 2 (very good quality) land to the north, see Drawing SHI I 739/009 (Provisional Agricultural Land Provision, **Appendix 6**) and therefore can be considered to be in an area of transition between ALC Grades.

- 4.60. This variability is further evidenced by detailed survey data collated by SLR Consulting in 2006, in relation to a proposed eastern extension to the adjacent Risley Landfill Site, which identified a graduated change in ALC Grade across the large agricultural field, from Grade 1 in the southeast corner through Grade 2 (very good quality), Subgrade 3a (good quality), and finally Subgrade 3b (moderate quality) in the northwest corner. The small triangular area to the west of the Site was identified as Grade 4 (poor quality). The predominant grading was Subgrade 3a.
- 4.61. Data from the Soil Survey of England and Wales, and the 2006 survey data both show that Site is characterised by soils in the Turbary Moor association, the typical soil association of reclaimed raised moses in the area, see SHI 1739/010 (Soil Associations, **Appendix 6**). The Turbary Moor association comprises deep earthy fibrous peat soils with high groundwater levels where uncultivated. When improved for arable crops, groundwater is usually controlled with ditches and field drains. Turbary Moor soils are permeable and well drained (Wetness Class 1) but like all peats, they can hold large amounts of available water and so are non-droughty for all crops.
- 4.62. Peat deposits in the south east of the Site were identified during a preliminary site investigation in August 2018 with peat depths ranging from 0.3 m to 1.7 m. A detailed soil and peat characteristic and depth survey is required to provide a comprehensive assessment of the extent and depth of the deposit, the quality of the peat present and will be undertaken to support the ES. As the peat is buried at depth beneath agricultural land it is not an actively forming peat bog nor does it support sensitive habitats or species.
- 4.63. A plan of the Key Receptors is included in **Appendix 6**.

### **Drainage and Flood Risk**

- 4.64. The eastern and northern boundaries of the Site is defined by relatively straight drains. In the west of the Site there is a drain and a statutory main river. Although the Site is relative flat, the predominate flow direction of the watercourse on-site is towards the north. Other surface water features in the vicinity of the Site comprise of an attenuation balancing pond and a series of drains associated with the Risley Landfill Site to the west of the Site.
- 4.65. Water flows from all the drains on-site into the unnamed statutory main river, which is tributary of the Glaze Brook. This watercourse has a confluence with two other tributaries of the Glaze Brook at National Grid Reference (NGR) SJ 66765 94282 forming the Willow

Brook. This watercourse flows eastwards via a passing beneath Holcroft Lane (B5212) and discharges into the Glaze Brook at NGR SJ 68402 94072. The Glaze Brook then flows southeasterly and joins the Manchester Ship Canal at NGR SJ 70232 91145.

- 4.66. The Government's Flood Map for Planning and Long Term Flood Risk online map, shows the Site is within Flood Zone 1 (i.e. low probability of fluvial flooding).
- 4.67. A plan of the Key Receptors is included in **Appendix 6**.

### **Access Arrangement and Highway Works**

- 4.68. The Site is located to the north of the existing roundabout of Junction 11 of the M62 – a four arm roundabout which forms a junction between the M62 Motorway (off-slip roads) running east-west and the A574 Birchwood Way to the south. The northern arm of the roundabout is currently restricted to providing access to the former landfill site (Proposed Country Park area) only.
- 4.69. Access to the Site will be taken from a new connection to this northern arm of the roundabout. Any necessary changes to the roundabout that might be required by the Proposed Development will be identified in the Transport Assessment that will be provided to support the ES as part of the Traffic and Transport ES Technical Paper.
- 4.70. At present no public transport services pass the Site. A number of public transport routes serve the Birchwood area to the south-west, with frequent peak and day-time bus services passing through the local area and around Birchwood Park, although there are limited evening and weekend services. Currently the nearest bus stops to the Site are c.1.5km away, located on Gorse Covert Road in the residential area to the south, with further stops located on Faraday Street, off Birchwood Way. Birchwood rail station is located c.3.5km to the south-west of the Site and provides direct services to Warrington town centre and Liverpool to the west, and Manchester to the east (serving a number of intermediate stops).
- 4.71. Existing cycle and pedestrian routes to the south of the motorway are largely segregated off-road routes, in keeping with the character of Birchwood. From the Site to the south, pedestrian and cycle connectivity are via a segregated path which runs parallel to Birchwood Way, which branches off through the wider area. To the north-west and west of the Site, a number of Public Rights of Way (PRoWs) are present, including footpath routes that run through the country park towards Culcheth.

4.72. A comprehensive Transport Assessment and a Travel Plan will be provided as part of the ES.

4.73. A plan of the Key Receptors is included in **Appendix 6**.

## Ecology and Landscape

### Ecology and Nature Conservation

4.74. A site walkover was initially undertaken by two suitably qualified ecologists in January 2018 to consider likely constraints and survey requirements. Following this, a series of Wintering Birds Surveys were undertaken during the period January – March 2018. A single Bat Activity Survey (including transect and automated sampling) was undertaken during October 2018. The Extended Phase I Habitat Survey was undertaken during November 2018 and the Preliminary Ecological Appraisal (PEA) has now been compiled. It is planned that additional surveys for the following receptors will be undertaken to inform the application:

- Badger Survey
- Great Crested Newt Survey
- Water vole and Otter survey
- Breeding Birds Survey
- Wintering Birds Survey
- Invertebrate Survey

4.75. The presence of the Manchester Mosses SAC is considered to be the key ecological receptor at this stage. However, the closest part of the conservation area lies >1 Km from the development area. Consequently, it is not considered that the treatment of peat and resultant effects on-site hydrology would lead to adverse effects to neighbouring peatland habitat and hence the qualifying features of the SAC, however this will be confirmed via liaison with Natural England and potentially as part of a Habitats Regulations Assessment.

4.76. In terms of protected species, the Site is dominated by arable farmland with little semi-natural habitat presence and consequently is likely to be of limited value to protected species. This is demonstrated by the results of the preliminary surveys undertaken to date, however will be fully investigated through the course of the remaining site surveys.

- 4.77. The design proposals will include the development of a Landscape and Biodiversity Management Plan which will seek to complement the measures being developed for the adjacent Restored Risley land fill site. Habitat compensation, if required for ecological receptors to be impacted by the development, will be included within the Site boundary and may include ponds and tree lines, hedgerows and spinneys which are reflective of the landscape context of the Site. Enhancement measures may also include similar habitat provisions outside the planning application boundary, necessary to provide a positive planning balance and net biodiversity gain. Site Landscape design in general will include native plantings designed to maximise biodiversity gain.
- 4.78. A plan of the Key Receptors is included in **Appendix 6**.

### Landscape and Visual Impact

- 4.79. The Site lies within the Mersey Valley National Character Area (NCA), as defined by Natural England, described as low-lying river valley landscape. The Site consists of a single agricultural field, rectangular in shape. The restored Risley Landfill rises immediately to the west, consisting of a single hill covered in rough grass and establishing trees. Natural pools valued for wildlife form part of a Local Wildlife Site to the north of the landfill site. There are agricultural fields immediately to the north and east, and to the southeast, south of the M62 Motorway. Culcheth village lies to the northwest, beyond an elevated section of disused railway line. To the south of the M62 Motorway are Birchwood Technology Park and the village of Gorse Covert. The motorway corridor is in-cut as it passes the Site, having wooded embankments. Risley Moss to the south of Gorse Covert and Holcroft Moss to the southeast are Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC). Risley Moss is also a European Site of International Importance and a Local Nature Reserve. There is a Site of Importance for Nature Conservation immediately to the south of Junction 11. Public Rights of Way to the west of the Site, and crossing fields to the north are part of the Local Authority's Active Travel Greenway Network.
- 4.80. The Site is bounded by mixed species hedgerows of varying heights to the east and west, by a line of trees to the north and by vegetation bounding the M62 Motorway Junction 11 to the south. A drainage ditch borders the western Site edge.

- 4.81. The Scoping Masterplan indicates the proposed MSA set within a landscape framework. Boundary hedgerows will be retained and managed, and planting including native tree and scrub planting will be established to the perimeter of car parking and amenity areas.
- 4.82. The overall concept for the landscape masterplan of the proposed MSA will be to provide a safe and accessible visitor destination which relates sympathetically to the adjacent Restored Risley land fill site and provides a degree of visual integration with its Green Belt setting.
- 4.83. The proposed MSA development provides the opportunity to unlock the recreational value and use of the adjacent Restored Risley land fill site by providing parking, visitor centre, toilets and refreshment facilities. The Proposed Development also provides the opportunity to improve the management and enhancement of habitats associated with the Country Park.
- 4.84. The after uses and habitats within the landscape masterplan will aim to set the new buildings (Facilities Building, Hotel, service yard and Fuel filling Station), open parking areas and internal roadways, within a framework of mainly native woodland, trees and shrubs. There would be provision for cars and HGVs, caravans and other visitors, such as pedestrian and cycle links, with informal woodland walks and facilities for dog walkers, possible children's play area, seating and access to the Country Park.
- 4.85. A plan of the Key Receptors is included in **Appendix 6**.

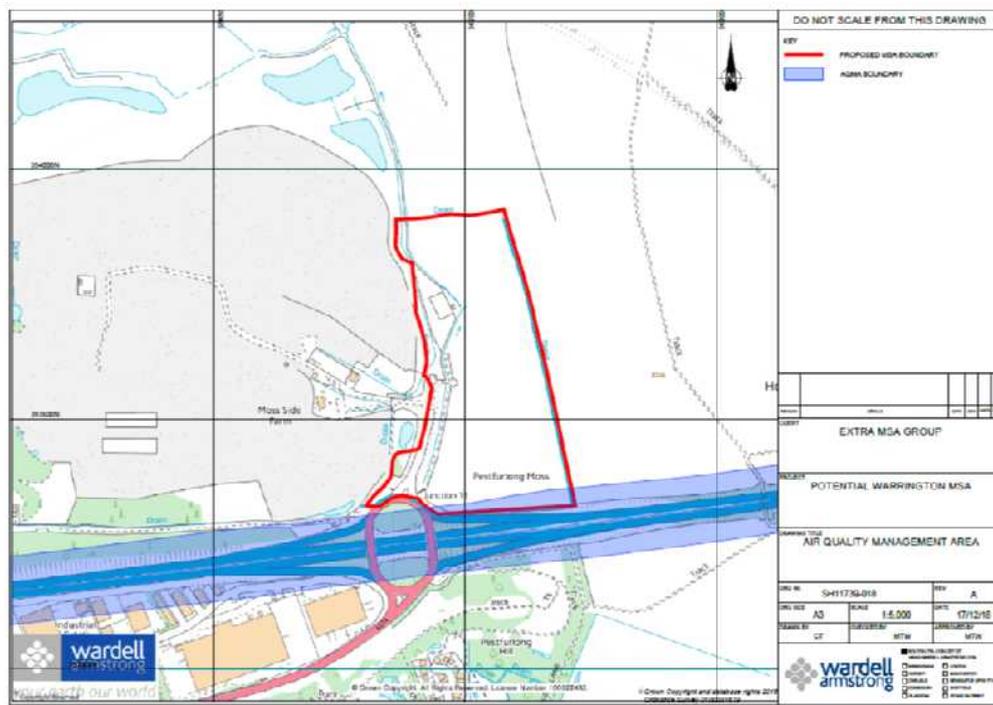
### **Air Quality, Dust and Odour**

- 4.86. Warrington Borough Council (WBC) has declared an Air Quality Management Area (AQMA) for an area extending 50m from the roadside along the M62 Motorway. The southern boundary of the Site is therefore located within the existing AQMA.
- 4.87. The main issues associated with the proposed development relate to dust and fine particulate matter (PM10) arising during the construction phase, and nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM10 and PM<sub>2.5</sub>) during the operational phase. In addition, there is the potential for odour impacts at the most sensitive parts of the proposed development (i.e. the hotel and amenity space/picnic space) as a result of the former landfill site to the west.
- 4.88. Once operational, the proposed development is not expected to result in newly generated trips, other than perhaps a small number associated with deliveries, staff travel and the

proposed visitor centre. Rather, the majority of trips to/from the proposed development will be transferred trips that are already on the highway network. This will lead to a redirection of traffic flows from the existing M62 Motorway carriageway along a new access road from Junction 11.

4.89. There are few existing sensitive receptors located in the vicinity of the proposed development or Junction 11 of the M62 Motorway. The closest sensitive receptor locations are the residential properties located approximately 0.3km to the south of the Site along Inglewood Close. The impact of vehicle emissions (nitrogen dioxide, NO<sub>2</sub>, and PM<sub>10</sub>) will be considered at these areas. There are also industrial/commercial premises located less than 0.25km to the south west of the Site, however these are considered to be of a low sensitivity. At this stage, it is not expected that there will be any impacts further afield, including within the Manchester Mosses Special Area of Conservation (SAC) and Holcroft Mosses Site of Special Scientific Interest (SSSI) which are located approximately 1km to the east.

4.90. A plan of the Air Quality Management Area is shown on the plan below and is included at **Appendix 7**.



**Figure 4.5: Air Quality Management Area (AQMA) Plan**

4.91. A plan of the Key Receptors is included in **Appendix 6**.

## Noise and Vibration

4.92. The Proposed Development Site is located at the north-eastern side of junction 11 of the M62, therefore, the existing baseline noise environment is dominated by road traffic noise. Existing sensitive receptors are Franks Farm, located approximately 500m to the north of the Site, and dwellings off Inglewood Close, approximately 300m to the south of the Site. Noise at these receptors will need to be considered in the ES.

4.93. Land to the north of the Site boundary is allocated for the proposed HS2 line. Therefore, noise from HS2, and the M62 Motorway will be considered at proposed sensitive uses at the MSA (i.e. the Hotel, and some areas of the Facilities Building).

4.94. Vibration from the M62 Motorway is considered to be very unlikely to affect the Proposed Development Site. However, vibration from the future HS2 north of the Development Site boundary may affect proposed sensitive receptors (i.e. Hotel and Facilities Building). See Chapter 13 for further details.

4.95. A plan of the Key Receptors is included in **Appendix 6**.

## Cultural Heritage/Archaeology

4.96. The Cheshire Historic Environment Record (HER) has been consulted for non-designated heritage assets within the search area (taken as an area of approximately 1km radius from the Site boundary). The consultation revealed that there are two non-designated heritage assets recorded within the boundary of the Site. These comprise the findspot of a Roman coin (HER reference I4458) and the findspot of a copper alloy stud and a lead gaming piece (HER reference I4457). The finds appear to have been recovered through metal detecting.

4.97. The British Geological Survey records the solid geology of the Site as sandstone of the Helsby Sandstone Formation. Superficial geology is recorded as peat. This appears to have been referenced as moss land within historic documents and maps; the land within the Site, is located within an area known as Pestfurlong Moss which was gradually reclaimed for agricultural use from the at least the mid eighteenth century onwards. This saw a farmstead

established within the boundary of the Site in 1849-1893. Now demolished there remains a potential for the presence of below ground remains. The geology of the Site is also of archaeological potential in its own right, peat having the potential to include organic remains and evidence of a palaeoenvironmental nature which could inform on past environments. The findspots recorded by the HER are not receptors, having been removed from the Site but they are illustrative of the potential for other similar finds to remain within the Site.

- 4.98. The necessity for archaeological fieldwork to determine the application would be ascertained through discussions held with the Local Planning Authority Archaeologist. Archaeological fieldwork could comprise targeted trial trenches on areas of known interest, for example the former location of Pesfurlong Moss Farm, or a programme of boreholes/sampling suitable to collect deposits of a palaeoenvironmental potential.
- 4.99. Historic England GIS datasets have been searched for designated heritage assets within 1km of the Site boundary, discretion informed by professional judgement being applied to this search area accordingly. There are no designated heritage assets within the boundary of the Site or within the 1km search area. However, Grade II\* Listed Holcroft Hall is located 1.5km north of the Site.
- 4.100. With regard to impacts caused as a consequence of changes to a designated heritage asset's setting, there is a potential for impact to Grade II\* Holcroft Hall. This would need to be considered within any planning application. Whilst beyond the standard 1km search, it is considered pertinent to include this asset for further assessment due to its Grade II\* status. Appropriate screening to minimize any harm to the setting of Holcroft Hall may be included as embedded mitigation within the masterplan if necessary. Likewise building heights and building locations may be designed to be sympathetic to the setting of Holcroft Hall if this is necessary and possible.
- 4.101. A plan of the Key Receptors is included in **Appendix 6**.

## Construction

- 4.102. Construction working hours will be 07.00 hours to 18.00 hours Monday to Friday and 07.00 hours to 15.00 hours on Saturday with no working on Sundays or Bank Holidays, unless first agreed with the Local Planning Authority.

- 4.103. Initially the access will be constructed and the Site will be subject to earthworks to provide a development platform, Some cut and fill will be required as part of the work and at this stage it is expected that there will be a balance of materials with minimal import/export required. The top soil will be stripped and stockpiled, avoiding unnecessary double-handling, ready for re-used in landscaped areas. Drainage during construction will be carefully managed and controlled across the Site.
- 4.104. The buildings associated with the MSA (Facility Building and Fuel Filling Station) will be constructed ahead of the parking areas, although some of the hard surfaced areas will be developed concurrently with the buildings. The proposed car parking areas will accommodate the stock piling of soils for re-use on Site, the storage of materials and the Site compounds. The car parking areas will be constructed as these areas become available and, as such, there will be a phased release of these areas for construction.
- 4.105. Landscaping will be implemented across the Site towards the end of the construction phase. This will be the subject of a Landscape Management Plan both for planting and longer term management and maintenance.
- 4.106. Standard construction plant and machinery will be utilized during construction, which is expected to include (but not limited to) the following:
- long-reach excavators
  - bulldozers
  - tippers
  - front-end loaders
  - scrapers
  - hydraulic excavators
  - backhoe loaders
  - craneage
- 4.107. Construction access will be via the Site's access to the roundabout at Junction 11 of the M62 Motorway.
- 4.108. It is expected that a general cut and fill balance can be achieved across the development Site with as much of the material as possible (including topsoil) being retained and re-used within the Application Site. There are two options being considered for the peat which will either remain on-site or be exported off-site. This will be confirmed as the scheme and environmental assessment evolves. There will however be a need to import material for the engineering fill for the main access road.

- 4.109. There will be a strategy in place for managing imported and any exported material on-Site.
- 4.110. A Construction Management Plan (CMP) will be produced prior to construction to set out the details for managing the construction phases of the development. A Framework for this is to be included within the Environmental Statement and will set out the statement of intent for the CMP.
- 4.111. Extra commits with its trading partners (Construction Companies) to make arrangement for the employment and training of staff learning their trade or profession. Approximately 400 construction jobs will be created as part of the Site development.

## Operation

- 4.112. The MSA will be in 24 hour operation in accordance with the DFT Circular 02/2013 mandatory requirements. The Employees will work on a shift pattern to be determined by the Tenant Operators.
- 4.113. Extra commits with its trading partners (Tenant Operators) to make arrangement for the employment and training of staff learning their trade or profession. It is anticipated that the MSA will provide 250-300 (FTE) full time and part time jobs within the MSA.
- 4.114. The Site will be lit during the operational hours of darkness however, there will be careful consideration of areas to be lit, position of lighting, light distribution, with an appropriate control strategy for the operational lighting so that, when not required and subject to Health and Safety assessment, non-essential lighting is switched off at a pre-determined curfew time (suggested as 23:00 in accordance with ILP Guidance Notes) in order to further reduce the impact. A Lighting Assessment will be included as part of the Environmental Statement.
- 4.115. During operational phase, the main potential for the generation of both noise and emissions (associated with air quality) will likely be associated with road traffic accessing the Site. The main pollutants of interest are nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM<sub>10</sub>).
- 4.116. The proposed development will comprise a complementary range of restaurant, fast food, ancillary retail, leisure and other ancillary commercial uses, within respective Units of the Facilities Building, together with the Fuel Filling Station and Hotel that will generate commercial waste. The operational commercial wastes would comprise of non-hazardous

waste and small quantities of hazardous waste. Within the service yard for the Facilities Building and Hotel, there will be a Waste Compactor and appropriate separation of different waste materials for recycling.

- 4.117. There will be a system for monitoring the use of the Fuel Filling Station forecourt. The interceptors will be linked back to a control point to warn of any issues associated with spillage immediately.
- 4.118. Average annual water usage at other similar Extra MSA sites is in the region of 17,000m<sup>3</sup> and it is anticipated that the annual water usage at the Warrington MSA would be similar.
- 4.119. Benchmark data suggests that the main Facilities Building and Hotel within the development will consume a total of approximately 2,900MWh of energy every year, resulting in approximately 900tCO<sub>2</sub> of emissions. The energy hierarchy will be followed to reduce these figures as far as is practical. Energy use will be reduced through passive design and system efficiencies will be maximised to further reduce consumption. Low and zero carbon technologies are currently being investigated with a view to providing 10% of the building's energy needs if practical solutions are available. Overall, the development is targeting a significant reduction in energy consumption beyond what is required by national Building Regulations.

## Decommissioning

- 4.120. Decommissioning of the Proposed Development is not relevant to this project, given the proposed end use.

## Phasing

- 4.121. Following submission of an outline application, its determination and subsequent approval of reserved matters and condition discharge submissions, it is anticipated that development could commence on Site in Quarter 4 2021, taking 12 months or so, before the opening of the MSA in Q4 2022.

## 5. Need and Alternative Development Options

### Development Need

- 5.1. The need for the Proposed MSA Development on this Site can be categorised into needs in respect of safety on the strategic highway network, regeneration and economic. Together these needs justify the Site's redevelopment as an MSA. This will be detailed within the ES Part I report.
- 5.2. The strategic motorway network plays a key role in the movement of goods and people around the country and it is critical both to the performance of the economy now and also to help facilitate planned economic growth.
- 5.3. MSAs provide a key function in ensuring the safety and welfare of drivers and their passengers. Driver fatigue is a recognised cause of road accidents and the impact and costs of delay as a result of accidents on the motorway network can be significant and widespread.
- 5.4. Government policy set out in DfT Circular 02/2013 '*The Strategic Road Network and the Delivery of Sustainable Development*' advises that motorists should stop and take a break of at least 15 minutes every two hours. Commercial and public service drivers are also required to take statutory breaks and are subject to working time limits.
- 5.5. Motorway Service Areas perform a critical road safety function in providing opportunities and facilities for motorists and commercial drivers to take such breaks. The DfT Circular 02/2013 and Highways England recommend that MSAs are provided at least once every 28 miles in order to provide motorists with sufficient opportunity to stop and rest in appropriate locations and at regular intervals across the strategic highway network. This can typically be a maximum of 30 minutes driving time, but on busy and congested sections of the Motorway Network, this can equate to every 15 to 20 miles.
- 5.6. The M62 is one of the busiest and most important motorways with daily traffic flows of circa 126,000 vehicles in the vicinity of Junction 11 (24 hours AADT 2016). It is the west-east trans-Pennine Motorway in Northern England, connecting the two major ports of Liverpool and Hull, via intervening conurbations including Manchester, Warrington, St Helens and Leeds, and connects the two City Regions of Liverpool and Manchester.

- 5.7. The area around Greater Manchester, Warrington and St Helens accommodates a convergence of other significant Motorway and major road networks that not only connect the east to west; but also north to south; and to the orbital around Manchester. The presence of MSAs within this area is limited, not only in respect of distance, but also travel time, especially given the large volumes of traffic that utilise these routes throughout the day and night.
- 5.8. As shown on the Gap Analysis (Existing) Map below, there is a circa 35 mile gap between Charnock Richard and Birch Services on the M6/M62 route. The distance between Birch and Burtonwood Services on the M62/M60 route is 22 miles. This context, together with the congestion experienced on these routes means that, particularly at peak hours, distances significantly exceed the maximum 30 minutes travelling time separation requirement and the needs of motorists, commercial drivers and their passengers are not being adequately met within the area. Furthermore, there are no Services Areas on the M58, M66 or the M60 orbital around Manchester, meaning that drivers can be driving in excess of recommended travel time to find Services when travelling these routes and connecting into the M6 and M62 Motorways.

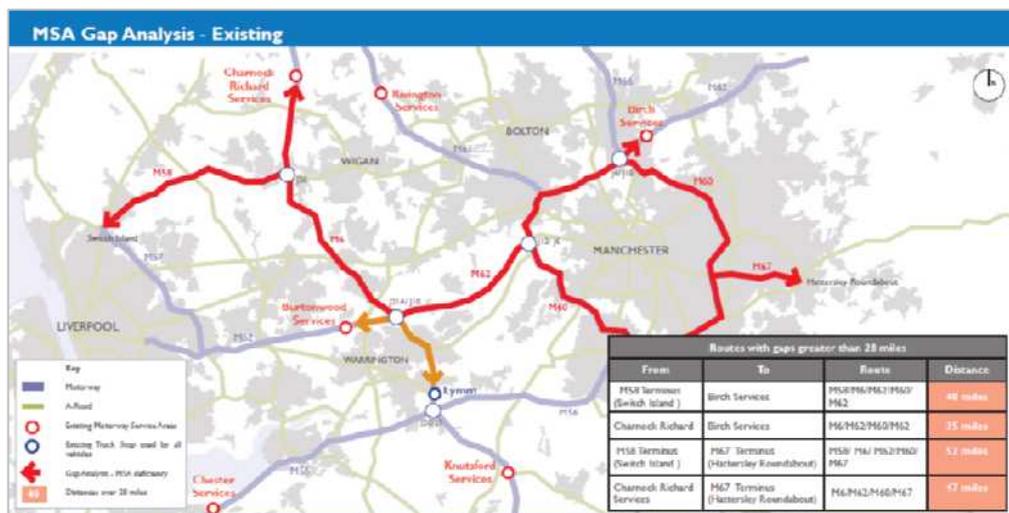


Figure 5.1: MSA Gap Analysis – Existing

- 5.9. There is therefore a clear, compelling and vital 'need' for a new MSA within the area to fill this gap in provision at this key strategic location on highway safety grounds.
- 5.10. Highways England recommends that MSAs are provided at intervals between which there is a maximum distance of 28 miles (up to 30 minutes travelling time).

5.11. There is a clear public road safety need for a new MSA within the area to fill this gap in provision at this key strategic location. To meet the 15 to 20 mile recommended distance between services within such a congested locality on the motorway network, Junction 11 of the M62 would be an optimal location to address the gap between existing services. This is shown on the Gap Analysis (Proposed) below:



Figure 5.2: MSA Gap Analysis – Proposed

5.12. Motorway Service Areas serve a distinct purpose and there are a number of unique locational requirements that need to be met when selecting an appropriate site for such a use. These include:

- A location adjacent to the Motorway Network;
- A site of sufficient size to accommodate a Fuel Filling Station, Main Facility Building (containing a range of food and ancillary retail outlets), a budget hotel and sufficient size of parking facilities for all categories of vehicles (to road safety design and specific Motorway traffic flow requirements).
- Appropriate, convenient and safe access from and to the Motorway.

5.13. Although within Circular 02/13, Highways England gives preference to MSAs in on-line locations (between junctions), in circumstances where this cannot be achieved due to planning, safety, operational or environmental constraints, a site sharing a common boundary with the highway at a junction with the strategic road network is preferred to the absence of facilities.

- 5.14. Following a rigorous site search process, Extra is not aware of any potential viable on-line sites between junctions in this area. Junction 11 is the only suitable location for a new MSA. It is central to the area of deficiency and development land is available within the north eastern quadrant of the junction. This need will be full justified and detailed through the outline planning application and ES.

## Alternative Development Options

- 5.15. Paragraph 2, Schedule 4 of the EIA Regulations states the need for inclusion of the following details:

*“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”*

- 5.16. A series of alternatives associated with scheme design have been considered as part of the evolution of the Proposed Development. These will be documented fully within the ES, identifying how environmental considerations have influenced the final Proposed Development. These will include consideration of the following matters:

- Alternative Sites – An Alternatives Site Assessment will be appended to the ES to show an assessment of any potential locations that could accommodate an MSA within a specified area of ‘need’ for an MSA.
- Do nothing – leave the Site as it is, undeveloped and therefore not address the highway safety need in this area.
- Preferred Option – Development of the Site with a ‘New Concept’ MSA.
- Scheme Evolution – the ES will include details of the scheme evolution, the alternatives considered and the environmental considerations that have led to determining the final Proposed Development. This will include the consideration of development design, technology, location, size and scale as studied by the developer. This will be detailed in each of the ES Technical Papers within Part 2 of the ES, with an overarching summary provided within the Part 1 Report of the ES.

## 6. Interaction of Effects and Cumulative Impact

- 6.1. In respect of the assessment of cumulative effects, Schedule 4 of the EIA Regulations states that an Environmental Statement must include a description of the likely significant effects of the development on the environment (those identified in the Regulations as population and human health; biodiversity; land, soil, water and climate; and material assets, cultural heritage and the landscape), resulting from *'the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.'*
- 6.2. The European Commission identifies cumulative impacts as *'impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project.'*
- 6.3. In respect of the assessment of the interaction of effects, Regulation 4 (2) of the EIA Regulations requires a description and assessment in an appropriate manner, of the direct and indirect significant effects of the proposed development on the interaction of the factors assessed within the ES (i.e. population and human health; biodiversity; land, soil, water and climate; and material assets, cultural heritage and the landscape).
- 6.4. For the purposes of this ES we define the cumulative and the interaction of effects as:
- 'Those that result from additive impacts (cumulative) caused by other existing and/or approved projects together with the project itself and the synergistic effects (in-combination) which arise from the reaction between impacts of the project on different aspects of the environment.'***
- 6.5. The additive impacts and their effects and the synergistic effects are addressed in turn below.

### Additive Impacts (Cumulative Impact and their Effects)

- 6.6. A cumulative impact assessment will be included within the ES. Each technical area will undertake a cumulative impact assessment, relevant to that technical area and this will be detailed in each of the ES Technical Papers within Part 2 of the ES. An overarching summary and assessment will be provided within the Part I Report of the ES.

6.7. The cumulative projects will be agreed with the Local Authority prior to undertaking the cumulative assessment.

### **Synergistic Effects (In-Combination / Interaction of Effects)**

6.8. There are a number of interactions of effects that will need to be considered for the Proposed Development, both at construction and operational phases i.e. the interaction between different effects on one receptor. Each individual effect may be small but, taken together, in-combination, could be deemed significant, and as such, this will need to be identified and assessed as part of the environmental assessment work.

6.9. The different types of receptors are categorised as follows:

- Humans- (a) long term human receptors- residents, business users; and (b) transient human receptors, including pedestrians, cyclists, drivers and public transport users, construction workers.
- Property- residencies and business uses.
- Ecological- habitats, including protected sites or species.
- Historic Environment– heritage assets
- Landscape - character areas
- Controlled waters- surface waters like water courses or groundwater (aquifers).
- The economy
- Local waste infrastructure i.e. landfills, recycle and recovery facilities

6.10. Details of the likely interactions of effects will be considered further through the environmental assessment work and detailed within the ES Part I Report.

## 7. Ground Conditions and Contamination

### Introduction

- 7.1. This technical scoping chapter has been prepared by Wardell Armstrong LLP (WA). The chapter considers the scope of the likely impacts upon geology and ground conditions resulting from the development of this site.
- 7.2. The site has been subject to a Phase I Environmental Assessment, a preliminary site investigation (included at Appendices 8 and 9) and a site walkover survey.
- 7.3. Wardell Armstrong will be completing the Geology and Ground Conditions Technical paper within the Environmental Statement for the development.
- 7.4. In order to assess the significance of potential impacts, the following key items of legislation have been considered:
- Part IIA of the Environmental Protection Act, 1990
  - The Groundwater (England and Wales) Regulations, 2009
  - National Planning Policy Framework published in July 2018
  - National Planning Practice Guidance (Land affected by Contamination), published in March 2014
- 7.5. Technical reports will be submitted as appendices to the ES and will address the suitability of the site for the proposed development and any risk to human health receptors (construction workers and future occupiers).

### Baseline Information

#### Sources of Information

- 7.6. The history of the site and its immediate vicinity has been investigated by consultation with a range of archive sources and statutory bodies. The environmental data is primarily based on

a Landmark Envirocheck report dated 26<sup>th</sup> November 2018. The following reports have been completed for the site and provide information for the baseline assessment:

- Phase I Environmental Assessment, Wardell Armstrong LLP, Report Reference SHI 1739-Rep-004 November 2018 (**Appendix 8**); and
- Preliminary Site Investigation, Wardell Armstrong LLP. Report Reference SHI 1739-Rep-002 August 2018 (**Appendix 9**).

### **National Policy**

7.7. National Policy is set out within the National Planning Policy Framework (NPPF 2018). Relevant Paragraphs from the Ground Conditions and Pollution section are as follows:

*178. Planning policies and decisions should ensure that:*

*a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);*

*b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and*

*c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.*

*179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.*

7.8. Paragraph 178b within the NPPF (2018) makes reference to the Environmental Protection Act (EPA) 1990 Part IIA. Part IIA was introduced into the EPA by the Environment Act 1995 to help deal with the substantial legacy of contaminated land. Part IIA, its accompanying regulations and Statutory Guidance contained in DETR Circular 02/2000 Contaminated Land came into force in England on 1<sup>st</sup> April 2000. Part IIA included the first statutory definition of “contaminated land” and conferred new responsibilities and powers on local authorities and the Environment Agency to identify contaminated land and ensure that it is dealt with. Defra

published updated guidance in April 2012 (EPA 1990: Part 2A Contaminated Land Statutory Guidance).

7.9. Within Part IIA, contaminated land is defined as “...any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on, or under the land that:

- a) *significant harm is being caused or there is a significant possibility of such harm being caused; or*
- b) *significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused.”*

7.10. Part IIA addresses “unacceptable risk”. The approach is based upon the principles of risk assessment, including the concept of a contaminant, a receptor and a pathway, which, if combined, form a pollutant linkage. These, and other key terms, are defined in Part IIA and in the statutory guidance (DETR Circular 02/2000). A significant pollutant linkage forms the basis of a formal determination that land is contaminated land.

7.11. For each receptor, a description of the harm that is to be regarded as significant harm for the purposes of the regime is contained in the statutory guidance. Receptors include human beings, ecological systems in certain protected locations (e.g. Sites of Special Scientific Interest), property such as crops, livestock, domesticated animals, animals maintained for sporting purposes and buildings and their services. Significant harm includes, in appropriate cases, death, disease, serious injury, specified ecological system effects, substantial diminution of crop yield and structural building failure.

7.12. National Planning Practice Guidance (NPPG) was published in March 2014 and includes guidance for land affected by contamination and land stability. The NPPG documents currently refer to paragraphs within the previous version of the NPPF (2012) and will be updated to refer to the NPPF 2018 in due course.

### **Local Policy**

7.13. Local Policy is set out within the *Local Plan Core Strategy* (Warrington Borough Council, Adopted July 2014). The following policies are appropriate to Ground Conditions:

## Policy QE 5

### **Biodiversity and Geodiversity**

The Council will work with partners to protect and where possible enhance sites of recognised nature and geological value. These efforts will be guided by the principles set out in National Planning Policy and those which underpin the strategic approach to the care and management of the borough's Green Infrastructure in its widest sense.

Sites and areas recognised for their nature and geological value are shown on the Policies Map and include:

- European Sites of International Importance
- Sites of Special Scientific Interest
- Regionally Important Geological Sites
- Local Nature Reserves
- Local Wildlife Sites
- Wildlife Corridors

The specific sites covered by the above designations at the time of publication are detailed in Appendix 3.

Proposals for development which may affect **European Sites of International Importance** will be subject to the most rigorous examination in accordance with the Habitats Directive. Development or land use change not directly connected with or necessary to the management of the site and which is likely to have significant effects on the site (either individually or in combination with other plans or projects) and which would affect the integrity of the site, will not be permitted unless the Council is satisfied that;

- there is no alternative solution; and
- there are imperative reasons of over-riding public interest for the development or land use change.

Proposals for development in or likely to affect **Sites of Special Scientific Interest (SSSI)** will be subject to special scrutiny. Where such development may have an adverse effect, directly or indirectly, on the SSSI it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard the national network of such sites.

Proposals for development likely to have an adverse effect on **regionally and locally designated sites** will not be permitted unless it can be clearly demonstrated that there are reasons for the development which outweigh the need to safeguard the substantive nature conservation value of the site or feature.

Proposals for development which may adversely affect the integrity or continuity of **UK Key habitats or other habitats of local importance**, or adversely affect **EU Protected Species, UK Priority Species or other species of local importance**, or which are the subject of **Local Biodiversity Action Plans** will only be permitted if it can be shown that the reasons for the development clearly outweigh the need to retain the habitats or species affected and that mitigating measures can be provided which would reinstate the habitats or provide equally viable alternative refuge sites for the species affected.

All development proposals affecting protected sites, wildlife corridors, key habitats or priority species (as identified in Local Biodiversity Action Plans) should be accompanied by information proportionate to their nature conservation value including;

- a site survey where necessary to identify features of nature and geological conservation importance; an assessment of the likely impacts of the proposed development proposals for the protection and management of features identified for retention;
- an assessment of whether the reasons for the development clearly outweigh the nature conservation value of the site, area or species; and
- proposals for compensating for features damaged or destroyed during the development process

Where development is permitted, the Council will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation interest and/or to provide appropriate compensatory measures.

### Policy QE 6

#### **Environment and Amenity Protection**

The Council, in consultation with other Agencies, will only support development which would not lead to an adverse impact on the environment or amenity of future occupiers or those currently occupying adjoining or nearby properties, or does not have an unacceptable impact on the surrounding area. The Council will take into consideration the following:

- The integrity and continuity of tidal and fluvial flood defences;
- The quality of water bodies, including canals, rivers, ponds and lakes;
- Groundwater resources in terms of their quantity, quality and the ecological features they support;
- Land quality;
- Air quality;
- Noise and vibration levels and times when such disturbances are likely to occur;
- Levels of light pollution and impacts on the night sky;
- Levels of odours, fumes, dust, litter accumulation and refuse collection / storage.
- The need to respect the living conditions of existing neighbouring residential occupiers and future occupiers of new housing schemes in relation to overlooking/loss of privacy, outlook, sunlight, daylight, overshadowing, noise and disturbance;
- The effect and timing of traffic movement to, from and within the site and car parking including impacts on highway safety;
- The ability and the effect of using permitted development rights to change use within the same Use Class (as set out in the in the Town and Country Planning (General Permitted Development Order) without the need to obtain planning consent.

Proposals may be required to submit detailed assessments in relation to any of the above criteria to the Council for approval.

Where development is permitted which may have an impact on such considerations, the Council will consider the use of conditions or planning obligations to ensure any appropriate mitigation or compensatory measures are secured.

Development proposals on land that is (or is suspected to be) affected by contamination or ground instability or has a sensitive end use must include an assessment of the extent of the issues and any possible risks. Development will only be permitted where the land is, or is made, suitable for the proposed use.

Additional guidance to support the implementation of this policy is provided in the Design and Construction and Environmental Protection Supplementary Planning Documents.

7.14. Additionally, the *Environmental Protection: Supplementary Planning Document* (Warrington Borough Council, May 2013) has been reviewed and provides information to developers to assist with planning applications. The flowchart (fig 4.1) set out in Section 4.3 sets out the “idealised Planning and Contaminated Land Procedure” and identifies that a Preliminary Risk Assessment should be carried out and submitted where a site is known or suspected to be affected by contamination. For this site the Preliminary Risk Assessment is deemed to have been carried out within the Phase I Environmental Assessment and Preliminary Site Investigation Reports which will be included with the ES (also attached at Appendices 8 and 9).

#### Site History

7.15. A review of site history is carried out within the Phase I which is included at **Appendix 8**. A summary is presented below:

Summary of Land Use		
Date	Site Land Use	Adjacent Land Use
1849 -1870s	The site is shown as part of Pestfurlong Moss and is undeveloped with a number of tracks crossing it.	The area is generally undeveloped with just a few farms shown in the vicinity.
1880 -1890s	Pestfurlong Moss Farm is shown in the central area and a track connects to Moss Side Farm to the west of the site. A pond is shown in the north west corner of the site.	Holcroft Firs (Woodland) and Holcroft Moss are shown bordering the site to the east. A railway line (Wigan Junction Branch) is seen c. 400m north east of the site.
1900 -1910s	No significant changes.	No significant changes.
1920-1930s	Some of the “tracks” previously identified are identified to have flow and are therefore likely to be drains/small watercourses. Some of the farm buildings also appear to have been demolished.	Holcroft Moss has a series of drains and tracks cut through and is likely to be subject to peat cutting.
1940-1950s	No significant changes.	Tramways are shown through Holcroft Moss and the woodland area of Holcroft Firs has reduced in size. The Royal Ordnance Factory (ROF) Risley is seen c. 300m south west of the site.
1960-1970s	The farm buildings are no longer shown. Three new buildings are shown in the north of the site – their use is not evident. The M62 Motorway and Junction 11 are constructed on plans dated 1975.	Holcroft Firs is no longer labelled. Drains are indicated across Holcroft Moss.

Summary of Land Use		
Date	Site Land Use	Adjacent Land Use
1980-1990s	The pond in the north west corner is no longer evident and is labelled as Scrub. Drains are indicated in the west of the site and along the northern and eastern perimeters. Issues are labelled in the south. An access road is constructed from J11 onto the southwest of site in late 1990's.	The railway line is shown as dismantled. ROF Risley is redeveloped as residential housing. Moss Side Farm to the west is expanded and a large spoil tip is seen to the west of this.
2000s	Only one building is now shown on site in the north and a fenced area is shown adjacent to it.	No significant changes.
Present day	The site comprises agricultural fields with some rough grass land. An agricultural building is present in the north of the site	The area around the site is largely agricultural with the M62 motorway located to the south and a landfill site to the west.

Table 7.1: Summary of Land Use

### Mining History

7.16. Research of topographical, geological and other archive mining records has indicated evidence of surface workings in the vicinity of the site. The Landmark Envirocheck report records six former opencast sites within 1km of the site. The commodities worked in these areas were Peat (two locations), Sand (two locations) and Common Clay and Shale (two locations). The closest of these was located c. 470m west of the site at Silver Lane (Common Clay and Shale). All six opencast sites have now ceased operation.

7.17. Published geological information indicates that this site is not in an area of underground mining. Therefore, the site is considered unlikely to be subject to any ground instability from this source and no mine entries should be present

### Geological setting

7.18. The assessment of the geology of the site is based on the published geological mapping sheet (Sheet No 97, Runcorn, Solid and Drift Edition, 1:50,000 scale) supplemented by the Preliminary Site Investigation (SH11739-Rep 004, September 2018), topographical plans and site visit. A summary of relevant geological information is provided below:

Summary of Relevant Geological Data	
Strata	Description
Made ground.	Made ground of an unknown nature, thickness and extent may be present on site associated with the demolition of former buildings however none was observed during the preliminary site investigation.

Summary of Relevant Geological Data	
Strata	Description
Natural superfcials.	Peat was identified in varying thicknesses in the eastern part of the site (0.30m to 1.40m) with increasing thickness toward the south east. The western part of the site is shown to be underlain by Till deposits. These were observed in the north west of the site to comprise cohesive deposits comprising sandy clay with a minor component of fine to coarse gravel with a generally rounded angularity. Lithologies were variable from igneous granite to sedimentary mudstone, shale and red sandstone
Solid strata.	Helsby Sandstone Formation. Not observed during preliminary Sl.
Landslides.	Low risk
Ground stability.	British Geological Information Services indicate a high potential for compressible ground stability hazards on site.

Table 7.2: Summary of Relevant Geological Data

### Environmental Setting

7.19. No contaminated land entries or notices are identified within 1km of the site.

7.20. The Landmark Envirocheck report identifies that the western part of the site is within the boundary of Risley Landfill operated by Biffa Ltd. This landfill has been subject to a Partial Permit surrender by consolidated notice (ref: EPR/BV78771R/S009) and the area within the boundary of the Site is now excluded. The surrender was effective from 7<sup>th</sup> August 2018 and the documents are included within the Phase I Environmental Assessment report at **Appendix 8**.

### Phase I Environmental Assessment Conceptual Site Model (CSM)

7.21. The following Conceptual Site Model was developed within the Phase I Environmental Assessment (**Appendix 8**) and considers the potential sources and receptors at the site as well as any pathway linkages. Please note that the Phase I report considers a number of receptors (i.e. controlled waters and flora and fauna) that will be considered in other technical papers within the ES (i.e. Water Resources and Ecology and Nature Conservation).

Conceptual Site Model		
Source (Contaminant)	Pathway	Receptor
No. 1 Made ground potentially present on site (heavy and phytotoxic metals, PAH, asbestos).	1. Inhalation. 2. Dermal contact. 3. Ingestion. 4. Surface runoff. 5. Groundwater migration. 6. Direct contact (aggressive attack).	2. Future occupiers. 3. Construction workers. 4. Groundwater. 5. Surface water. 6. Subsurface building materials [sulphur] and plastic service pipes [phenol]. 7. Flora and Fauna.
No. 2 Historic building material and made ground (asbestos).	1. Disturbance and inhalation.	2. Future occupiers. 3. Construction workers.
No. 3 Ground gas – Peat (gas)	1. Inhalation 7. Gas migration	2. Future occupiers. 3. Construction workers. 7. Flora and Fauna.
No. 4 Adjacent Landfill (leachate, gas)	1. Inhalation 2. Dermal contact. 3. Ingestion. 4. Surface runoff. 5. Groundwater migration. 6. Direct contact (aggressive attack). 7. Gas migration	2. Future occupiers. 3. Construction workers. 4. Groundwater. 5. Surface water. 6. Subsurface building materials [sulphur] and plastic service pipes [phenol]. 7. Flora and Fauna.

Table 7.3: Conceptual Site Model

## Potential Environmental Impacts

### Construction Phase

7.22. The Ground Conditions technical paper will consider the following potential impacts arising during the construction phase of the development:

1. Introduction of additional contamination into soil during construction phase as a result of accidental spillages i.e. Fuels. Please note that any impacts on controlled waters will be assessed within the Water Environment Chapter.
2. Impacts on site and/or adjacent properties or infrastructure (including HP Gas Main) from unstable ground, and/or slopes or excavations during construction.
3. Impacts on construction workers as a result of any ground gas on site.

7.23. At present it is not known how the Peat deposits will be treated to enable development. This will be assessed through more detailed design work prior to submission of the Environmental Statement. At present it is considered that two options are likely:

1. Option 1: Excavation. The Peat would be removed where required within the site boundary and either re-used on site or reused off-site (through most appropriate means).
2. Option 2: Stabilisation. The peat would remain in-situ but be subject to an appropriate stabilisation method.

7.24. The treatment of the Peat by either of the above methods would potentially result in impacts to Ground Conditions, Water Environment, Soils and Ecology. Impacts would be assessed as appropriate in the relevant technical paper. Where assessed, the technical papers will cross reference to each other to ensure that the assessment is robust. For Ground Conditions the impacts may potentially include, but may not be limited to, the following (depending on the option selected);

- Stability of the remaining ground in respect of the proposed development, adjacent land and the HP gas main present on site;
- Potential changes to ground gas migration pathways;
- Potential changes to ground chemistry; and
- Potential changes to site levels and requirements for import of material to create development platform.

7.25. The following impacts have been considered and are not considered likely to be significant. These impacts will not be included in the technical paper unless further evidence arises during the design process which indicates that they should be considered.

1. Potential permanent loss of geological strata through construction/excavation. It is considered that there will be minimal or no loss of Glacial Till or Helsby Sandstone for the Proposed Development. Where earthworks occurs to adjust the development platform levels material will be retained on site wherever possible. It

is considered that any impact will not be significant. Any loss of Peat will be covered within the technical paper for Soils and Agricultural Land Classification.

2. Impacts on construction workers as a result of excavations into contaminated soils. It is possible that made ground may be present on the Site however this was not observed during the preliminary site investigation. The site history demonstrates agricultural use since before 1849. It is not anticipated that significant contamination will be present on site. Construction would be carried out to best practice and PPE employed by construction workers which will be protective against any minor contamination that might be present.

### **Operational Phase**

7.26. The Ground Conditions technical paper will consider the following potential impacts arising during the operational phase of the development:

1. Potential impact on soil/ground as a result of leakage from proposed fuel tanks and associated pipeworks or accidental spillage/leakage from vehicles (site users and delivery vehicles) during the operational phase. Please note that any impacts on controlled waters will be assessed within the Water Environment Chapter.
2. Impacts both on site and on adjacent sites as a result of unstable ground or instability created from Peat treatment or potential changes to topography. This includes any impacts to infrastructure such as the HP gas main.
3. Impacts on future users of the site as a result of ground gas.

7.27. Potential impacts on the proposed building and underground infrastructure (pipework, tanks etc.) as a result of the presence of contaminated soils will not be considered in the technical paper. Based on the site history and observations during the preliminary site investigation, it is not considered that significant contamination will be present on site. The risk to future buildings and any associated new underground infrastructure (such as pipework, tanks etc.) is considered to be low and therefore any impact not significant. Geotechnical investigation will also be completed prior to construction to inform detailed design.

## Methodology for the Environmental Statement

### Receptors

7.28. Ground Conditions receptors are identified in accordance with the following table:

Designation	Receptors
International	<p>An Internationally designated geological or geomorphological site e.g SSSI or Geopark</p> <p>There are not considered to be any receptors that will be affected at this level of sensitivity. Holcroft Moss and Risley Moss are European Sites of International importance but are not designated for Geology.</p>
National	<p>A nationally designated geological or geomorphological site e.g SSSI Presence of economically important mineral which is valuable as a national resource.</p> <p>There are not considered to be any geological receptors that will be affected at this level of sensitivity. Holcroft Moss and Risley Moss are SSSIs but are not designated for Geology.</p> <p>An HP gas main is present on the eastern site boundary and is part of the national transmission network. Ground stability will be considered in respect of this receptor.</p>
Regional	<p>Geological features of designated regional importance, e.g Regionally Important Geological Sites (RIGS) or sites within Geological Conservation Review (GCR). Presence of economically important minerals of regional value.</p> <p>There are not considered to be any receptors that will be affected at this level of sensitivity. Three RIGS are identified within Warrington but none are located in proximity to the site.</p>
County	Geological receptors are not identified at this level.
Borough/District	Geological receptors are not identified at this level.
Local/Neighbourhood	<p>Non-statutory sites that have been identified by local geoconservation groups as being of importance. Geological strata and features that are not protected.</p> <p>There are no geological features in the vicinity of the site that are protected or identified as locally important.</p> <p>The Peat and other geological strata present beneath the site are considered to be at local/neighbourhood scale. The Peat is buried under agricultural use and not identified as a notable geological unit or site in this location.</p> <p>Human Health Receptors comprise construction workers and future users of the site.</p>

Table 7.4: Receptors

7.29. A Receptor Plan for Ground Conditions is included at **Appendix 6**.

### Environmental Impacts

Magnitude	Environmental Impact
Substantial	Total loss of, or alteration to, the baseline resource such that post development characteristics or quality would be fundamentally and irreversibly changed  Significant improvement to the baseline resource, regeneration, restoration and enhancement on an extensive scale.
High	Significant loss of, or alteration to, the baseline resource such that post development characteristics or quality would be significantly changed  Significant improvement to the baseline resource, regeneration, restoration and enhancement on a large scale.
Moderate	Loss of, or alteration to, the baseline resource such that post development characteristics or quality would be partially changed Improvement to the baseline resource; regeneration, restoration and enhancement.
Minor	Small changes to the baseline resource, which are detectable but the underlying characteristics or quality of the baseline situation would be similar to pre-development conditions Minor improvement to the baseline resource; regeneration, restoration and enhancement on a small scale
Negligible	A very slight negative change to the baseline conditions, which is barely distinguishable, and approximates to the 'no change' situation A very slight positive change to the baseline conditions, which is barely distinguishable and approximates to the 'no change' situation.
Neutral	No change, either positive or negative, to baseline conditions.

Table 7.5: Environmental Impacts

### Impact Prediction Confidence

7.30. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 7.6: Confidence Levels

## Significance of Effects

7.31. The following sections provide a summary of the likely significance of the impacts that may result from the proposed development of the site. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive ES technical paper and reported in the ES Technical Paper.

### Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
(1) Introduction of additional contamination into soil, during construction phase as a result of accidental spillages ie. fuels.	Local	Minor/Moderate Negative	Minor Adverse	High
(2) Impacts on site and/or adjacent properties and infrastructure (including HP gas main) from unstable ground, slopes and/or excavations during construction.	Local and National	Minor/Moderate Negative and High Negative	Minor Adverse and Substantial Adverse	Low
(3) Impacts on construction workers as a result of contamination and ground gas on site.	Local	Minor/Moderate Negative	Minor Adverse	High
(4) Impacts on the site, surrounding area and/or construction workers as a result of the treatment of peat on site. Impacts dependent on method selected	Local and National	Unknown at present	Unknown at present	Low

Table 7.7: Significance of Impact – Construction

7.32. The impacts relating to the treatment of the peat are currently unknown as it will depend on the method of treatment. Impacts will be determined as the scheme evolves and will be fully assessed within the ES Technical Paper.

7.33. A low confidence is attributed to the stability related impacts as information on the Peat is currently limited. A Peat Survey will be carried out as part of the Agricultural Land and Soils work and this will inform this assessment within the ES Technical Paper.

## Operational Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
(1) Potential impact on soil/ground as a result of leakage from proposed fuel tanks and associated pipework or accidental spillage/leakage from vehicles (site users and delivery vehicles) during the operational phase.	Local	Minor/Moderate Negative	Minor Adverse	High
(2) Impacts both on site and on adjacent sites (including HP gas main) as a result of unstable ground or instability created from Peat Treatment or potential changes to topography	Local and National	Unknown at present	Unknown at present	Low
(3) Impacts on future users of the site as a result of ground gas.	Local	Minor/Moderate Negative	Minor Adverse	High

Table 7.8: Significance of Impact – Operation

7.34. The impacts relating to the treatment of the peat are currently unknown as it will depend on the method of treatment. Impacts will be determined as the scheme evolves and will be fully assessed within the ES Technical Paper.

## Mitigation

7.35. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

7.36. Where the mitigation can be incorporated into design during earlier stages of the project, i.e. to prevent ground stability issues with regraded areas and slopes, this will be identified and described within the ES.

7.37. Mitigation measures to prevent and limit impacts from pollution i.e. from fuel/materials spills in both construction and operational phases will comprise good practice construction

methods as well as the incorporation of sediment traps, fuel interceptors, fuel bunding and by the provision of spill kits etc.,

- 7.38. Mitigation to prevent any impact for ground gas is likely to be through incorporation of appropriate gas protection measures within buildings on site.

### **Further Work Required**

- 7.39. At this stage for contamination purposes it is considered that no further site investigation will be required prior to submission of the ES. It is anticipated that further site investigation would be carried out pre-development in order to inform detailed design. This investigation would include a gas assessment and provide recommendations for the level of gas protection required.
- 7.40. A Peat survey will be carried out prior to submission of the ES. This will inform the assessments in a number of Chapters (Water Resources, Agricultural Land and Soils, and Ecology and Nature Conservation) and will also provide information to determine the method of treatment for the peat and hence the impacts which will require assessment in the Geology and Ground Conditions ES chapter.

### **Summary**

- 7.41. An assessment will be undertaken to consider the potential ground conditions impacts associated with the construction and operational phases of the proposed development.
- 7.42. During the construction and operational phases, the main potential impacts are associated with additional contamination from spillage and leakage, impacts associated with ground gas and impacts associated with ground stability particularly in respect of the HP gas main. There are likely to be further impacts associated with treatment of the Peat but these will depend on the methodology used.
- 7.43. Impacts to human health from contamination and demonstration of the sites suitability for the proposed use will be addressed within the technical appendices to the ES; the Phase I Environmental Assessment and the Preliminary Site Investigation Report.

7.44. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of Ground Conditions.

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>5. Introduction of contamination into ground through spillage/leakage during construction</li> <li>6. Impacts associated with unstable ground, slopes or excavations</li> <li>7. Impacts on construction workers from ground gas</li> <li>8. Impacts associated with the treatment of the Peat</li> </ol> <p>Operation:</p> <ol style="list-style-type: none"> <li>4. Impact on ground from leakage from proposed fuel tanks and pipework or accidental spillage from vehicles</li> <li>5. Impact on site/adjacent sites from unstable ground or instability from treatment of Peat or changes to topography</li> <li>6. Impacts on future Users from ground gas.</li> </ol>	<p>The main risks to the site relate to introduction of contamination in both construction and operation; ground gas generated from either Peat or the offsite landfill and stability associated with the Peat or and changes to current site topography. Impacts associated with these risks are scoped in.</p>

### Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ol style="list-style-type: none"> <li>3. Permanent loss of geological strata (Glacial Till or Helsby Sandstone)</li> <li>4. Impact on construction workers from excavation into contaminated soils.</li> </ol> <p>Operation:</p> <ol style="list-style-type: none"> <li>2. Impact on underground infrastructure/buildings from contaminated soils</li> </ol>	<p>There is unlikely to be significant loss of geological strata. Baseline data indicates that contamination is likely to be minimal and the risk to construction worker and buildings/underground infrastructure is low and as such is not likely to be significant.</p>

## 8. Traffic and Transportation

### Introduction

- 8.1. This section of the ES Scoping study has been prepared by i-Transport LLP and will examine the environmental impact of the traffic that will be attracted by the proposed development. The MSA development proposals will attract traffic flows that could have potential impacts on the highway network surrounding the site. These impacts may relate to driver delays, delays to public transport users, pedestrian delay and amenity, fear and intimidation, severance and road safety.
- 8.2. A full Transport Assessment (TA) and staff Travel Plan (TP) will be produced to accompany the planning application. The TA will form an Appendix to the ES.
- 8.3. The assessments presented in the final ES will be based on a comprehensive series of independent traffic surveys conducted at key points on Birchwood Way (A574) and along the M62, including at Junction 11 during November 2018. Details of the baseline data to be used are set out below.
- 8.4. Initial discussions with WBC have been held on 26 November 2018 regarding the needs case for the MSA and the Alternative Sites Assessment.

### Baseline Information

#### Planning Policy and Guidance

- 8.5. The following planning policy documents and policies will be referred to and considered in the traffic and transportation section of the ES and the TA:-

- **National Planning Policy Framework 2018 (The Framework)**

*“102. Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

- a) *The potential impacts of development on transport networks can be addressed;*
- b) *Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) *Opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) *The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding mitigating any adverse effects and for net environmental gains; and*
- e) *Patterns of movement, streets, parking and other transport considerations are integral to the design schemes and contribute to making high quality places.*

105. *If setting local parking standards for residential and non-residential development, policies should take into account:*

- a) *The accessibility of the development;*
- b) *The type, mix and use of development;*
- c) *The availability of and opportunities for public transport;*
- d) *Local car ownership levels; and*
- e) *The need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.*

106. *Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimizing the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities*

*should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.*

*107. Planning policies and decisions should recognize the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance. Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use.*

*108. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- a) Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) Safe suitable access to the site can be achieved for all users; and*
- c) Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*

*109. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*

*110. Within this context, applications for development should:*

- a) Give priority first to pedestrian and cycle movements, both within the scheme and neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- b) Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*

- c) *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- d) *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and convenient locations.*

*111. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”*

- **DfT Circular 02/2013 The Strategic Road Network and the Delivery of Sustainable Development.**

*“9. Development proposals are likely to be acceptable if they can be accommodated within the existing capacity of a section (link or junction) of the strategic road network, or they do not increase demand for use of a section that is already operating at over-capacity levels, taking account of any travel plan, traffic management and/or capacity enhancement measures that may be agreed. However, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.*

*11. Local authorities and developers will be required to ensure that their proposals comply in all respects with design standards. Where there would be physical changes to the network, schemes must be submitted to road safety, environmental, and non-motorised user audit<sup>4</sup> procedures, as well as any other assessment appropriate to the proposed development. The Design Manual for Roads and Bridges sets out details of the Secretary of State’s requirements for access, design, and audit, with which proposals must conform.*

*25. The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater. This is known as the review period.*

- 26. *The Highways Agency expects the promoters of development to put forward initiatives that manage down the traffic impact of proposals to support the promotion of sustainable transport and the development of accessible sites. This is particularly necessary where the potential impact is on sections of the strategic road network that could experience capacity problems in the short or medium term.*
- 27. *Where the overall forecast demand at the time of opening of the development can be accommodated by the existing infrastructure, further capacity mitigation will not be sought.*
- 34. *Where insufficient capacity exists to provide for overall forecast demand at the time of opening, the impact of the development will be mitigated to ensure that at that time, the strategic road network is able to accommodate existing and development generated traffic. Any associated mitigation works should be appropriate to the overall connectivity and capacity of any affected part of the strategic road network.”*

- **DfT Circular 02/2013 - Annex B: Roadside Facilities for Road Users on Motorways and All Purpose Trunk Roads in England**

- “B2. *This policy applies to all existing signed roadside facilities, and to all proposed signed roadside facilities. It should be noted that the operation of all signed roadside facilities will be the subject of a legal agreement between the Secretary of State and the operator.*
- B4. *Motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Government advice is that motorists should stop and take a break of at least 15 minutes every two hours. Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements.*
- B5. *The network of service areas on the strategic road network has been developed on the premise that opportunities to stop are provided at intervals of approximately half an hour. However, the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer.*

- B6. *The Highways Agency therefore recommends that the maximum distance between motorway service areas should be no more than 28 miles. The distance between services can be shorter, but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation.*
- B7. *Speed limits on the strategic road network vary and therefore, applying the same principles, the maximum distance between signed services on trunk roads should be the equivalent of 30 minutes driving time. This distance can also be shorter, also subject to compliance with design requirements set out in the Design Manual for Roads and Bridges.*
- B8. *The distances set out above are considered appropriate for to all parts of the strategic road network and to be in the interests and for the benefit of all road users regardless of traffic flows or route choice. In determining applications for new or improved sites, local planning authorities should not need to consider the merits of the spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their specific planning merits.*
- B9. *It is for the private sector to promote and operate service areas that meet the needs of the travelling public. New and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation, which together set the framework within which local planning authorities would consider the planning proposals for such developments.*
- B11. *In circumstances where there is potential for these to become destinations in their own right, the Highways Agency will only support proposals for or within service areas and other roadside facilities if it can be shown that there would be no overall increase in trip mileage, and always provided that there would be no significantly adverse impact on the safety and operation of the strategic road network.*
- B12. *At all roadside facilities, it is particularly important to avoid adverse impacts upon the effective operation of the strategic road network, such as increasing the risk of congestion or of vehicles slowing or stopping on the main carriageway. Proposals for*

*new roadside facilities will be subject to road safety audit procedures to be undertaken in accordance with the requirements of the Design Manual for Roads and Bridges.*

*B13. On-line (between junctions) service areas are considered to be more accessible to road users and as a result are more attractive and conducive to encouraging drivers to stop and take a break. They also avoid the creation of any increase in traffic demand at existing junctions.*

*B14. Therefore, in circumstances where competing sites are under consideration, on the assumption that all other factors are equal, the Highways Agency has a preference for new facilities at on-line locations.*

*B15. However, in circumstances where an on-line service area cannot be delivered due to planning, safety, operational or environmental constraints, a site sharing a common boundary with the highway at a junction with the strategic road network is to be preferred to the continued absence of facilities.*

*B27. The methodology set out in Schedule 1 will also be used for calculating the levels of parking provision for all new sites promoted after the publication of this policy.*

*B28. However, notwithstanding the provisions of the previous two paragraphs, levels of provision may be adjusted to reflect local conditions through a process of site specific negotiation. It will be the responsibility of the site operator to demonstrate that any departure from the requirements of Schedule 1 is appropriate.*

*B32. Separate parking must be provided to service such developments [hotels, conference centres and business centres] so as to avoid any reduction in the general parking provision available to other road users.*

*B36. Operators of roadside facilities are encouraged to provide refuelling facilities for low emission vehicles, including recharging facilities for plug-in vehicles and other arrangements that meet the needs of emergent low carbon and alternative fuel technologies as appropriate, such as gas refuelling stations.”*

- **Highways England; The Strategic Road Network. Planning for the future. A guidance to working with Highways England on planning matters.**

*“2. The advice and guidance in this document applies to the whole strategic road network, comprising of motorways and all-purpose trunk roads in England.”<sup>1</sup>*

*8. We will support economic growth, providing the conditions that help businesses to succeed and grow, facilitating new development around the network, and supporting investment and trade. This will take place alongside maintaining a safe and efficient SRN. The document sets out how we, along with those working on our behalf, will work with development promoters to help you to assess and successfully manage the relationship between your proposed development and the SRN.*

*29. The primary function of the SRN is to facilitate the safe and efficient movement of goods and people.*

*30. A safe and efficient network supports the national and regional economies by providing certainty, improving access to markets, enabling competition, improving labour mobility, enabling economies of scale, and helping to attract inward investment.*

*35. Our advice to local planning authorities will be to refuse or place conditions on developments only where the residual cumulative impacts of development on the capacity of the SRN (once proposed mitigations are taken into account) are still assessed to be severe. For example, if development would lead to operating conditions that significantly erode the safe operation of the SRN.*

*38. The continued safe operation of the SRN will remain our primary consideration, even where proposals would not result in capacity issues.*

*39. Where there would be physical changes to the network, schemes must be subject to road safety, environmental and non-motorised user audits, as well as any other assessment appropriate to the proposed development. Local authorities and developers need to ensure that their proposals comply with requirements for access, design and audit as set out in the DMRB.*

*40. Although identification of the scale and nature of action required to support a particular development is the responsibility of the development promoter, we will help to identify options for this and share with you any relevant information we hold to help you make informed decisions. The issues can be complex and take some time to work through, so we encourage engagement with us at the earliest opportunity.*

41. *The mitigation of impacts should be approached in the following manner:*

- i. **Avoidance** – *the promoter should take all reasonable steps to minimise the level of physical mitigation required, through the use of measures such as Travel Plans, and travel demand management measures, such as development phasing, HGV booking systems and encouraging flexible working and sustainable travel;*
- ii. **Off-line improvements** – *before considering to propose changes to the SRN, the promoters of development should assess the potential for alterations to be made to the local road network in the alternative;*
- iii. **Alterations to the SRN** – *once all other options have been examined, we will consider the potential for changes to be made to the SRN.*

44. *As a consequence, we will encourage the promoters of new development to access their proposals via the local road network or existing junctions on the SRN. Modifications to existing junctions will be agreed where the residual cumulative impact of the proposed development would not be severe. In line with standards contained in the DMRB, direct connections to slip roads and/or connector roads will not be allowed for safety and operational reasons.*

45. *Where a new junction or access is proposed in connection with a signed roadside facility, permanent highway depot or major transport interchange, we will seek the imposition of planning conditions which prohibit subsequent changes of use and the creation of any form of through access to any adjacent development.*

46. *Where a new junction or direct means of access is agreed, the promoter will be expected to secure all necessary consents, and fund related design and construction works.*

48. *Developers and scheme promoters will need to provide sufficient environmental information to satisfy the LPA, and any other consenting authorities, that all environmental implications of the proposals have been appropriately considered.*

49. *We will expect to see measures implemented that fully mitigate any and all environmental impacts arising from and relating to the interaction between developments and the SRN. There are three aspects to this:*

- *The environmental impacts arising from the temporary construction works;*
- *The environmental impacts of the permanent transport solution associated with development; and*
- *The environmental impact of the road network upon the development itself.*

*50. To assist in the process we will willingly participate in the screening and scoping processes to help identify any significant transport-related environmental impacts of proposals.*

*51. Assessment undertaken by the promoter of the development should be sufficiently comprehensive to establish the likely transport-related environmental impacts, including air quality, light pollution and noise, and to identify the measures to mitigate these impacts.*

#### **Roadside Facilities, including Motorway Service Areas**

*56. We continue to have an interest in roadside facility proposals and will provide advice to local planning authorities on matters relating to the impact that such proposed development will have upon the SRN. New and existing roadside facilities are subject to the provisions of relevant planning legislation and regulation, which together set the framework within which local planning authorities should consider the planning proposals for such developments.*

*57. Local planning authorities, developers and operators are encouraged to discuss with us at the earliest opportunity any proposals to develop new roadside facilities or to alter and/or sign existing sites. All such proposals should be referred to: [roadsidefacilities@highwaysengland.co.uk](mailto:roadsidefacilities@highwaysengland.co.uk)*

*58. For the provision of signed roadside facilities for road users, permanent highway maintenance depots (and associated compounds) and major transport interchanges, our planning response will be limited to the initial development only. We would require further consultation to consider any subsequent expansions at the site or new development on adjacent land. To this end we will see planning conditions restricting changes of use of the premises and its associated access onto the SRN so as to ensure*

*that any such proposals are subject of separate assessment through the planning process.*

*86. In submitting a planning application, the developer should provide all the information that we will need to fully consider the interaction of the development with the SRN, and the suitability of any related actions proposed.*

*88. If, however, the development proposed has not been subject to an appropriate level of assessment or is not included or consistent with an approved local plan, then we would anticipate agreeing the scope of work required to make a full assessment. For those sites that have been considered at local plan stage, we will take into account any assessment already undertaken.*

*89. We would anticipate that a full assessment would include assessment of the impact of the development based on the performance and character of the SRN as determined by the presumption that the local plan proposals (if any) will be fully implemented, unless other more appropriate assumptions about development in the area should be made as a result of local circumstances changing. We would expect proposals set out in an emergent local plan to be afforded weight appropriate to its stage of development.*

*90. We would also anticipate that the assessment would include the identification of any mitigation necessary, and a road safety audit (stage 1). We will also seek to agree appropriate levels of assessment and mitigation relating to the scale of the development in relation to other development in the area.*

### **Assessment of development impact**

*I00. The overall forecast demand<sup>12</sup> On the SRN and surrounding local road network should be assessed and compared to the ability of the existing network to accommodate traffic. For developments which will be brought forward in phases, this assessment should focus on the overall forecast demand of the development as a whole, not just the initial phase(s).*

*I01. Assessments should be carried out for:*

- *The development and construction phase; and*
- *The opening year, assuming full buildout and occupation, and*
- *Either the date ten years after the date of registration of the associated planning application or the end of the Local Plan period (whichever is greater).*

*The assessment at opening will be used for the determination of impact mitigation needs whilst the latter is necessary to determine the risk which will transfer to us.*

*I02. We need these assessments to enable us to better plan for the future of the network, to inform an appropriate split of responsibilities between the parties involved, and to identify and plan to address any future problems before they arise. In line with the NPPF these assessments will also help us, and the LPA, to assess whether any development proposals which do not feature in an adopted or emerging Local Plan could compromise the delivery of that Plan.*

### **Travel plans and demand management**

*I03. We expect the development promoters to put forward initiatives that reduce the traffic impact of proposals by supporting the promotion of sustainable transport and the development of accessible sites. This is particularly necessary where the potential impact is on sections of the SRN that could experience capacity problems in the foreseeable future. Early engagement with us enables us to support this thinking, and we will work*

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<sup>12</sup> The overall forecast demand will be the existing flow plus traffic likely to be generated by development already committed, plus traffic likely to be generated by the development under consideration, less any reduction arising from any travel plan or demand management measures that are being proposed.

*with developers and LPAs to identify appropriate measures to facilitate the delivery of sustainable development.*

*104. The preparation, implementation, monitoring and updating of a robust travel plan that promotes the use of sustainable transport modes (such as walking, cycling and public transport) is an effective means of managing the impact of development on the road network, and reducing the need for major transport infrastructure. This contributes to the ongoing effectiveness of the SRN in ensuring swift connections nationally and regionally, minimising delays and congestions. Retaining some network capacity within the SRN facilitates the provision for further developments.*

*107. However, quite often, the implementation of travel plan measures alone will not be sufficient to reduce the traffic demand of proposed development to acceptable levels. In such instances we will work with LPAs and local highway authorities to determine whether the implementation of more direct demand management measures could effectively regulate and manage traffic flows so as to support the delivery of the travel plan outcomes and to make the most effective use of the available capacity on the SRN.*

#### *Capacity enhancement (planning applications)*

*108. Where overall forecast demand in the opening year of the development can be safely accommodated by the existing infrastructure, capacity enhancement will not be sought.*

*109. Capacity enhancement measures on the SRN will only be considered after the travel plan has been incorporated in the development proposal. While capacity enhancements should normally be addressed at the plan making stage, such measures may be considered at the time when individual planning applications are submitted, subject to the over-riding principle that delivery of the adopted local plan proposals should not be compromised.*

*110. Where insufficient capacity will be available to provide for overall forecast demand in the development's opening year, the impact of the development would need to be mitigated to ensure that, at the time, the SRN is able to accommodate existing and development specific traffic. Such works can take place on the SRN or on the adjacent*

*local road network, and both options should be explored, and the impact on the relationship with both networks should be considered.*

*115. Where physical changes to the SRN are proposed in order to support planning application a road safety audit (stage 1) and non-motorised user assessment is required before planning permission is granted, carried out in accordance with the standard current at the time. Pre-application engagement with us is particularly important in this situation.”*

### **Warrington Local Plan (July 2014)**

*“Policy MPI:*

*To secure sustainable development the Council and its partners will support proposals where they:*

- *reduce the need for private car use through its location, travel planning and marketing (smarter choices) and other measures to change travel behaviour.*
- *Consider demand management measures including the effective reallocation of road space in favour of public transport, pedestrians and cyclists.*
- *Adhere to locally determined car and cycle parking standards.*
- *Mitigate the impact of development or improve the performance of Warrington’s Transport network, including the Strategic Road Network, by delivering the site-specific infrastructure which will support the proposed level of development.*

*Policy MP3:*

*The Council will expect that a high priority will be given to the needs and safety of pedestrians and cyclists in new development.*

*New development should not compromise and should contribute to enhancing and developing integrated networks of continuous, attractive and safe routes for walking and cycling including improvements to roads, Rights of Way and the Greenway Network (as shown on the Policies Map). This should include appropriate segregation of users and*

*appropriate priority should be given to users at junctions. Where appropriate the Council will consider the use of conditions or planning obligations to secure such improvements.*

*Enhancements and improvements should look to increase accessibility and make the most of potential environmental, social and health benefits.*

*Particular priority will be given to routes linking residential areas (especially those in recognised areas of deprivation) with employment areas, transport interchanges, schools, Warrington hospital and other local services and facilities.”*

**Policy MP4:**

*The Council will aim to secure improvements to public transport infrastructure and services (including bus, rail and taxi/private hire) in partnership with operators and delivery partners.*

*In accordance with the overall Spatial Strategy, development should be located in areas with easy access to public transport. Development should aim to make public transport a viable and attractive alternative by;*

- *Integrating with existing public transport infrastructure and services as far as possible, and*
- *Providing additional public transport infrastructure and services that are reasonably related in scale to the proposed development where existing facilities are not available or are in need of improvement, provided this does not impact on the deliverability of the scheme.*

*Where appropriate the Council will consider the use of conditions or planning obligations to secure these improvements.”*

**Warrington Local Transport Plan (March 2011)**

“Objectives:

*To build and manage a transport network that:*

- *Is integrated and customer focused and reduces the need to travel by car.*
- *Enables the regeneration of the Borough and supports economic growth.*
- *Maintains the highway, minimises congestion for all modes of travel and enables Warrington’s ‘smart growth’.*
- *Improves everyone’s access to health, employment, education, culture, leisure and the natural environment.*
- *Improves everyone’s access to the town centre by all modes of travel.*
- *Enhances accessibility for those in disadvantaged communities or groups.*
- *Improves neighbourhoods and residential areas.*
- *Improves safety and security for all modes of travel.*
- *Reduces the impact of traffic on air quality in Warrington and helps to reduce carbon emissions and tackle climate change.*
- *Makes Warrington safer, sustainable and healthier.*
- *Integrates with transport networks outside Warrington to enhance the sustainability of cross boundary travel.”*

- **Guidance Documents**

The following guidance documents will be referenced in the ES and the TA:-

- Planning Practice Guidance ID42: Travel Plans, transport assessments and statements in decision-taking;
- Guidelines for the Environmental Assessment of Road Traffic (IEMA), 1994
- Design Manual for Roads and Bridges (DfT)
- Manual for Streets (DCLG/DfT), March 2007

- Parking Standards Supplementary Planning Document, Warrington Borough Council, March 2015
- Warrington Borough Council Design Guide Note 1 (DGN1) – Parking & Servicing, April 2015
- Warrington Borough Council Design Guide Note 2 (DGN2) – Travel Plans and Guidance, April 2016

8.6. The study area for the assessment of traffic and transportation impacts will be agreed with both highway authorities. At this stage it is suggested it will include M62 Motorway Junction 11 (including its slip roads), weaving between M62 Motorway Junctions 10 and 11, and the A574 Birchwood Way / Daten Avenue / Moss Gate junction.

#### Existing Traffic Data

8.7. A series of independent traffic counts have been undertaken to provide details of existing traffic flows across the study area network.

8.8. Manual Classified Counts (MCC) were conducted at the following locations on Tuesday 13<sup>th</sup> November:

- Junction 11 M62 Motorway (07:00 - 19:00)
- M62 Motorway mainline at Junction 11 (07:00 - 19:00)
- Birchwood Way (A574) / Daten avenue / Moss Gate (07:00 - 10.00 and 16:00 - 19:00)
- Daten Avenue / Leacroft Road / Risley Road roundabout (07:00 - 10.00 and 16:00 - 19:00)
- Birchwood Way / Faraday Street roundabout (07:00 - 10.00 and 16:00 - 19:00)

8.9. An additional MCC was undertaken at Junction 11 M62 Motorway on Saturday 17<sup>th</sup> November between the hours of 10:00 and 17:00.

8.10. A origin / destination survey was undertaken (also on the 13<sup>th</sup> November between the hours of 07:00 and 19:00) of the movement from the M6 southbound off-slip to the M62 Motorway Junction 11 (eastbound) off-slip (and the opposite direction of travel), using Automatic

Number Plate Recognition (ANPR) technology. This data will be used to derive weaving proportions on the M62 Motorway between Junctions 10 and 11.

8.11. All traffic data has been recorded in 15-minute intervals. COBA vehicle classifications were adopted (pedal cycles, motorcycles, cars, LGVs, OGV1s, OGV2s and buses).

8.12. Queue length surveys were also conducted at the above junctions on the same dates. Queue length data were recorded at one-minute intervals.

8.13. Maximum queues have been recorded in vehicle numbers separated into Light Vehicles and Heavy Vehicles and by each particular lane at the end of each red phase for each cycle of the traffic signals. At non-signalised sites vehicles were recorded at 1-minute intervals (rather than maximum queues per cycle).

8.14. The surveyed flows will be converted to passenger car units (pcu's) using factors set out in the TRRL document RR67 as follows:

- Motorcycle = 0.4 pcu's
- Car = 1.0 pcu's
- LGV = 1.0 pcu's
- OGV1 = 2.3 pcu's
- OGV2 = 2.3 pcu's
- Bus/Coach = 2.0 pcu's

8.15. Automatic Traffic Count (ATC) data has also been collected for a continuous 14-day period on the A574 Birchwood Way, between Daten Avenue and Junction 11 of the M62 Motorway (6<sup>th</sup> November to and including 20<sup>th</sup> November).

8.16. The surveyed data will be used to derive the existing baseline peak hour traffic flows for use in analysis.

#### Operational Assessment

8.17. The operational performance of M62 Motorway J11 will be assessed using industry standard software. Merge/diverge provision and weaving provision, will be assessed using the

methodology set out in TD22/06 'Layout of Grade Separated Junctions', supplemented by the advice in IANI49 as appropriate.

#### Collision Data

- 8.18. Collision data will be obtained from WBC and Highways England (HE) for the study area under consideration and for the most recent five-year period that data is available. The data will be compared with national average accident rates from COBA (DMRB).

#### Committed Developments and Highways Infrastructure

- 8.19. The assessment will take account of other committed developments in the area. They will be included in the baseline traffic case and considered in the traffic and environmental assessments. At this stage, the following developments will be allowed for, with these updated following detailed scoping discussions that are to be held with WBC and HE:

- Zones 3 to 6 Residential, Omega South, Warrington (Planning Application Ref: 2015/26469)
- Former Bayleaf Public House, Harpers Road, Warrington (Planning Application Ref: 2016/27896)
- The Quadrant, Birchwood, Warrington (Planning Application Ref: 2014/23358)
- Redevelopment of Birchwood Park, Birchwood, Warrington (Planning Application Ref: 2015/26044)
- Omega Zones 1 and 2, Warrington (Planning Application Ref: 2003/01449)
- Omega Zone 7, Omega South, Warrington (Planning Application Ref: 2014/23290)

- 8.20. The transport infrastructure schemes set out below are committed and these will be taken into account in the traffic and environmental assessments using an approach to be agreed with WBC and HE:

- M62 Junction 8 Improvements
- Warrington East Phases 2 and 3
- M6 / M62 Motorway to Motorway Scheme
- Smart Motorway M62 Junction 10 to Junction 12
- Smart Motorway M6 J21A to Junction 26

## Potential Environmental Impacts

8.21. Potential environmental impacts during the construction and operational phases of the development will be considered. Environmental impacts could include:

### Construction Phase

8.22. Environmental impacts during the construction phase could include:

- Impacts on driver delay
- Impacts on pedestrian delay and amenity
- Impacts on fear and intimidation
- Impacts on severance
- Impacts on accidents and road safety
- Impacts on public transport users

### Operational Phase

8.23. Environmental impacts during the operational phase could include:

- Impacts on driver delay
- Impacts on pedestrian delay and amenity
- Impacts on fear and intimidation
- Impacts on severance
- Impacts on accidents and road safety
- Impacts on public transport users

## Methodology for the Environmental Statement

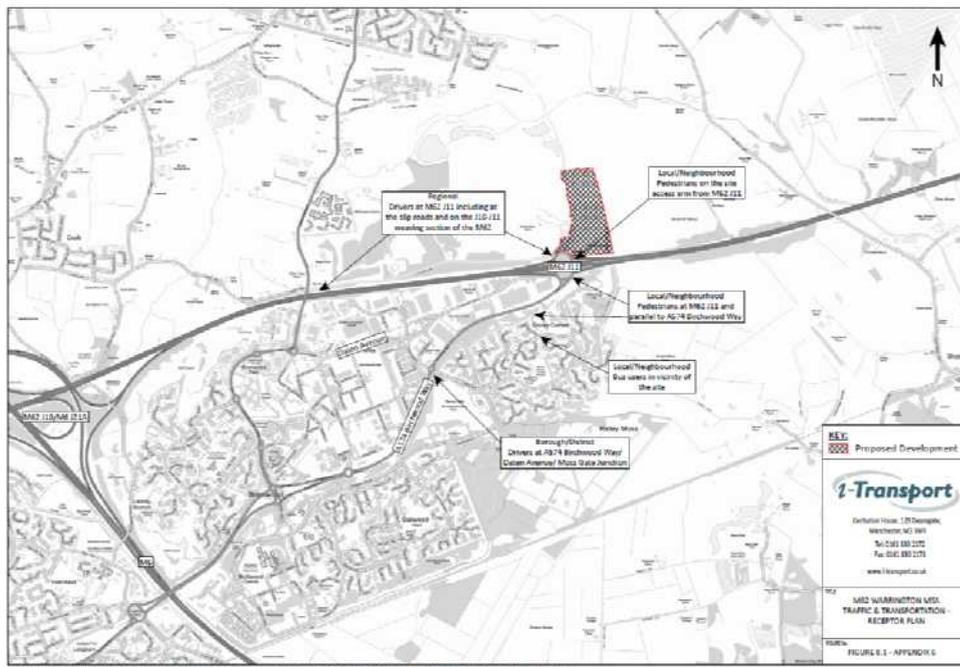
### Receptors

8.24. Receptors will comprise drivers and other users of the highway affected by increased traffic levels resulting from the development proposals. The importance of the receptors is as follows:

Designation	Development Receptors
International	None
National	None
Regional	Drivers at M62 Motorway J11 including at slip roads and on the J10-J11 weaving section of M62 Motorway.
County	None
Borough/District	Drivers at A574 Birchwood Way / Daten Avenue / Moss Gate junction.
Local/Neighbourhood	Pedestrians at M62 Motorway J11 and along A574 Birchwood Way  Pedestrians on the site access arm from M62 Motorway J11;  Bus users in the vicinity of the site.

**Table 8.1 Receptors**

8.25. A Traffic and Transportation Receptor Plan is included **Appendix 6** of this scoping report and presented below.



## Impacts

8.26. The scale of impacts will be assessed and reported in the ES using the following:

Impact	Description	Environmental Impact Receptors
Substantial	Driver delay	Over 2 minutes increase in delay, averaged over all arms at a junction.
	Pedestrian delay	Over 2 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Doubling or halving of traffic flow where the footway width is sub-standard (versus current design standards)
	Fear and intimidation	Change in degree of hazard from moderate to extreme.
	Severance	Over 90% increase in traffic flows on relevant links.
	Accidents and road safety	Over 50% increase in traffic flows at location with existing adverse accident record (blackspot).
	Public transport users	Over 2 minutes increase in delay along bus route in vicinity of site.
High	Driver delay	Between 1.5 – 2 minutes increase in delay, averaged over all arms at a junction.
	Pedestrian delay	Between 1.5 – 2 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Between 50% - 100% increase in traffic flow where the footway width is sub-standard.
	Fear and intimidation	Change in degree of hazard from great to extreme.
	Severance	Between 60%-90% increase in traffic flows on relevant links.
	Accidents and road safety	Over 50% increase in traffic flows at location with accident rate above DMRB default for junction type.
	Public transport users	Between 1.5 - 2 minutes increase in delay along bus route in vicinity of site.
Moderate	Driver delay	Between 1.0 – 1.5 minutes increase in delay, averaged over all arms at a junction.

Impact	Description	Environmental Impact Receptors
	Pedestrian delay	Between 1.0 – 1.5 minutes increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Between 10-50% increase in traffic flow where the footway width is sub-standard.
	Fear and intimidation	Change in degree of hazard from moderate to great.
	Severance	60% increase in traffic flows on relevant links.
	Accidents and road safety	30-50% increase in traffic flows at location with accident rate above DMRB default for junction type.
	Public transport users	Between 1.0 – 1.5 minutes increase in delay along bus route in vicinity of site.
Minor	Driver delay	Between 0.5 – 1.0 minutes increase in delay, averaged over all arms at a junction.
	Pedestrian delay	Between 0.5 – 1.0 minutes increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Doubling of traffic flow where the footway width is satisfactory.
	Fear and intimidation	Change in degree of hazard to moderate.
	Severance	Between 30-60% increase in traffic flows on relevant links.
	Accidents and road safety	10-30% increase in traffic flows at location with accident rate above DMRB default for junction type.
Negligible	Public transport users	Between 0.5 – 1.0 minutes increase in delay along bus route in vicinity of site.
	Driver delay	Less than 0.5 minutes increase in delay, averaged over all arms at a junction.
	Pedestrian delay	Less than 30 second increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Less than doubling of traffic flow where the footway width is satisfactory.
	Fear and intimidation	No change in degree of hazard.

Impact	Description	Environmental Impact Receptors
	Severance	Less than 30% increase in traffic flows on relevant links.
	Accidents and road safety	Less than 10% increase in traffic flows at location with accident rate above DMRB default for junction type.
	Public transport users	Less than 0.5 minutes increase in delay along bus route in vicinity of site.
Neutral	Driver delay	No change in the delay averaged over all arms at a junction.
	Pedestrian delay	No change in pedestrian delay at a crossing point.
	Pedestrian amenity	No change in the traffic flow on relevant links.
	Fear and intimidation	No change in traffic flows / composition / speeds affecting the degree of hazard.
	Severance	No change in traffic flows on relevant links
	Accidents and road safety	No change in traffic flows on relevant links and junctions.
	Public transport users	No change in the delay along bus route in the vicinity of the site.

**Table 8.2 Environmental Impacts**

### Impact Predication Confidence

8.27. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

**Table 8.3 Confidence Levels**

8.28. At this stage, the environmental impacts related to road traffic cannot be predicted because the calculations and assessments are yet to be undertaken.

### Significance of Effects

8.29. The environmental impact of the road traffic attracted by the Proposed Development will be assessed taking account of the criteria set out in The Institute of Environmental Management and Assessment's 1993 'Guidelines for the Environmental Assessment of Road Traffic' which provides two broad rules to define the need for environmental impact analysis:-

- Highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%);
- Any other specifically sensitive areas where traffic flows have increased by 10% or more.

8.30. There are no specifically sensitive areas within the study area and hence the 30% parameter will be used.

8.31. Traffic attracted by the Proposed Development will generally result in negative impacts.

8.32. The likely significance of effects (pre-mitigation) for both the construction and operational phases will be determined as data becomes available and assessments are progressed.

8.33. The environmental impacts on driver delay, pedestrian delay and amenity, fear and intimidation, severance, accidents and road safety and on public transport users will be assessed by comparing the baseline position with that with the Proposed Development in place. This will allow the Scale of Impact to be determined using Table 8.2 above. This scale of impact and the Designation of Receptor set out in Table 8.1 will then allow the significance of the effect to be determined using the methodology set out in Section 3 of this Scoping Report including the significance matrix.

### Mitigation

8.34. Mitigation will be considered to address any significant impacts, so as to reduce the significance of the impact. Mitigation will comprise highway improvements where transport assessment

demonstrates they are required and the implementation of a Staff Travel Plan to promote sustainable travel to/from the site.

- 8.35. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

### Further Work Required

- 8.36. The TA and TP need to be scoped with WBC and HE and then completed to take account of the Proposed Development.
- 8.37. Following the completion of the TA, assessments of impacts on driver delay, delays to bus users, pedestrian delay and amenity, fear and intimidation, severance and road safety need to be undertaken.

### Summary

- 8.38. This paper identifies relevant Planning Policy and Guidance which will guide the environmental impact assessment of the traffic and transportation effects of the Proposed Development. Initial data collection is described along with how these data will be used in the assessment to follow. Committed Developments that will be applied in the traffic and environmental assessments are identified. The potential environmental effects relevant to traffic and transportation are discussed. Anticipated mitigation measures are considered along with further work that is needed to complete the assessment.
- 8.39. Based on the scale and pattern of vehicle movements attracted to the Proposed Development, which will largely be from the mainline of M62 Motorway, the table below confirms the details to be Scoped In of the environmental assessment in respect of Traffic and Transportation. All other impacts are effectively scoped out.

Environmental Issue	Reason for “Scoping In”
Traffic and Transportation	
<p>Construction:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p> <p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p> <p>Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11</p>	<p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p>
<p>Operation:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p> <p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p>	<p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p>

Environmental Issue	Reason for “Scoping In”
Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11	Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development

**Table 8.4 Scoped In**

Environmental Issue	Reason for “Scoping In”
Traffic and Transportation	
Construction: All other traffic related environmental impacts	Because the Proposed Development is not anticipated to materially increase traffic flows and/or travel movements at other locations.
Operation: All other traffic related environmental impacts	Because the Proposed Development is not anticipated to materially increase traffic flows and/or travel movements at other locations.

**Table 8.5 Scoped Out**

## 9. Drainage and Flood Risk

### Introduction

9.1. The Water Resources ES Technical Paper will be undertaken by Wardell Armstrong LLP and will consider the potential issues arising from the Proposed Development in relation to the hydrological and hydrogeological environment. It will assess the potential impacts on:

- surface waters including rivers and surface water bodies;
- groundwater;
- private water supplies and other water abstractions; and
- potential water dependent hydro-ecological sites.

9.2. As further described in Chapter 7: Geology and Ground Conditions, at present it is not known how the buried peat deposits will be treated to enable the Proposed Development; and at present it is considered that two Options are likely:

- Option 1 – peat removal; and
- Option 2 – the *in situ* stabilisation of peat.

9.3. The environmental impacts associated with water resources of each Option are considered within this chapter.

9.4. A qualitative assessment will be undertaken using a combination of professional judgment, legislation and other statutory policy and guidance, which will be considered in the preparation of this assessment. Legislation and other statutory policy and guidance includes:

- European Directive: The Water Framework Directive (2000/60/EC);
- European Directive: The Groundwater Daughter Directive (2006/118/EC);
- European Directive: The Priority Substances Directive (2008/105/EC);
- Act of Parliament: The Environment Protection Act 1990;
- Act of Parliament: The Land Drainage Act 1991;
- Act of Parliament: The Water Resources Act 1991, Water Act 2003 and Water Act 2014;
- Act of Parliament: Flood and Water Management Act 2010;
- National Policy: The National Planning Policy Framework 2018;
- National Policy: Planning Practice Guidance: Flood Risk and Coastal Change (2014);
- Local Policy: Warrington Borough Council Local Plan Core Strategy 2014;
- Local Policy: Warrington Borough Council Draft Local Plan;

- Local Policy: Warrington Borough Council Strategic Flood Risk Assessment (SFRA) 2008;
- Local Policy: Warrington Borough Council Surface Water Management Plan (SWMP) 2012; and
- Local Policy: Warrington Borough Council Mid Mersey Water Cycle Study (WCS) 2011.

- 9.5. The assessment will present the baseline dataset, assess potential impacts at each stage of the Proposed Development, consider potential mitigation and management measures and assess the potential for residual impacts. The assessment will also consider cumulative impacts arising from the Proposed Development and other current or future (known) developments within the same catchment(s). A preliminary screening Water Framework Directive (WFD) assessment will be undertaken to determine if the Proposed Development and associated activities support the local River Basin Management Plan (RBMP).
- 9.6. As the Site is greater than 1 hectare in area, a Flood Risk Assessment (FRA) and Drainage Strategy will be produced. The FRA would be undertaken in accordance with the National Planning Policy Framework (NPPF 18); the associated National Planning Practice Guidance (NPPG); and subsequent guidance issued by the Environment Agency (EA). This will also include consideration of the surface water drainage strategy to meet the requirements as set out in WMBC's Sustainable Drainage (SuDs) Guidance.

## Baseline Information

### Surface Water

- 9.7. The eastern and northern boundaries of the Site are defined by relatively straight drains. In the west of the Site there is a drain and a statutory main river.<sup>2</sup> Although the Site is relatively flat the predominant flow direction of the watercourses is towards the north. Other surface water features in the vicinity of the Site comprise an attenuation balancing pond and a series of drains associated with the restored (future county park) Risley Landfill Site to the west.
- 9.8. All the drains within the Site flow into the unnamed statutory main river to the west, which is a tributary of the Glaze Brook. The unnamed statutory main river has a confluence with two other tributaries of the Glaze Brook at National Grid Reference (NGR) SJ 66765 94282

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<sup>2</sup> Environment Agency (2018) Interactive Maps: Main River Consultation [online]. Accessed 30.11.2018. Available at: <https://environment.maps.arcgis.com/apps/webappviewer/index.html?id=17cd53dfc524433980cc333726a56386>

forming the Willow Brook. The first of these tributaries originates from an issue (spring) located near Bates Farm to the northwest of Site and flows east via a series of drains towards the confluence. The second tributary originates from an issue near Bentham Road to the north of the dismantled railway and flows south towards the confluence. The Willow Brook flows eastwards passing beneath Holcroft Lane (B5212) and discharges into the Glaze Brook at NGR SJ 68402 94072. The Glaze Brook then flows southeasterly and joins the Manchester Ship Canal at NGR SJ 70232 91145.

- 9.9. The Site is within the Glaze Surface Water Sub-catchment<sup>3</sup> of the EA's Glaze Operation Catchment<sup>4</sup>. This sub-catchment is monitored by the EA under the WFD as part of their North West River Basin Management Plan (RBMP). In 2016, the EA classified the Glaze surface water sub-catchment as having poor ecological status, good chemical status and an overall poor status.

#### **Groundwater**

- 9.10. The superficial deposits, according to British Geological Survey (BGS) geology map,<sup>5</sup> for the majority of the Site comprise of peat underlain by glacial till with the northern section of the Site underlain just by glacial till. The bedrock is comprised of pebbly (gravelly) sandstone of the Helsby Sandstone Formation.<sup>5</sup>
- 9.11. A review of the BGS online hydrogeology map<sup>6</sup> indicates that the Site is underlain by a highly productivity bedrock aquifer.<sup>7</sup> According to the EA<sup>8</sup>, the Site is underlain by a Principal bedrock aquifer.<sup>9</sup> The glacial till is considered to be a Secondary (undifferentiated) aquifer<sup>10</sup>,

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<sup>3</sup> Environment Agency (2018) Catchment Data Explorer: Glaze [online]. Accessed 30.11.2018. Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB112069061420>

<sup>4</sup> Environment Agency (2018) Catchment Data Explorer: Glaze Operational Catchment [online]. Accessed 30.11.2018. Available at: <https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3202>

<sup>5</sup> British Geological Survey (2018) Geology of Britain Viewer [online]. Accessed 29.11.2018. Available at: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

<sup>6</sup> British Geological Survey (2018) Onshore GeoIndex: Hydrogeology 1:625,00 Scale [online]. Accessed 29.11.2018. Available at: <http://mapapps2.bgs.ac.uk/geoindex/home.html>

<sup>7</sup> Principal sandstone aquifer up to 600m thick and yielding up to 125l/s. Quality good but hard and becomes saline beneath confining Mercia Mudstone.

<sup>8</sup> MAGIC Partnership (2018) MAGIC Interactive Map [online]. Accessed 29/11/2018. Available at: <http://www.magic.gov.uk/MagicMap.aspx>

<sup>9</sup> Geology that exhibit high permeability and/or provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.

<sup>10</sup> In cases where it has not been possible to attribute either category A or B to a rock type: Aquifers A: permeable strata capable of supporting water supplies at a local rather than strategic scale and in some cases forming an important source of base flow to rivers; and Secondary Aquifer B: predominantly lower permeability strata which may in part have the ability to store and yield limited amounts of groundwater by virtue of localised features such as fissures, thin permeable horizons and weathering.

whereas the peat deposits are considered to be unproductive<sup>11</sup> and are therefore not considered to be aquifers.<sup>8</sup>

9.12. The Site is located within the Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers groundwater sub-catchment,<sup>12</sup> which is monitored by the EA under the WFD as part of their North West RBMP. In 2016, the EA classified this groundwater sub-catchment as having poor quantitative, poor chemical and an overall poor status.

### Abstractions and Discharges

9.13. According to Envirocheck Report (187316938\_I\_I) (summarised in the Phase 1 Environmental Assessment in **Appendix 8**) there are nine water abstraction licenses (six surface water and three groundwater sources) and one discharge consent within 2 km of the Site (as shown on the Preliminary Water Resources Receptors plan of **Appendix 6**). The abstractions and discharges are detailed in Table 9.1, below, and their locations are shown on the Preliminary Water Resources Receptors plan of **Appendix 6**.

Consent Type	Consent Holder	Consent Description	National Grid Reference	Approximate Distance and Direction from The Site
Water Abstraction: Surface Water	U.K. Waste Limited - Silver Lane	Industrial abstraction from unnamed artificial watercourse.	SJ 66800 94100	210m northwest of the Site
Water Abstraction: Surface Water	U.K. Waste Limited - Silver Lane	Industrial abstraction from unnamed artificial watercourse.	SJ 66500 93200	325m southwest of the Site
Water Abstraction: Surface Water	J & J R Allen (Culcheth) Ltd - Farm, Culcheth,	Agricultural spray irrigation (summer) from reservoir/pond (daily abstraction rate: 200,000m <sup>3</sup> , yearly abstraction rate: 2,000,000m <sup>3</sup> ).	SJ 67400 94200	432m northeast of the Site

<sup>11</sup> These are geological strata with low permeability that have negligible significance for water supply or river base flow.

<sup>12</sup> Environment Agency (2018) Catchment Data Explorer: Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers [online]. Accessed 30.11.2018. Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB41201G101700>

Consent Type	Consent Holder	Consent Description	National Grid Reference	Approximate Distance and Direction from The Site
Water Abstraction: Groundwater	J & J R Allen Culcheth Ltd - Land at Franks Farm, Culcheth	Permit start date: 10/05/1996. General agriculture: direct spray irrigation from groundwater (single point) between May and September each year (daily abstraction rate: 910m <sup>3</sup> , yearly abstraction rate: 30,000m <sup>3</sup> ).	SJ 67350 94350	512m northeast of the Site
Discharge Consent: Surface Water	Christopher & Geoffrey Moss - Hoyles Moss Farm	Issue and effective date 06/05/1974. Private sewage discharges of final/treated effluent to tributary of River Glaze.	SJ 67500 92600	782m southeast of the Site
Water Abstraction: Surface Water	Alfred Mcalpine Const. Ltd T/A Mcalpine-Pps P.Line Systems - Glaze Brook At Culcheth	Permit start date 18/08/2000. Abstraction of surface water for hydraulic testing for curtilage of gas pipeline between Rixton & Atherton.	SJ 68370 94800	1,568m northeast of the Site
Water Abstraction: Surface Water	Alfred Mcalpine Const. Ltd T/A Mcalpine-Pps P.Line Systems - Glaze Brook At Culcheth	Permit start date 19/02/2001. General Use (Medium Loss).	SJ 68380 94810	1,582m northeast of the Site.
Water Abstraction: Surface Water	A E Marshall & Sons Ltd - Holmleigh Farm, Glazebrook At Glazebury Near Warrington	Permit start date 31/03/2002. Spray Irrigation from surface water.	SJ 68000 95400	1,747m northeast of the Site.
Water Abstraction: Groundwater	Aviemoire Trustee Limited - Permo Triassic Sherwood At Birchwood Park	Permit start date 24/08/2015. Make-up or top up water for spray irrigation from groundwater source.	SJ 65160 92320	1,924m southwest of the Site.
Water Abstraction: Groundwater	Aviemoire Trustee Limited - Permo Triassic Sherwood At Birchwood Park	Permit start date 08/03/2016. Make-up or top up water for spray irrigation from groundwater source.	SJ 65143 92306	1,945m southwest of the Site.

Table 9.1 Abstractions and Discharges

### Designations

9.14. The Site is not located in a Drinking Water Areas (surface water),<sup>8</sup> nor Drinking Water Safeguard Zone (surface water or groundwater).<sup>8</sup> The Site is located in a groundwater Source Protection Zone 3 (SPZ 3):<sup>8</sup> Total Catchment<sup>13</sup>, as shown on the Preliminary Water

<sup>13</sup> This zone is defined as the total area needed to support the abstraction or discharge from the protected groundwater source.

Resources Receptors plan of **Appendix 6**, and a surface water (River Glaze) Nitrate Vulnerable Zone (NVZ).<sup>8</sup>

### **Flood Risk**

9.15. From an initial inspection of the Government's Flood Map for Planning<sup>14</sup> and Long Term Flood Risk online map<sup>15</sup>, this shows the Site to be within Flood Zone I (i.e. low probability of fluvial flooding), as defined in the NPPF 18. The Site is also shown not to be significantly affected by surface water and not to be affected by reservoir flood risk. Ground water flood risk is considered limited due to the existing drainage provision over the area.

### **Hydro-ecological Designates Sites**

9.16. According to Defra's MAGIC website<sup>8</sup> there are three hydro-ecological designated sites, within 2km of the Site, two Sites of Special Scientific Interest (SSSI) and one Special Areas of Conservation (SAC):

- Holcroft Moss, SAC and SSSI, approximately 890m east of the Site. Designated for its mossland;<sup>16</sup>
- Risley Moss, SAC and SSSI, approximately 1,075m south of the Site. Designated for its raised bog system;<sup>17</sup>
- Manchester Mosses SAC, approximately 890m east and 1,075m south of the Site. Designated for its raised bog system.<sup>18</sup>

9.17. There are no other statutory designated sites such as Ramsar sites or Special Protection Areas (SPA) within 2km of the Site.

### **Likely Evolution of the Baseline**

9.18. It is anticipated that without the Proposed Development the identified baseline scenario for water resources within the Site will not change significantly in the short term as a result of natural processes and systems. However, the baseline does have the potential to alter due to climate change. An increase in rainfall may affect run-off across the site and could alter watercourse processes such as erosion, deposition and the frequency and intensity of river flooding. A decrease in rainfall could lead to seasonal and prolonged drying out of

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<sup>14</sup> UK Government (2018) Flood Map for Planning [online]. Accessed 29/11/2018. Available at: <https://flood-map-for-planning.service.gov.uk/confirm-location?eastings=367034&northings=393585&nationalGridReference=SJ6703493585>

<sup>15</sup> UK Government (2018) Long Term Flood Risk Information [online]. Accessed 29/11/2018. Available at: <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006461.pdf>

<sup>16</sup> Natural England (2018) Holcroft Moss SSSI [online]. Accessed 29/11/2018. Available at: <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001838.pdf>

<sup>17</sup> Natural England (2018) Risley Moss SSSI [online]. Accessed 29/11/2018. Available at: <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001838.pdf>

<sup>18</sup> Joint Nature Conservation Committee (2018) Manchester Mosses [online]. Accessed 29/11/2018. Available at: <http://jncc.defra.gov.uk/protectedsites/sacselecion/sac.asp?eucode=UK0030200>

watercourses and drains, which may affect aquatic ecology. In addition, a reduction in rainfall may also affect groundwater recharge time and decrease groundwater elevations.

## Potential Environmental Impacts

- 9.19. There are two types of impacts on the water environment: i) those which result from the creation of the Proposed Development (e.g. the creation of impermeable surfaces causing changes in the hydrologic regime); and ii) those that occur associated with the use of the Proposed Development (e.g. accidental releases of fuel from a future user's vehicle).
- 9.20. The assessment will identify potential impacts as a result of the construction and operation of the Proposed Development. The potential impacts (without mitigation), which are likely to have significant effects include the following:

### Construction Phase

- Increased run-off on exposed ground causing erosion and pollution.
- Increase in silt and sediment loads as a result of construction works.
- Disturbance or erosion of bed and banks of watercourses and land drains.
- Changing the flood risk across the site and affecting offsite areas.
- Loss or alteration of peat deposits affecting local groundwater levels (Option 1 and 2 proposals to deal with peat on the Site).
- Point source pollution from accidental spillages.

### Operational Phase

- Disruption/cut off of natural surface and groundwater pathways.
- Increased run-off from hardstanding areas causing erosion and pollution.
- Changes to watercourse morphology.
- Disturbance or erosion of bed and banks of watercourses and land drains.
- Increased run-off creating flood risk onsite and offsite.
- Drying out of peat deposits affecting local groundwater levels (Option 1 and 2 proposals to deal with peat on the Site).
- Point source pollution from accidental spillages.
- Leaching of alkaline substance (e.g. cement / lime) into groundwater (Option 2 proposal to deal with peat on the Site).

## Methodology for the Environmental Statement

### Receptors

- 9.21. The receptors considered in the assessment are identified in accordance with Table 9.1. When a receptor meets multiple criteria or there is an absence of verified published data, the highest applicable sensitivity category is assigned to allow an assessment of the worst-case scenario.

Designation	Receptors
International	Internationally designated sites where hydrology/hydrogeology is a key factor in designation (e.g. Ramsar / Special Areas of Concern / Special Protection Areas sites)
National	Nationally designated sites where hydrology/hydrogeology is a key factor in designation (e.g. Sites of Special Scientific Interest, National Nature Reserves)
Regional	Akin to very large surface water or groundwater catchments.
County	Akin to large surface water or groundwater catchments. Typically includes public water supplies, groundwater Source Protection Zones, reservoirs.
Borough/District	Akin to medium sized surface water or groundwater catchment and sub-catchments. Typically includes main rivers.
Local/Neighbourhood	Akin to small surface water or groundwater catchment and sub-catchments. Typically includes ordinary watercourse, land drains and ditches, small lakes and ponds.

Table 9.2: Receptors

- 9.22. Please refer to Preliminary Water Resources Receptors plan, below and in **Appendix 6** for the locations of the preliminary water resources receptors in relation to the Site.



### Environmental Impacts

9.23. The scale of impact is determined in relation to the magnitude of change from the baseline condition that may result from the Proposed Development. Substantial, moderate and minor impacts can be beneficial or adverse. Negligible and neutral impacts are neither beneficial or adverse. Impacts found to be substantial or moderate are considered to have a significant effect; whereas impacts that are identified as minor, negligible and neutral are not considered to have a significant effect.

Magnitude	Environmental Impact
Substantial	Total loss / gain of, or alteration to, the baseline resource such that post-development characteristics or quality would be fundamentally and irreversibly changed.
High	Loss / gain of or alteration to the baseline resource such that post-development characteristics or quality would be fundamentally but reversibly changed.
Moderate	Loss / gain of or alteration to the baseline resource such that post-development characteristics or quality would be partially but reversibly changed.
Minor	Small changes to the baseline resource, which are detectable but the underlying characteristics or quality of the baseline situation would be similar to pre-development conditions.
Negligible	A very slight change to the baseline conditions, which is barely distinguishable.
Neutral	No change from the baseline environment.

Table 9.3: Environmental Impacts

### Impact Prediction Confidence

9.24. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.

Confidence Level	Description
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 9.4: Confidence Levels

## Significance of Effects

- 9.25. The following section provides a summary of the likely significance of the environmental effects that may result from the Proposed Development. These have been considered for the construction and operational phases and are based on information gained from the known baseline position at this time. These effects will be reviewed as part of, and reported within, the comprehensive ES technical paper.

### Construction Phase

- 9.26. Table 9.5 presents the finding of the preliminary impact assessment for the construction phase. The assessment assumes that design mitigation is in place but does not take into account the incorporation of the industry good practice measures which would be employed by the Proposed Development.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Increased run-off on exposed ground causing erosion and pollution of onsite drains	Local	Minor Negative	Minor Adverse	Low
Increased run-off on exposed ground causing erosion and pollution of unnamed statutory main river	Borough/District	Minor Negative	Minor Adverse	Low
Increase in silt and sediment loads as a result of construction works causing pollution of onsite drains	Local	Minor Negative	Minor Adverse	Low
Increase in silt and sediment loads as a result of construction works causing pollution of unnamed statutory main river	Borough/District	Minor Negative	Minor Adverse	Low

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Disturbance or erosion of bed and banks of onsite drains	Local	Minor Negative	Minor Adverse	Low
Disturbance or erosion of bed and banks of unnamed statutory main river	Borough/District	Minor Negative	Minor Adverse	Low
Changing the flood risk across the site and affecting offsite areas	Local	Minor Negative	Minor Adverse	Low
Loss or alteration of peat deposits affecting local shallow groundwater levels (Option 1 and 2 proposals to deal with peat on the Site)	Local	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on onsite drains	Local	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on unnamed statutory main river	Borough/District	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on groundwater in superficial deposits	Local	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on bedrock groundwater	County	Moderate Negative	Moderate Adverse	Low
<p>Note  Low confidence level reflects that additional information and baseline data is required to increase confidence level.</p>				

Table 9.5: Significance of Impact - Construction

## Operational Phase

- 9.27. Table 9.6 presents the finding of the preliminary impact assessment for the operational phase. The assessment assumes that design mitigation is in place, but does not take into account the incorporation of the industry good practice measures which would be employed by the Proposed Development.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Disruption/cut off of natural surface water pathways	Local	Minor Negative	Minor Adverse	Low
Disruption/cut off of natural shallow groundwater pathways	Local	Minor Negative	Minor Adverse	Low
Disruption/cut off of natural bedrock groundwater pathways	County	Minor Negative	Minor Adverse	Low
Increased run-off from hardstanding areas causing erosion and pollution of unnamed statutory main river	District	Minor Negative	Minor Adverse	Low
Increased run-off from hardstanding areas causing erosion and pollution of onsite drains	Local	Minor Negative	Minor Adverse	Low
Changes to unnamed statutory main river morphology	District	Minor Negative	Minor Adverse	Low
Changes to onsite drains morphology	Local	Minor Negative	Minor Adverse	Low
Disturbance or erosion of bed and banks of onsite drains	Local	Minor Negative	Minor Adverse	Low
Disturbance or erosion of bed and banks of unnamed statutory main river	District	Minor Negative	Minor Adverse	Low
Increased run-off changing flood risk affecting offsite areas.	Local	Minor Negative	Minor Adverse	Low
Drying out of peat deposits affecting local shallow groundwater levels (Option 1 and 2 proposals to deal with peat on the Site)	Local	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on onsite drains	Local	Minor Negative	Minor Adverse	Low

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Point source pollution from accidental spillages on unnamed statutory main river	District	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on groundwater in superficial deposits	Local	Minor Negative	Minor Adverse	Low
Point source pollution from accidental spillages on bedrock groundwater	County	Moderate Negative	Moderate Adverse	Low
Leaching of alkaline substance (e.g. cement / lime) into shallow groundwater (Option 2 proposal to deal with peat on the Site)	Local	Minor Negative	Minor Adverse	Low
Leaching of alkaline substance (e.g. cement / lime) into bedrock groundwater (Option 2 proposal to deal with peat on the Site)	County	Moderate Negative	Moderate Adverse	Low
<p>Note  Low confidence level reflects that additional information and baseline data is required to increase confidence level.</p>				

Table 9.6: Significance of Impact – Operation

## Mitigation

9.28. Mitigation that will be inherent in the design of the Proposed Development (and hence considered in the assessments presented in Tables 19.5 and 19.6) include:

- The use of Sustainable Drainage System (SuDS)

9.29. Mitigation measures will be designed to avoid, reduce or offset potential significant effects and these will feed into the Proposed Development layout and design detail. The detailed design and evolution of the scheme is ongoing and, as such, the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES. At this stage, it is not considered that any special flood risk mitigation will be required as flood risk sources are considered to be low. Surface water runoff from the Site will be managed using

appropriate SuDs or similar techniques to ensure discharge is maintain as existing and surface water storage provided as appropriate to balance storm event flows which exceed this discharge rate. Surface water from storm events up to a 1 in 100-year event with an allowance for climate change will be contained and managed on Site. In addition, it is assumed that Proposed Development will be undertaken in line with the current guidance and codes of best practice included, but not limited to, the measure detailed in the following documents:

- CIRIA C741: Environmental Good Practice on Site Guide (4<sup>th</sup> edition).
- CIRIA C750: Groundwater control: design and practice (2<sup>nd</sup> edition).
- CIRIA C753 Sustainable Urban Drainage Systems Manual
- CIRIA C768 Guidance on the Construction of SuDS
- CIRIA C532 Control Of Water Pollution From Construction Sites.
- CIRIA C650 Environmental Good Practice On Site (Expansion Of C502).
- CIRIA C689 Culvert Design & Operational Guide.
- Pollution Prevention Guidelines (PPG) 1 General Guide To The Prevention Of Pollution.
- PPG2 Above Ground Oil Storage.
- PPG4 Treatment & Disposal Of Sewage Where No Foul Sewer.
- PPG5 Works & Maintenance In, Or Near Water.
- PPG6 Working At Construction And Demolition Sites.
- PPG8 Safe Storage & Disposal Of Used Oils.
- PPG21 Polluting Incident Response Planning.
- PPG22 Dealing With Spills.

9.30. It is noted that all PPGs have been withdrawn by the EA, as the legislative requirements contained within the documents are, in many cases, no longer correct; however, the PPGs are still considered to be a relevant and effective source of best practice information and are widely used and accepted within the construction industry.

9.31. A Construction Environmental Management Plan (CEMP) (or equivalent) would incorporate the key principles of the good practice, legislation, regulations and guidance. The CEMP would provide practical measures to avoid and minimise the impact of the Proposed Development on ground and surface waters, as well as providing emergency preparedness and corrective actions together with measures for monitoring, recording and disseminating of information.

### **Further Work Required**

9.32. Water resources EIA, Flood Risk Assessment and Outline Drainage Strategy are currently being progressed and will include:

- Collecting and building upon the water environment baseline condition.
- Development of a Conceptual Site Hydrogeological Model (CSHM) to identify source-pathway-receptor linkage.
- Assessment of impacts taking into account design mitigation.
- Determine if further mitigation measures are required.
- Identify any cumulative and residual effects.
- Undertake a preliminary screening WFD assessment.

9.33. The following organisations will be consulted as part of the EIA process:

- Highways England
- Warrington Borough Council as Lead Local Flood Authority
- United Utilities as the Water Authority in the area
- Environment Agency

9.34. It is envisioned that the requirement for additional Site Investigation (SI) works (beyond the preliminary SI conducted in August 2018 and discussed in Chapter 7: Geology and Ground Conditions and the associated appendices (**Appendix 8** Phase I Environmental Assessment And **Appendix 9** Preliminary Site Investigation) for the purpose of final construction design would be undertaken post-planning.

## Summary

9.35. An assessment will be undertaken to consider the potential impacts to the water environment associated with the construction and operational phases of the Proposed Development.

9.36. There are two types of impacts on the water environment: i) those which result from the creation of the Proposed Development (e.g. the creation of impermeable surfaces causing changes in the hydrologic regime); and ii) those that occur associated with the use of the Proposed Development (e.g. accidental releases of fuel from a future user's vehicle). Impacts relating to hydrogeology of peat are also dependent on whether Option 1 (removal) or Option 2 (*in situ* stabilisation) is followed.

9.37. Table 9.7 below confirms the details to be Scoped In to the environmental assessment in respect of water resources. There are no elements Scoped Out of the environmental assessment at this time.

## Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>9 Water Resources</b></p> <p><i>Construction:</i></p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p> <p><i>Operation:</i></p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p>	<p>The proximity to the restored Risley Landfill Site as well as the potential for the Proposed Development to cause disruption to groundwater flow pathways. In addition, the Proposed Development has the potential to result in releases of pollution materials and sediment into the water environment including the underlying principal aquifer, which is in a SPZ3.</p>

Table 9.7: Receptors which are Scoped In

## 10. Landscape and Visual Impact Assessment

### Introduction

- 10.1. This scoping chapter has been prepared by Spawforths. The paper considers the scope of likely impacts upon landscape and views resulting from the proposed development of this Site. The assessment considers land both within and adjacent to the Site.
- 10.2. A Zone of Theoretical Visibility (ZTV) has been initially assessed for potential impacts on landscape and on existing views through a combination of field work and desk study. It should be noted that the ZTV Analysis is modelled on the Development Cell Parameter Plan in **Appendix 5**.
- 10.3. Initial Site survey in respect of Landscape and Visual Impact Assessment was carried out in December 2018.
- 10.4. Impact on Landscape Character and Visual Amenity will be assessed according to current principles of best practice as described in the guidelines published by the Landscape Institute and the Institute of Environmental Management & Assessment (IEMA) (Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013).
- 10.5. The author of this ES scoping paper is a Chartered Landscape Architect with approximately twenty five years' experience of landscape and visual impact assessment.

### Baseline Information

- 10.6. Site appraisal has taken the form of both a desktop study and a field survey.
- 10.7. The desktop study has been based on the use of, among others:
- NPPF (July 2018)
  - Warrington: A Landscape Character Assessment 2007
  - Warrington Local Plan Core Strategy adopted 21 July 2014
  - Warrington Unitary Development Plan Operative Date 23 January 2006

- Warrington Borough Council Supplementary Planning Document Design and Construction October 2010
- The Cheshire Historic Landscape Characterisation Project November 2007
- The Cheshire Historic Landscape Characterisation Project: Managing Historic Landscapes November 2007
- Warrington Borough Council Landscape Character Assessment 2007
- Salford City Council Landscape Character Assessment September 2007
- Warrington Borough Council Open Space Audit 2016
- Warrington Borough Council Local Plan Green Belt Final Report 21 October 2016
- Warrington Borough Council Local Plan Green Belt Assessment (Additional Site Assessments of Call for Sites Responses and SHLAA Green Belt Sites) July 2017
- More From Trees - The Mersey Forest Plan 2013
- Liverpool City Region and Warrington Green Infrastructure Framework Technical Document September 2013
- HS2 High Speed Rail Volume 2: Community Area report MA04: Broomedge to Glazebrook October 2018
- HS2 High Speed Rail Volume 2: Community Area report MA05: Risley to Bamfurlong October 2018
- Planning Application and Environmental Statement Risley Landfill Site 2006
- Warrington Eastern Development Area, Chapter 8 Landscape and Visual August 2006
- The Planning Inspectorate Appeal Decision Appeal Ref: APP/M0655/A/07/2052946 Risley Landfill Site, Silver Lane, Risley, Near Warrington, WA3 6BY 26 August 2008
- Woodland Trust Gorse Covert Mounds leaflet
- The National Playing Fields Association (NFPA) 6 acre (2.4 ha) standard
- Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, 2013 published by the Landscape Institute and the Institute of Environmental Management & Assessment (IEMA)
- The Character of England Map produced in 2005 by the former Countryside Commission and English Nature (now Natural England) – National Character Area Profile 60. Mersey Valley
- Historical maps of the area

- Site specific planning policies
- Common Land and Rights of Way Maps
- Local Ordnance Survey mapping
- Surveyed level plans
- Aerial photographs

10.8. Baseline mapping prepared as part of this Scoping Assessment carried out in December 2018 (see **Appendix 10**) includes:

- ZTV Analysis mapping (Figure 2)
- Key existing Site features and landscape character areas
- Local rights of way and connections
- Landscape designations
- Photographic survey
- Representative viewpoint locations
- Site topography and landform
- Landscape character of the wider study area
- Known heritage assets
- Known ecological habitats
- Visual receptors
- Arboricultural implications plan

10.9. The final extent of the area to be reported on and representative viewpoint locations will be a matter of agreement with the Local Authority. This ES assessment will also draw on the experience of the Planning Application and Environmental Statement Risley Landfill Site 2006 in terms of landscape and identified principal and secondary viewpoints, and issues raised by the Appeal Decision dated 26 August 2008 Appeal Ref: APP/M0655/A/07/2052946.

10.10. Receptors to be assessed include the following (please refer to Receptor Plans in **Appendix 6**):

10.11. Key **residential receptors** identified within 1km of the proposed application boundary include residents living on the B5212 Holcroft Lane, and residents living on the private road leading west from Holcroft Lane. The ZTV Analysis Map (Figure 2) indicates that these properties have views of the Proposed Development.

- 10.12. There are residential properties located within 500m of the proposed Application Boundary in Gorse Covert, adjacent to Pestfurlong Hill. The ZTV Analysis Map (Figure 2) indicates that it is unlikely that there would be any views of the Proposed Development from Culcheth village or from Gorse Covert.
- 10.13. Potential **employment** receptors within the study area include workers on the adjacent restored landfill site and farmers and farm workers managing agricultural land within the immediate surrounding area.
- 10.14. Potential **Recreational** receptors include those walking or cycling on the Public Right of Way (PROW) within the Site, and on PROWs and undesignated tracks approaching the Site. The ZTV Analysis (Figure 2) indicates potential glimpsed views from Holcroft Moss SSSI and SAC, but not from Risley Moss, and views from Gorse Covert Mounds; also that there may be glimpsed views from PROWs and undesignated tracks to the east of Culcheth, and this requires further investigation.
- 10.15. The ZTV Analysis Map (Figure 2) indicates that for stretches of the Glazebrook Trail, a linear signposted long distance recreational trail, there is unlikely to be intervisibility with the Site, but this requires further investigation. It is likely that there are views towards the Site from the Salford Trail, approximately 1.5km away, and this also requires further investigation. It is possible that there are other long distance views of the Site and it is intended to investigate these through detailed assessment of the study area.
- 10.16. The ZTV Analysis Map (Figure 2) indicates possible longer distance views within the wider 5km Study Area. These include views from Moss land approximately 2km and beyond to the northeast, and from land to the south and southeast. Whilst it is unlikely that there will be significant impact on views from these distances, intervisibility will be discussed with local authority officers.
- 10.17. The **travelling public** are potential receptors, including the following:
- Motorists using the M62 Motorway with intermittent views of the Site

- Motorists on local A-, B- and other roads.

## Potential Environmental Impacts

- 10.18. This section sets out the likely environmental impacts which will be considered as part of the Landscape and Visual Impacts technical paper.
- 10.19. The main potential impacts on the landscape character and visual amenity of the existing area will be changes to the existing character of the landscape and to views from surrounding dwellings, PROWs, motorway and other roads, undesignated tracks and publicly accessible areas.
- 10.20. The main visual elements of the Proposed Development which will affect character and these views include:
- New buildings and/or structures
  - Changes in landform & topography
  - New roads and urban spaces
  - New areas of open space and associated new vegetation
  - Any changes to the character, amount and disposition of vegetation cover
- 10.21. Heights, scale and manner in which the proposed building and other features are integrated into the surrounding area are key issues. The heights and scale of the Proposed Development will be established by the Parameters Plans (see **Appendix 5**) which will enable an objective visual assessment at this stage, and incorporate various mitigation measures to reduce the impacts on landscape character and the visual impact of the proposals.
- 10.22. Potential impacts which will be addressed within the landscape and visual impact assessment include:
- Changes to the character and visual appearance of the Proposed Development area (proportion, scale, enclosure, texture, colour, views)
  - Impacts on the distinctiveness, value and character of the existing landscape context and the ability of that context to accept change.
  - Impact of the Proposed Development on different groups of viewers (residents, pedestrians, vehicle travellers etc.) during and after construction.

- Changes to the night time views resulting from lighting of the Proposed Development.

#### Construction Phase

10.23. The Landscape and Visual Impacts technical paper will consider the following potential impacts arising during the construction phase of the Proposed Development.

- The visual impacts of construction works including earthworks, visibility of mobile cranes and general building works visible above Site hoardings, if these are erected.
- The visual impact of HGV movements, during phases of construction (firstly clearing and remediation of the Site in preparation for development, then the construction phase when the Proposed Development is built out).
- The visual impact of hoardings at footpath and roadway level, if applicable. Regarding receptors outwith the Site, this could have impact on the walking public passing through or nearby the Proposed Development.
- The visual impact of Site lighting on recreational and residential areas within the study area during the construction phase. This is likely to relate to lighting during the winter months of the Site compound (security lighting) and possibly for elements of the construction process.
- Potential restrictions on walkers within and adjacent to the Site during road building, hedge removal and tree planting works.
- Impacts on existing retained hedgerows and trees, and on watercourses during the construction works.
- Generally, change in character and appearance of the Site.

#### Operational Phase

10.24. The Landscape and Visual Impacts technical paper will consider the following potential landscape impacts arising during the operational phase of the Proposed Development:

- Impacts relating to individual landscape elements, landscape character and the characteristics of the surrounding landscape.
- Impacts on the wider green open space network and the surrounding landscape.

- Impacts on tree cover
- Impacts on Site topography, and
- Impacts on the night-time environment, in terms of lighting.

10.25. Potential visual impacts arising during the operational phase of the Proposed Development will be considered in terms of changes to the extent of visibility of the Site and changes to the identified principal viewpoints.

#### National

10.26. At a national level, the Application Lands lie within the Mersey Valley National Character Area (NCA), a wide, low-lying river valley landscape. The Site lies in the northeastern area of the NCA, in predominantly arable farmland, adjacent to the M62 Motorway corridor connecting Liverpool to Leeds. Here, open flat farmland is found on the rich, dark peaty soils of the former mosses, with a complex network of drainage ditches. Field pattern is regular and large scale, often defined by degraded hedgerows with isolated hedgerow trees.

10.27. The high density of urban areas in the wider area has led to landfill developments appearing in the landscape, and urban areas are often interspersed with Greenbelt.

10.28. Historically, the World War II Royal Ordnance Factory at Risley, to the south of the Site, covering most of the area now known as Birchwood, Oakwood and Gorse Covert, covered 927 acres of largely heath and mossland. The remnants of the ROF are considered a key cultural element of the landscape.

10.29. The National Character Assessment states that whilst the majority of the NCA has low levels of tranquility, there are comparatively high tranquility levels being found around the mosslands towards Manchester, to the east of the Site. There are remnants of semi-natural mossland protected by designation to the south and east of the Site. Risley Moss and Holcroft Moss are designated European Sites of International Importance (Special Areas of Conservation), Sites of Special Scientific Importance (SSSI).

10.30. Culcheth is one of a number of extensive villages in the area. There are listed buildings at Holcroft Hall within 1.5km of the Site and Great Woolden Hall within 2km of the Site.

- 10.31. Within the context and scale of the national character area, the proposed change of character of the Site from agriculture to motorway service area use is considered to be of minor significance.

#### Regional

- 10.32. To the southwest of the Site lies the civil parish of Birchwood, the nearest area of which is Gorse Covert residential estate, and the Birchwood Technology Park employment site. Birchwood lies at the northeastern edge of Warrington, a large town and unitary authority area.

#### Local

- 10.33. The Site itself sits partially on underlying peat and is in agricultural use, with fields to the east and north, former Risley landfill site, recently restored, rising to the west and the M62 Motorway to the south. To the north of the former landfill are Silver Lane Pools Local Wildlife Site. An elevated section of disused railway line runs to the north and northeast of the Site, separating the Site visually from the village of Culcheth 750m to the northwest. To the south of the motorway is the Gorse Covert Mounds Woodland Trust Site, with views over the Site from the elevated Pestfurlong Hill. The residential area of Gorse Covert lies immediately to the south of the Mounds. Public Rights of Way run from junction 11 north linking through to the village of Culcheth and around the former landfill Site perimeter.

#### Impact on the wider green open space network and the surrounding townscape

- 10.34. Currently the Application Site is agricultural land, lying adjacent to a former landfill site, recently restored, but as yet not generally accessible to the public. To the north of the landfill is the Silver Lakes Local Wildlife Site, and to the south of Junction 11 the Gorse Covert Mounds Woodland Trust Site. The Site is linked by existing footpaths to both of these areas and to Risley Moss Local Nature Reserve located to the south of Gorse Covert. Holcroft Moss, an area of SSSI designated lowland raised bog, thought to be the only known example in Cheshire that has never been cut for peat, is located approximately 1km to the east of the Site and is less well connected to the Site. To the east of the Site, within the Salford Landscape Character Area, are rural mosslands bounded to the southwest by the Glaze Brook and the Glazebrook long distance trail. These include Little Woolden Moss, located approximately 2km to the northeast of the Site. Key features of this area include low-lying, flat topography

associated with reclaimed former lowland peat bogs, a wide network of deep drainage ditches alongside private roads and between larger fields results in a simple ordered landscape, and a relative lack of built development in striking contrast to the adjoining urban areas. The flat landscape allows extensive views, as indicated on the ZTV Analysis Map (Figure 2).

- 10.35. In terms of accessible green open spaces, the Parameters Plan (see **Appendix 5**) proposes retention of perimeter vegetation, establishment of public open green space and connection to existing public footpaths linking the Site to local wildlife areas and communities. The overall pre-mitigation significance of the impacts on the wider open space network will be assessed, as will the establishment of a comprehensive green infrastructure to the MSA.

#### Impact on surrounding farmland

- 10.36. The Parameters Plans (see **Appendix 5**) indicate farmland to the north and east of the Application Site. Adjacent farmland is buffered by existing tall hedgerow containing mature trees along part of the Site's eastern boundary, whilst land to the north has open views into the Site. The overall pre-mitigation significance of the impacts on surrounding farmland will be assessed.

#### Impact on Tree Cover

- 10.37. Adjacent farmland is buffered by existing tall hedgerow containing mature trees along part of the Site's eastern boundary, by a sparse line of birch along its northern perimeter. The current Parameters Plans (see **Appendix 5**) indicate retention and management of this vegetation, to be supplemented by proposed tree and scrub planting to the northern, eastern and southern Site edges.
- 10.38. There is potential to establish planting of smaller tree belts within the scheme, having various screening and enclosing functions; wider belts could incorporate foot and cycle paths to increase the variety of open space experiences. New tree planting and native hedge planting could result in substantial overall enhancement of condition, biodiversity and age structure of vegetation within the Site. The overall pre-mitigation significance of the impacts on tree cover will be assessed.

#### Impacts on Site Topography

- 10.39. Proposed Development of the Site is likely to entail creation of development platforms, with potential impact on existing landscape form and topography and on existing views.

## Methodology for the Environmental Statement

- 10.40. The purpose of the environmental impact assessment (EIA) process is to identify and evaluate potential significant environmental effects arising from the Proposed Development.
- 10.41. The methodology sets out the criteria used to determine the sensitivity of the landscape and visual receptors, the magnitude of change, and the assessment of significance of the residual landscape and visual effects.
- 10.42. This LVIA uses a two stage methodology:

- Stage 1 follows LVIA guidance to determine visual and landscape impacts and the significance of effects on identified receptors.
- Stage 2 uses findings of the landscape and visual impacts against the methodology utilised in the other technical papers to determine the significance of environmental effects in the wider context, by correlating the identified effects against the level of importance of the receptor, measured from International to local level.

### Stage I

- 10.43. Stage I of the LVIA uses best practice LVIA guidance to assess the sensitivity of the receptor, quality, nature and value of the landscape and the view and the anticipated magnitude of change following proposed development and the correlated effect. See Tables below.

### Methodology Guidelines (Stage I)

- GLVIA3 places greater emphasis on professional judgement and less emphasis on a formulaic approach.
- Use of tables and written description of impacts/effects. Although a tabular format has been adopted for the assessment, a descriptive narrative has been produced for each receptor at each stage of the proposed development process. The descriptive narrative should be considered to be the most important aspect

of the assessment, supported by the tables. This has been described within the assessment stage of this chapter.

- Design Evolution. Where potential impacts have been mitigated by the incorporation of elements within the design, as an iterative part of the assessment process, these have been described.
- The likely evolution in the absence of development of this Site will be described.
- Mitigation. Mitigation is only a requirement for identified significant effects. Where lesser (or non-significant) effects have been identified which are able to be reduced within the design proposals these have been described within the section on Design Evolution (described above). This is described in the introduction to the pertinent part of this chapter.

10.44. Following the Landscape Institute's guidelines, landscape impacts are defined as relating to changes in fabric, character and quality of the landscape as a result of the Proposed Development. Visual impacts relate to changes in the available views of the landscape and are therefore impacts on people and their perceptions.

10.45. The LVIA assesses the potential effects of the Proposed Development on the landscape and visual amenity of the agreed study area. It will consider the layout, orientation and setting of the Proposed Development and the proposed buildings in terms of scale and massing. The study findings are based on desk top research, photography and fieldwork analysis.

10.46. The LVIA will be undertaken in the following stages:

- Baseline data collection and analysis;
- Confirmation of scope and methodology;
- Desk top study and Site survey to establish zone of influence;
- Description of baseline landscape and visual amenity;
- Identification and evaluation of potential impacts on the landscape and views;
- Development of mitigation measures / strategy;
- Assessment of landscape and visual effects during construction and operation phases;
- Evaluation of the significance of residual impacts on the landscape and visual amenity; and
- Presentation of findings within the ES.

10.47. Initial Site visits documented the following matters which are regarded as being of particular significance:

- Existing built form;
- Topography;
- Vegetation;
- Access and existing circulation;
- Key views;
- Land uses; and
- Water bodies and drainage systems.

10.48. The LVIA methodology will be in accordance with best practice as outlined in the following published documents listed in Section 2 Consulted Documents.

Landscape Methodology (Stage 1)

Baseline Landscape Character (Stage 1)

10.49. Existing landscape character assessment studies that cover the proposed Application Site and surrounding area at a national, county and local level have been reviewed. These studies include:

- Warrington Borough Council Landscape Character Assessment 2007
- Salford City Council Landscape Character Assessment September 2007
- The Character of England Map produced in 2005 by the former Countryside Commission and English Nature (now Natural England)

10.50. The ES chapter establishes the baseline landscape character of the immediate study area. The local landscape assessment identifies distinct landscape elements and characteristics and defines the assessed sensitivity of the landscape and of the surrounding study area to change from the Proposed Development. The location, land use, landscape elements, landscape quality and character types are described within the landscape character assessments and their sensitivity to change from the Proposed Development is evaluated. The likely nature and scale of the proposed changes to the landscape is then assessed with the individual effects, whether found to be adverse (i.e. negative), beneficial (i.e. positive) or neutral.

### Landscape Sensitivity (Stage 1)

- 10.51. The table below identifies the principal factors considered when assessing the sensitivity of the landscape in relation to the Proposed Development. The determination of the sensitivity of the landscape resource to changes associated with the proposal is defined as High, Medium or Low.

Table 70.1 Landscape Sensitivity

Landscape	High	Medium	Low
<b>Landscape Designation</b>	A landscape of distinctive character susceptible to relatively small changes. Includes national or regionally designated landscapes e.g. Area of Great Landscape Value (AGLV), National Scenic Area. Historic Gardens and Designed Landscapes on the National Register	A landscape of moderately valued characteristics. Including local landscape designation	A landscape of relative unimportance, the nature of which is tolerant to substantial change. No landscape designation
<b>Landscape Resource</b>	Important landscape resources or landscapes of particularly distinctive character and therefore likely to be subject to national designation or otherwise with high values to the public. Is vulnerable to minor changes.	Moderately valued characteristics reasonably tolerant of change.	Relatively unimportant/immature or damaged landscapes tolerant of substantial change.
<b>Scale and Enclosure</b>	Small intimate landscape.	Medium scale landscape	Large scale open landscape.
<b>Landform and Topography</b>	Mountainous or large dominating hills and valleys. Intimate small scale landscapes defined through easily identifiable elements in the immediate landscape	Rolling landform with small hills and valleys. Some intimacy and human scale through landscape elements such as hedgerows and woodland copses.	Large scale open landscape. Little intimacy or human scale, few character elements or features.
<b>Settlement</b>	Organic land cover pattern	A gradation between High and Low	Grid like linear land cover pattern
<b>Landmarks and visible built structures</b>	Landscape with symbolic or important features	A gradation between High and Low	Landscape with no recognised individual features or elements
<b>Remoteness and Tranquility</b>	Remote location, little evidence of human activity	A gradation between High and Low	Highly developed countryside areas with continuous evidence of human activity
<b>Landscape Quality and Value</b>	A landscape of exceptional or high quality and/or high value.	A landscape of good or ordinary quality and /or good or moderate value	A landscape of low or poor quality and value

Landscape Value and Quality (Stage 1)

10.52. The tables below identify factors considered when assessing landscape value and quality. Landscape condition is a more factual description with less reliance on a subjective professional judgement. This is completed through a straight forward comparative description and reference to the Application Site and its surrounds.

Landscape Value

Table 10.2 Landscape Value

Landscape	Definition	Typical Example
<b>High</b>	An iconic landscape or element(s) held in high regard both nationally, regionally and by the local community; A landscape or element(s) widely used by both the local community and a broader visiting community; Features of particular historical protected significance ; Landscape or space which defines or is closely associated with a community and its life and livelihood.	Nationally, regionally recognised e.g. parts of National Park, National Scenic Area, Special Landscape Area; Conservation or Listed status Registered Historic Garden and Designed Landscape
<b>Good</b>	A landscape or element(s) recognised regionally and locally as important ; A landscape widely used by the local community; Features or elements widely used or visited and held in association with the area or community.	Part of an AGLV (Area of Great Landscape Value)
<b>Moderate</b>	A landscape of local importance ; A landscape widely used by the local community; A sense of place recognisable and associated with the local area.	Area of local landscape importance
<b>Low</b>	A landscape without particular noted significance; A landscape or elements infrequently used by the local community; A landscape which is not distinct and does not add to the overall context of the area.	

10.53. The criteria used for assessing Landscape Quality is based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place. The categorisation of quality in the landscape is assessed through understanding;

- The general condition of the fabric of the landscape/townscape and the importance of its components.

- The consistency of the strength of its character.
- Its 'attractiveness' or scenic quality.
- Its contribution to the wider landscape/townscape context.
- Its amenity value and any protective designation that may cover areas of land.
- Land use and quality of management/condition.
- The intrusive nature of existing development, perception of proximity to urbanising influences of pylons, roads, the presence and character of visible built edge, and the dominance of detracting features.

## Landscape Quality

Table 10.3 Landscape Quality

Landscape	Definition	Typical Example
<b>Exceptional</b>	Strong landscape structure, characteristics, patterns, and/or clear urban grain identifiable with a historic period or event; Appropriate management for land use and land cover and/or a well maintained urban environment of distinction; Distinct features worthy of conservation, historic architectural grain; Sense of place exceptional local distinctiveness; No detracting features.	Internationally or nationally recognised. World Heritage Sites, National Parks, National Scenic Area, Special Landscape Area;
<b>High</b>	Strong landscape structure, characteristic patterns and/or clear urban grain; Appropriate management for land use and landcover, but potentially scope to improve; Distinct features worthy conservation; Sense of place; Occasional detracting features.	Nationally, regionally recognised e.g. parts of National Scenic Area, Conservation Area or Listed status. Registered Historic Gardens and Designed Landscapes
<b>Good</b>	Recognisable landscape structure and/or urban grain Scope to improve management for land use and land cover; Some features worthy of conservation; Sense of place; Some detracting features.	Regionally recognised e.g. localised areas within National Park, National Scenic Area, AGLV.
<b>Ordinary</b>	Distinguishable landscape structure, characteristics, patterns of landform and landcover often masked by land use; Fractured urban grain with patterns of use difficult to distinguish; Scope to improve management of vegetation; Some features worthy of conservation; Some detracting features	Locally recognised landscape without specific designation.

Landscape	Definition	Typical Example
<b>Poor</b>	Distinguishable landscape structure, characteristics, patterns of landform and landcover often masked by land use; Fractured urban grain with patterns of use difficult to distinguish; Scope to improve management of vegetation; Some features worthy of conservation; Some detracting features	Locally recognised landscape without specific designation.
<b>Very Poor</b>	Degraded landscape structure, characteristic patterns and/or urban grain missing; Mixed land use or dereliction dominates; Lack of management/ intervention has resulted in degradation; Extensive detracting features.	A Landscape likely to be singled out as needing intervention or regeneration.

### Magnitude of Landscape Change (Stage 1)

- 10.54. The criteria used to identify the magnitude of landscape change are summarised in the table below. Changes are described on a non-linear scale from Large, Medium, Small or Negligible.

### **Magnitude of Change**

Table 10.4 Magnitude of Change

Magnitude of Change	Example
<b>Large</b>	The Proposed Development would result in a prominent change to the landscape character (enhance or degrade). Major alteration to significant elements or features or the removal / introduction of substantial elements. The alteration of a landscape to substantially increase / decrease both the landscape value and quality
<b>Medium</b>	The Proposed Development would result in a change to the landscape character (enhance or degrade). Alteration to elements of features or partial removal / introduction. The alteration of a landscape to increase / decrease the landscape value and quality.
<b>Small</b>	The Proposed Development would result in a slight change to the landscape character (enhance or degrade). Alteration to minor elements or features or the removal / introduction. The minor alteration of a landscape to increase / decrease both the landscape value and quality.
<b>Negligible</b>	A very minor change which is not uncharacteristic and maintains the quality and value of the landscape.

### Landscape Effects (Stage 1)

- 10.55. The landscape effects are assessed by correlating the Landscape Sensitivity against the Magnitude of Change. They can be expressed as a Positive, Neutral or Negative effect.

#### Summary Table of Landscape Effects

Table 10.5 Summary Table of Landscape Effects

		Magnitude of Landscape Change			
		Large	Medium	Small	Negligible
Landscape Sensitivity	High	Substantial	High	Moderate	Minor
	Medium	High	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	None

### Visual Methodology (Stage 1)

- 10.56. The assessment process mirrors that of landscape effects in that it requires the collation of baseline information relating to the nature and type of views and the receptor's sensitivity which will receive them. As with landscape effects, visual effects are determined by considering the magnitude and nature of change against the sensitivity of the receptor.
- 10.57. The magnitude of change to the view will depend on numerous factors including the extent and nature of the current view, the distance to the Proposed Development, the time of year and whether other elements intervene in the view such as vegetation or moving traffic. To assist this process the level of change is graded between Large and Negligible and is described in the Magnitude of Visual Change table below.
- 10.58. The Initial process of assessing the visual impact of the Proposed Development is to establish the area from which the Proposed Development is likely to be visible. This has been undertaken through a combination of field work and desktop surveys.

- 10.59. The study area of the LVIA has been informed by ZTV Mapping (Figure 2) and through visual analysis/field survey and examination from public roads, public footpaths and accessible land.
- 10.60. The sensitivity of the visual receptors is based on a combination of factors including receptor type, the frequency of use of the receptor, the speed at which the receptor is travelling or the amount of time that a view would be observed. Visual sensitivity is categorized as High, Medium and Low and has been derived in accordance with the best practice guidelines (Table 3.8).
- 10.61. As well as the proximity, nature and quality of the view the magnitude of visual impact depends on factors such as the degree of change to the view (e.g. the proportion of the view affected), impacts on the landscape character of the proposed Application Site context and impacts on the visual amenity of the viewpoint caused by the Proposed Development.

Visual Sensitivity (Stage I)

- 10.62. The criteria used to identify the visual sensitivity are summarised in the table below. Each receptor is assessed as having a sensitivity measured as High, Medium, or Low.

**Visual Sensitivity**

Table 10.6 Landscape Sensitivity

<b>Receptor Sensitivity</b>	<b>Description</b>
<b>High</b>	Occupiers of residential properties Users of outdoor recreational facilities, including public rights of way, whose attention may be focused on the landscape Elevated panoramic viewpoints Communities where the Proposed Development results in changes in the landscape setting or valued views enjoyed by the community
<b>Medium</b>	People engaged in outdoor recreation where enjoyment of the landscape is incidental rather than the main interest People travelling through the landscape where the views involved are transient and sporadic but have a special significance in either the journey or the expression of the landscape or community being visited.
<b>Low</b>	People at their place of work, industrial facilities. People travelling through the landscape in cars, trains or other transport such that the speed and nature of the views involved are short lived and have no special significance

### Visual Quality (Stage 1)

- 10.63. An additional consideration of the nature of a view and its quality where a subjective opinion is considered alongside the objective factors. The quality is assessed as being Exceptional, High, Good, Ordinary or Poor.

Table 10.7 Visual Quality

<b>Visual Quality</b>	<b>Description</b>
<b>Exceptional</b>	Iconic views or skylines which are individual character elements in their own right. Protected views through SPG's or LDF.
<b>High</b>	View mentioned in the listing for a conservation area, listed building or scheduled monument as being important with regard its setting. Wide panoramic distant views of a valued landscape(s)
<b>Good</b>	Views with strong and distinctive features. Uninterrupted views. Views over a landscape of recognised character and quality without detracting features
<b>Ordinary</b>	A view typical of the locality. Generally attractive, some detracting features
<b>Poor</b>	Restricted views or views over a landscape of low value and quality.

### Magnitude of Visual Change (Stage 1)

- 10.64. The assessment of visual change describes:
- The changes in the character of the available views resulting from the Proposed Development; and
  - The changes in the visual amenity of the visual receptor.
- 10.65. The criteria used to identify the magnitude of visual change are summarised in the table below. Changes are described on a non-linear scale from Large, Medium, Small or Negligible.

## Magnitude of Visual Change

Table 10.8 Magnitude of Visual Change

Magnitude of Change	Example
<b>Large</b>	The Proposed Development would result in a prominent change to the existing view and would change the quality of the view. The Proposed Development would be easily noticed by the observer. The Proposed Development may break the skyline or form some other substantial change to the view.
<b>Medium</b>	The Proposed Development would result in a noticeable change in the existing view that may change the character and quality of the view. The change would be readily noticed by the observer but would not dominate the view.
<b>Small</b>	The Proposed Development would result in a perceptible change in the existing view but this would not affect its character or quality. The Proposed Development will appear as a small element in the wider landscape which may be missed by the casual observer. The view may be at such a distance as to reduce the appearance of the Proposed Development.
<b>Negligible</b>	Only a small part of the Proposed Development will be discernible and this may be for only part of the year or be a filtered view. The view may be at such a distance as to render the change virtually indiscernible without aid or reference. The quality and character of the view will remain unchanged.

### Visual Effects (Stage 1)

- 10.66. The visual effects are assessed by correlating the Visual Sensitivity against the Magnitude of Change. They can be expressed as a Positive, Neutral or Negative effect.

### Summary Table to determine visual effects

Table 10.9 Summary Table to determine visual effects

		Magnitude of Visual Change			
		Large	Medium	Small	Negligible
Visual Sensitivity	High	Substantial	High	Moderate	Minor
	Medium	High	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	None

### Significance of Effects on Landscape and Visual Receptors (Stage 1)

- 10.67. To draw final conclusions about significance, the separate judgements about the sensitivity of the landscape receptors and the magnitude of the landscape effects needs to be combined to allow a final judgement to be made about whether each effect is significant or not.
- 10.68. There are no hard and fast rules about what makes a significant effect, and there can be no standard approach since circumstances vary with the location and landscape context and with the type of proposal.
- 10.69. The Guidelines for Landscape and Visual Assessment suggest the following, although the final analysis relies on the expert opinion of the analyst:
- The loss of mature or diverse landscape elements, or features, is likely to be more significant than the loss of new or uniform/homogenous elements.
  - Effects on character areas, which are distinctive or representative, may be more important than the loss of areas in poor condition or degraded character which may, however, present greater opportunities for enhancement.
  - The loss of landscape elements, features or characteristics will be given greater weight if they are identified as being of high value or importance. Thus effects on landscape areas or characteristics recognised for their national importance are likely to be of more significance than effects on areas or characteristics of local importance. The test is whether the integrity of the landscape and objectives of the designation are compromised or not.
- 10.70. The Guidelines require an assessment for both landscape and visual effects to be the result of the sensitivity of a receptor being considered alongside the magnitude of change anticipated for each receptor. The scale of the effects on the receptor are summarised as a non-linear process as follows:
- A combination of a large or medium change in combination with a high or medium sensitivity leading to a substantial or high outcome.
  - A combination of medium or small change in combination with medium or low sensitivity leading to a moderate or minor outcome.

- A combination of small or negligible change in combination with low or negligible sensitivity leading to a minor or negligible outcome.
- A negligible change to a receptor or negligible sensitivity is considered to be of no effect.

10.71. In consideration of the nature of the Proposed Development, and the context of the wider landscape, an assessment of 'high or substantial' has been determined as a significant impact. This can be expressed as a negative or positive effect depending on the assessor's judgement regarding the nature and quality of the existing resource and how this has been changed. In some circumstances the change may be described as a neutral change if the expectation of the viewer or the fundamental nature and characteristics of a landscape or view appear unaffected.

### **Receptors (Stage 2)**

#### Stage 2 Methodology

10.72. The second stage of the assessment looks to establish a contextual value of the assessed effect with regard to the identified importance of the receptor, which is measured on a scale ranging from International to negligible.

#### Significance of Effects (Stage 2)

10.73. In the context of the second stage assessment the significance of effect is determined using a Significance Matrix (see Chapter 3). This identifies the receptor hierarchy level across the top of the matrix and the environmental impact down the side and where they meet within the matrix identifies the significance of the effect. An assessment of Moderate, Substantial or High is considered to be a significant effect for the Stage 2 Methodology.

#### Potential Environmental Impacts

- Potential environmental impacts include those affecting:
- Changes to the character and visual appearance of the Proposed Development area (proportion, scale, enclosure, texture, colour, views)
- Impacts on the distinctiveness, value and character of the existing landscape context and the ability of that context to accept change

- Impact of the Proposed Development on different groups of viewers (visual receptors) (residents, pedestrians, vehicle travellers, etc.) during and after construction
- Changes to night time views resulting from any lighting of the Proposed Development.

### Impact Prediction Confidence (Stage 2)

10.74. The ES methodology requires that a statement is made by the assessor regarding the level of confidence of the assessor to the degree of certainty of the assessed impact. The criteria for these definitions are set out below:

### **Impact Prediction Confidence**

Table 10.10 Impact Prediction Confidence

<b>CONFIDENCE LEVEL</b>	<b>DEFINITION</b>
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based upon reliable information or previous experience
Low	The predicted impact and its level are best estimates, generally derived from first principles of relevant theory and the experience of the assessor. More information may be needed to improve the level of confidence

### Timescale of Impacts Assessment Criteria

### **Assessment of Timescale of Impacts**

Table 10.11 Assessment of Timescale of Impacts

<b>TIMESCALE OF IMPACT</b>	<b>DEFINITION</b>
Short-term	0-5 years
Medium-term	5-20 years
Long-term/ indefinite	20 years and beyond

## Assessment of Environmental Value Hierarchy

### Receptors

#### Assessment of Environmental Value Hierarchy of Receptors

- 10.75. The table below sets out the criteria for establishing the Value Hierarchy of the receptor applicable to all papers of this ES:

Table 10.12 Criteria for establishing the Value Hierarchy of the Receptor

Designation	Proposed Development Receptors
International	<p>World Heritage Sites, Scheduled Monuments of exceptional quality, or assets of acknowledged international importance or can contribute to international research objectives            Grade I Listed Buildings and built heritage of exceptional quality            Grade I Registered Parks and Gardens and historic landscapes and townscapes of international sensitivity,  <b>There are no known receptors of this level of sensitivity within the Proposed Development Site. Known receptors of this level of sensitivity within the surrounding area include Risley Moss SSSI and Local Nature Reserve and parts of Holcroft Moss SSSI. Further discussions regarding the wider locality will be held with the local authority.</b></p>
National	<p>Scheduled Monuments, or assets of national quality and importance or that can contribute to national research objectives            Grade II* and Grade II Listed Buildings,            Grade II* and II Registered Parks and Gardens, Registered Battlefields, historic landscapes and townscapes of outstanding interest, quality and importance, with exceptional coherence, integrity, time-depth, or other critical factor(s)  <b>There are no known receptors of this level of sensitivity within the Proposed Development Site. Holcroft Hall 1km to the north of the Site is Grade II* listed, and Great Woolden Hall 2km to the east is Grade II listed and the adjacent farmland contains a Scheduled Monument (promontory fort 300m west of Great Woolden Hall Farm) . There are listed structures and buildings in Culcheth to the northwest. Further discussions regarding the wider locality will be held with the local authority.</b></p>
Regional	<p>Designated or undesignated assets of regional quality and importance that contribute to regional research objectives            Conservation Areas with very strong character and integrity, other built heritage that can be shown to have exceptional qualities in their fabric or historical association.            Designated or undesignated special historic landscapes and townscapes which are well preserved and exhibiting considerable coherence, integrity time-depth or other critical factor(s)            Long distance footpaths including the Sustrans Trail which link locations within regions  <b>The Glazebrook Trail follows the Warrington BC county boundary 1.5km to the east of the Site. To discuss with local authority officers.</b></p>

Designation	Proposed Development Receptors
County	<p>Undesignated archaeological remains of county importance with the potential to contribute to research objectives and understanding at a County level.</p> <p>Conservation Areas with very strong character and integrity, other built heritage that can be shown to have exceptional qualities in their fabric or historical association.</p> <p>Designated or undesignated historic landscapes and townscapes with reasonable coherence, integrity, time-depth or other critical factor(s)</p> <p><b>The historic remnants of the former Royal Ordnance Factory at Risley are considered a key cultural element of the landscape. To discuss with local authority officers.</b></p>
Borough	<p>Undesignated assets of borough importance with the potential to contribute to borough and local research objectives.</p> <p>Locally Listed Buildings, other Conservation Areas, historic buildings that can be shown to have good qualities in their fabric or historical association</p> <p>Assets that form an important resource within the community, for educational or recreational purposes.</p> <p><b>An area in the north of Culcheth (former Newchurch Hospital) has been designated as a Conservation Area to protect its character, however it is considered to be relatively remote from the Site. Further discussions regarding the Site and the wider locality will be held with the project archaeologist and with the local authority to confirm this.</b></p>
Local/Neighbourhood	<p>Assets compromised by poor preservation and/or poor survival of contextual associations and with limited potential to contribute to research objectives.</p> <p>Historic (unlisted) buildings of modest quality in their fabric or historical association</p> <p>Historic landscapes and townscapes with limited sensitivity or whose sensitivity is limited by poor preservation, historic integrity and/or poor survival of contextual associations.</p> <p>Assets that form a resource within the community with occasional utilisation for educational or recreational purposes.</p> <p><b>There are local receptors (residential, recreational, place of work and vehicle route receptors) surrounding the proposed Site. See table below and Visual Receptors Plan.</b></p>

### Identified Visual Receptors

- 10.76. The location of the receptors described below is identified on the Visual Receptors Plan (see **Appendix 6**).

Table 10.13 Identified Visual Residential Receptors

Residential Receptors		
Visual Receptor (R)	Representative View	Representative View Point (VP)
RI	Properties with front, rear or gable end elevations directly facing the proposed Application Site, or with angled views from rear or front elevations within 1.5km of Site boundary	<i>Representative Viewpoints to be discussed and agreed with the designated Local Authority Officer</i>

Table 10.14 Identified Visual Recreation Receptors

<b>Recreation Receptors</b>		
<b>Visual Receptor (R)</b>	<b>Representative View</b>	<b>Representative View Point (VP)</b>
R2	Public Right of Way within the Site	<i>Representative Viewpoints to be discussed and agreed with the designated Local Authority Officer</i>
R3	Public Right of Way within 100m of Site Boundary	
R4	Public Right of Way within 500m of Application Boundary	
R5	Public Rights of Way within 2km of Application Boundary	
R6	Former (restored) landfill Site within 500m of Application	
R7	Non-designated access track within 500m of Application Boundary	
R8	Elevated disused railway line within 1km of Application Boundary	

Table 10.15 Identified Visual Place of Work Receptors

<b>Place of Work Receptors</b>		
<b>Visual Receptor (R)</b>	<b>Representative View</b>	<b>Representative View Point (VP)</b>
R9	<i>To be agreed with local authority officer</i>	<i>Representative Viewpoints to be discussed and agreed with the designated Local Authority Officer</i>

Table 10.16 Identified Visual Transport Receptors

<b>Transport Receptors</b>		
<b>Visual Receptor (R)</b>	<b>Representative View</b>	<b>Representative View Point (VP)</b>
R10	M1 Motorway and slip roads within 100m of Application Site boundary	<i>Representative Viewpoints to be discussed and agreed with the designated Local Authority Officer</i>
R11	M1 Motorway and slip roads within 1km of Application Site boundary	
R12	A-Roads within 500m of the Application Site boundary	
R13	B-Roads within 1km of the Application Site boundary	
R14	B-Roads within 2km of the Application Site boundary	

Transport Receptors		
Visual Receptor (R)	Representative View	Representative View Point (VP)
R15	Holcroft Moss	

## Predicted Environmental Impacts

Table 10.17 Predicted Environmental Impacts

Impact	Typical Criteria Description
Substantial	<p>Impacts will damage or destroy cultural heritage assets; result in the loss of the asset and/or quality and integrity; cause severe damage to key characteristic features or elements; almost complete loss of setting and/or context of the asset. The assets integrity or setting is almost wholly destroyed or is severely compromised, such that the resource can no longer be appreciated or understood. (Negative)</p> <p>The proposals would remove or successfully mitigate existing damaging and discordant impacts on assets; allow for the restoration or enhancement of characteristic features; allow the substantial re-establishment of the integrity, understanding and setting for an area or group of features; halt rapid degradation and/or erosion of the heritage resource, safeguarding substantial elements of the heritage resource. (Positive)</p>
High	<p>Substantial impact on the asset, affecting the integrity; predominant loss of, or damage to, key characteristics, features or elements; substantially intrusive into the setting and/or would adversely impact upon the context of the asset; complete loss of the asset for community appreciation. The assets integrity or setting is noticeably damaged but not destroyed so understanding and appreciation is substantially compromised. (Negative)</p> <p>Substantial benefit to, or restoration of, key characteristics, features or elements; improvement of asset quality; degradation of the asset would be halted; the setting and/or context of the asset would be enhanced and understanding and appreciation is substantially improved; the asset would be bought into community use. (Positive)</p>
Moderate	<p>Moderate impact on the asset, but only partially affecting the integrity; partial loss of, or damage to, key characteristics, features or elements; moderately intrusive into the setting and/or would adversely impact upon the context of the asset; reduction in the asset for community appreciation. The assets integrity or setting is partly damaged but not destroyed so understanding and appreciation is compromised. (Negative)</p> <p>Benefit to, or restoration of, key characteristics, features or elements; improvement of asset quality; degradation of the asset would be reduced; the setting and/or context of the asset would be enhanced and understanding and appreciation is improved; the asset would be bought into community use. (Positive)</p>

Impact	Typical Criteria Description
Minor	<p>Some measurable change in assets quality or vulnerability; minor loss of or alteration to, one (or maybe more) key characteristics, features or elements; change to the setting would not be overly intrusive or overly diminish the context; community use or understanding would be reduced. The assets integrity or setting is damaged but understanding and appreciation would only be diminished not compromised. (Negative)</p> <p>Minor benefit to, or partial restoration of, one (maybe more) key characteristics, features or elements; some beneficial impact on asset or a stabilisation of negative impacts; slight improvements to the context or setting of the proposed Application Site; community use or understanding and appreciation would be enhanced. (Positive)</p>
Negligible	<p>Very minor loss or detrimental alteration to one or more characteristics, features or elements. Minor changes to the setting or context of the proposed Application Site. No discernible change in baseline conditions (Negative).</p> <p>Very minor benefit to or positive addition of one or more characteristics, features or elements. Minor changes to the setting or context of the proposed Application Site No discernible change in baseline conditions. (Positive).</p>
Neutral	No discernible impact

#### Impact Prediction Confidence

- 10.77. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Table 10.18 Impact Prediction Confidence Levels

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

## Significance of Effects

### Construction Phase

- 10.78. This constitutes an initial assessment prior to consideration for mitigation.

Table 10.19 Significance of Effects – Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Changes in character and appearance of Application Site	Local	Moderate to High Negative	Minor Adverse	Low
Change to access through the Proposed Development - loss of on and through Site pedestrian connectivity	Local	Moderate to High Negative	Minor Adverse	Low
Construction activity on the Site i.e. movement of vehicles, construction machinery, lighting	Local	Moderate to High Negative	Minor Adverse	Low
Impact on designated areas and buildings e.g. SSSIs, SACs, Listed Buildings	National	Negligible to Minor Negative	Negligible to Moderate Adverse	Low
Impact on Conservation Areas	Borough	Negligible	Negligible	Neutral
Changes in existing landscape context	Local to Regional	Negligible to Minor	Negligible to Moderate Adverse	Low
Impact on viewpoints and viewer groups	Local to National	Minor to Moderate Negative	Moderate to High Adverse	Low
Change to landform (cut and fill)	Local	Minor to High Negative	Minor Adverse	Low
Impacts on existing retained hedgerows and trees	Local	Minor to Moderate Negative	Minor Adverse	Low
Impacts on watercourses	Local	Moderate to High Negative	Minor Adverse	Low

10.79. Further assessment and discussion with persons including local authority officers will be required before a greater level of confidence can be achieved regarding impacts on landscape and on views both within the Site and the wider area.

10.80. The construction phase will materially change some key elements within the Site, including existing landscape character and views. Impacts upon the same receptor may be different during the construction phase, when compared to the operational phase of the Proposed Development.

Operational Phase

10.81. This constitutes an initial assessment prior to consideration for mitigation.

Table 10.20 Significance of Effects – Operational Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Changes in character and appearance of Application Site	Local	Minor Negative	Minor Adverse	Low
Night time impacts	Local to Borough	Minor to Moderate Negative	Minor Adverse	Low
Increased vehicle activity on existing roads	Local	Minor to Moderate Negative	Minor Adverse	Low
Changes in existing landscape context	Local to Regional	Negligible to Minor	Negligible to Moderate Adverse	Low
Impact on viewpoints and viewer groups	Local to National	Minor to Moderate Negative	Minor to High Adverse	Low

10.82. Further assessment and discussion with persons including local authority officers will be required before a greater level of confidence can be achieved regarding impacts on landscape and on views both within the Site and the wider area.

10.83. The construction phase will materially change some key elements within the Site, including existing landscape character and views. Impacts upon the same receptor may be different during the construction phase, when compared to the operational phase of the Proposed Development.

## Mitigation

10.84. Mitigation measures to address the potential impacts, are still in an early stage of progression, and will emerge in conjunction with the Green Space Strategy Plan for the proposed Application Site. Broad mitigation measures are likely to include the following:

- Mitigation measures, in the form of soft landscaping, will be implemented during the construction and operation phase, and this planting will help to assimilate the Proposed Development into the wider context. Changes brought about by the Proposed Development will be considered to normalise over time and be consistent with the adjacent rural/urban edge character area.
- General design principles that will be implemented to further help assimilate the Proposed Development into the surrounding landscape during operation include:
  - A design layout that takes account of topography.
  - Retention of key views.
  - Orientation of buildings.
  - Location of open space, play space and infrastructure planting.
  - Retention of key characteristics e.g. trees and hedgerows.
- Mitigation measures will be introduced to reduce the impact on receptors with possible 'significant effects', these measures could include:
  - Tree and scrub planting in groups and perimeter belts
  - Tree planting within car park areas
  - Scrub understorey planting.
- General good practice construction principles will be implemented during the construction period to reduce impacts on the landscape and visual receptors include:
  - Construction parcels / sub phases
  - Considered location of access to the construction Site.
  - Considered location of Site compounds.

The level of construction plant and working hours and methods of operation to be restricted e.g. to those identified in the project description

Site Lighting during working hours of darkness to be kept to a minimum required for safe and efficient working.

A Tree and Hedgerow Protection Plan will be prepared as part of the reserved matters submitted to ensure the protection of existing vegetation during the construction period.

A Landscape Infrastructure Phasing Plan will be prepared and undertaken during the construction phase and preliminary details will be submitted within the reserved matters submissions.

A Landscape Management Plan to identify how the installed works (during construction) will be maintained to ensure establishment prior to the Site becoming operational.

There are mature trees on the Site perimeters that will require continuing monitoring and arboricultural assessment, given the proposed changes of use for the Application Site. To ensure the successful establishment of the new landscape a Landscape Management Plan should be written outlining the necessary works over a period to be agreed.

## Further Work Required

- 10.85. Once the scope of the assessment has been agreed, the exact existing baseline conditions will be firmed up and established. This will be done through further Site appraisal, taking the form of both desktop study and field survey. It is possible that there are additional medium and long distance views of the Site which will become apparent in the absence of intervening screening foliage, and it is intended to investigate these as part of the LVIA process.
- 10.86. To fully inform the Landscape technical paper, additional elements of landscape and visual survey and analysis and liaison with appropriate local authority officers is required to be completed.
- 10.87. Agreement of key receptors, viewpoints, and the requirement or otherwise for photomontage representation of the Proposed Development will be agreed in discussion relevant consultees, in this case with the local authority officers.

## Summary

- 10.88. The Landscape Scoping Paper indicates potential impacts on the landscape and on viewpoints arising from the Proposed Development of the Site. Overall, a precautionary approach has been taken with regards to the significance of receptors, significance of effects and magnitude of impacts. It is considered unlikely that any project impact identified for scoping will increase in magnitude. Mitigation will be used to ensure that, where possible, highlighted impacts are reduced.
- 10.89. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of the ES Landscape Technical Paper.

### Scoped In

Table 21 Details to be Scoped In to the Environmental Assessment

Environmental Issue	Phase	Reason for “scoping in”
Visual receptors as follows: <ul style="list-style-type: none"> <li>- Dwellings</li> <li>- PRowWs in local open space</li> <li>- Landfill site</li> <li>- Non-designated access tracks</li> <li>- Elevated railway line</li> <li>- Places of work</li> <li>- Motorway</li> <li>- Roads</li> <li>- Holcroft SSSI</li> </ul> identified within an area of 5km from the Site boundary (the Study area).	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
Landscape receptors identified within the Study Area especially where there is a distinct change in character or type to the current landscape	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
Security and compound lighting	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible

## Scoped Out

Table 22 Details to be Scoped Out of the Environmental Assessment

Environmental Issue	Reason for “scoping out”
No Visual receptors within the Study Area will be scoped out at this stage	It is unlikely that receptors over 5km from the Site boundary will be affected by the Proposed Development

## 11. Ecology and Nature Conservation

### Introduction

- 11.1. This scoping report chapter has been prepared by Wardell Armstrong LLP. This document will consider the scope of likely impacts upon the potential ecological receptors affected by the proposed development of this Site. The assessment considers all land within the Application Boundary, with appropriate survey/data radii being applied for relevant species groups/taxa. The assessment should be considered in conjunction with the hydrology of the Site (as set out in Chapter 9: Water Environment); and, in relation to the potential excavation and reuse of peat resources, Agriculture, Land and Soils (Chapter 16). A full description of the Site is provided in Chapter 4: Project Description.
- 11.2. The scoping assessment is informed via a combination of field survey work and desk top research, which included the assessment of statutory and non statutory conservation Sites, protected and notable species, habitats and invasive species. Wardell Armstrong LLP have completed a preliminary level of field survey to support this application (A Preliminary Ecological Appraisal report is provided as **Appendix 11**), which to date comprises:
- Data collection from RECORD (November 2018)<sup>19</sup>;
  - Preliminary Ecological Appraisal, (November 2018);
  - Habitat Suitability Index (HSI) assessment for Great Crested Newt (November 2018)
  - Wintering Bird Surveys (January – March and October – November 2018) – survey only, no assessment undertaken to date.
  - Bat Activity Survey (October 2018) – survey only, no assessment undertaken to date.
- 11.3. In order to assess the significance of potential impacts, the following legislation has been considered:
- Conservation of Habitats and Species Regulations 2017 (and as amended), which protects a range of species including bats, otter, and great crested newt.
  - Wildlife and Countryside Act (WCA) 1981 (as amended), which protects Sites of Special Scientific Interest, National Nature Reserves, and a range of species including bats, great crested newt, otter, water vole and all wild birds. This includes partial protection for adder, common lizard and grass snake. Additional protection is provided to birds listed on Schedule 1 of WCA against

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<sup>19</sup> <http://www.record-lrc.co.uk/>

disturbance of any Schedule listed bird or young while nesting. Finally, Section 14 of the WCA prohibits the release of any Schedule 9 (part 2) species.

- The Protection of Badgers Act 1992, which protects badger setts and protects the animals from disturbance.
- Natural Environment and Rural Communities (NERC) Act 2006 which requires the Secretary of State to publish a list of habitats and species of principal importance for the conservation of biodiversity in England.

#### **National Policy**

11.4. Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to 'have regard' to the conservation of biodiversity when considering planning applications.

11.5. Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF18).

11.6. The NPPF18 underpins the Government's planning policies for England and how these are to be applied. The central theme of the NPPF18 is a presumption in favor of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats Site is being planned or determined.

11.7. The NPPF18 states:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and;

- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity;
- The following should be given the same protection as habitats sites:
  - a) potential Special Protection Areas and possible Special Areas of Conservation;
  - b) listed or proposed Ramsar sites; and
  - c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF18 requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

### **Local Policy**

- 11.8. Local Policy is set out within the *Local Plan Core Strategy* (Warrington Borough Council, Adopted July 2014). The following policies are appropriate to Ecology:

#### **Policy QE 3**

##### **Green Infrastructure**

The Council will work with partners to develop and adopt an integrated approach to the provision, care and management of the borough's Green Infrastructure. Joint working and the assessment of applications will be focussed on:

- protecting existing provision and the functions this performs;
- increasing the functionality of existing and planned provision especially where this helps to
- mitigate the causes of and addresses the impacts of climate change;
- improving the quality of existing provision, including local networks and corridors, specifically
- to increase its attractiveness as a sport, leisure and recreation opportunity and its value as a habitat for biodiversity;
- protecting and improving access to and connectivity between existing and planned provision
- to develop a continuous right of way and greenway network and integrated ecological system;

- securing new provision in order to cater for anticipated increases in demand arising from development particularly in areas where there are existing deficiencies assessed against standards set by the Council.

#### Policy QE 5

##### **Biodiversity and Geodiversity**

The Council will work with partners to protect and where possible enhance Sites of recognised nature and geological value. These efforts will be guided by the principles set out in National Planning Policy and those which underpin the strategic approach to the care and management of the borough's Green Infrastructure in its widest sense.

Sites and areas recognised for their nature and geological value are shown on the Policies Map and include:

- European Sites of International Importance
- Sites of Special Scientific Interest
- Regionally Important Geological Sites
- Local Nature Reserves
- Local Wildlife Sites
- Wildlife Corridors

The specific Sites covered by the above designations at the time of publication are detailed in Appendix 3.

Proposals for development which may affect **European Sites of International Importance** will be subject to the most rigorous examination in accordance with the Habitats Directive. Development or land use change not directly connected with or necessary to the management of the Site and which is likely to have significant effects on the Site (either individually or in combination with other plans or projects) and which would affect the integrity of the Site, will not be permitted unless the Council is satisfied that;

- there is no alternative solution; and
- there are imperative reasons of over-riding public interest for the development or land use change.

Proposals for development in or likely to affect **Sites of Special Scientific Interest (SSSI)** will be subject to special scrutiny. Where such development may have an adverse effect, directly or indirectly, on the SSSI it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the Site itself and the national policy to safeguard the national network of such Sites.

Proposals for development likely to have an adverse effect on **regionally and locally designated Sites** will not be permitted unless it can be clearly demonstrated that there are reasons for the development which outweigh the need to safeguard the substantive nature conservation value of the Site or feature.

Proposals for development which may adversely affect the integrity or continuity of **UK Key habitats or other habitats of local importance**, or adversely affect **EU Protected Species, UK Priority Species or other species of local importance**, or which are the subject of **Local Biodiversity Action Plans** will only be permitted if it can be shown that the reasons for the development clearly outweigh the need to retain the habitats or species affected and that mitigating measures can be provided which would reinstate the habitats or provide equally viable alternative refuge Sites for the species affected.

All development proposals affecting protected Sites, wildlife corridors, key habitats or priority species (as identified in Local Biodiversity Action Plans) should be accompanied by information proportionate to their nature conservation value including;

- a Site survey where necessary to identify features of nature and geological conservation importance; an assessment of the likely impacts of the proposed development proposals for the protection and management of features identified for retention;
- an assessment of whether the reasons for the development clearly outweigh the nature conservation value of the Site, area or species; and
- proposals for compensating for features damaged or destroyed during the development process

Where development is permitted, the Council will consider the use of conditions or planning obligations to ensure the protection and enhancement of the Site's nature conservation interest and/or to provide appropriate compensatory measures.

- 11.9. Wardell Armstrong will be completing the Ecology technical chapter within the Environmental Statement for the Proposed Development. In addition, Wardell Armstrong will be completing remaining survey work and technical consultation. A Technical (baseline) PEA report is also appended at **Appendix 11**.

## Baseline Information

### Desk Study

- 11.10. Summary methods are provided below with additional detailed contained within the individual technical appendices, which will support the Environmental Statement Ecology and Nature Conservation Paper. The desktop study was informed by review of existing available information provided by RECORD (Local Records Centre) and from available internet-based resources for a 2km search radius, extending to 5Km for Special Protected Area's (SPA's), Special Areas of Conservation (SAC's) and Ramsar Sites.

- 11.11. Specific information was sought for:

- Statutory designated Sites;
- Locally designated Sites;
- Ancient woodland;
- Protected and/or notable species;
- NERCs.41 Priority Habitats and Species; and
- Local Biodiversity Action Plan (LBAP) priority habitats and species.

- 11.12. Statutory conservation Sites located within the 2-5 km search radii include Manchester Mosses (SAC) Astley & Bedford Mosses (SAC and SSSI), Risley Moss (SAC and SSSI), LNR, Rixton Clay Pits (SAC and SSSI) and LNR, Holcroft Moss (SAC SSSI), and Woolston Eyes (SSSI).
- 11.13. The closest statutory Site is Holcroft Moss which is c.890m from the Proposed Development to the west and is separated from it by the M62. Astley and Bedford Mosses, and Risley Moss are (together with Holcroft Moss) components of the internationally designated Manchester Mosses SAC suite, which all lie more distant from the Proposed Development. Manchester Mosses SAC is designated for the presence of Annex I Habitats namely *Degraded raised bogs still capable of natural regeneration*.
- 11.14. The development area will be partly located over sub-surface peat. There are two options currently being considered to enable the formulation of a stable development platform. These are either i) the stabilisation and retention of the peat in situ; or ii) the removal and potential donation of the peat to nearby conservation areas. In the event that the latter option is pursued the 'quality' of the peat, i.e. its capacity to contribute meaningful conservation benefit as part of a peatland restoration scheme, will be investigated as part of the work being undertaken for the Agricultural Land and Soils chapter (Chapter 16). It is considered that there will be insufficient land available within the Site to accommodate the peat, however the restoration/mitigation scheme will investigate the potential for the inclusion of peat laden marshy grassland/swamp habitats within non developed parts of the Site.
- 11.15. As the application Site lies outside the SAC suite, there will be no direct loss of EU Annex I protected habitat and hence no direct adverse effects; however the potential for the removal and/or stabilisation of sub surface peat within the application Site may result in localised hydrological changes. All assessment provided in this Scoping Chapter are provided without prejudice to the subsequent Habitats Regulations Assessment (HRA). The proposals will be considered in detail in this regard and a (shadow) Stage I HRA 'screening assessment' will be undertaken. The SAC is evaluated at International value. Woolston Eyes SSSI and Rixton Clay Pits are scoped out of the assessment, being of c.4.5Km and 3Km respectively, from the Proposed Development with no hydrological connectivity or habitat linkage (due to the presence of the M62).
- 11.16. Non statutory conservation Sites located within the 2km search radius are Pestfurlong Moss (Local Wildlife Site) Gorse Covert Mounds (LWS), Rixton Moss (LWS) and Silver Lane Risley (LWS).

11.17. Pestfulong Moss LWS supports lowland raised bog habitat with scrub and woodland. It is evaluated at Borough level and will be considered through the assessment due to its connectivity with Risley Moss and presence of peatland habitats. Silver Lane Risley LWS is adjacent to Site and ecologically connected by a water course and vegetation and is therefore carried through the assessment.

11.18. Gorse Covert Mounds and Rixton Moss LWS are scoped out of further assessment on the basis of limited/absent ecological connectivity and separation distance from the Proposed Development.

#### **Extended Phase I Habitat Survey**

11.19. The aim of the Extended Phase I Habitat survey are the recording of broad habitat types present on Site, as well as to identify evidence of protected or notable species or habitats with the potential to support these species. An Extended Phase I Habitat Survey of the Site was undertaken on 31<sup>st</sup> October 2018. The surveys followed the 'Extended Phase I' methodology (Institute of Environmental Assessment (IEA), 1995 and JNCC 2010). The survey area for habitats includes all within the Site. The survey recorded no habitats which are considered to be of intrinsic ecological value via their inclusion on NERC s.41 and none are considered to be intrinsically notable at Local scales however all habitat losses are considered through the assessment process in compliance with NPPF 18 which requires the delivery of a net gain in biodiversity from all Proposed Development.

11.20. The Preliminary Ecological Appraisal, utilizing data gathered from the Desk Study and habitat information from the Extended Phase I Habitat Survey has evaluated the following species receptors as being potentially subject to adverse effects (in the absence of mitigation):

- Protected species (Great Crested Newt, Bats, Badger, Water Vole, Reptiles);
- Barn Owl; and
- Breeding and Wintering birds.

11.21. The nature of potential effects and any additional survey requirements are discussed below for each of the identified receptors in turn.

#### **Habitat Suitability Survey (HSI) For Great Crested Newt (GCN)**

11.22. HSI assessment was undertaken of accessible ponds within, and up to ~500m from, the Site boundary. The HSI assessment was conducted in accordance with good practice guidelines (English Nature and Langton et al. 2001). This HSI scoring system assesses a waterbodies'

suitability as an aquatic habitat for GCN following ARG UK (2010) methodology which is based on Oldham *et al* (2000). The HSI is a simple model to provide an informed view of the value of a waterbody to support breeding populations of GCN, which involves assessing waterbodies based on ten habitat parameters that are known to influence breeding populations of GCN.

- 11.23. As the presence/absence of GCN is not known until surveys of waterbodies can be done during the required period (mid March – mid June) the value of this receptor cannot yet be ascertained. In terms of survey methodology, eDNA sampling and analysis will be undertaken initially, during mid – April, with ‘conventional’ surveys (6 visits) being undertaken for waterbodies where presence is established via eDNA methods.

**Bat Activity Survey**

- 11.24. A single bat activity survey has been undertaken using transect and automated detector sampling during October 2018. The survey was led by a Natural England Bat Licensed Surveyor and methods were in accordance with standard practice guidelines (Collins 2015). In terms of foraging and commuting habitats, the habitats within the Site are considered to be of ‘Low’ habitat quality, given their predominantly arable nature. The survey report will be provided as an appendix to the ES Technical Paper.
- 11.25. Two Song Meter SM2BAT+ Ultrasonic Recorder (Wildlife Acoustics, Inc.) automated bat detector units were deployed for five consecutive nights during October. Transect survey were undertaken in October 2018. Bat activity surveys will also be undertaken during May 2019 at which point activity levels and species composition will be determined. This will allow evaluation of the Site as a foraging and commuting resource for bats, and will also allow consideration of effects and hence requirements for an additional ‘summer’ survey.
- 11.26. In addition to bat activity surveys a ground based inspection of all trees within and immediately adjacent to the Site will be undertaken. Climbed inspection of all trees with identified features suitable for roosting bats will be undertaken and if necessary the species composition and nature of identified roosts would be ascertained by undertaking evening roost surveys. All tree roost survey work will be undertaken in accordance with standard guideline (Collins 2015). The evaluation of the Site for roosting bats is dependent upon the results of the roost surveys and will be updated in due course.

- Badgers**
- 11.27. No evidence of badger presence was recorded during the Extended Phase I Habitat Surveys, however suitable sett creation habitat exists on Site in the form of linear woodland/lines of trees and scrub around the southern and eastern margins of the Site. Consequently, a targeted badger survey will be undertaken during winter 2018-2019 according to the methodology proposed by Harris *et al* (1989). The evaluation of the Site for badgers is dependent upon the results of the surveys and will be updated in due course.
- Water Vole**
- 11.28. The habitats on Site provide sub-optimal habitat for foraging and burrowing, with no evidence seen during the Extended Phase I Habitat Survey. However, the species may periodically use the habitats associated with the ditch along the western Site boundary. It is recommended that a water vole survey is undertaken in accordance with standard guidelines (Strachan & Moorhouse 2006) and mitigation is considered following any confirmation of presence. The evaluation of the Site for water vole is dependent upon the results of the surveys and will be updated in due course.
- Reptiles**
- 11.29. The survey area includes suitable grass snake habitat in the form of grassland associated with linear waterbodies. In addition, suitable basking habitat is present on the open shorter areas of grassland along the western Site boundary. Given the presence of suitable habitat, further detailed surveys via either direct observation and/or deployment and checking of artificial refugia will be considered. However, in the event that suitable habitats can be avoided, or effects adequately mitigated, presence will be assumed, and surveys may not be undertaken. The evaluation of the Site for grass snake is dependent upon the results of the surveys and will be updated in due course.
- Breeding Birds (including Barn Owl)**
- 11.30. The Site does not support suitable breeding habitat for barn owl, given the lack of mature trees with open/large cavities, or agricultural buildings. However, the scrub habitat on Site, field margins and bordering scrub habitat are considered to be viable foraging habitat for hunting barn owl. A targeted desk study for barn owl will be undertaken to ascertain the importance of the Site for barn owl, via consultation with the Barn Owl Conservation Trust. In addition, given the availability of nesting habitat within the survey area breeding season bird surveys will be undertaken during March – May inclusive. The survey methodology would be based upon, and adapted from, generic British Trust for Ornithology survey methods including

transect/Common Bird Census (CBC) (Gilbert et al 1998 and Bibby, Burgess & Hill 1992). The detailed results of which shall be reported in due course.

#### **Wintering Birds**

- 11.31. The open arable habitats on Site and within the wider landscape are potentially attractive to waterbirds which aggregate into flocks during winter. Birds such as Lapwing, Golden plover and certain geese could potentially utilise the fields on Site as part of a wider network of wintering habitat for daytime roosting and foraging. Wintering bird surveys are therefore being undertaken and will be reported separately. Field survey methods will be based upon, and adapted from, transect/Common Bird Census (CBC) (Brown and Shepherd 1993 and Gilbert et al 1998).

### **Potential Environmental Impacts**

- 11.32. From data gathered during field work, the consultation with local data sources and the habitats present on Site, impacts on Woolston Eyes (SSSI) Gorse Covert Mounds (LWS) and Silver Lane (LWS) can be scoped out due to lack of ecological connectivity and/or separation distance from the Proposed Development. Additionally, brown hare, *Lepus europaeus*, hedgehog *Erinaceus europaeus*, dormouse *Muscardinus avellanarius*, common toad *Bufo bufo*, eurasian otter *Lutra lutra*, protected/notable plants, protected/notable invertebrates and white-clawed crayfish *Austropotamobius pallipes* are considered highly unlikely to be present on Site given the lack of supporting habitats, or perceived marginal adverse effects for species such as brown hare, common toad and hedgehog. Such receptors will therefore not be considered in detail within the ES assessments. These receptors are therefore scoped out.

#### **Construction Phase**

- 11.33. The Ecology and Nature Conservation Paper of the Environmental Statement will consider the following potential impacts, which may arise from the construction phase of the development.

- Potential for the removal and/or stabilisation of sub surface peat within the application Site to result in localised hydrological changes impacting the Manchester Mosses SAC and Pestfurlong Moss LWS.
- Loss of vegetated habitats features and trees (including impacts to root protection areas) arising from the clearance of the development platform and related construction operations.
- Loss of terrestrial habitat and incidental mortality of great crested newt should they be present.
- Loss of badger setts, should they arise prior to the onset of development

- Disturbance, displacement and incidental mortality (loss of breeding habitat) on breeding bird assemblages, and loss of active nests present on or adjacent to Site during the breeding season (including barn owl).
- Disturbance/displacement of significant aggregations of wintering birds.
- Loss of bat roosts and disturbance/displacement of foraging and commuting bats.
- Disturbance, loss of supporting habitat and incidental mortality of water vole during modifications to existing ditch network.
- Incidental mortality and habitat loss for grass snake during habitat clearance and/or modifications to existing ditch network.
- Accidental dispersal of invasive weeds (WCA schedule 9 listed plants including Himalayan Balsam).

#### **Operational Phase**

11.34. The Ecology and Nature Conservation Paper of the Environmental Statement will consider the following potential impacts, which may arise from the operational phase of the development.

- Pollution/contamination of groundwater resources and impacts on sub-surface peat.
- Impacts on breeding bird assemblages, including disturbance and displacement
- Loss of roosting, foraging and commuting habitats for bats through inappropriate lighting

### **Methodology for the Environmental Statement**

11.35. The assessment of significance of impacts has been determined by identifying the presence of ecological features; evaluating their importance, or value, and defining magnitude of the effects. In order to objectively assess effects arising from a particular development/activity it is essential to establish the sensitivity of each ecological receptor. The sensitivity has been evaluated within a geographical context, with each receptor falling into one (or more) of the following categories detailed within the table below.

Designation	Receptors
International	<p>Examples:</p> <ul style="list-style-type: none"> <li>• An internationally designated Site or candidate Site.</li> <li>• A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole.</li> <li>• Any regularly occurring population of an internationally important species, which is threatened or rare in the UK.</li> <li>• Any regularly occurring, nationally significant population/number of any internationally important species.</li> </ul>
National	<p>Examples:</p> <ul style="list-style-type: none"> <li>• A nationally designated Site.</li> <li>• A viable area of a priority habitat identified in the UK BAP, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole.</li> <li>• Any regularly occurring population of a nationally important species, which is threatened or rare in the region or county.</li> <li>• A regularly occurring regionally or county significant population/number of any nationally important species.</li> <li>• A feature identified as of critical importance in the UK BAP.</li> </ul>
Regional	<p>Examples:</p> <ul style="list-style-type: none"> <li>• Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat, which are essential to maintain the viability of a larger whole.</li> <li>• A regularly occurring, locally significant number of a regionally important species.</li> </ul>
County	<p>Examples:</p> <ul style="list-style-type: none"> <li>• County designated Sites.</li> <li>• A viable area of a habitat type identified in the County BAP.</li> <li>• Any regularly occurring, locally significant population of a species which is listed in a County “red data book” or BAP on account of its regional rarity or localisation.</li> <li>• A regularly occurring, locally significant number of a species important in a County context.</li> </ul>

Designation	Receptors
Borough/District	<p>Examples:</p> <ul style="list-style-type: none"> <li>• Area of habitat considered to appreciably enrich the habitat resource within the context of the Parish.</li> <li>• Local Nature Reserves</li> </ul>
Local/Neighbourhood <sup>20</sup>	<p>Examples:</p> <ul style="list-style-type: none"> <li>• Habitats and species that contribute to local/Site biodiversity, could only be replicated in the medium term, but are common in the local area.</li> <li>• Loss of such habitats would ideally be mitigated if local/Site biodiversity is to be conserved and enhanced.</li> </ul>

Table11.1: Receptors

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<sup>20</sup> Also including 'Site/Zone of Influence' levels.

11.36. A Receptor Plan for Ecology is included at **Appendix 6**.

### Environmental Impacts

Magnitude	Environmental Impact
Substantial	Permanent impact(s) resulting in the total loss the integrity of the Site or conservation status of a habitat, species assemblage/community population or group.
	Significant improvements of resource quality, restoration and enhancement on an extensive scale, significant improvement of attribute quality. Significant improvement in Local Green Infrastructure
High	Permanent or long term impact(s) on the integrity of the Site or conservation status of a habitat, species assemblage/community population or group, which is likely to threaten its sustainability.
	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality.
Moderate	Permanent or long term impact(s) on the integrity of the Site or conservation status of a habitat, species assemblage/community population or group, which is unlikely to threaten its sustainability.
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Minor	Short term and reversible impact(s) on the integrity of the Site or conservation status of a habitat, species assemblage/community population or group that is within the range of variation normally experienced between years.
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Short term and reversible impact that is within the range of annual variation.
	Very minor benefit to or positive addition of one or more characteristics, features or elements

Table 11.2: Environmental Impacts

### Impact Prediction Confidence

11.37. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table11.3: Confidence Levels

## Significance of Effects

- 11.38. The following tables provide a summary of the likely significance of the impacts that may result from the proposed development of the Site. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. For protected species, the baseline information is restricted as the majority of the survey will be undertaken during 2019. Where insufficient confidence exists for even a basic level of evaluation, 'unknown' is entered in the relevant columns. Effects will be reviewed as part of the comprehensive ES technical paper.

### Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Indirect localised hydrological modifications to Manchester Mosses (Astley and Bedford Mosses, Risley Moss and Holcroft Moss) SAC	International	Unknown	Unknown	Low (subject to detailed scheme design)
Indirect localised hydrological modifications to LWS	Borough	Unknown	Unknown	Low (subject to detailed scheme design)
Impacts on bat roosts	Unknown	Unknown	Unknown	Low (subject to further survey)
Impacts on, foraging and commuting bat populations	Borough	Moderate Negative	Minor Adverse	Low (subject to further survey)

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Impacts on suitable badger sett creation habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Impacts on water vole foraging and burrowing habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Impacts on reptile (grass snake) basking habitat	local	Minor Negative	Minor Adverse	Low (subject to further survey)
Impacts on great crested newt terrestrial habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Impacts on barn owl foraging habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Impacts on wintering bird assemblages, including disturbance and displacement present on Site during the wintering season	Borough	Minor Negative	Minor Adverse	Low (subject to further survey)
Impacts on breeding bird assemblages, including disturbance and displacement present on Site during the breeding season	Borough	Minor Negative	Minor Adverse	Low (subject to further survey)

Table 11.4: Significance of Impact – Construction

### Operational Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Indirect localised hydrological modifications to Manchester Mosses (Astley and Bedford Mosses, Risle Moss and Holcroft Moss) SAC	International	Unknown	Unknown	Low - Dependant on detailed design)
Indirect localised hydrological modifications to LWS	Unknown	Unknown	Unknown	Low - Dependant on detailed design)
Impacts on bat roosts	Unknown	Unknown	Unknown	Low (subject to further survey)
Disturbance to roosting, foraging and commuting bat populations due to increased human presence and traffic/noise and lighting.	Borough	Moderate Negative	Minor Adverse	Low (subject to further survey)

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Disturbance to badgers within sett creation habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Disturbance to water vole within foraging and burrowing habitat	Unknown	Unknown	Unknown	Low (subject to further survey)
Disturbance to reptile (grass snake) within basking habitat	Unknown	Unknown	Unknown	Low
Disturbance to great crested newt within terrestrial	Unknown	Unknown	Unknown	Low (subject to further survey)
Disturbance and accidental harm to barn owl due to increased human presence and traffic/noise	Unknown	Unknown	Unknown	Low (subject to further survey)
Disturbance and displacement of over-wintering birds	Borough	Minor Negative	Minor Adverse	Low (subject to further survey)
Impacts on breeding bird assemblages, including disturbance and displacement	Borough	Minor Negative	Minor Adverse	Low (subject to further survey)

Table 11.5: Significance of Impact – Operation

## Mitigation

11.39. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full assessment and re-confirmed in the Ecology and Nature Conservation Technical Paper. However it is likely that the following outline measures will be required:

- A Construction Environmental Management Plan (CEMP) would be finalised and agreed with the Local Planning Authority prior to construction commencement. The CEMP will contain all measures required to mitigate identified adverse effects, especially with regard to the scheme drainage design and pollution/sediment prevention measures. The CEMP will also include specific measures required for species protection, including update surveys discussed below;
- The CEMP would include measures to mitigate for pollution and dust impacts during the construction period. For example, dust would be controlled by means of dust

suppression measures such as dampening down of roads and covering of storage areas. These measures would protect adjacent habitat which is important for invertebrate, breeding bird, wintering bird and bat populations;

- A Habitat Management Plan (HMP) would also be provided to include measures to limit disturbance of bat roosting, foraging and commuting habitat etc. particular reference will be made to the peat resource and how this will be managed for maximum conservation and environmental benefit.
- The HMP will include habitat creation measures including compensation for habitat losses, habitat creation/ management, and water course management;
- The HMP will also non-native invasive species management provisions, due to the presence of Himalayan balsam *Impatiens glandulifera*;
- An Ecological Clerk of Works (ECoW) in the form of a suitably qualified ecologist, would oversee all activities during construction and to ensure that mitigation measures and procedures set out in the CEMP are implemented;
- Creation of a sensitive lighting scheme to retain extant unlit bat foraging/commuting corridors will be incorporated in the ES. The lighting scheme will include lighting restrictions both during and post-construction and may include the following methods, taken from the Bats and Lighting Guidance (Stone, 2013):
  - Avoidance of light spill using directional and or baffled lighting;
  - Variable lighting regimes (VLR) – switching off when human activity levels are low i.e. 21:00 to 05:30;
  - Avoid use of blue-white short wavelength lights and high UV content; or
  - Create light barriers utilising hedgerow and tree planting.
- The requirement for further bat mitigation would be subject to an assessment following further survey during 2019 including activity surveys and ground-based tree assessments;

- Pre-construction surveys for badger, in order to ensure the baseline assessments remain accurate. Surveys should be undertaken within the Site and adjacent land to within 50 m and within three months of the commencement of construction/habitat clearance. Any modifications to the baseline assessments will be described and precautionary measures, such as avoiding sett/holt locations (including appropriate buffers) will be included within the CEMP;
- Due to presence of local desk study records it is recommended that a water vole survey is undertaken in accordance with standard guidelines (Strachan & Moorhouse 2006) and mitigation is considered following any confirmation of presence;
- Suitable basking habitat is present for grass snake at the Sites peripheries, avoidance measures should be undertaken during clearance works, if not further survey is likely required;
- Seven waterbodies were assessed as suitable great crested newt breeding ponds. It is therefore recommended that great crested newt presence/absence surveys are undertaken in the form of eDNA sampling. Should the results confirm absence of great crested newts prior to completion of the conventional surveys, then no further surveys would be required. Should the results confirm presence then it will be necessary to undertake detailed population assessment surveys via a further 6 survey visits;
- It is recommended a barn owl desk study is carried out to ascertain the importance of the Site for barn owl, via consultation with the Barn Owl Conservation Trust.
- Due to the likely presence of nesting bird within the development area, it is recommended that initial Site works are undertaken outside of the usual bird breeding season (normally taken to be March – July inclusive). If such timescales cannot be accommodated, it is recommended that a check for the presence of active nests, and nesting birds should be undertaken by a suitably qualified ecologist prior to the commencement of works. Any active nests should be identified and protected subject to the relevant legal provisions until the nesting attempt is complete; and
- As the wintering bird assessment will be subject to further survey, it is considered appropriate that suitable mitigation will be discussed following the required surveys.

## Further Work Required

11.40. To fully inform the Environmental Statement Ecology Chapter and ensure sufficient information is available, the following additional elements of ecological survey will be completed.

1 – Stage 1 Habitats Regulations (shadow) ‘screening assessment’ will be undertaken;

2 – Bat Activity Surveys (manual transect and automated detector) during May 2019, consideration for the requirement of a summer survey will then be assessed;

3 – Surveys for badger setts and classification of setts (Harris *et al* 1989);

4 – Water vole surveys are to be carried out in accordance with standard guidelines (Strachan & Moorhouse 2006) likely during May and August 2019;

5 – Reptiles surveys are to be considered unless Site clearance is to be undertaken following reasonable avoidance measures;

6 – eDNA sampling for great crested newt presence/absence within seven waterbodies, if found to be present a further 6 conventional surveys will be undertaken as a detailed population assessment;

7 – A targeted desk study for barn owl will be undertaken to ascertain the importance of the Site for barn owl, via consultation with the Barn Owl Conservation Trust;

8 – Wintering Bird Surveys of the Site; and

11.41. Liaison with Warrington Borough; Ecology Unit and Natural England will be undertaken to ensure there is agreement over the required scope of surveys, with additional information requests being considered on their own merit.

## Summary

11.42. A precautionary approach has been taken with regards to the evaluation of receptors and significance of effects, given that the project design is at an early stage of development. Nonetheless, it is considered reasonably unlikely that impact(s) will increase in magnitude, although this will be reassessed once the project design has been finalised and all the

assessments for ecology and other disciplines are complete. Mitigation will be used to ensure that all residual impacts are reduced to an acceptable level, by the assessment made within the Environmental Statement.

11.43. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of Ecology.

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Ecology</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>10) Hydrological connectivity to statutory and non-statutory Sites;</li> <li>11) Habitat loss and indirect lighting impacts to bats roosting, foraging and commuting habitats;</li> <li>12) Loss of badger sett creation habitat;</li> <li>13) Impacts to water vole foraging and burrowing habitat;</li> <li>14) Impact on grass snake basking habitat;</li> <li>15) Impacts on great crested newt terrestrial habitat;</li> <li>16) Impacts on barn owl foraging habitat;</li> <li>17) Impacts on wintering bird assemblages; and</li> <li>18) Impacts on breeding bird assemblages.</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>10) Indirect hydrological impacts to statutory and non-statutory Sites;</li> <li>11) Disturbance to bat roosting, foraging and commuting habitats;</li> <li>12) Disturbance to badgers within sett creation habitat;</li> <li>13) Disturbance to water vole within foraging and burrowing habitat</li> <li>14) Disturbance to reptile (grass snake) within basking habitat</li> <li>15) Disturbance to great crested newt within terrestrial</li> <li>16) Disturbance to barn owl foraging habitat;</li> <li>17) Disturbance of over-wintering birds; and</li> <li>18) Impacts on breeding bird assemblages.</li> </ul>	<p>Information from the Preliminary Ecological appraisal including desk study data has shown that the receptors are likely to be impacted by the development, however further survey is required to assess the level of impact and inform appropriate mitigation.</p>

### Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Ecology</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>9) Woolston Eyes SSSI</li> <li>10) Rixton Clay Pits SSSI</li> <li>11) Covert Mounds LWS</li> </ul>	<p>Receptor is of a distance and or lack of ecological connectivity to Site. Once further surveys have been concluded it is likely that</p>

Environmental Issue	Reason for “scoping out”
<p>12) Rixton Moss LWS</p> <p>Operation:</p> <p>13) Woolston Eyes SSSI</p> <p>14) Rixton Clay Pits SSSI</p> <p>15) Covert Mounds LWS</p> <p>16) Rixton Moss LWS</p>	<p><i>other receptors may be scoped out.</i></p>

Table 1.6: Receptors which are Scoped In/Out

## 12. Socio Economic

### Introduction

- 12.1. This scoping chapter has been produced by Spawforths and provides preliminary details of the socio-economic impacts from the proposed Motorway Service Area (MSA) Development at land at Junction 11 of the M62 Motorway.
- 12.2. The main aim is to gather information from the statutory consultees and other interested parties to enable identification of the significant impacts that need to be investigated in more detail within the subsequent ES.
- 12.3. The socio-economic chapter has been undertaken to facilitate the assessment of the proposed development by identifying the existing baseline position and comparing this with the socio-economic effects of the proposal. Consideration has been given to the impacts that the scheme is likely to have upon the local wards, the Borough of Warrington, County of Cheshire, Greater Manchester, North West and nationally, before and after proposed mitigation measures are introduced. The magnitude and significance of this impact is then considered and subsequent consideration is given to whether mitigation is appropriate. The approach taken to assess the socio-economic impacts arising from the proposed development is considered in terms of the construction phase and the operational phase.
- 12.4. For the purposes of this report the definitions of socio-economic, social and economic are discussed below:
- Socio-economics is the study of the relationship between economic activity and social life and the understanding of how the combination of both influences something.
  - Social – relates to the elements of life which relate to the local population / community of an area. It is the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans and projects) and any social change processes invoked by those interventions.
- 12.5. The social aspects of this report include:
- Population, Demographics and Migration

- Quality of Life Indicators (Deprivation, Crime, Health, Education)

12.6. The Economic – relates to the production, development, and management of material wealth, as of a country, household or business enterprise. The economic aspects of this report include:

- Employment and Occupation
- Labour Force
- Employment Activity
- Unemployment and Economic Inactivity
- Retail and Leisure
- Travel to Work

12.7. The socio-economic impacts of the Proposed Development can be broadly defined as the:

- Temporary increase in population within the local area
- Significant job creation and employment opportunities for the local community
- Increased expenditure within the local area
- Regeneration within the area
- Improvements to key transport infrastructure
- Effects on the wider community including delivery of community and leisure facilities services
- Delivery of new public open space and pedestrian and cyclist access through the site to wider green spaces.

## Baseline Information

- 12.8. In order to understand the socio-effects of the proposed development it is first necessary to understand the baseline socio-economic conditions within the geographical area that will be most impacted upon by the proposal. The study areas for the socio-economic baseline assessment is electoral ward-based, with the majority of the wards, included in the assessment, within the administrative area of Warrington Borough Council, with the exception of one neighbouring ward which falls under the control of Salford City Council.

### The Study Area

- 12.9. The Site lies within the 'Culcheth, Glazenbury and Croft' ward which is situated to the north east of Warrington Town Centre and includes the villages of Croft, Culcheth and Glazenbury.
- 12.10. In addition, it is considered appropriate to include several surrounding wards to the Site which the Proposed Development will have a potential socio-economic impact upon. Given the nature of the Proposed Development and its potential socio-economic impacts, the principal focus has been on the more populated urban wards surrounding the Site. The other wards which will be included are as follows:
- Birchwood
    - Situated to the north east of Warrington Town Centre and includes the suburbs of Birchwood, Oakwood, Gorse Covert, and Risley as well as the Birchwood Business Park.
  - Poulton North
    - Situated to the north of Warrington Town Centre and includes the residential suburbs of Houghton Green and Padgate.
  - Poplars and Hulme
    - Situated in the north of Warrington Town Centre and includes part of the residential suburbs of Hulme and Cinnamon Brow as well as part of the Winwick Quay Employment Area.

- Rixton and Woolston
  - Situated to the east of Warrington Town Centre and includes the residential suburbs of Woolston and Martinscroft as well as the villages of Glazebrook and Hollinfare. It also includes a large employment area centred on Martinscroft.
  
- Cadishead
  - Situated in the neighbouring local authority of Salford City Council, the ward is located to the south west of the city of Salford and includes the residential suburb of Cadishead.

12.11. The relationship of the MSA, Junction 11, M62 Motorway Site (circled red) with the above wards is outlined in Figure 12.1 below and included at **Appendix 6** (Socio-Economic Receptor Plan):

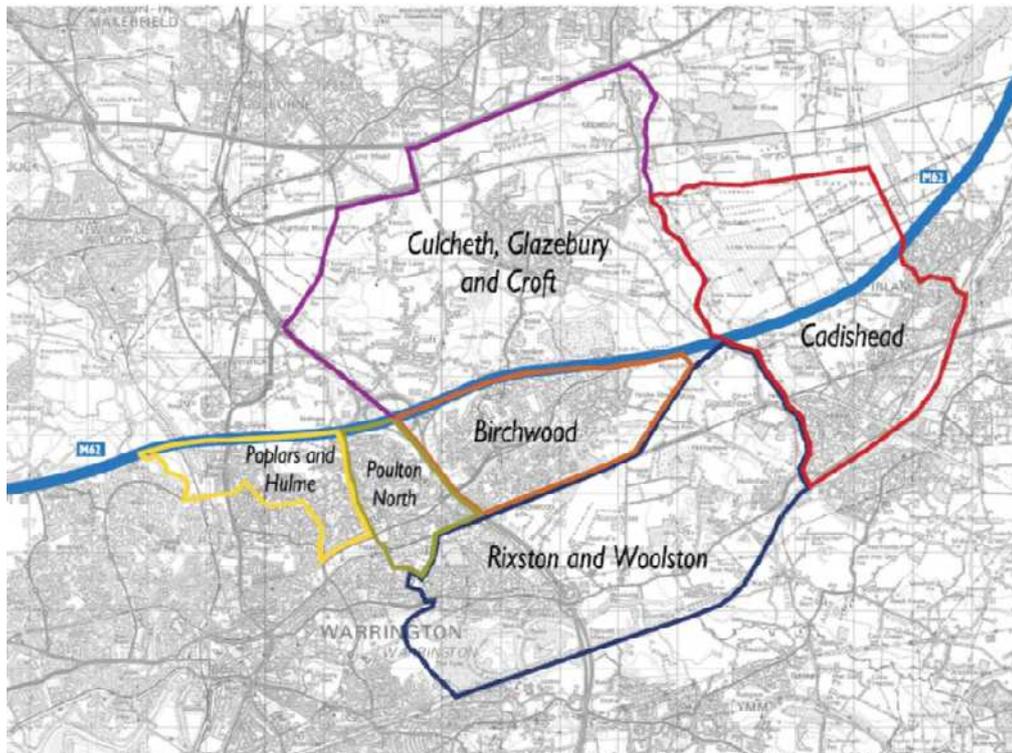


Figure 12.1: Electoral Ward Boundaries

[Source: Promap]

- 12.12. For wider comparative purposes, baseline information has also been utilised beyond the ward level for Warrington, Cheshire, Greater Manchester, North West and England or Great Britain. The County of Cheshire covers the local authority areas of Warrington, Halton, Cheshire West and Chester and Chester East. Whilst the Greater Manchester City Region covers the local authority areas of Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, and Wigan. This will give a comprehensive baseline context to assess the application proposal against.
- 12.13. When assessing deprivation for the six wards, the Index of Multiple Deprivation (IMD) produced by the Department for Communities and Local Government produces data at middle level and lower super output area (LSOA) level. There are 32,482 LSOA's in England and the socio-economic assessment will focus on the relevant LSOA's within the wards included in the socio-economic assessment.

#### **Collation of Baseline Data**

- 12.14. The baseline collation creates the baseline position of the study area and provides a platform in which to assess the socio-economic implications of the proposed development. Socio-economic issues comprise the social, economic and demographic characteristics of an area. The socio-economic assessment will consider population and demographic trends, transport trends, economic growth, employment figures and trends and quality of life indicators, including health, education, deprivation and crime. Data has been collated predominately from the following sources which are available for Spawforths to access:

- Ministry of Housing, Communities and Local Government (MHCLG) Policy and Guidance
- HCA Employment Densities Guide, 3rd Edition, 2015
- NOMIS - The Office for National Statistics
- NHS Website
- Police.co.uk Website
- Department of Education

- Office for National Statistics - Neighbourhood statistics
- Warrington Council Website Policy and Guidance
- Salford Council Website Policy and Guidance
- Greater Manchester Combined Authority website and documents

12.15. The baseline position is correct on 11 December 2018 when the data was collected. There could be anomalies between different data sets such as ONS Census figures and NOMIS: Official Labour Market Statistics. In our experience this can be down to different methods of data gathering, different geographical areas (including ward boundaries) and different release dates.

## Population and Demographic Trends

### Population and Age

12.16. Table 12.1 outlines the population figures for the study area which consists of the six wards outlined in

Ward	Total
Culcheth, Glazebury and Croft	11,690
Birchwood	10,701
Poulton North	10,266
Poplars and Holme	10,528
Rixton and Woolston	9,116
Cadishead	10,264
Total Study Area Population	62,565

**Table 12.1: Study Area Ward Population**

[Source: ONS Census 2011]

12.17. Table 12.2 sets out the age structure for the individual wards with comparison figures for Warrington, the county, and England also provided.

	Total Population	0-9	10-17	18-24	25-59	60-74	75+
Culcheth, Glazebury, and Croft	11,690	874	1,155	893	5,411	2,035	1,086
		9.4%	9.9%	7.6%	46.2%	17.4%	9.3%
Birchwood	10,701	1,211	978	919	5,451	1,584	558
		11.4%	9.1%	8.6%	50.9%	14.8%	5.2%
Poulton North	10,266	1,225	944	1,243	4,598	1,693	563
		11.9%	9.2%	12.1%	44.8%	16.5%	5.6%
Populars and Holme	10,528	1,549	1,098	1,087	4,927	1,197	673
		14.6%	10.5%	10.3%	46.9%	11.4%	6.4%
Rixton and Woolston	9,116	836	921	683	4,304	1,765	607
		9.2%	10.0%	7.4%	47.3%	19.4%	7.0%
Cadishead	10,264	1,383	1,062	927	4,842	1,384	666
		14.0%	10.0%	9.0%	47.0%	13.0%	7%
Study Area	62,565	7,311	6,158	5,752	29,533	9,658	4,153
		11.7%	9.8%	9.2%	47.2%	15.4%	6.6%
Warrington	202,228	23,864	20,146	16,745	96,818	30,639	14,016
		11.9%	10.0%	8.3%	47.9%	15.2%	6.9%
Greater Manchester Region	2,682,528	339,768	261,856	278,658	1,261,874	361,903	178,469
		13%	10%	10%	47%	14%	7%
North West	7,052,177	824,257	677,782	681,102	3,258,237	1,067,386	543,413
		12%	10%	10%	46%	15%	8%
England	53,012,456	6,291,081	5,045,879	4,970,636	24,872,054	7,724,560	4,108,246
		11.9%	9.5%	9.4%	46.9%	14.6%	8%

**Table 12.2: Age Structure: Number and % of Total Population**

[Source: ONS Census 2011]

### Future Demographic Trends

- 12.18. A key element in assessing the potential for new developments will be expectations of population and household numbers within the study area around the Development Site.
- 12.19. The population of Warrington Borough at the time of the ONS 2011 Census was 202,228. The most recent population figures estimate Warrington's population to be 209,704 according to the ONS Population Estimates for UK, Mid-2017 (25 October 2018), a 3.6% increase from the ONS Census 2011 figure.

12.20. Population figures available for Local Authority areas, which Local Authorities use as evidence are the 2016-based sub national population projections (24 May 2018) and take into account results from the ONS 2011 Census. These figures demonstrate that the North West is projected to grow at 3.11% over the next 10 years, the second lowest of all the regions in England.

12.21. The figures project that the population of Warrington will rise from the 2016 figure of 209,000 to 227,800 in 2041. This represents an increase of 9.0% over a 25 year timeframe which gives an average annual growth rate of 0.36%. This is the highest estimated growth for all of the Cheshire Authorities over the same time period. Table 12.3 demonstrates that the percentage population projections in Cheshire authorities (6.13%) are broadly in line with those in the North West (6.49%) but significantly lower than those of Greater Manchester (10.22%) and England (12.09%).

	2016	2021	2026	2031	2036	2041	% change from 2016 - 2041	Annual Growth Rates
<b>Warrington</b>	209,000	214,200	218,700	222,100	225,100	227,800	9.00%	0.36%
<b>Cheshire East</b>	377,300	383,100	388,700	393,000	396,400	399,500	5.88%	0.24%
<b>Cheshire West and Chester</b>	335,700	341,300	346,200	350,400	353,300	355,800	5.99%	0.24%
<b>Halton</b>	127,300	128,500	129,400	129,900	130,200	130,500	2.51%	0.10%
<b>Cheshire</b>	1,049,300	1,067,100	1,083,000	1,095,400	1,105,000	1,113,600	6.13%	0.25%
<b>Greater Manchester (Met County)</b>	2,780,800	2,861,100	2,922,900	2,975,100	3,021,000	3,064,900	10.22%	0.41%
<b>North West</b>	7,224,000	7,358,000	7,466,900	7,556,000	7,627,000	7,692,900	6.49%	0.26%
<b>England</b>	55,268,100	57,030,500	58,505,600	59,789,800	60,905,500	61,952,100	12.09%	0.48%

**Table 12.3: Population Projections (2016 based Sub-National)**

**[Source: ONS: Subnational Population Projections, 2016-based projections (24 May 2018)]**

12.22. The population of Warrington, as with broad national trends, shows the effect of baby-boom years of the 1950s and 1960s. The population of the area, as with broad national trends, is forecast to become older. By 2036, over half of local authorities are projected to have 25% or more of their local population aged 65 and over (ONS: Overview of the UK Population: July 2017).

- 12.23. Transport and employment demand will rise from existing residents or future residents (e.g. in migrants) as the North West, more specifically Cheshire, as the population figures have shown becomes a location of choice for people to live and work.

### **Ethnicity**

- 12.24. According to the 2011 census, 7.1% of the Warrington's population are from an ethnic minority background, which is significantly less diverse than both the North West (12.9%) and England and Wales (19.5%). The key findings in respect to ethnicity from the 2011 Census are:

- The largest minority group in Warrington is 'Asian/Asian British' at 2.4% of the population, but they are closely followed by 'Other White', which includes Eastern Europeans estimated at 2.3%.
- English is overwhelmingly the main language used in Warrington with 97% of the population using it as their main language at home as well as at work (ONS 2011 Census).
- Warrington has lower percentages of pupils whose first language is other than English, being below England and the North West.

- 12.25. According to Warrington January 2017 School Census, the ward with the highest proportion of BME pupils is Bewsey and Whitecross with 30.8%. Other wards with relatively high proportions include Fairfield and Howley, Orford, Chapelford and Old Hall and Latchford East.

- 12.26. The School 2017 Census goes on to highlight that in Warrington, Polish and Urdu are the main languages spoken as a first language other than English. Chinese, Latvian, Kurdish and Hungarian also featured with 80 or more pupils having these as a first language other than English.

### **Migration**

#### Internal Migration

- 12.27. The most recent data available relating to migration rates for the Warrington are the ONS 'Internal Migration by Local Authorities within England and Wales, Year Ending 2017' released

on 28 June 2018. There were an estimated 3.03 million residents moving between local authorities in England and Wales between July 2016 and June 2017.

- 12.28. The data shows an inflow of 8,060 and an outflow of 7,490 for all ages within Warrington resulting in a positive inflow. Looking more closely at the figures, there are positive inflows of population in the majority of age ranges, with the exception of a net outflow of 550 individuals in the 15 to 19 age range which is likely to be the result of young adults leaving for higher education. However there is a noticeable peak of 580 of inflows of internal migrants within the age range of 20 to 34, which could be a result of people returning from higher education and migrating in to the Borough for work opportunities. In comparison, there was a 730 increase within the 15-19 age range for the North West and a 3,660 increase within the 20-34 age range. However, there is a noticeable outflow of residents in the age range of 65-90+ across the North West Region.

Age Range	0 to 9	10 to 19	20 to 34	35 to 59	60 plus	Total
Warrington	220	-520	580	130	140	550
North West	3,000	1,480	3,660	2,970	-420	7,030

Table 12.4: Internal Migration Rates for Warrington by Age Group

[Source: ONS Internal Migration by Local Authorities in England and Wales, Year Ending June 2017 (28 June 2018)]

#### International Migration

- 12.29. The ONS 'Population of the UK by county of birth and nationality for the period July 2017 to June 2018' (based on the Annual Population Survey) provides an indication of the levels of international migration in to Warrington. The main findings are:
- 12.30. From the 208,000 residents within Warrington, an estimated 189,000 were born in the UK and 19,000 born outside of the UK, which equates to 9.1% of the population. This is a significant rise in comparison with the 2011 census which indicated that the non-British born population comprised of 5.7% of the Warrington community. Nevertheless, it is still below the 2018 figure of 10.6% for the North West and 16.8% for the UK.
- 12.31. The majority of non-UK born residents, some 10,000, originate from the European Union with the remaining 9,000 from Non-European Union countries especially South Asia.

12.32. Between 2001 and 2011, the non-UK born population grew by 235,133 persons, accounting for 72.9% of the total population growth of 322,413 usual residents in the decade. While overall the population of the North West increased by just fewer than 5% between 2001 and 2011, the non-UK born resident population grew by 68.7% in the same period.

### Economic Growth

12.33. Gross Value Added (GVA) provides a good measure of the economic output of a region. According to figures released in December 2017 by the ONS the recession impacted on the regions of the UK to different degrees. Regional GVA measures the contribution of each region to the UK economy. The estimates show that both total GVA and GVA per head at current basic prices have been on an upward trajectory since 2009/2010.

12.34. Table 12.5 identifies the headline GVA by area indices at current basic prices by region and Local Authority.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>England</b>	1,161,811	1,192,177	1,169,559	1,199,998	1,231,242	1,274,646	1,323,340	1,391,837	1,433,165
<b>North West</b>	132,673	135,867	134,634	136,472	135,730	139,897	146,219	151,384	156,871
<b>Cheshire</b>	25,041	25,870	25,431	25,828	25,838	27,307	28,557	29,936	30,981
<b>Warrington</b>	5,414	5,422	5,337	5,592	5,520	6,038	5,942	6,411	6,505
<b>Cheshire East</b>	9,118	9,492	9,276	9,300	9,432	10,236	11,384	11,684	12,130
<b>Cheshire West and Chester</b>	8,014	8,269	8,202	8,053	7,880	8,175	8,181	8,575	8,966
<b>Halton</b>	2,495	2,687	2,616	2,883	3,006	2,858	3,050	3,266	3,380

**Table 12.5: Headline Gross Value Added / £million**

[Source: ONS headline GVA (2017)]

12.35. Table 12.6 highlights the headline Gross Value Added (GVA) by area £ per head indices at current basic prices by region.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>England</b>	22,738	23,148	22,581	22,889	23,239	23,927	24,700	25,772	26,365

	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>North West</b>	19,532	19,639	19,588	19,864	19,860	20,410	21,091	21,689	22,426
<b>Cheshire</b>	25,816	25,321	25,674	25,959	26,441	27,358	28,519	29,962	30,140
<b>Warrington</b>	28,414	27,028	26,698	27,785	28,144	29,439	29,362	30,864	29,690
<b>Cheshire East</b>	25,466	25,245	25,599	26,069	26,817	28,245	30,684	31,891	32,618
<b>Cheshire West and Chester</b>	24,654	24,380	25,136	24,719	24,970	25,076	25,558	27,228	27,634
<b>Halton</b>	20,447	21,858	21,160	23,103	23,911	22,738	24,214	25,846	26,717

**Table 12.6: Gross Value Added (GVA) by area £ per head**

[Source: ONS headline GVA per head (2017)]

- 12.36. In 2015 Warrington accounted for 21% of the GVA of Cheshire and 4% of the region. GVA per capita within Warrington was relatively high when compared with Cheshire West and Halton, but slightly below Cheshire East. In 2015, GVA per capita in Warrington stood at £29,690, higher than both the national and sub-regional averages of £26,365 and £22,426 respectively.

#### Local Economy

- 12.37. Regional and Sub Regional Gross Disposable Household Income (GDHI) estimates released on 24 May 2018 by the ONS highlighted that GDHI per head for the UK increased from 16,621 in 2011 to 19,432 in 2016 (16.9%).
- 12.38. GDHI for the North West was £121,079 million in 2016, an increase of 15.9% from the 2011 value, £104,485 million. GDHI per head in the region rose from £14,808 in 2011 to £16,761 in 2016, an increase of 13.2%.
- 12.39. GDHI for Warrington stood at 4,049 million in 2016 the second lowest of all the Cheshire Local Authorities. However, the figure is a significant increase of 2.2% from 2015, the highest increase within the sub-region. GDHI per head in Warrington (£19,377) is slightly below the national average of £19,878 but significantly higher than the region (£16,761). The GDHI per head in Warrington in 2016 increased by 1.6% on the 2015 figures compared to Cheshire West and Cheshire East, which declined 2.4% and 0.2% respectively. GDHI per head relative to the UK (where UK = 100) for Warrington in 2016 was 99.7, the second highest in the sub-region.

	Total GDHI 2016 £Million	Increase on 2015 %	GDHI Per Head £	Increase on 2015 %	Per Head Index UK = 100
England	1,098,599	1.5	19,878	0.6	102.3
North West	121,079	0.5	16,761	-0.2	86.3
Warrington	4,049	2.2	19,377	1.6	99.7
Cheshire East	8,310	0.2	22,025	-0.2	113.34
Cheshire West and Chester	6,504	-1.9	19,372	-2.4	99.69
Halton	1,960	1.0	15,396	0.5	79.23

Figure 12.7: Gross Disposable Household Income by area 19,432

[Source: 2018, ONS headline GVA million]

- 12.52. Data of earnings by workplace published by NOMIS (2018) identifies the average gross weekly pay and hourly pay for full time workers within Warrington and the region.
- 12.53. Within the North West male full-time workers earned £571.90 compared to £472.40 for full-time women workers giving a gross weekly pay of £529.60. This is lower than the Great Britain average of £571.10 (£612.20 for men and £510.00 for women).
- 12.54. The data reveals that on average for full-time workers within Warrington the gross average weekly pay was £569.50 (£632.40 for men and £515.70 for women) above the regional (£529.60) figure but slightly below the Great Britain (£571.10) average. The Warrington figure is a 14.6% increase on 2013 NOMIS figure and the second highest average within the Cheshire sub-region. The averages within the other sub-regional authorities are Cheshire East (£588.10), Cheshire West (£562.20), and Halton (£556.00).

## Employment

### Economically Active – In Employment

- 12.55. There have been consistently steady levels of job creation in Warrington with the number of residents who are in work remaining relatively steady even during the previous recession. According to NOMIS figures, before the economic downturn there were 79.5% of working age residents in employment in Warrington (June 2006-July 2007). The most up to date figures put 129,700 (79.0%) of Warrington residents aged 16-64 in employment (July 2017-June 2018),

a small drop of 3.4% since July 2012-June 2013 when 82.4% of 16-64-year olds were in employment.

- 12.56. The most recent figures mean that the employment rate of economically active residents aged 16-64 is 79.0%, which is above the regional (76.7%) and Greater Manchester (76.3%) averages and slightly above national (78.4%) rates. This is shown in Table 12.8 which identifies the percentage of economically active within the working age group (16 – 64) who were employed for each time period. In addition, this is shown relative to the comparative percentages for the other Cheshire Local Authorities, region and nationally. The figures demonstrate the strength of the employment opportunities within the Cheshire Authorities in comparison to other areas in the North West.

	In Employment (%) Jul 07 – Jun 08	In Employment (%) Jul 17 – Jun 18
Great Britain	76.7	78.4
North West	74.5	76.7
Greater Manchester	74.1	76.3
Warrington	78.5	79.0
Cheshire East	78.5	77.4
Cheshire West	76.6	77.7
Halton	73.9	77.9

Table 12.8: Total number of people economically active in employment (16-64)

[Source: UK National Statistics NOMIS official labour market statistics – All people – Economically active – In employment (website visited: 9 December 2018)]

#### Labour Force

- 12.57. Table 12.9 below provides the levels of economic activity and economic inactivity for people aged 16-74 in the individual wards, the socio-economic study area, Warrington and England.

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
All categories: Economic activity 16 - 74	8,783	9,752	8,164	8,340	7,598	8,100	50,737	163,477	42,989,620

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
<b>Economically Active (%)</b>									
<b>In employment: Part-time</b>	14.58	15.09	17.21	17.10	15.89	14.41	15.68	15.22	14.40
<b>In employment: Full-time</b>	42.49	30.60	36.00	35.52	40.39	41.41	37.53	39.49	35.41
<b>Self-employed</b>	6.32	8.95	5.17	5.47	8.16	6.40	6.79	7.22	9.06
<b>Unemployed</b>	4.63	3.16	7.17	5.83	3.04	4.54	4.70	4.23	4.71
<b>Economically Inactive (%)</b>									
<b>Retired</b>	18.41	26.00	18.02	20.58	23.77	18.41	21.18	21.55	21.20
<b>Student</b>	3.58	3.66	3.53	5.58	2.86	3.58	3.74	3.34	5.26
<b>Looking after home or family</b>	3.23	2.41	4.58	3.38	2.36	3.23	3.23	3.03	3.98
<b>Long-term sick or disabled</b>	5.16	2.68	5.90	5.00	2.59	5.16	4.40	3.88	3.81
<b>Other</b>	1.59	7.44	2.43	1.56	0.95	1.59	2.75	2.04	2.18

**Table 12.9: Economic Activity (people aged 16-74)**

[Source: ONS Census 2011]

### Occupation

- 12.58. The occupational structure of those in employment is influenced by a number of factors such as the skill levels of the working age population and the type of employment opportunities available within the various spatial levels, such as the individual wards, the town and the wider

sub-region. Table 12.10 outlines the differences in occupations amongst residents of the wards within the study area and those of Warrington and England.

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
<b>All categories: Economic activity 16 - 74</b>	5,556	5,282	4,759	4,828	4,879	5,019	30,323	100,856	25,162,721
<b>1. Managers, directors and senior officials</b>	9.1%	16.0%	6.7%	9.1%	10.9%	7.4%	9.91	11.1%	10.9%
<b>2. Professional occupations</b>	16.9%	22.7%	8.7%	14.1%	15.7%	11.3%	15.07	18.1%	17.5%
<b>3. Associate professional and technical occupations</b>	14.2	13.8	8.7	11.5	11.6	10.6	11.81	13.0	12.8
<b>4. Administrative and secretarial occupations</b>	13.0	10.1	10.5	12.7	14.4	13.1	12.28	11.6	11.5
<b>5. Skilled trades occupations</b>	7.3	8.7	11.9	9.6	12.6	12.1	10.29	9.5	11.4
<b>6. Caring, leisure and other service occupations</b>	7.9	7.4	11.2	9.1	8.6	10.2	9.04	8.6	9.3
<b>7. Sales and customer service occupations</b>	11.8	6.5	13.5	12.7	8.9	10.7	10.64	9.8	8.4
<b>8. Process plant and machine operatives</b>	7.4	5.5	10.3	7.6	7.2	11.1	8.13	6.8	7.2
<b>9. Elementary occupations</b>	12.4	9.3	18.5	13.6	10.0	13.6	12.84	11.5	11.1

**Table 12.10: Employment by Occupation (people aged 16-74 in employment)**

[Source: ONS Census 2011]

#### Employment by Industry

- 12.59. It is important to consider the various sectors and industries that employ residents in the individual wards, and compare the figures with those of the socio-economic study area, Warrington and England to reveal any trends and differences.

	Birchwood (%)	Culcheth, Glazebury and Croft (%)	Poplars and Hulme (%)	Poulton North (%)	Rixton and Woolston (%)	Cadishead (%)	Study Area	Warrington (%)	England (%)
<b>All People (16-74 in employment)</b>	5,568	5,329	4,766	4,844	4,896	5,039	30,442	101,235	25,308,888
<b>Agriculture, energy and water</b>	2.53	3.72	2.52	2.56	2.94	2.96	2.88	3.09	2.26
<b>Manufacturing</b>	8.44	8.14	9.11	8.57	10.36	10.02	9.08	8.76	8.86
<b>Construction</b>	5.80	7.62	7.70	6.71	8.64	8.16	7.41	7.20	7.67
<b>Wholesale and retail trade; repair of motor vehicles and motor cycles</b>	17.28	14.62	21.23	20.73	17.97	20.96	18.70	17.50	15.93
<b>Transport and storage</b>	7.15	4.45	8.39	7.04	5.86	7.24	6.66	6.11	5.01
<b>Accommodation and food service activities</b>	4.31	4.82	5.98	4.89	4.21	4.56	4.78	4.70	5.56
<b>Information and communication</b>	6.63	4.32	4.03	4.91	4.82	4.35	4.87	5.07	4.06
<b>Financial and insurance activities</b>	3.04	3.08	2.37	2.56	3.70	2.92	2.95	3.30	4.38
<b>Real estate activities</b>	0.86	1.28	0.88	0.99	0.96	0.95	0.99	1.21	1.46
<b>Professional, scientific and technical activities</b>	8.19	8.74	3.67	5.97	6.39	5.42	6.48	6.77	6.71
<b>Administrative and support service activities</b>	6.59	4.75	6.55	5.28	4.82	6.43	5.74	5.20	4.92
<b>Public administration and defence; compulsory social security</b>	6.36	8.89	4.24	5.02	5.19	4.27	5.72	5.64	5.89
<b>Education</b>	8.66	10.92	5.98	8.71	8.58	6.51	8.27	8.60	9.89
<b>Human health and social work activities</b>	9.45	10.77	12.74	11.33	11.52	11.29	11.13	12.50	12.40
<b>Other</b>	4.72	3.88	4.62	4.73	4.04	3.97	4.33	4.36	5.01

**Table 12.11: Economic Activity and Employment by Sector (people aged 16-74)**

[Source: ONS Census 2011: KS60IEW – last updated January 2013]

### Travel to Work

- 12.60. There are six rail stations within the Borough of Warrington providing services across the North West and nationally. Warrington Bank Quay Station is located on the West Coast Main Line which provides a frequent service to London and Edinburgh, which currently takes less than two hours to the Capital. Furthermore, the arrival of HS2 services at Warrington Bank Quay station will provide new opportunities to reinforce the town's status as a transport hub and will potentially cut the travel time to London in slightly more than one hour. The local stations of Sankey-for-Penketh, Warrington Central, Padgate, Birchwood and Glazebrook stations all lie on the Trans-Pennine line between Manchester and Liverpool.
- 12.61. There is a comprehensive network of local bus services, providing extensive coverage of the urban areas of the Borough. The provision of bus services in the rural fringes is less comprehensive. The network is strongly focused on the town centre where most bus services terminate in the bus interchange which opened in 2006. The principal bus operator is the Council-owned Warrington Borough Transport which operates around 90% of local bus mileage in the Borough. Other services and services to further afield destinations are provided by Arriva, First Manchester and Halton Transport.
- 12.62. Warrington lies at the centre of the region's communications network. The M6, M56 and M62 motorways intersect within the Borough, providing good access to all parts of the region and beyond.
- 12.63. Table 12.12 sets out the level of car ownership in the individual wards and compares the information with those of the socio-economic study area, Warrington, and England to reveal where there are high and low levels of car ownership.

	All Households	No cars or vans in household	1 car or van in household	2 cars or vans in household
England	22,063,368	5,691,251	9,301,776	5,441,593
Warrington	85,140	16,409	35,587	26,623
Birchwood	4,839	985	2,296	1,263
Culcheth, Glazebury and Croft	4,457	510	1,736	1,735
Poulton North	4,304	998	1,902	1,116

	All Households	No cars or vans in household	1 car or van in household	2 cars or vans in household
Rixton and Woolston	3,702	364	1,445	1,463
Cadishead	4,381	1,149	2,032	952
Study Area	21,683	4,006	9,411	6,529

**Table 12.12: Car Ownership in 2013**  
[Source: ONS - Census 2011]

12.64. Table 12.13 illustrates the most popular travel to work method for residents in employment within each ward and compares the figures with the study area, Warrington and England figures.

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
All People (16- 74)	8,225	8,666	7,491	7,777	6,991	7,434	46,584	149,461	38,881,374
Work mainly at or from home	2.49%	4.98%	1.98%	2.22%	3.18%	2.18%	2.88%	3.11%	3.47%
Underground, metro, light rail, tram	0.09%	0.09%	0.00%	0.09%	0.04%	0.20%	0.09%	0.10%	2.64%
Train	2.58%	0.92%	0.67%	1.20%	1.27%	2.54%	1.53%	1.44%	3.46%
Bus, minibus or coach	2.65%	1.89%	6.57%	3.96%	2.17%	4.25%	3.54%	3.37%	4.85%
Taxi	0.21%	0.15%	0.43%	0.40%	0.21%	0.62%	0.33%	0.27%	0.34%
Motorcycle, scooter or moped	0.43%	0.36%	0.64%	0.59%	0.46%	0.71%	0.53%	0.46%	0.53%
Driving a car or van	45.18%	42.91%	40.64%	43.42%	53.13%	42.99%	44.58%	47.65%	36.90%
Passenger in a car or van	3.70%	2.33%	5.57%	4.29%	3.86%	4.44%	3.99%	3.88%	3.25%
Bicycle	1.93%	0.68%	2.60%	1.74%	1.72%	2.14%	1.78%	1.75%	1.91%
On foot	8.10%	5.87%	4.23%	3.92%	3.53%	7.09%	5.52%	5.10%	6.95%
Other method of travel to work	0.21%	0.75%	0.21%	0.24%	0.21%	0.35%	0.34%	0.35%	0.42%
Not in employment	32.45%	39.05%	36.47%	37.92%	30.21%	32.49%	34.91%	32.52%	35.28%
	2,669	3,384	2,732	2,949	2,112	2,415	16,261	48,605	13,718,653

**Table 12.13: Method of Travel to Work**  
[Source: ONS Census 2011]

### Economically Active - Unemployed

- 12.65. The most up to date figures relating to unemployment are dated October 2018 sourced from the Office for National Statistics - NOMIS. The claimant count is the number of people who are receiving out of work benefits. Given that official unemployment figures are partially based on the number of Job Seekers Allowance claimants it is important to also consider these rates in detail for the study area. However, the claimant count may not reflect the true level of unemployment, given that on all the unemployed will not claim welfare benefits, some are deterred because they cannot prove they are looking for work and some can claim while on relatively low earnings from part time work.
- 12.66. Table 12.14 provides information on the percentage of people aged 16-64 who are claiming Job Seekers Allowance. The information is provided for the individual wards, the socio-economic study area and wider spatial indicators including Warrington and Region.

	<b>JSA Claimants (October 2018)</b>
<b>Great Britain</b>	2.2%
<b>North West</b>	3.6%
<b>Warrington</b>	2.6%
<b>Birchwood</b>	3.3%
<b>Culcheth, Glazebury and Croft</b>	1.3%
<b>Poulton North</b>	3.7%
<b>Rixton and Woolston</b>	1.4%
<b>Cadishead</b>	2.0%
<b>Study Area</b>	2.34%

**Table 12.14: Job Seekers Allowance Claimant Rate (% of the resident population aged 16 to 64) (October 2018)**  
[Source –NOMIS official labour market statistics – Claimant Count (16-64) - Data Set (October 2018)]

### **Retail and Leisure**

- 12.67. The Warrington retail and leisure sectors are dynamic sectors of the economy within the Borough. The socio-economic technical paper will review the current retail and leisure position of the individual wards within the socio-economic study area and their relationship with Warrington City Centre.

### Community Infrastructure

- 12.68. Access to greenspace and open space within communities can impact people’s lives. The socio-economic technical paper will review the current quantity and quality of open space with community access for the individual wards within the socio-economic study area. This will include Restored Risley land fill site, Culcheth Linear Park, Risley Moss Local Nature Reserve, Rixton Claypit Nature Reserve, and Birchwood Forest Reserve.

### **Quality of Life Indicators (Education, Health, Crime, Deprivation)**

#### Education and Skills

- 12.69. Education is important and there is little doubt that skills are vital to sustainable economic growth and stronger communities. It improves career prospects, financial power and the education profile of the area will be a key determinant for employers. A local population with a higher level of skills will support the needs of the local economy by being work ready, will strengthen economic growth and reduce the skills gap and shortages. People living in the most deprived neighbourhoods are less likely to access higher education and training opportunities due a number of constraints.

- 12.70. Table 12.15 provides a breakdown of the qualifications achieved by residents aged 16-74 in the individual wards and compares this information with wider spatial indicators.

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
<b>All People Aged 16 and over Highest Level of Qualification (16-74)</b>	8,783	9,752	8,164	8,340	7,598	8,100	50,737	163,477	42,989,620
<b>No qualifications</b>	19.6%	19.2%	31.0%	22.3%	19.9%	27.5%	23.09%	20.7%	22.5%
<b>Level 1 qualifications</b>	14.7%	12.8%	19.4%	15.2%	15.4%	18.4%	15.85%	14.6%	13.3%
<b>Level 2 qualifications</b>	18.0%	15.5%	17.4%	18.0%	17.1%	18.0%	17.29%	16.5%	15.2%

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
<b>Apprenticeship</b>	3.4%	3.7%	3.5%	4.0%	5.2%	4.0%	3.96%	4.1%	3.6%
<b>Level 3 qualifications</b>	12.9%	11.0%	11.8%	15.2%	12.8%	12.5%	12.65%	12.6%	12.4%
<b>Level 4 qualifications and above</b>	27.1%	34.4%	12.7%	21.3%	25.4%	15.9%	23.18%	27.4%	27.4%
<b>Other qualifications</b>	4.3%	3.5%	4.2%	4.0%	4.1%	3.8%	3.98%	4.1%	5.7%

**Table 12.15: Qualification and Skills Levels, 2013**  
[Source: ONS Census 2011]

- 12.71. The socio-economic technical paper will assess the education, skills and training of the local area which will include the performance of local schools in respect of GCSE performance, the number of 16-18 year olds who are not in employment, education or training (NEETS) and the level of Higher Education enrolments.

Health and Wellbeing

- 12.72. The health of people in Warrington Borough is similar to the England average. However, the residents in a number of wards within the study area have marginally poorer health than the national average especially those classed as being in ‘bad’ and ‘very bad’ health. Child poverty is at the roots of many poor outcomes for children and young people and for their families, not only in terms of health but also educational attainment and employment prospects. There are links between economic disadvantage and poverty, in terms of labour market barriers, financial exclusion, unemployment and worklessness.
- 12.73. Information from the Joint Strategic Needs Assessment (JSNA), Joint Health and Wellbeing Strategy, and the Index of Multiple Deprivation will be utilised to illustrate the health and wellbeing of the individual wards and Warrington. This will include statistics about health inequalities; child poverty; lifestyle factors including smoking, physical activity, obesity, alcohol and drugs; and the main causes of death and disease. Table 12.16 provides the general health of the population of the wards with the Warrington and national averages.

	Birchwood	Culcheth, Glazebury and Croft	Poplars and Hulme	Poulton North	Rixton and Woolston	Cadishead	Study Area	Warrington	England
<b>All People aged 16 - 74 who are of</b>	10,701	11,690	10,528	10,266	9,116	10,264	62,565	202,228	53,012,456
<b>Very Good Health</b>	45.96%	48.53%	45.95%	46.90%	49.57%	45.07%	46.97%	49.81%	47.17%
<b>Good Health</b>	34.57%	33.66%	33.20%	33.43%	33.92%	34.28%	33.84%	32.75%	34.22%
<b>Fair Health</b>	12.97%	12.41%	13.73%	13.31%	12.13%	14.28%	13.14%	12.09%	13.12%
<b>Bad Health</b>	4.96%	4.20%	5.71%	5.07%	3.41%	5.15%	4.77%	4.19%	4.25%
<b>Very Bad Health</b>	1.54%	1.20%	1.41%	1.30%	0.97%	1.21%	1.28%	1.17%	1.25%

**Table 12.16: General Health**  
[Source: ONS Census 2011]

### Crime and Disorder

- 12.74. Crime is associated with social disorganisation, low social capital, relative deprivation and health inequalities and can have an impact on people's and employer's choice to move to an area. Information publicly available from Cheshire Police Constabulary, Joint Strategic Needs Assessment (JSNA) and the Index of Multiple Deprivation (2015) will be utilised to illustrate the level of incidents of crime, youth offences and anti-social behaviour of the individual wards and the Borough. As not all crime is reported then the total number of crimes recorded by the police can only give an impression of actual crime committed.

### Deprivation

- 12.75. The Index of Multiple Deprivation (IMD) is the Government's official measure of multiple deprivation at a small area level. The IMD is used as an objective measure of quality of life as it can be used to compare and rank deprivation between different places with reasonable confidence. The IMD data can be used to pinpoint pockets of deprivation or highlight variations within a wider geographical area.

- 12.76. The IMD 2015 is an overall measure of conditions in every neighbourhood in England. It is important to note that these statistics are a measure of relative deprivation, not affluence, and to recognise that not every person in a highly deprived area will themselves be deprived. Likewise, there will be some deprived people living in the least deprived areas.
- 12.77. The IMD 2015 provides an update on the 2010 English Indices of Deprivation and uses where possible similar but updated indicators and the same methodology. The Index of Multiple Deprivation 2015 (IMD 2015) is a Lower layer Super Output Area (LSOA) level measure of multiple deprivation, and is made up of seven LSOA level domain indices. These relate to
- Income;
  - Employment;
  - Health deprivation and disability;
  - Education skills and training;
  - Barriers to housing and services;
  - Crime;
  - Living Environment.
- 12.78. Warrington is ranked 176 (rank of average score) out of 326 Local Authorities within the English Indices of Deprivation 2015. As a result, Warrington does not demonstrate particularly high levels of deprivation. However, Indices indicates that there are significant pockets of deprivation within the Borough with a total of 90 neighbourhoods (LSOAs) in the most deprived 10% nationally (representing 9% of all Warrington's neighbourhoods). In addition, there is significant areas of deprivation in the surrounding Boroughs of Salford, Halton and St Helens.
- 12.79. The socio-economic technical paper will assess the IMD 2015 at a ward and LSOA level for the various deprivation domains to highlight the concentration and location of deprivation within the study area.

## Policy Context

12.80. In order to assess the impacts, the development will be considered against the baseline of the following policies, guidance and information:

- National Planning Policy Framework (NPPF 18) (2018).
- National Planning Practice Guidance (NPPG) (Published 2016 – Updated October 2018).
- Warrington Local Plan Core Strategy (July 2014).
- Warrington Emerging Local Plan (Preferred Options July 2017).
- Cheshire and Warrington Strategic Economic Plan (2017).
- Warrington Economic Development Needs Study (2016).
- Warrington's Economic Growth & Regeneration Programme - Warrington Means Business (2017).

## Potential Environmental Impacts

12.81. The potential Environmental Impacts will be assessed for both the construction and operational phases of development. At this stage, it is identified that the scheme could incur the following socio-economic impacts:

Construction
Migration - Less out migration for employment opportunities within the Study Area (six wards)
Temporary increase in people migrating into the area for construction related employment opportunities
Disruption to local communities in relation to increased construction traffic on local highway network
Disruption to local community in relation to Public Rights of Way in terms of noise and air quality
Creation of net additional GVA within Warrington during Construction Phase

<b>Construction</b>
Creation of direct jobs –skilled temporary construction jobs for residents within the Study Area (six wards)
Creation of direct jobs – skilled temporary construction jobs for residents within Warrington
Creation of indirect jobs – general employment provision
Increased demand and expenditure on local shops, services and facilities within the Study Area (six wards) (impact on existing facilities)
Increased demand and expenditure on local shops, services and facilities within Warrington (impact on existing facilities)
Opportunities for skills training for local residents within the Study Area (six wards)
Impact on the residents of the Study Area (six wards) and leisure visitors during construction period in terms of air quality and noise.
Health - Impact on workers during the construction period – Noise
Health - Impact on local and proposed residents during the construction period – Air Quality
Security / Crime - Increased opportunity for vandalism, crime and anti-social behaviour
Raise the image profile of the Study Area (six wards) as the development is viewed as positive to the local economy.

**Table 12.17: Potential Impacts – Operation**

<b>Operational</b>
Temporary increase in people migrating into the area for employment, leisure and community related activities.
Increase in motor vehicle use within Warrington and the Study Area (six wards)
Increase public transport and active travel opportunities within Warrington and the Study Area (six wards)
Creation of net additional GVA within Warrington per Annum Long Term
Reduce opportunities for accidents to take place as a result of fatigue and tiredness with the potential to increase economic activity within Warrington, North West and national economy.
Creation of direct long term jobs of a variety of occupations and skill levels for residents within Warrington

Operational
Creation of direct long term jobs of a variety of occupations and skill levels for residents within the Study Area (six wards)
Creation of indirect job opportunities for the Study Area (six wards) – long term through expansion of existing business and new business.
Increased demand and expenditure on existing local services and facilities within Warrington and the study area (six wards)
Creation of community facilities to be utilised by residents of the Study Area (six wards) and Warrington
Retention and enhancement of formal public right of ways and cycling routes for members of the local community
Creation of educational and staff training and learning programmes for potential employees
Decrease in deprivation indicators through increased provision of employment, educational and training opportunities
Decrease in crime and disorder related incidents and deprivation through provision of employment, educational and training opportunities
Security and Crime - Potential increase in crime on the site and locality
Improvement in health deprivation indicators through improved connectivity within cycling and pedestrian networks
Raise the image profile of the Study Area (six wards), Warrington and the North West to provide further economic, infrastructure and social / community investments and associated benefits

**Table 12.18: Potential Impacts – Operation**

## Methodology for the Environmental Statement

- 12.82. Assessing the socio-economic impacts of the development is a subjective exercise. Unlike other topics, the criteria for defining impacts and receptors are less certain. In broad terms, commercial development projects can have a positive impact on the economic, social and the quality of life situation of a community.
- 12.83. **Provision of Employment** can have benefits though an increase in long term job opportunities for the local community, skilled construction jobs, educational and training programmes and opportunities, increased expenditure to sustain and expand local services and direct infrastructure improvements.
- 12.84. **Provision of Leisure and Community facilities** can have benefits through a temporary increase in the local population, an increase in long term job opportunities for the local

community, skilled construction jobs, educational and training programmes and opportunities, increased expenditure to sustain and expand local services and direct infrastructure improvements.

12.85. **Provision of Public Open Space / Pedestrian and Cycle Links** can have a range of benefits including improved health for the local community, greater opportunities for local people to become active within their local area and it can also assist in raising the image of an area.

12.86. These will be assessed and quantified against the baseline situation once the final scheme is available. The final socio-economic technical report will:

- Provide the socio-economic base line position
- Identify and address Potential Environmental Impacts based on each baseline topic (summarised below)
- Identify Proposed Mitigation measures for adverse Environmental Impact identified as considered relevant
- Assess the potential residual effects
- Assess identified cumulative effects

Baseline Topic Area	Information to be provided
<b>Population and Demographic Trends</b>	This section of the report will seek to determine the impact the proposed development will have regarding any change in Population, Migration and Future Demographic Trends and assess whether this will result in a beneficial or adverse impact on the area.
<b>Transport</b>	This section of the report will include an analysis of whether the proposed development will have any impact on the existing Travel to Work Patterns. This will include an analysis of whether there will be more jobs available locally which could reduce motor vehicular use within the area and the impact the proposed development will have on sustainable travel and active travel opportunities.

Baseline Topic Area	Information to be provided
<p><b>Economic Growth</b></p>	<p>This section of the document will focus on any impact the proposed development will have upon the existing baseline position relating to:</p> <ul style="list-style-type: none"> <li>• Gross Value Added (GVA) – the economic impact assessment work will identify the GVA benefits attributable to the proposed development, based upon the use of an average GVA per head figure (by industry type) and applying this to the likely level of net additional employment outputs generated by the development (see below). The assessment will also make an assumption around the potential for the proposals to increase the current average GVA per head levels given the high quality nature of the Proposed Development and its potential ability to attract highly skilled workers to the area.</li> <li>• Additional expenditure within the local economy – the economic impact assessment will account for the fact that the commercial proposed development will generate additional expenditure within the local economy. Data from relevant sources such as local retail capacity studies will provide spend per capita figures for the area. The analysis will account for the potential displacement of existing expenditure and will demonstrate the potential economic impact on Warrington and beyond.</li> </ul> <p>In both of the above, the ‘do nothing’ deadweight position in relation to the site will also be accounted for.</p>
<p><b>Employment</b></p>	<p>This section of the document will focus on any impact the proposed development will have upon the existing baseline position relating to:</p> <p>Construction-related employment – an assessment of the number of FTE construction jobs that the Proposed Development could support and an assumed overall construction cost for the development.</p> <p>In all of the above, the ‘do nothing’ deadweight position will also be accounted for, as well as other factors of additionality including leakage, displacement and multiplier effects.</p> <p>Unemployment and Economic Inactivity – an assessment of how the likely economic impacts of the proposed development will address existing socio-economic challenges in the local economy relating to unemployment and economic inactivity and how the new jobs created will be available and accessible to local people, to assist in increasing local wage rates and enhancing skill levels.</p>

Baseline Topic Area	Information to be provided
<b>Retail and Leisure</b>	This section will include an assessment of what the impact of the proposed development will have on existing retail and leisure infrastructure in terms of the delivering retail and leisure facilities into the locality.
<b>Community Infrastructure</b>	This section will include an assessment of what the impact of the proposed development will have on existing community infrastructure in terms of the delivering community facilities to be utilised by the local community.
<b>Quality of Life Indicators</b>	<p>This section of the document will focus on any impact the proposed development will have upon the existing baseline position relating to:</p> <ul style="list-style-type: none"> <li>• <b>Health</b> An assessment of what impact the proposed development will have on health deprivation indicators within the area in terms of delivering employment, educational and training opportunities</li> <li>• <b>Education</b> An assessment of what impact the proposed development will have on education indicators through the creation of educational and staff training and learning programmes for potential employees</li> <li>• <b>Deprivation</b> Taking the baseline position this section will assess whether the development will have a positive or negative impact on existing deprivation within the area. The report will assess deprivation at the Local Authority Level and the LSOA Level to provide a picture of deprivation within the local area.</li> <li>• <b>Security and Crime</b> An understanding of crime patterns within the area can help to determine how the scheme might impact on these figures through provision of employment, educational and training opportunities</li> </ul>
<b>Non Quantifiable Indicators</b>	This section of the document will focus on any impact the proposed development will have upon the existing baseline position relating to image. Image is difficult to quantify and is therefore subjective. An analysis of the existing site and proposed site will be undertaken to determine those elements which impact on the image of the local and wider area. This is likely to include an assessment of the profile of the area, perceptions, likelihood of attracting future investment into the area, any economic, social and community benefits which might make the area more attractive place to choose to live and work.

**Table 12.19: Baseline Topic**

## Receptors

12.87. The table below sets the definition of each of the Receptor Criteria and highlights the importance of the receptor as well as the area to which they relate.

Designation	Development Receptors
International	The Receptor is of international importance <ul style="list-style-type: none"> <li>• It has transnational value European               <ul style="list-style-type: none"> <li>○ European Community</li> </ul> </li> </ul>
National	The Receptor is of national importance <ul style="list-style-type: none"> <li>• It has been identified as a key national policy, strategy or priority               <ul style="list-style-type: none"> <li>○ United Kingdom</li> </ul> </li> </ul>
Regional	The Receptor is of regional importance <ul style="list-style-type: none"> <li>• It has been identified as a key regional policy, strategy or priority               <ul style="list-style-type: none"> <li>○ The North West</li> </ul> </li> </ul>
County	The Receptor is of importance at the county level <ul style="list-style-type: none"> <li>• It has been identified as a key county policy, strategy or priority               <ul style="list-style-type: none"> <li>○ The County of Cheshire</li> </ul> </li> </ul>
Borough/District	The Receptor is of importance at the Borough level <ul style="list-style-type: none"> <li>• It has been identified as a key Borough policy, strategy or priority               <ul style="list-style-type: none"> <li>○ Warrington Metropolitan Borough Council</li> </ul> </li> </ul>
Local/Neighbourhood	The Receptor is of local importance <ul style="list-style-type: none"> <li>• It has been identified as a key local policy, strategy or priority.               <ul style="list-style-type: none"> <li>○ The Electoral Wards of Culcheth, Glazenbury and Croft, Birchwood, Poulton North, Poplars and Hulme, Rixton and Woolston, and Cadishead.</li> </ul> </li> </ul>

**Table 12.20: Receptors**

12.88. The socio-economic receptor plan is identified below in Figure 12.2 and **Appendix 6**. The Receptor Plan highlights the development receptors from the national to the local level.

## Socio-Economic Development Receptors

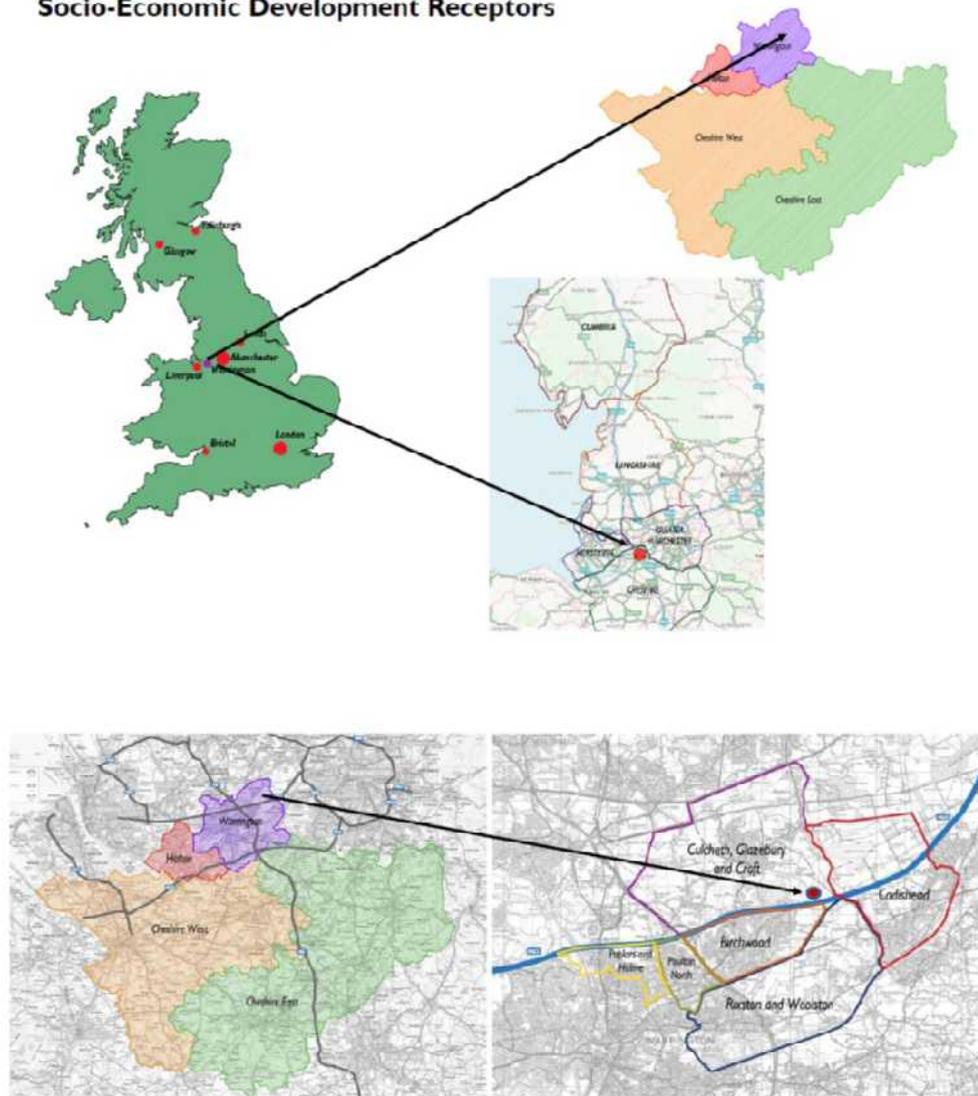


Figure 12.2: Receptor Plan

### Environmental Impacts

- 12.89. Assessing the socio-economic impact of a development such as the Warrington MSA, J11 M62 Motorway Development is a subjective exercise. It is widely stated that there is no specific guidance which establishes a methodology to be followed when assessing the potential socio-economic impacts of a development. Spawforths, who hold the IEMA EIA Quality Mark, will adopt an approach in the ES which is based upon professional experience, discussions with

stakeholders, previous consultation responses on a variety of ES related developments and consideration of relevant national and local policy and guidance.

12.90. The magnitude (scale) of an impact is often difficult to define. Generally terms substantial, high, moderate, minor, negligible, and neutral are adopted to describe magnitude. The table below provides clarity as to the scale of impact utilised within this technical report.

Scale of Impact	Topic	Criteria	Positive	Negative
Substantial	Population and Demographics	Results in Socio Economic major loss/major gain	Increase in population > 1000 (Local) Increase in population > 2000 (Borough/District) Increase in population > 3000 (County) Increase in population > 4000 (Regional)	Decrease in population > 1000 (Local) Decrease in population > 2000 (Borough/District) Decrease in population > 3000 (County) Decrease in population > 4000 (Regional)
	Transport		Improved connectivity to the National Road Network, public transport and cycling and walking networks.	Substantial construction traffic on local roads.  Substantial increase in congestion on local roads impacting on drive time
	Economic Growth	Regeneration of previously developed land > 50 hectares	Substantial increase in GVA within the locality	Substantial loss in GVA within the locality
	Employment		Employment generation of > 300 jobs  Construction of new strategic site	Employment loss of > 300 jobs  Closure of strategic employer
	Retail and Leisure	Regeneration of site of National Importance	Reduced need to travel for retail and leisure opportunities <5min walk time.  >1000 new homes and Significant employment creation results in increased trade for retailers	Proposal significantly undermines existing town centre policies or strategies.  Significant trade lost from existing retailers.
	Community Infrastructure		Major gain of POS, sports and recreational facilities of Regional importance	Major loss of POS, sports and recreational facilities of Regional importance

Scale of Impact	Topic	Criteria	Positive	Negative
	Quality of Life		Substantial impact on indicators of deprivation	Substantial increase in impacts leading to deprivation
	Image		Substantial improvements to the image of the District	Substantial harm to the image of the district
			Significant reduction in crime which impacts at the regional level	Increase in crime at regional level
			Significant security improvements at the regional level	
Scale of Impact	Topic	Criteria	Positive	Negative
High	Population and Demographics	Results considerably noticeable loss or gain	Increase in population > 500 (Local)	Decrease in population > 500 (Local)
			Increase in population > 1000 (Borough/District)	Decrease in population > 1000 (Borough/District)
			Increase in population > 2000 (County)	Decrease in population > 2000 (County)
			Increase in population > 3000 (Regional)	Decrease in population > 3000 (Regional)
			Transport	Improved connectivity to the Regional Road Network, public transport and cycling and walking networks.
Economic Growth	Regeneration of previously developed land 20 – 50 hectares	Major increase in GVA within the locality	Major loss in GVA within the locality	
Employment	Regeneration of site of County wide Importance	Employment generation of > 200 jobs	Employment loss of > 200 jobs	
Retail and Leisure		Construction of new major site	Closure of major employer	
		Reduced need to travel for retail and leisure opportunities <10 min walk time or residential / employment located within 5 minute walk of a bus stop offering a 15 minute frequency service to retail opportunities.	Proposal undermines existing town centre policies or strategies. Major loss of trade for existing retailers.	
		>500 new homes and major employment creation results in increased trade for retailers		

Scale of Impact	Topic	Criteria	Positive	Negative
	Community Infrastructure		Major gain of POS, sports and recreational facilities of County-wide importance	Major loss of POS, sports and recreational facilities of County-wide importance
	Quality of Life		Major impact on indicators of deprivation  Significant reduction in crime which impacts at the county level  Significant security improvements at the county level	Major increase in impacts leading to deprivation  Increase in crime at county level
	Image		Major improvements to the image of the District	Major harm to the image of the district
Moderate	Population and Demographics	Results in impact on Socio Economic issues - partial loss or gain  Regeneration of previously developed land 10 - 20 hectares  Regeneration of site of city	Increase in population > 300(Local) Increase in population > 500 (Borough/District) Increase in population > 1000 (County) Increase in population > 2000 (Regional)	Decrease in population > 300 (Local) Decrease in population > 500 (Borough/District) Decrease in population > 1000 (County) Decrease in population > 2000 (Regional)
	Transport		Improved connectivity to the County Road Network, public transport and cycling and walking networks.	Moderate construction traffic on local roads.  Moderate increase in congestion on local roads impacting on drive time
	Economic Growth		Moderate increase in GVA within the locality	Moderate loss in GVA within the locality
	Employment		Employment generation of > 100 jobs  Construction of employment site of district importance	Employment loss of > 100 jobs  Closure of employer of district importance

Scale of Impact	Topic	Criteria	Positive	Negative
	Retail and Leisure	wide Importance	Reduced need to travel for retail and leisure opportunities <10 min walk time or residential / employment located within 10 minute walk of a bus stop offering a 15 minute frequency service to retail opportunities.	Proposal undermines existing town centre policies or strategies.
			>100 new homes and major employment creation results in increased trade for retailers	Moderate loss of trade for existing retailers.
	Community Infrastructure		Moderate gain of POS, sports and recreational facilities of district wide importance	Moderate loss of POS, sports and recreational facilities of district wide importance
	Quality of Life		Moderate impact on indicators of deprivation  Significant reduction in crime which impacts at the District level  Significant security improvements at the District level	Moderate increase in impacts leading to deprivation  Increase in crime at district level
	Image		Moderate improvements to the image of the District	Moderate harm to the image of the district
Scale of Impact	Topic	Criteria	Positive	Negative
Minor	Population and Demographics	Results in minor socio economic impacts  Regeneration of previously developed land < 10 hectares	Increase in population > 100(Local) Increase in population > 300 (Borough/ District) Increase in population > 500 (County) Increase in population > 1000 (Regional)	Decrease in population > 100 (Local) Decrease in population > 300 (Borough/ District) Decrease in population > 500 (County) Decrease in population > 1000 (Regional)
	Transport		Improved connectivity to the local Road Network, public transport and cycling and walking networks.	Minor construction traffic on local roads.  Minor increase in congestion on local roads impacting on drive time
	Economic Growth		Minor increase in GVA within the locality	Minor loss in GVA within the locality

Scale of Impact	Topic	Criteria	Positive	Negative
	Employment	Regeneration of site of local importance	Employment generation of > 10 jobs	Employment loss of > 10 jobs
			Construction of employment site of local importance	Closure of employer of local importance
	Retail and Leisure		Reduced need to travel for retail and leisure opportunities <10 min walk time or residential / employment located within 5 minute walk of a bus stop offering a 30 minute frequency service to retail opportunities.	Proposal undermines existing town centre policies or strategies.
			>50 new homes and major employment creation results in increased trade for retailers	Some loss of trade for existing retailers.
	Community Infrastructure		Major gain of POS, sports and recreational facilities of local importance	Major loss of POS, sports and recreational facilities of local importance
	Quality of Life	Minor impact on indicators of deprivation Significant reduction in crime which impacts at the local level Significant security improvements at the local level	Minor increase in impacts leading to deprivation Increase in crime at local level	
	Image			Minor improvements to the image of the all district or locality
Scale of Impact	Topic	Criteria	Positive	Negative
Negligible	All	Results in Socio Economic impact but of insufficient magnitude	Minimal change with measurable change difficult to ascertain	Minimal change with measurable change difficult to ascertain
Scale of Impact	Topic	Criteria	Positive	Negative

Scale of Impact	Topic	Criteria	Positive	Negative
Neutral	All	No net change in results of Socio Economic impact	No net measurable change	No net measurable change

**Table 12.21: Impacts**

### Impact Predication Confidence

12.91. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

**Table 12.22: Confidence Level**

### Significance of Effects

12.92. Having determined the nature of the impact, its level of Receptor (International to Local) and level of environmental impact (Substantial to Neutral and positive or negative), a significance matrix will be utilized to determine the significance of effect and a level of confidence assigned.

12.93. Significance is calculated by combining the scale of impact and importance or sensitivity of the receptor through the matrix contained within Chapter 3 of the ES Scoping Request Report.

12.94. It is also sometimes of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions is also highlighted in the report.

12.95. The table below provides a summary of the assessment of environmental impacts so far pre mitigation.

### Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Migration - Less out migration for employment opportunities within the Study Area (six wards)	Local / Neighbourhood	Minor Positive	Minor Beneficial	High
Temporary increase in people migrating into the area for construction related employment opportunities	Local / Neighbourhood	Minor Positive	Minor Beneficial	High
Disruption to local communities in relation to increased construction traffic on local highways network	Local / Neighbourhood	Minor Negative	Minor Adverse	High
Disruption to local community in relation to Public Rights of Way in terms of noise and air quality	Local / Neighbourhood	Minor Negative	Minor Adverse	High
Creation of net additional GVA within Warrington during Construction Phase	Borough	Moderate Positive	Minor Beneficial	High
Creation of direct jobs –skilled temporary construction jobs for residents within the Study Area (six wards)	Local / Neighbourhood	Substantial Positive	Moderate Beneficial	High
Creation of direct jobs – skilled temporary construction jobs for residents within Warrington	Borough	Substantial Positive	Moderate Beneficial	High
Creation of indirect jobs – general employment provision	Borough	Moderate Positive	Minor Beneficial	High
Increased demand and expenditure on local shops, services and facilities within the Study Area (six wards) (impact on existing facilities)	Local / Neighbourhood	Moderate Positive	Minor Beneficial	High
Increased demand and expenditure on local shops, services and facilities within Warrington (impact on existing facilities)	Local / Neighbourhood	Moderate Positive	Minor Beneficial	High
Opportunities for skills training for local residents within the Study Area (six wards)	Local / Neighbourhood	Minor Positive	Minor Beneficial	High
Impact on the residents of the Study Area (six wards) and leisure visitors during construction period in terms of air quality and noise.	Local / Borough	Minor Negative	Minor Adverse	Low
Health - Impact on workers during the construction period – Noise	Local / Neighbourhood	Minor Negative	Minor Adverse	High

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Health - Impact on local and proposed residents during the construction period – Air Quality	Local / Neighbourhood	Minor Negative	Minor Adverse	Low
Security / Crime - Increased opportunity for vandalism, crime and anti-social behavior	Local / Neighborhood	Minor Negative	Minor Averse	High
Raise the image profile of the Study Area (six wards) as the development is viewed as positive to the local economy.	Local / Borough	Moderate Positive	Minor Beneficial	High

**Table 12.23: Significance of Impact – Construction Phase**

### Operational Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Temporary increase in people migrating into the area for employment, leisure and community related activities.	Local / Neighbourhood	Moderate Positive	Minor Beneficial	High
Increase in motor vehicle use within Warrington and the Study Area (six wards)	Local / Borough	Minor Negative	Minor Adverse	Low*
Increase public transport and active travel opportunities within Warrington and the Study Area (six wards)	Local / Borough	Moderate Positive	Moderate Beneficial	Low*
Creation of net additional GVA within Warrington per Annum Long Term	Borough	High - Moderate Positive	Moderate Beneficial	Low*

<b>Nature of Impact</b>	<b>Receptor</b>	<b>Environmental Impact</b>	<b>Significance of Effect</b>	<b>Confidence Level</b>
Reduce opportunities for accidents to take place as a result of fatigue and tiredness with the potential to increase economic activity within Warrington, the North West Region and national economy.	Borough	High - Moderate Positive	Moderate - Minor Beneficial	Low*
Creation of direct long term jobs of a variety of occupations and skill levels for residents within Warrington	Borough	High - Substantial Positive	Moderate Beneficial	High
Creation of direct long term jobs of a variety of occupations and skill levels for residents within the Study Area (six wards)	Local / Neighbourhood	Substantial Positive	Moderate Beneficial	High
Creation of indirect job opportunities for the Study Area (six wards) – long term through expansion of existing business and new business.	Local / Neighbourhood	High - Moderate Positive	Moderate - Minor Beneficial	Low*
Increased demand and expenditure on existing local services and facilities within Warrington and the study area (six wards)	Local / Borough	Moderate Positive	Minor Beneficial	Low*
Creation of community facilities to be utilised by residents of the Study Area (six wards) and Warrington	Local / Borough	Moderate Positive	Moderate Beneficial	High

<b>Nature of Impact</b>	<b>Receptor</b>	<b>Environmental Impact</b>	<b>Significance of Effect</b>	<b>Confidence Level</b>
Retention and enhancement of formal public right of ways and cycling routes for members of the local community	Local / Borough	Moderate Positive	Minor Beneficial	High
Creation of educational and staff training and learning programmes for potential employees	Local / Borough	Moderate Positive	Minor Beneficial	Low*
Decrease in deprivation indicators through increased provision of employment, educational and training opportunities	Local / Borough	Minor – Moderate Positive	Minor Beneficial	Low*
Decrease in crime and disorder related incidents and deprivation through provision of employment, educational and training opportunities	Local / Neighbourhood	Minor Positive	Minor Beneficial	Low*
Security and Crime - Potential increase in crime on the site and locality	Local / Neighbourhood	Minor Negative	Minor Adverse	Low*
Improvement in health deprivation indicators through improved connectivity within cycling and pedestrian networks	Local / Borough	High Positive	Minor Beneficial	Low*

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Raise the image profile of the Study Area (six wards), Warrington and the North West Region to provide further economic, infrastructure and social / community investments and associated benefits	Local / Borough	High - Moderate Positive	Moderate Beneficial	Low*

[\*A low level of confidence has been assigned to these assessments. Before the assessments can be assigned a high level of confidence, further detailed analysis is required.]

**Table 12.24 : Significance of Impact – Operational Phase**

## Mitigation

- 12.96. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

## Further Work Required

- 12.97. Once the scheme proposals are finalised, the final ES will include a full assessment of the socio-economic impacts from the development. This will include a review of existing baseline data and discussions with key stakeholders. A review of the following will be included:

- Ministry of Housing, Communities and Local Government (MHCLG) Policy and Guidance
- HCA Employment Densities Guide, 3rd Edition, 2015
- NOMIS - The Office for National Statistics
- NHS Website

- Police.co.uk Website
- Department of Education
- Office for National Statistics - Neighbourhood statistics
- Warrington Council Website Policy and Guidance
- Salford Council Website Policy and Guidance
- Greater Manchester Combined Authority website and documents

## Summary

12.98. In summary, a socio-economic assessment is required to determine the potential socio-economic impacts during the construction and operation of the scheme. A more detailed baseline assessment on the following criteria will be included in the ES Technical Paper:

- Population and Demographic Trends
- Economic Growth
- Employment
- Retail and Leisure
- Community Infrastructure
- Quality of Life Indicators
  - Health and Wellbeing
  - Education and Skills
  - Crime and Disorder
  - Deprivation
- Image

12.99. The ES scoping chapter recognises positive and negative Potential Environmental Impacts during both the construction and operational phases and these will be assessed in greater detail within the ES Technical Paper and any appropriate mitigation as required.

12.100. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Socio Economic</b></p> <p><i>Construction:</i></p> <ul style="list-style-type: none"> <li>○ Population and Demographics – the inward migration of people for job opportunities.</li> <li>○ Economic Growth –net increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the construction works as well as in the wider economy and impact on socio-economic challenges in the local economy.</li> <li>○ Retail and Leisure – Increased demand and expenditure in local shops, services, and facilities</li> <li>○ Community Infrastructure – Impact on existing community infrastructure</li> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul> <p><i>Operation:</i></p> <ul style="list-style-type: none"> <li>○ Population and Demographics – commuting and migration of people for jobs opportunities.</li> <li>○ Economic Growth – long term increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the operation of the MSA and associated development and impact on socio-economic challenges in the local economy.</li> </ul>	<p>The Proposed Development has the potential to have significant impact during both the construction and operation stages.</p>

Environmental Issue	Reason for “scoping in”
<ul style="list-style-type: none"> <li>○ Transport – Increase motorway vehicle use; increase public transport and active travel opportunities; reduce accident numbers and mortality rates</li> <li>○ Retail and Leisure – Increased demand and expenditure on local shops, services, and facilities</li> <li>○ Community Infrastructure – creation of new community infrastructure</li> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents and workers</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul>	

## 13. Noise and Vibration

### Introduction

- 13.1. The noise and vibration assessment prepared by Wardell Armstrong LLP will consider the suitability of the prevailing local noise and vibration environment for the Proposed Development and assess the potential impacts at existing and proposed noise and vibration sensitive receptors, such as local residential dwellings, and the proposed Hotel. The assessment will consider the potential impacts during both the construction and operational phases of the Proposed Development.
- 13.2. Consultation will be undertaken with the Environmental Health Department of Warrington Borough Council to agree on the exact scope of works, assessment Methodology, and locations for noise monitoring.
- 13.3. Existing sensitive receptors are Franks Farm (ESR1), located approximately 500m to the north, and dwellings off Inglewood Close (ESR2), approximately 300m to the south. Dwelling located in Culcheth to the north west are at a greater distance than ESR2 from the proposed MSA, and therefore any noise impact at these receptors will be less.
- 13.4. Therefore, the earthworks and construction phase works will be carried out based on guidance BS5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Parts 1 and 2 (BS5228) for these receptors. A background noise survey will be carried out at locations considered representative of the identified sensitive receptors. These background levels will, in turn, suggest suitable noise criteria for the construction phase mitigation as appropriate.
- 13.5. Noise from the operation of the development will also need to be assessed. The operational phase assessment will consider the potential impact of the Proposed Development on existing sensitive receptors. Any noise from sources at the site will be assessed in accordance with British Standard 4142:2014 Methods for rating and assessing industrial and commercial sound (BS4142). In turn recommendations for noise mitigation will be made as appropriate.
- 13.6. In addition to assessing the impact of the development on existing receptors, the proposed noise sensitive areas of the development will also need to be considered. The dominant noise source will be existing road traffic; therefore, measurements will be required at the site during

both the daytime and night-time. In addition, the noise from the MSA itself will be assessed at the proposed Hotel. The suitability of the prevailing local noise environment will be assessed in accordance with National Planning Policy Framework, 2018 (The Framework) and the Noise Policy Statement for England 2010 (NPSE) for noise sensitive aspects of the Proposed Development. Consideration will be given to the noise mitigation measures that will be required to ensure compliance at proposed residential dwellings and office accommodation with appropriate internal and external noise level criteria adopted from British Standard 8233:2014 Guidance on Sound Insulation and noise reduction for buildings (BS8233).

- 13.7. Attended daytime and night-time noise surveys will be undertaken to identify the key noise sources affecting the Proposed Development site. The future HS2 railway line is proposed on land immediately to the north of the development site, therefore, noise and vibration from the future line will need to be considered at the proposed Hotel. Ordinarily, projects that are not committed development, i.e. those that do not have the benefit of planning permission, would not be included within the environmental assessment and would instead be contained within the cumulative assessment. However, in this instance, given the sensitive nature of the Hotel end use, the national significance of the HS2 proposals, and the location of the potential future HS2 railway line proposed to the land immediately to the north of the Proposed Development, HS2 will form part of the main environmental assessment in respect of noise and vibration. This will ensure that the Proposed Development incorporates suitable mitigation to mitigate any potential future impacts from this source.

### **Baseline Information**

- 13.8. The potential major sources of noise contributing to baseline conditions were identified through a desktop study of the development and surrounding land uses using available maps and aerial photography. The M62 Motorway to the south of the site is considered to be the major source of noise affecting the development site.
- 13.9. The baseline assessment will be assessed with reference to;
- National Planning Policy Framework, 2018 (NPPF 18);
  - Noise Policy Statement for England (2010); and,
  - Planning Practice Guidance - Noise, 2014;

- 13.10. It is assumed that road traffic noise will be the dominant source of noise at the nearest existing receptors, and at the development site. Therefore, noise monitoring will be carried out outside of the site boundary, at the location of the existing sensitive receptors, or at a representative point, where land access to the receptors is not permitted. In addition, attended noise monitoring will be carried out to measure the baseline noise level at the development site in the location of the proposed sensitive receptors.
- 13.11. Information regarding HS2 will be obtained from High Speed Two (HS2) Limited, and shall be included in the assessment of noise and vibration at the proposed receptors (i.e. the Hotel).
- 13.12. Details of the committed developments which will be included in the assessment of development led road traffic will be obtained from the traffic consultant. Data from the traffic consultant will also be utilised to assess the cumulative impact of the development at receptors.

## Potential Environmental Impacts

### Construction Phase

- 13.13. It is anticipated that noise and vibration from construction vehicles, and construction activities at the Proposed Development could potentially cause a disturbance at existing sensitive receptors.
- 13.14. Mitigation measures may therefore be required to minimise any potential noise and vibration impacts.

### Operational Phase

- 13.15. During the operational phase it is anticipated that the generation of development led road traffic is unlikely to cause a noise impact upon existing and proposed sensitive receptors. However, fixed plant and service yards could cause a noise impact on both existing sensitive receptors and those proposed as part of the development (i.e. the Hotel), and will be considered in the ES. Therefore, the noise and vibration chapter will include an assessment of the operational phase impact at existing and proposed sensitive receptors.
- 13.16. The suitability of the existing noise climate of the site for residential type accommodation (i.e. the Hotel) will also be assessed. It is considered that road traffic and noise from the future HS2 are likely to be the dominant sources of noise.

## Methodology for the Environmental Statement

- 13.17. Baseline noise monitoring will be conducted, and will consist of daytime and night-time measurements to establish the prevailing ambient and background levels at future and proposed sensitive receptors.
- 13.18. Characterising the local noise environment allows the impact of the Proposed Development to be assessed, including determining whether the construction and operational phases of the development are likely to have significant effects on the identified receptors.
- 13.19. BS 5228-1&2:A1:2014 will be used to assess potential noise and vibration effects from the construction process. This standard provides a methodology for the assessment and control of noise from construction operations. The Standard contains detailed information on noise reduction measures and promotes the ‘best practicable means’ (BPM) approach to control noise and minimise associated impacts on local residents.
- 13.20. The suitability of the prevailing local noise environment will be assessed in accordance with NPPF 18 and NPSE for noise sensitive aspects of the Proposed Development. Consideration will be given to the noise mitigation measures that will be required to ensure compliance with appropriate internal and external noise level criteria adopted from BS8233.
- 13.21. Where possible the noise from the proposed MSA, as it affects receptors, will be assessed in accordance with BS4142. In turn recommendations for noise mitigation will be made as appropriate. At this stage, a detailed assessment of specific noise sources at the proposed MSA is not possible, as the exact details of the scheme are not known (unless an occupier is subsequently identified, at which point detailed specifications will be used). However, the modelling and baseline surveys completed as part of the assessment will be used to derive limits for plant noise at the site boundary of each of the commercial and employment areas, so that the amenity of the existing and proposed residential areas is protected.

### Receptors

Designation	Receptors
International	Receptors with the highest sensitivity to noise including internationally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).

Designation	Receptors
National	Receptors of very high sensitivity to noise including hospitals and residential care homes. Nationally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
Regional	Receptors of high sensitivity including places of worship and places of quiet recreation (e.g. Country Parks). Regionally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
County	Receptors of moderate to high sensitivity including residential dwellings, schools, and play areas. Locally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
Borough/District	Receptors of moderate sensitivity to noise including offices and play areas. Locally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
Local/Neighbourhood	Receptors of the lowest sensitivity to noise (e.g. industrial estates).

Table 13.1: Receptors

### Environmental Impacts

- 13.22. When considering the significance of internal or external noise levels for a specific proposed use (such as internal noise levels for residential accommodation, or construction noise) a comparison will be made between the predicted noise levels and the relevant guideline or policy level.
- 13.23. The table below defines the magnitude of the effect. Together with the sensitivity of the receptor, as detailed above, it is used to determine the level of significance.

Magnitude	Environmental Impact
Substantial	Impact resulting in a considerable change in baseline environmental conditions predicted either to cause statutory objectives to be significantly exceeded or to result in severe undesirable/desirable consequences on the receiving environment.
High	Impact resulting in a discernible change in baseline environmental conditions predicted either to cause statutory objectives to be exceeded or to result in undesirable/desirable consequences on the receiving environment.
Moderate	Impact resulting in a discernible change in baseline environmental conditions predicted either to cause statutory objectives to be marginally exceeded or to result in undesirable/desirable consequences on the receiving environment.

Minor	Impact resulting in a discernible change in baseline environmental conditions with undesirable/desirable conditions that can be tolerated
Negligible	No discernible change in the baseline environmental conditions, within margins of error of measurement.
Neutral	No change to the baseline environmental conditions

Table 13.2: Environmental Impacts

### Impact Prediction Confidence

- 13.24. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 13.3: Confidence Levels

### Significance of Effects

- 13.25. The following tables provide a summary of the likely significance of the impacts that may result from the Proposed Development of the site. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive ES technical paper and reported in the ES Technical Paper.

## Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Change in noise and vibration levels at existing sensitive receptors due to construction works.	County/Borough	Minor Negative *	Minor Adverse*	Low*
*Environmental impacts and confidence levels represented in this table refer to the predicted impacts and confidence levels prior to undertaking the works. The confidence level will be high once the baseline monitoring and assessment have been completed.				

Table 13.4: Significance of Impact - Construction

## Operational Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Change in noise levels at future sensitive receptors due to proposed MSA	County/Borough	Minor Negative*	Minor Adverse*	Low*
Impact of noise levels due to existing and proposed noise sources at proposed sensitive receptors	County/Borough	Minor-Moderate Negative*	Minor-Moderate Adverse*	Low*
*Environmental impacts and confidence levels represented in this table refer to the predicted impacts and confidence levels prior to undertaking the works. The confidence level will be high once the baseline monitoring and assessment have been completed.				

Table 13.5: Significance of Impact – Operation

## Mitigation

- 13.26. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

## Construction Phase

- 13.27. To reduce the potential impact of noise levels generated by the construction phase of the MSA, at future receptor locations in the immediate vicinity of the site, it is likely that mitigation measures will be required.
- 13.28. Best working practice will be implemented during each phase of the earthworks and construction works at the site. The construction works will follow the guidelines in BS5228-1 and the guidance in BRE Controlling particles, vapour and noise pollution from construction sites, Parts 1 to 5, 2003.
- 13.29. Where necessary, the following measures could be put in place to minimise noise emissions, and are likely to be included within a Construction Environmental Management Plan (CEMP):
- When works are taking place within close proximity to those sensitive receptors identified, screening of noise sources by temporary screen may be employed;
  - All plant and machinery should be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearing and the integrity of silencers;
  - Site staff should be aware that they are working close to receptors and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting and radios;
  - A further measure to reduce noise levels at the sensitive receptors would include, as far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor;
  - Adherence to any time limits imposed on noisy works by the Local Authority;
  - Implement set working hours during the week and at weekends;
  - Ensure engines are turned off when possible; and,
  - Should earthworks and/or construction activities need to be carried out during night-time hours, the Local Authority could include a planning condition which requests advance notice and details of any night working to be provided.
- 13.30. BS5228-2 recognises that the most common form of vibration associated with piling is the intermittent type derived from conventional driven piling. To minimise the potential for vibration to be generated by any necessary piling it is recommended that careful consideration is given to the type of piling to be used. For example, auger bored piles would be preferable to driven piles with regards to a reduced potential for noise and vibration to be generated.

- 13.31. However, it is recognised that the piling process will need to be selected on the basis of the strata to be encountered, the loads to be supported and the economics of the system.
- 13.32. The receptors likely to be affected by piling will vary depending on the phase of the MSA under construction. Once the precise building locations, ground conditions for each location and type(s) of piling are confirmed, vibration levels could be estimated and recommendations for control made as appropriate. To keep ground borne vibration to a minimum the following measures, as referred to in BS5228-2, should be put in place:
- Substitution: Where reasonably practicable, plant and or methods of work likely to cause significant levels of vibration at the receptors identified, should be replaced by less intrusive plant/methods of working; and
  - Vibration isolation of plant at source: This may prove a viable option where the plant is stationary (e.g. a compressor, generator) and located close to a receptor.
- 13.33. There are a number of measures which can be implemented, depending upon the type of piling chosen. BS5228-2 indicates that mitigation might include: use of alternative methods, removal of obstructions, provision of cut-off trenches, reduction of energy input per blow, reduction of resistance to penetration. Continuous flight augering would cause minimal vibration even when very close to the piling operation. As the construction programme and methodologies become more defined it is suggested that earthworks and construction vibration be reconsidered and that a detailed strategy for control be implemented.

### **Operational Phase**

- 13.34. The mitigation measures required to reduce the impact of existing sources of noise on proposed sensitive receptors is not known at this stage. However, it is likely that noise mitigation provided by glazing together with an alternative method of acoustically treated ventilation will be required for bedrooms at the proposed Hotel to achieve internal guideline noise levels during the daytime and night-time.
- 13.35. Mitigation measures may also be required to reduce noise from the operational phase of the proposed MSA on existing and proposed sensitive receptors.

## Further Work Required

- 13.36. At the time of writing, consultation with the Environmental Health Officer at Warrington Borough Council had not been undertaken, and this should be completed prior to the preparation of the noise and vibration ES chapter
- 13.37. Baseline noise monitoring at existing receptors, and at the Development Site will be undertaken to support the construction and operational noise assessments.
- 13.38. A full assessment of development led road traffic will need to be undertaken following receipt of the future traffic flows with and without the scheme.

## Summary

- 13.39. The noise and vibration assessment prepared by Wardell Armstrong will consider the suitability of the prevailing local noise and vibration environment for the Proposed Development and will assess the potential impacts at existing and proposed noise and vibration sensitive receptors, such as local residential dwellings. The assessment will consider the potential impacts during both the construction and operational phases of the Proposed Development.
- 13.40. The potential major sources of noise have been assessed and studied using available mapping and aerial photography. The baseline conditions will be assessed with reference to relevant national planning policy and legislation. Noise monitoring will be carried out to measure the noise level at the development site, and at existing sensitive receptors.
- 13.41. The impact of construction phase noise will need to be assessed at existing sensitive receptors. Development led road traffic noise is unlikely to cause a noise impact. Existing road traffic noise is likely to be the dominant source of noise at proposed sensitive receptors (i.e. the proposed Hotel).
- 13.42. Following baseline noise monitoring, the assessment will consider the suitability of the operational and construction phases of the development site with reference to current guidance documents.

- 13.43. An assessment of the likely significance of effects has been carried out. The predicted impact during the construction phase is minor adverse, and the predicted operational phase impact is minor to moderate adverse with a low confidence.
- 13.44. Likely mitigation measures have been suggested to attenuate noise during the construction and operational phases of the development.
- 13.45. The cumulative impact of development led road traffic will be considered in the full assessment. In addition, noise from the future HS2 will be considered.
- 13.46. Further works are required including correspondence with the local authority, baseline noise monitoring and the analysis of traffic data
- 13.47. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of noise and vibration.

#### Scoped In

Environmental Issue	Reason for “scoping in”
<b>Noise and Vibration</b> <i>Construction noise at existing sensitive receptors</i> <i>Operational phase noise at existing and proposed sensitive receptors</i>	These effects will need to be assessed to determine the requirements for any mitigation measures as appropriate.

#### Scoped Out

Environmental Issue	Reason for “scoping out”
<b>Noise and Vibration</b> <i>None</i>	N/A

## 14. Air Quality, Odour and Dust

### Introduction

- 14.1. This section of the ES scoping study has been prepared by Wardell Armstrong and relates to the air quality, odour and dust assessment for the Proposed Development.
- 14.2. The assessment will consider the potential impacts of the construction phase on existing sensitive receptors, concentrating on dust and fine particulate matter (PM10). In addition, the potential air quality impact of the operational phase will be considered at existing sensitive receptors and will take into account nitrogen dioxide (NO<sub>2</sub>) and fine particulate matter (PM10 and PM2.5) concentrations.
- 14.3. An assessment will also be undertaken to consider the potential odour impacts for workers during the construction phase, and at the most sensitive parts of the Proposed Development (i.e. the Hotel and outdoor amenity space/picnic space), as a result of the nearby former landfill site (Risley Landfill).
- 14.4. The Site is located immediately to the north of the M62 Motorway and the junction with the A574 Birchwood Way (i.e. Junction 11). The former landfill site boundary is located immediately to the west of the Site, at the closest point.
- 14.5. There are few existing sensitive receptors in the vicinity of the Site. The closest identified residential properties to the Site are located approximately 300m to the south, along Inglewood Close (as shown on the Receptor Plan included at **Appendix 6**). There are also industrial/commercial premises located less than 250m to the south west, however these are considered to be of a low sensitivity. The Manchester Mosses Special Area of Conservation (SAC) and Holcroft Mosses Site of Special Scientific Interest (SSSI) are located adjacent to the M62 Motorway, approximately 1km to the east.
- 14.6. Consultation regarding the scope of the air quality assessment will be undertaken with the Environmental Health Department at Warrington Borough Council (WBC) to agree the methodology set out below.
- 14.7. The construction phase dust assessment will be undertaken in accordance with the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from

Demolition and Construction’. This will consider the potential dust soiling and human health impacts on existing sensitive receptors.

14.8. The operational phase road traffic emissions assessment will be undertaken with reference to the DEFRA Local Air Quality Management Technical Guidance document LAQM.TG(16) and the Environmental Protection UK (EPUK) and IAQM document ‘Land-Use Planning and Development Control: Planning for Air Quality’. This will consider the potential air quality impacts on existing sensitive receptors.

14.9. The operational phase odour assessment will be undertaken in accordance with the IAQM document ‘Guidance on the Assessment of Odour for Planning’. This will consider the potential odour impacts on the most sensitive areas of the Proposed Development.

14.10. The assessment will take into account the following guidance:

- Part IV Environment Act, Chapter 25, Air Quality, 1995;
- Department for Environment, Food and Rural Affairs, The UK National Air Quality Strategy, March 1997;
- The Air Quality Standards Regulations 2010;
- Ministry of Housing, Communities and Local Government, National Planning Policy Framework (The Framework), July 2018;
- Department for Communities and Local Government, Planning Practice Guidance: Air Quality, March 2014;
- Department for the Environment, Food and Rural Affairs, Local Air Quality Management Technical Guidance LAQM.TG(16), February 2018;
- Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM), Land-Use Planning and Development Control: Planning for Air Quality v1.2, January 2017;
- Institute of Air Quality Management (IAQM), Guidance on the Assessment of Dust from Demolition and Construction, February 2014;
- Institute of Air Quality Management (IAQM), Guidance on the Assessment of Odour from Planning v1.1, July 2018;
- Warrington Borough Council (WBC), 2017 LAQM Annual Status Report; and
- Warrington Borough Council (WBC), Environmental Protection Supplementary Planning Document, May 2013.

## **Baseline Information**

14.11. A desk-based study of baseline air quality, in the vicinity of the Proposed Development, has been undertaken, utilising data obtained from the DEFRA website and from WBC.

14.12. WBC has declared two AQMAs which cover a number of roads across its administrative area. Details of these have been obtained from the 2017 LAQM Annual Status Report, prepared by WBC. The AQMAs have been declared for exceedance of the annual mean objective for NO<sub>2</sub> and incorporate the following areas:

- An area extending 50m from roadside along the M62, M6 and M56 Motorways (within the WBC administrative boundary); and
- Along a number of major roads around Warrington town centre and extending to both the north and south of the centre (including the A49, the A5060 and the A5061).

14.13. WBC currently operates three automatic monitoring locations and approximately 45 NO<sub>2</sub> diffusion tubes to monitor local air quality. None of these are located in the vicinity of the Site.

14.14. As there are no representative air quality monitoring locations in the vicinity of the Proposed Development, background pollutant concentrations have been obtained from the DEFRA default concentration maps. These are available through the DEFRA website and are provided for 1km x 1km grid squares across the UK. NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations have been obtained for the grid squares that cover the Proposed Development. The highest background concentrations are included below.

Pollutant	Pollutant Concentration (µg/m <sup>3</sup> )
Oxides of Nitrogen (NO <sub>x</sub> )	38.72
Nitrogen Dioxide (NO <sub>2</sub> )	25.51
Fine Particulate Matter (PM <sub>10</sub> )	13.79
Fine Particulate Matter (PM <sub>2.5</sub> )	8.64

Table 14.1: Background Pollutant Concentrations Obtained from the DEFRA Default Concentration Maps

## Potential Environmental Impacts

14.15. The potential environmental impacts for the construction and operational phases are set out below.

### **Construction Phase**

- 14.16. The construction phase of the Proposed Development has the potential to lead to impacts at existing sensitive receptors. There are a small number of existing sensitive human receptors located within 350m of the Proposed Development (as per the distance criteria set out in the IAQM construction dust guidance), but no potentially sensitive statutory designated habitat sites within 50m. Dust and PM10 impacts may be caused by demolition, earthworks and construction activities taking place at the Site; as well as through the trackout of dust and dirt from the Site onto the public highway.
- 14.17. In addition, vehicles associated with the construction of the Proposed Development may also have a potential impact on existing sensitive human and ecological receptors within 200m of the main construction routes to and from the Site (as per the distance criteria set out in the EPUK/IAQM guidance).
- 14.18. The former landfill site located to the west of the Proposed Development has the potential to lead to odour impacts, as a result of landfill gases and leachate, for workers during the construction phase where they will be present at the Site for extended periods.

### **Operational Phase**

- 14.19. The Proposed Development is not expected to result in newly generated trips, other than perhaps a small number associated with deliveries, staff travel and space that could be provided within the facilities building for community use (which could be used as a visitor/education centre to complement the adjacent Restored Risley land fill site). Rather, the majority of trips to/from the Proposed Development will be transferred trips that are already on the highway network. The operational phase will result in the redirection of a proportion of existing traffic on the M62 Motorway along the off-slip roads, onto the newly constructed Site access, and then back on to the motorway using the on-slip roads.
- 14.20. The operational phase of the Proposed Development has the potential to lead to impacts at existing sensitive human receptors located along Inglewood Close to the south (as shown on the Receptor Plan included at **Appendix 6**). The redirection of traffic along the westbound off-slip road and onto the Site access may lead to an increase in NO<sub>2</sub> and PM10 concentrations in the local area.

- 14.21. At this stage, it is not expected that there will be any impacts further afield in respect of operational phase air quality, including within the Manchester Mosses SAC and Holcroft Mosses SSSI, as no significant change in vehicles is expected to occur on the M62 Motorway to the east and west of Junction 11. It is therefore considered that no further assessment of these habitats sites is required.
- 14.22. The former landfill site located to the west of the Proposed Development has the potential to lead to impacts at the proposed sensitive uses (i.e. the Hotel and amenity space/picnic space). Odour impacts may arise as a result of landfill gases and leachate, the dispersion of which will be affected by local meteorological conditions.

## Methodology for the Environmental Statement

### Construction Phase

- 14.23. The construction phase dust assessment will be undertaken in accordance with IAQM guidance, which divides activities into four main types to reflect the different impacts that can be experienced, as follows:
- Demolition;
  - Earthworks;
  - Construction; and
  - Trackout.
- 14.24. A screening assessment is undertaken in the first instance to identify whether receptors are located within the required distance from where these works are taking place. This will include those existing residential properties along Inglewood Close, where applicable (as shown on the Receptor Plan included at **Appendix 6**). Where it is established that a more detailed assessment is required, the risk of dust impacts is determined by considering the scale and nature of these activities (and therefore the risk of dust arising), as well as the distance from the closest receptors.
- 14.25. The assessment assumes that no mitigation measures are applied, except for those required by legislation. Where the risk of dust impacts is not classed as negligible, Site specific mitigation measures are required. To assess the significance of the dust effects, with Site specific mitigation measures in place, the sensitivity of the receptor is taken into account.

- 14.26. Where Site specific mitigation measures are recommended, it is anticipated that these would be included within a Construction Environmental Management Plan (CEMP), to be agreed with WBC.
- 14.27. A qualitative assessment of the impact of construction phase traffic will be undertaken, as detailed traffic flows and routing details are not available at this stage.
- 14.28. A qualitative assessment will also be undertaken in accordance with IAQM guidance to consider the potential odour impacts during the construction phase, in respect of construction workers likely to be present at the Site for extended periods of time.
- 14.29. This will be a qualitative assessment and will draw upon the Source-Pathway-Receptor approach, which focuses on the concept that for an odour impact to occur, there must be a source of odour, a pathway to transport odour and a receptor to be affected by the odour.
- 14.30. The IAQM guidance provides a framework for considering the potential for the risk of odour impacts, taking into account the odour-generating potential of relevant Site activities (i.e. the Source Odour Potential) and the effectiveness of the pollutant pathway as the transport mechanism through the air to the receptor (i.e. the Pathway Effectiveness).
- 14.31. When these factors are taken into account with the sensitivity of the receptor, the likely magnitude of any impacts and significance of these effects can be determined.
- 14.32. In order to provide more details of local meteorological conditions, wind speed and direction data for the most recent five year period will be obtained from the most representative recording station. The odour complaint history for the former landfill site will also be requested from WBC, to identify whether there have been historical complaints associated with its operation.

#### **Operational Phase**

- 14.33. The operational phase assessment of road traffic emissions will be undertaken with reference to LAQM.TG(16) and EPUK/IAQM guidance.
- 14.34. The closest existing sensitive receptors to the Site are the residential properties along Inglewood Close to the south (as shown on the Receptor Plan included at **Appendix 6**). At the closest point, these are located within 0.2km of the roundabout of Junction 11 of the M62

Motorway, around which redirected vehicles will travel when accessing the Proposed Development.

- 14.35. The change in vehicles travelling around the Junction 11 roundabout will be reviewed against criteria included within the EPUK/IAQM guidance. Where it is likely that any of the criteria will be exceeded, a detailed assessment will be carried out using the ADMS-Roads atmospheric dispersion model to consider impacts on NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. All predicted concentrations will be compared against the air quality objectives set out in the Air Quality Standards Regulations 2010.
- 14.36. At this stage, it is not expected that there will be any impacts further afield in respect of air quality, including within the Manchester Mosses SAC and Holcroft Mosses SSSI.
- 14.37. The assessment of odour impacts associated with the former landfill site, at the proposed Hotel and amenity space/picnic space, will also be undertaken in accordance with IAQM guidance, using the method set out above.

**Receptors**

- 14.38. The designation for the receptors considered in the assessment are set out below:

Designation	Receptors
International	Receptors with the highest sensitivity to dust and air quality impacts, including internationally designated nature conservation sites which are also known to contain species sensitive to dust or air quality impacts (i.e. may change breeding habits or threaten species in some other way)
National	Receptors of very high sensitivity to dust and air quality impacts including hospitals and residential care homes. Nationally designated nature conservation sites which are also known to contain species sensitive to dust or air quality impacts (i.e. may change breeding habits or threaten species in some other way)
Regional	Receptors of high sensitivity including places of worship and places of quiet recreation (e.g. Country Parks). Regionally designated nature conservation sites which are also known to contain species sensitive to dust or air quality impacts (i.e. may change breeding habits or threaten species in some other way)

Designation	Receptors
County	Receptors of moderate to high sensitivity including residential dwellings, schools, hotels and play areas. Locally designated nature conservation sites which are also known to contain species sensitive to dust or air quality impacts (i.e. may change breeding habits or threaten species in some other way)
Borough/District	Receptors of moderate sensitivity including offices and play areas
Local/Neighbourhood	Receptors of the lowest sensitivity to dust and air quality impacts including industrial uses

Table 14.2: Receptors

14.39. The existing and proposed sensitive receptors considered in the assessment are shown on the Receptor Plan included at **Appendix 6**.

**Environmental Impacts**

14.40. When considering dust impacts during the construction phase of the Proposed Development, significance criteria from the IAQM guidance document are used. These take into account the risk of dust impacts arising from the four construction phase activities, along with the sensitivity of the receptor.

14.41. When considering air quality impacts during the operational phase of the Proposed Development, the significance criteria in the table below will be used.

14.42. When considering odour impacts for construction workers and at the sensitive uses within the Proposed Development (i.e. the Hotel and outdoor seating areas), the significance will be determined in accordance with the IAQM guidance.

14.43. For the purposes of this ES, the level of significance will be ultimately determined by using the magnitude criteria detailed in the table below, together with the sensitivity of the receptor, as detailed above.

Magnitude	Environmental Impact
Substantial	Impact resulting in a considerable change in baseline environmental conditions, predicted either to cause statutory objectives to be significantly exceeded or to result in severe undesirable/desirable consequences on the receiving environment
High	Impact resulting in a discernible change in baseline environmental conditions, predicted either to cause statutory objectives to be exceeded or to result in undesirable/desirable consequences on the receiving environment
Moderate	Impact resulting in a discernible change in baseline environmental conditions, predicted either to cause statutory objectives to be marginally exceeded or to result in undesirable/desirable consequences on the receiving environment
Minor	Impact resulting in a discernible change in baseline environmental conditions with undesirable/desirable conditions that can be tolerated
Negligible	No discernible change in the baseline environmental conditions, within margins of error of measurement
Neutral	No impact on baseline environmental conditions

Table 14.3: Environmental Impacts

### Impact Prediction Confidence

14.44. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 14.4: Confidence Levels

## Significance of Effects

14.45. The following tables provide a summary of the likely significance of the impacts that may result from the Proposed Development. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive ES technical paper.

### Construction Phase

14.46. The likely significance of impacts for the construction phase are set out below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Change in baseline dust and/or PM10 levels at existing sensitive receptors due to construction phase activities	County	Minor Negative	Minor Adverse	Low
Change in baseline air quality at existing sensitive receptors due to construction phase traffic	County	Minor Negative	Minor Adverse	Low
Odour for construction workers at the Site due to the former landfill site	County	Negligible	Negligible	Low

Table 14.5: Significance of Impact - Construction

14.47. The confidence level for the significance of dust and air quality effects associated with the construction phase is considered to be low due to detailed information being unavailable regarding the number and routing of construction phase vehicles, and further work being required.

14.48. The confidence level for the significance of odour effects associated with the construction phase is considered to be low due to further work being required.

14.49. Further information will be available for use in the air quality, odour and dust assessments and therefore it will be possible to report the confidence level as high in the ES technical paper.

### Operational Phase

14.50. The likely significance of impacts for the operational phase are set out below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Air quality at existing sensitive receptors due to operational phase traffic	County	Negligible	Negligible	Low
Odour at sensitive uses at the Proposed Development due to the former landfill site	County	Negligible	Negligible	Low

Table 14.6: Significance of Impact – Operation

14.51. The confidence level for the significance of air quality and odour effects associated with the operational phase is considered to be low due to further work being required.

14.52. The impacts included within this scoping report are considered to be indicative at present and are therefore subject to change. The air quality, odour and dust impacts associated with the Proposed Development will be detailed fully within the ES technical paper, once the assessment works are undertaken.

### Mitigation

14.53. Where negligible impacts are not predicted in the construction phase assessment, Site specific mitigation measures will be recommended, in accordance with IAQM guidance. These would be included within a Construction Environmental Management Plan (CEMP), to be agreed with WBC.

14.54. Although it is considered unlikely that there will be significant air quality effects associated with road traffic emissions from the operational phase of the Proposed Development, mitigation measures may be required to reduce any impact further. It is possible that measures such as a green travel plan and the promotion of a cleaner fleet of delivery vehicles may need

to be included within the proposals. Electric vehicle charging points are also included within the proposals.

- 14.55. With regard to the operational phase, it is not considered likely that there will be any significant impacts associated with odour. Mitigation measures are therefore unlikely to be required.

### Further Work Required

- 14.56. This scoping report has identified the main air quality, odour and dust issues associated with the Proposed Development, as well as providing a brief outline of air quality in the local area. The air quality ES technical paper will provide a more detailed description of the baseline conditions, potential environmental impacts and assessment methodology.

- 14.57. The following works will be undertaken to complete the air quality assessment.

#### **Construction Phase**

- 14.58. An assessment will be undertaken of the potential dust impacts associated with the construction phase of the Proposed Development. This will be undertaken in accordance with IAQM guidance and will consider the potential impacts at existing sensitive receptors.

- 14.59. A qualitative assessment of the impact of construction phase traffic will also be undertaken.

#### **Operational Phase**

- 14.60. A detailed assessment will be undertaken, where required, to consider the potential air quality impacts associated with the operational phase of the Proposed Development at existing sensitive receptors. This will be undertaken using the ADMS-Roads atmospheric dispersion model and will consider NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. The assessment will take into account traffic flow information, meteorological data and background pollutant concentrations. Cumulative developments will be considered where applicable.

- 14.61. An assessment will be undertaken of the potential odour effects associated with the nearby former landfill site at the sensitive uses within the Proposed Development (i.e. the Hotel and amenity space/picnic space).

## Summary

- 14.62. An assessment will be undertaken to consider the potential air quality, odour and dust impacts associated with the construction and operational phases of the Proposed Development.
- 14.63. Consultation regarding the scope of the air quality assessment will be undertaken with the Environmental Health Department at WBC and the following methodology will be agreed.
- 14.64. During the construction phase, the main potential impacts are associated with dust and PM10 arising from demolition, earthworks and construction; and through the trackout of dirt and mud onto the public highway. There are few existing sensitive receptors located within 350m of the Site, including no potentially sensitive statutory designated habitat sites. The closest sensitive receptors are the residential properties located approximately 300m to the south along Inglewood Close (as shown on the Receptor Plan included at **Appendix 6**).
- 14.65. During the operational phase, the Proposed Development is not expected to result in newly generated trips, other than perhaps a small number associated with deliveries, staff travel and space that could be provided within the facilities building for community use (which could be used as a visitor/education centre to complement the adjacent Restored Risley land fill site), and therefore any impacts are likely to be localised. The main traffic impact will be the redirection of a proportion of existing motorway traffic onto the motorway slip roads and Site access. There are few existing sensitive receptors located in the vicinity of these links, with the exception of the residential properties located along Inglewood Close to the south. A detailed assessment will be undertaken, where required, to consider the potential for air quality effects at this location.
- 14.66. At this stage, it is not expected that there will be any impacts further afield, including within the Manchester Mosses SAC and Holcroft Mosses SSSI.
- 14.67. There is the potential for odour impacts at sensitive parts of the Proposed Development (i.e. the Hotel and amenity space/picnic space) due to the location of the nearby former landfill site. An assessment will be undertaken to consider the potential for impacts in accordance with IAQM guidance. This will draw upon the Source-Pathway-Receptor approach and will take into account local meteorological conditions and any relevant odour complaint history.
- 14.68. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of air quality, odour and dust.

## Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Air Quality, Odour and Dust</b></p> <p><b>Construction:</b>  <i>Dust and PM10 emissions from construction phase activities (human receptors)</i>  <i>NO2 and PM10 emissions from construction phase vehicles (human and ecological receptors)</i>  <i>Odour associated with former landfill site</i></p> <p><b>Operation:</b>  <i>NO2 and PM10 emissions from operational phase vehicles (human receptors)</i>  <i>Odour associated with former landfill site</i></p>	<p><b>Construction:</b>  <i>Representative human receptors located within 350m of where construction activities will take place,</i>  <i>Representative human and ecological receptors potentially located within 200m of construction vehicle routes.</i>  <i>Construction workers may be present at the Site for extended periods of time</i></p> <p><b>Operational:</b>  <i>Representative human receptors located within 200m of where a change in vehicles could occur at Junction 11 due to re-routing.</i>  <i>Potential for sensitive receptors to stay overnight at the proposed Hotel or use outdoor facilities</i></p>

## Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Air Quality, Odour and Dust</b></p> <p><b>Construction:</b>  <i>Dust and PM10 emissions from construction phase activities (ecological receptors)</i></p> <p><b>Operation:</b>  <i>NO2 and PM10 emissions from operational phase vehicles (ecological receptors)</i></p>	<p><b>Construction:</b>  <i>No statutory designated ecological receptors located within 50m of where construction activities will take place,</i></p> <p><b>Operational:</b>  <i>No significant change in vehicles is expected to occur on the M62 Motorway to the east and west of Junction 11</i></p>

## 15. Cultural Heritage and Archaeology

### Introduction

- 15.1. This scoping assessment has been produced by Wardell Armstrong and sets out the preliminary archaeological and cultural heritage background of a 15.33ha site at Junction 11 of the M62 Motorway, Warrington. Potential impacts to the archaeological and heritage resource which can be identified through a review of recorded archaeological remains and designated heritage assets in the area, and which would be a material consideration in the planning process, are identified.
- 15.2. Baseline information for the report was obtained from the following:
- Cheshire Historic Environment Record (consulted November 2018);
  - GIS datasets (Historic England consulted November 2018):
    - Scheduled Monuments;
    - Listed Buildings;
    - Registered Parks and Gardens and
    - Registered Battlefields.

### Baseline Information

#### Definition of terms and planning policy

- 15.3. A heritage asset is defined in the National Planning Policy Framework (NPPF 18) as ‘a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest’ (NPPF 18, Annex 2 page:67).
- 15.4. The significance of a heritage asset is defined within NPPF 18 as ‘the value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.’ (NPPF 2018, Annex 2 page: 71).
- 15.5. The setting of a heritage asset is defined as ‘the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an

asset, may affect the ability to appreciate that significance or may be neutral.’ (NPPF 18, Annex 2 page: 71).

- 15.6. Where heritage assets are to be affected by development, ‘local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance’ (NPPF 2018, para: 189).
- 15.7. Designated heritage assets protected by statutory legislation comprise Scheduled Monuments, Protected Wrecks, Listed Buildings and Conservation Areas; nationally significant archaeological sites, monuments and structures are protected under the Ancient Monuments and Archaeological Areas Act (1979).
- 15.8. Listed Buildings and Conservation Areas are protected under the Planning (Listed Building and Conservation Areas) Act (1990). In relation to development proposals, the legislation states that ‘in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses’ (section 66).
- 15.9. Non-statutory designated heritage assets, comprising Registered Parks and Gardens and Registered Battlefields, are protected under national and local planning policy only. This is also the case for the remainder of the archaeological resource; entries onto a historic environment record or sites and monument record as well as previously unknown features which may be recorded during the course of data collection in respect to a given development proposal.
- 15.10. NPPF 18 supported by the National Planning Policy Guidance (PPG), which endorses the conservation and enhancement of the historic environment (Department for Communities and Local Government 2014), defines the role of the planning system as to promote and achieve sustainable development and involves ‘protecting and enhancing our natural, built and historic environment’ (NPPF 18, para:8).
- 15.11. In ensuring the statutory duty of the Planning (Listed Building and Conservation Areas) Act, the NPPF 18 requires that in determining applications ‘great weight’ should be given to the asset’s conservation and that ‘substantial harm to or loss of... grade II listed buildings, or grade

II registered parks or gardens, should be exceptional' whilst 'substantial harm to or loss of...assets of the highest significance, notably Scheduled Monuments, protected wreck sites, registered battlefields, Grade I and II\* listed buildings, Grade I and II\* Registered Parks And Gardens, and World Heritage Sites, should be wholly exceptional' (NPPF 18, para:194).

- 15.12. Developments where substantial harm to or total loss of significance of a designated heritage asset should be assessed against specific tests and should deliver substantial public benefits which outweigh any loss or harm (MHCLG 2018, para: 195). Less than substantial harm to a designated asset would require public benefits including the securement of an optimum viable use (NPPF 18, para: 196).
- 15.13. Impacts to the significance of non-designated assets will require a balanced judgement based on the level of significance and the scale of harm (MHCLG 2018, para: 197), although non-designated assets which are of equivalent significance to designated assets will be considered as such (MHCLG 2018, page: 56). Where heritage assets of an archaeological nature may be impacted upon by development '*local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation*' (NPPF18, para: 189).

#### **Scoping Baseline**

- 15.14. The Cheshire Historic Environment Record (HER) was consulted for non-designated heritage assets within the search area (taken as an area of approximately 1km radius from the Site boundary). Historic England GIS datasets were searched for designated heritage assets within 1km of the Site boundary, discretion informed by professional judgement being applied to this search area accordingly.
- 15.15. Consultation with the HER has shown that there are two non-designated heritage assets within the boundary of the Site, see Figure 15.1. These comprise the findspot of a Roman coin (HER reference 14458) and the findspot of a copper alloy stud and a lead gaming piece (HER reference 14457). The finds appear to have been recovered through metal detecting.
- 15.16. Consultation of Historic England datasets (2018) has shown that there are no designated heritage assets within the boundary of the Site or within the 1km search area. However, Grade II\* Listed Holcroft Hall is located 1.5km north of the Site, see Figure 15.1.

- 15.17. The British Geological Survey records the solid geology of the Site as sandstone of the Helsby Sandstone Formation. Superficial geology is recorded as peat. This appears to have been referenced as moss land within historic documents and maps.
- 15.18. The land within the Site, is located an area known as Pestfurlong Moss. Historically, this comprised an area of raised bog/moss land within the manor of Culcheth. In the thirteenth century Culcheth was divided into four parts; two of the divisions comprising the estate of Pestfurlong and the estate of Holcroft. The boundary between the two divisions appears to have been uncertain, being located as it was within moss land where boundaries were not readily perceptible. However, the 1838 Tithe Map for Culcheth resolved the issue<sup>21</sup> and is thought to show that the Site was within the eastern extremity of the Pestfurlong estate, the adjacent estate of Holcroft being thought to have been present to the immediate east.
- 15.19. The medieval manor house of Pestfurlong is known to have been located 600m west of the Site (HER reference 604/1/0). A 1757 plan of the Pestfurlong Estate is referenced<sup>22</sup> as depicting the land between the manor house and Moss Side Farm (present to the immediate west of the Site) as small fields and enclosures, presumably meaning that the land within the boundary of the Site remained as unenclosed raised bog/moss land on the edge of the occupied part of the estate in the mid eighteenth century. The 1849 Ordnance Survey map appears to confirm the presence of such an area, marked as 'Pestfurlong Moss', across the majority of the Site, although by this time enclosures associated with Moss Side Farm had encroached into the northern part of the Site indicating that some drainage/reclamation from the bog/moss land was taking place. Indeed, by the end of the nineteenth century 'Pesfurlong Moss Farm' was depicted on the 1893 Ordnance Survey within the boundary of the Site, indicating that agricultural reclamation from the bog/moss land was occurring such that agricultural exploitation was extending eastwards from Moss Side Farm. The Site had presumably been reclaimed from the bog/moss land in its entirety at this point, albeit various editions of the Ordnance Survey appear to show that the 1893 enclosures reverted back to open areas in the twentieth century.
- 15.20. The medieval manor house of the Holcroft estate was located 1.5km north of the Site. This is extant and Grade II\* Listed (reference I159651).

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<sup>21</sup> Leah, M., Wells, C., Appleby, C. and Huckerby, E. (1997) The wetlands of Cheshire

<sup>22</sup> Leah, M., Wells, C., Appleby, C. and Huckerby, E. (1997) The wetlands of Cheshire

## Potential Environmental Impacts

### Construction Phase

- 15.21. Ground disturbance has the potential to remove/truncate remains of archaeological and historic interest. Preliminary research undertaken as part of this scoping report has identified the former presence of a farmstead within the boundary of the Site; established 1849-1893 and lost 1929-1954. Buried remains of the farmstead would be of archaeological and historic interest. The geology of the Site is also of archaeological potential in its own right, peat having the potential to include organic remains and evidence of a palaeoenvironmental nature which could inform on past environments. The findspots recorded by the HER are not receptors, having been removed from the Site but they are illustrative of the potential for other similar finds to remain within the Site.

### Operational Phase

- 15.22. With regard to impacts caused as a consequence of changes to a designated heritage asset's setting, there is a potential for impact to Grade II\* Holcroft Hall. This would need to be considered within any planning application. Whilst beyond the standard 1km search, it is considered pertinent to include this asset for further assessment due to its Grade II\* status.

## Methodology for the Environmental Statement

### Receptors

- 15.23. Heritage assets comprise designated and non-designated elements of the historic environment and can be a building, monument, site, place, area or landscape 'positively identified as having a degree of significance' and are valued components of the historic environment. The value of a heritage asset is the level of interest it holds; the interest can be archaeological, architectural, artistic or historic. A heritage asset can hold one or more of these interests.
- 15.24. The designation of an asset as a World Heritage Site, Scheduled Monument, Listed Building, Registered Park or Garden, Historic Battlefield, Historic Wreck or Conservation Area indicates a level of heritage significance.
- 15.25. In ascribing levels of Heritage Significance to heritage assets, guidance presented in the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (2007) will be used. However, to accord with the methodology to be utilised for the environmental statement a slight

variation will be utilised. On review of the significance of impact that is to be used for the assessment and the DMRB significance of effects matrixes for archaeological remains, historic buildings and historic landscapes (tables 5.4, 6.4 and 7.4 DMRB 2007) the terminology presented in the value column below accords to the DMRB terminology as follows:

- International = very high (DMRB)
- National = high (DMRB)
- Regional = No according value (DMRB)
- County = medium (DMRB)
- Borough = No according value (DMRB)
- Local = low (DMRB)

Designation	Development Receptors
International	<ul style="list-style-type: none"> <li>• World Heritage Sites</li> <li>• Other sites of acknowledged international importance</li> <li>• Sites that can contribute significantly to acknowledged international research objectives</li> <li>• Other buildings of recognized international importance</li> <li>• World Heritage Sites</li> <li>• Historic landscapes of international value, whether designated or not</li> <li>• Extremely well preserved historic landscapes with exceptional coherence, time depth, or other critical factor(s)</li> </ul>

Designation	Development Receptors
National	<ul style="list-style-type: none"> <li>• Scheduled Ancient Monuments</li> <li>• Undesignated sites of schedulable quality and importance</li> <li>• Sites that can contribute significantly to acknowledged national research objectives</li> <li>• Scheduled Ancient Monuments with standing remains</li> <li>• All Grade I and all Grade II* Listed Buildings</li> <li>• Some Grade II listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in their listing grade</li> <li>• Conservation Areas containing numerous very important buildings</li> <li>• Undesignated structures of clear national importance</li> <li>• Designated historic landscapes of outstanding interest (Grade I and II*)</li> <li>• Undesignated landscapes of outstanding interest</li> <li>• Undesignated landscapes of high quality and importance, and of demonstrable national value</li> <li>• Well preserved historic landscapes, exhibiting considerable coherence, time depth or other critical factor(s)</li> </ul>
Regional	<p>Current guidance (DMRB) does not identify a regional classification for heritage assets in accordance with the outcomes of Significance Matrix to be used across the ES. Professional judgement throughout the assessment may allocate this value to a particular heritage asset</p>
County	<ul style="list-style-type: none"> <li>• Undesignated assets that contribute to regional research objectives at the county level</li> <li>• Some Grade II Listed Buildings</li> <li>• Conservation Areas containing buildings that contribute significantly to its historic character</li> <li>• Historic townscape or built up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> <li>• Designated special historic landscapes (grade II)</li> <li>• Undesignated historic landscapes that would justify special historic landscape designation, landscapes of county value</li> <li>• Averagely well preserved historic landscapes with reasonable coherence, time depth or other critical factor(s)</li> </ul>

Designation	Development Receptors
Borough/District	Current guidance (DMRB) does not identify a borough classification for heritage assets in accordance with the outcomes of Significance Matrix to be used across the ES. Professional judgement throughout the assessment may allocate this value to a particular heritage asset
Local/Neighbourhood	<ul style="list-style-type: none"> <li>• undesignated assets of local importance</li> <li>• Assets compromised by poor preservation and/or poor survival of contextual associations</li> <li>• Assets of limited value, but with potential to contribute to local research objectives</li> <li>• Locally listed buildings</li> <li>• Historic (unlisted) buildings of modest quality in their fabric or historical association</li> <li>• Historic townscape or built up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> <li>• Robust undesignated historic landscapes</li> <li>• Historic landscapes with importance to local interest groups</li> <li>• Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations</li> </ul>

Table 15.1: Receptors

### Environmental Impacts

- 15.26. The magnitude of impact will be measured from the condition that would prevail in a ‘do nothing’ scenario and it is assessed without regard to the importance of the receptor (DMRB 2007).
- 15.27. The highest magnitude of impact would be complete physical removal of the heritage asset. In some instances it is possible to discuss percentage loss when establishing the magnitude of impact. However complex receptors will require a much more sophisticated approach (DMRB 2007).
- 15.28. Heritage assets are susceptible to numerous forms of development and non-development impacts both during the construction process and as a consequence of the operational life of the proposed development. These can be either direct (physical) impacts or indirect (non-physical) impacts.
- 15.29. In ascribing the magnitude of impact, guidance presented in the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (2007) has been used and tailored in respect of setting impacts with regards to English Heritage’s publication The Setting of Heritage Assets (2011).

However, to accord with the methodology to be utilised for the environmental statement a slight variation will be utilised. On review of the significance of impact that is to be used for the assessment and the DMRB significance of effects matrixes for archaeological remains, historic buildings and historic landscapes (tables 5.4, 6.4 and 7.4 DMRB 2007) the terminology presented in the value column below accords to the DMRB terminology as follows:

- Substantial= No according value (DMRB)
- High = major (DMRB)
- Moderate = moderate (DMRB)
- Minor = minor (DMRB)
- Negligible = Negligible (DMRB)

Impact	Development Receptors
Substantial	Current guidance (DMRB) does not identify a substantial classification for impacts to heritage assets in accordance with the outcomes of Significance Matrix to be used across the ES. Professional judgement throughout the assessment may allocate this value to a particular impact if necessary
High	<ul style="list-style-type: none"> <li>• Change to most or all key archaeological materials, such that the resource is totally altered</li> <li>• Change to key historic building elements, such that the resource is totally altered</li> <li>• Major change to historic landscape character resulting from:               <ul style="list-style-type: none"> <li>• Changes to most key historic landscape elements, parcels or components</li> <li>• Extreme visual effects</li> <li>• Major change to noise or change to sound quality</li> <li>• Major changes to use or access</li> </ul> </li> </ul>

Impact	Development Receptors
Moderate	<ul style="list-style-type: none"> <li>• Changes to many key archaeological materials, such that the resource is clearly modified</li> <li>• Changes to many key historic building elements, such that the resource is significantly modified</li> <li>• Changes to setting of an historic building such that it is significantly modified</li> <li>• Moderate change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>• Changes to many key historic landscape elements, parcels or components</li> <li>• Visual change to many key aspects of the historic landscape</li> </ul> </li> <li>• Noticeable differences in noise or sound quality</li> <li>• Considerable changes to use or access</li> </ul>
Minor	<ul style="list-style-type: none"> <li>• Changes to key archaeological materials, such that the asset is slightly altered</li> <li>• Change to key historic building elements, such that the asset is slightly different</li> <li>• Changes to setting of an historic building such that it is noticeably changed</li> <li>• Limited change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>• Changes to few key historic landscape elements, parcels or components</li> <li>• Slight visual changes to few key aspects of the historic landscape</li> </ul> </li> <li>• Limited changes to noise levels or sound quality</li> <li>• Slight changes to use or access</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• Very minor changes to archaeological materials</li> <li>• Slight changes to historic buildings elements or setting that hardly affect it</li> <li>• Very small change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>• Very minor changes to key historic landscape elements, parcels or components</li> </ul> </li> <li>• Virtually unchanged visual effects</li> <li>• Very slight changes to noise levels or sound quality</li> <li>• Very slight changes to use or access</li> </ul>
Neutral	<ul style="list-style-type: none"> <li>• No change</li> </ul>

Table 15.2: Environmental Impacts

15.30. The significance of an impact is devised by cross referencing the importance of the receptor with the magnitude of the impact.

### Impact Prediction Confidence

- 15.31. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 15.3: Confidence Level

### Significance of Effects

- 15.32. The following tables provide a summary of the likely significance of the impacts that may result from the proposed development of the site. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive ES technical paper and reported in the ES Technical Paper.

#### Construction Phase

- 15.33. Ground disturbance would have the potential to affect heritage assets of archaeological/historic interest. This potential impact would need to be considered within any planning application. Specific assets identified during the preliminary baseline prepared for scoping has identified the following assets. The potential for other 'unknown' assets would be researched further as part of a full Archaeological Desk Based Assessment which would be appended to the ES paper as a technical appendix.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Disturbance to buried remains of Pesfurlong Moss Farm	Local	High Negative	Minor Adverse	Low*
Disturbance to peat deposits with a potential for organic and a palaeoenvironmental remains	Local/County	High Negative	Minor/Moderate Adverse	Low*

Table 15.4: Significance of Impact – Construction

\*Further research including map regression and a Site visit will inform on potential impacts.

### Operational Phase

- 15.34. As stated above, the impact of the development on the setting of Grade II\* Holcroft Hall, located 1.5km north, would need to be considered within any planning application. This would be addressed within a Heritage Statement, appended to the ES paper as a technical appendix.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Setting Impacts	Holcroft Hall (National)	Negligible/Minor Negative	Negligible to Moderate Adverse	Low**

Table 15.5: Significance of Impact – Operation

\*\*Field observations will be required to determine the level of impact. The above assumption is based on the intervening distance between the receptor and the Site boundary only.

### Mitigation

- 15.35. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.
- 15.36. For example, appropriate screening to minimize any harm to the setting of Holcroft Hall may be included as embedded mitigation within the masterplan. Likewise building heights and building locations may be designed to be sympathetic to the setting of Holcroft Hall if this is necessary and possible.

15.37. The necessity for archaeological fieldwork to determine the application would be ascertained through discussions held with the Local Planning Authority Archaeologist. Archaeological fieldwork could comprise targeted trial trenches on areas of known interest, for example the former location of Pesfurlong Moss Farm, or a programme of boreholes/sampling suitable to collect deposits of a palaeoenvironmental potential.

## Further Work Required

15.38. The necessity for archaeological fieldwork to determine the application or as a condition to consent would be ascertained through discussions held with the Local Planning Authority Archaeologist.

## Summary

15.39. With regard to impact on statutory designations, there would be no physical impact to designated heritage assets. However there may be a potential impact of the development on the setting of Grade II\* Holcroft Hall, located 1.5km north-east, which will need to be considered within any planning application.

15.40. With regards to non-designated heritage assets, it has been established that there are no known non-designated heritage assets remaining within the boundary of the Site. However, there is a potential for the presence of buried archaeological remains. This would need to be considered within any planning application.

15.41. The tables below confirm the details to be Scoped In of the environmental assessment in respect of Cultural Heritage and Archaeology.

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Cultural Heritage and Archaeology</b></p> <p><i>Construction:</i></p> <p><i>Direct impacts to buried archaeological remains remaining on site (recorded findspots having been removed)</i></p> <p><i>Operation:</i></p> <p><i>Potential impact to the setting of Grade II* Holcroft Hall</i></p>	<p><i>The potential for ground disturbance to remove/truncate buried archaeological remains</i></p> <p><i>The potential for changes within the setting of Holcroft Hall which could affect its significance</i></p>

Table 15.6: Work scoped in

- 15.42. On the basis of the scoping baseline, nothing in respect to Cultural Heritage and Archaeology is scoped out apart from an assessment of direct impact to recorded findspots – the features recorded having been removed from Site.

**Scoped Out**

Environmental Issue	Reason for “scoping out”
Assessment of impacts to recorded findspots	<i>Findspots within the site having been removed</i>

Table 15.7: Work scoped out

## 16. Agricultural Land and Soils

### Introduction

- 16.1. This technical scoping chapter has been prepared by Wardell Armstrong LLP (WA). The paper considers the scope of the likely environmental impacts upon agricultural land and soils (including underlying peat deposits) resulting from the Proposed Development. The assessment should be considered in conjunction with the geology underlying the Site (as set out in Chapter 7: Geology and Ground Conditions); the hydrology of the Site (as set out in Chapter 9: Water Resources); and, in relation to the potential excavation and reuse of peat resources, Ecology (as set out in Chapter 11: Ecology and Nature Conservation). A full description of the Site is provided in Chapter 4: Project Description.
- 16.2. Wardell Armstrong will also be completing the Agricultural Land and Soils Technical paper within the Environmental Statement for the Proposed Development.
- 16.3. As described in Chapter 7: Geology and Ground Conditions the Site has been subject to a Phase 1 Environmental Assessment (dated November 2018 and contained in **Appendix 8**) and a preliminary site investigation (undertaken in August 2018 and comprising 16 trail pits, as detailed in **Appendix 9**); these works were undertaken by WA. Additionally, in February 2006, SLR Consulting undertook a soil survey and ALC assessment on the agricultural land within the Application Site in relation to a proposed eastern extension to Biffa's Risley Landfill Facility.
- 16.4. No consultations have been undertaken in relation to agricultural land and soils prior to the submission of the Scoping Report.
- 16.5. The Agricultural Land Classification (ALC) is the standard method for determining the quality of agricultural land in England and Wales according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage; i.e. ALC assesses land quality based upon the type and level of agricultural production the land can potentially support.
- 16.6. The ALC places land into one of five grades: Grade 1 (excellent); Grade 2 (very good); Grade 3 (good to moderate) which is divided into Subgrades 3a (good) and 3b (moderate); Grade 4 (poor); and Grade 5 (very poor). Best and most versatile (BMV) agricultural land is defined

as land of excellent to good agricultural quality (ALC Grades 1, 2 and Subgrade 3a) and is afforded a degree of protection in planning policy.

16.7. The only legislation specifically related to agricultural land quality is the Town & Country Planning (Development Management Procedure) (England) Order 2015 (Statutory Instrument 2015/595), which triggers a requirement to consult Natural England if the permanent loss of BMV agricultural land exceeds 20 ha.

16.8. It must be noted that, as described in Chapter 7: Geology and Ground Conditions, at present it is not known how the buried peat deposits will be treated to enable the Proposed Development. This will be assessed through more detailed design work prior to submission of the ES. At present it is considered that two Options are likely:

Option 1: Excavation. The Peat would be removed where required within the site boundary and either re-used on site or disposed of off-site (through most appropriate means).

Option 2: Stabilisation. The peat would remain in-situ but be subject to an appropriate stabilisation method.

16.9. The environmental impacts of each Option upon the peat resource are considered within this chapter.

## Baseline Information

### Data Sources

16.10. Information regarding the agricultural land and soil (including peat deposits) resource present in and surrounding the Site was obtained from the following published sources:

- Defra interactive mapping available at [magic.gov.uk](http://magic.gov.uk) (for access to MAFF/Defra detailed ALC survey data)
- MAFF (1988). Agricultural Land Classification (ALC) of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land

- MAFF (1993). Provisional Agricultural Land Classification 1:250,000 map, North West region
- Met Office (1989). Climatological Data for Agricultural Land Classification (ALC): Grid point datasets of climatic variables at 5km intervals for England and Wales.
- Soil Survey of England and Wales (1984). Soils and their Use in Northern England, with accompanying 1:250,000 map, Sheet 1.

16.11. Additionally, soil survey and field scale ALC data for the Site contained within the supporting ES of an application for an eastern extension to the adjacent former Risley Landfill Site were considered. The data were collated by SLR Consulting in February 2006 and submitted to WBC by the landfill operator (Biffa).

**National Policy**

16.12. Under Section 15 of the NPPF 18: Conserving and enhancing the natural environment, Paragraph 170 states that “*planning policies and decisions should contribute to and enhance the natural and local environment by:*

*a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*

*b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*

*e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*

*f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*

- 16.13. The current National Planning Practice Guidance (NPPG) which accompanies the NPPF 18 will, where necessary, be updated in due course to reflect changes between the NPPF 18 and the previous version, NPPF 12. However, based upon the criteria above, it is expected that the NPPG will continue to direct development towards previously developed land (provided that it is not of high environmental/biodiversity value); towards non-BMV land in preference of BMV land; or, where BMV is present, towards the lower quality agricultural land in preference to higher quality. Therefore, knowledge of the ALC grading of the Site, is necessary to be able to determine whether the requirements of planning policy are being met.

### **Local Policy**

- 16.14. Local policy is set out within the WBC Local Plan Core Strategy, adopted in July 2014. The Site is located in the Warrington Green Belt and Section 2.27 of the Local Plan recognises that “Warrington has extensive areas of high-grade agricultural land which have been well protected to date primarily through an established and adopted Green Belt”. The related policy, Policy CS 2: Overall Spatial Strategy - Quantity and Distribution of Development states that:

*“development [within the Green Belt] will only be allowed where it is considered to be appropriate in accordance with national policy.”*

- 16.15. There are no further policies which specifically relate to the protection of soils and agricultural land, however, although not formally set out in a planning policy, Section 10 of the Local Plan sets a vision for ‘Securing a High Quality Environment’ which is ‘natural and durable’ by 2027, which states that:

*“The borough is exercising careful stewardship of the natural environment and has acted to safeguard and enhance vital natural resources including water, air, and soil which help to both mitigate and adapt to climate change.”*

- 16.16. The 2013 WMBC Supplementary Planning Document on Environmental Protection is concerned with soils in relation to contaminated land and potential impacts to human health, rather than the maintenance of the soil resource.

## Guidance

- 16.17. Natural England Technical Information Note 49 (TIN049), promotes the use of the ALC for assessing the quality of farmland, to ensure informed choices are made about its future use within the planning system. It advocates the use of soil survey to inform environmental assessment, particularly where development is around the edge of towns. TIN049 states that where development is proposed on agricultural or other potential crop producing land, if that development is not for agricultural purposes and is not in accordance with the provisions of a development plan, and involves the direct or cumulative loss of more than 20 ha of BMV agricultural land, Natural England must be consulted in accordance with the Schedule 4, paragraph (y) of the Statutory Instrument 2015 No. 595.

## Agricultural Quality Baseline

- 16.18. A desk-based study of baseline Agricultural Land and Soils within the Proposed Development has been undertaken using standard published data, and data from site surveys conducted by SLR Consulting in 2006.
- 16.19. As discussed in Chapter 4: Project Description, the agricultural land within the Site comprises a large arable field (11.7 ha) and a small area of grassland (1.0 ha); all other land within the Site (2.7 ha) is non-agricultural.
- 16.20. The most current and detailed published ALC data covering the Site and the wider Warrington Borough is the Provisional ALC mapping provided by Defra (1:250,000 scale). The Provisional mapping is intended for strategic use as it does not identify variations in ALC grade of less than approximately 80 ha and hence is not accurate at the field scale. It therefore cannot be used to accurately define the ALC grading of the Site, but instead provides a general indication of the predominant ALC grading of the wider area.
- 16.21. The Provisional mapping (as reproduced in the receptor plan in **Appendix 6**) shows all agricultural land within the Site as being Grade 1 (excellent quality); immediately bordered by units of Grade 3 (good to moderate quality) land to the east; Grade 5 (very poor quality) land to the west; and Grade 2 (very good quality) land to the north. The Site can therefore be considered to be in an area of transition between ALC Grades. This variation is further evidenced by the 2006 SLR Consulting survey data which identified a graduated change in ALC Grade across the large agricultural field, from Grade 1 in the southeast corner through Grade

2, Subgrade 3a and finally Subgrade 3b in the northwest corner. The small triangular area of rough grassland to the west of the site was identified as Grade 4. The data showed Subgrade 3a to cover the majority of the Site. These data will be verified through further survey prior to ES submission.

- 16.22. Additionally, in 1991, the land immediately west of the Site was subject to a detailed soil and ALC survey by MAFF (now Defra) which showed that, prior to the landfill being constructed and restored, the natural agricultural land within the landfill boundary was predominantly Subgrade 3b, with the area bordering the agricultural land within the Application Site to be Subgrade 3b to the south and Subgrade 3a to the north. This again indicates the variable nature of the ALC grading in the vicinity of the Site.

### **Soil Baseline**

- 16.23. Soil series are the lowest category in the soil classification system and are precisely defined based upon particle-size distribution, parent material (substrate) type, colour and mineralogical characteristics. The soils mapping provided by the Soil Survey of England and Wales (1984) however describes Soil Associations; which are groupings of related soil series. Additionally, the scale of the mapping is such that it is not accurate to the field level and does not pick up small-scale local variations. The mapping therefore provides a general indication of the soils types likely to be present within the Site and the wider area.
- 16.24. The Soil Survey of England and Wales (1984) maps the majority of the soils in the Site as being characterised by soils of the Turbary Moor association the typical soil association of reclaimed raised moorlands in the area (**Appendix 6**). The presence of this association in the areas of agricultural land within the Site was confirmed by the 2006 soil survey data. The Turbary Moor association comprises deep earthy fibrous peat soils with high groundwater levels where uncultivated. When improved for arable crops, groundwater is usually controlled with ditches and field drains. Turbary Moor soils are permeable and well drained (Wetness Class 1) but like all peats, they can hold large amounts of available water and so are non-droughty for all crops.
- 16.25. It is noted that the receptor plan in **Appendix 6** shows that soils of the Salop association are present along the western boundary of the Site. However, as the natural soils in this area were subject to removal due to the development of the Risley Landfill Site, there is the

potential for the restored soil profile in this area to be of a different type than was present when the soils mapping was produced.

- 16.26. As reported in Chapter 7: Geology and Ground Conditions, in parts of the Site the agricultural land is formed over basin peat, which has been drained (control of groundwater) to allow the agricultural land to be developed or improved, see paragraph 16.24 for further description. The results of the preliminary site investigation conducted in August 2018, which details the location of the peat basin and provides preliminary depth measurements, are presented in Chapter 7: Geology and Ground Conditions. The peat basin underlies approximately half of the large agricultural field, being focussed to the south and south east of the Site. The agricultural land and soils paper will consider the potential environmental impacts to this resource, as a continuation of the agricultural soils which as formed above it. The term soil is therefore used to describe both the upper agricultural soils and the underlying buried peat deposits. The characteristics of the peat deposits will be defined through further survey.

#### **Likely Evolution of the Baseline**

- 16.27. It is anticipated that without the Proposed Development the identified baseline scenario for soils and agriculture within the Site will not change significantly as a result of natural processes and systems. However, the baseline does have the potential to alter due to changes in land use and farming practices. These changes may include, but are not limited to, a shift from arable to pastoral agricultural practices, or a change in the agricultural drainage regime.
- 16.28. In addition, there is also the potential for long-term changes to the baseline due to climate change. These could potentially lead to alterations in agricultural land quality (ALC grade), for example through increased levels of soil wetness in the winter and increased droughtiness in the summer. Changes in rainfall may also affect decomposition rates and soil organic matter content. However, it is considered that the lifetime of the Proposed Development is not long enough for any natural changes in the land use and land quality to be sufficient to alter the findings of the assessment.
- 16.29. The baseline has the potential to change in the period between submission of the planning application and the start of construction due to new developments being brought forward within the vicinity of the Site, for example through the loss of agricultural land to development. Where development proposals are known about, these will be considered within the ES. If,

after ES submission, further developments emerged that had any potential for significant effects on agricultural land and soils, there would be a requirement for those schemes to consider the cumulative effect of their proposals in combination with those of the Proposed Development.

- 16.30. In summary, as there is little potential for the baseline presented in this technical paper to change significantly, it is reasonable to adopt the current baseline for use in the assessment.

## Potential Environmental Impacts

### Construction Phase

- 16.31. The potential impact on agricultural land arising during the construction phase of the Proposed Development is considered to be:

1) Loss of agricultural land.

- 16.32. This could occur as a consequence of either built development or change of land use to non-agricultural. Due to the nature of the Proposed development, any loss of agricultural land will be permanent.

- 16.33. The long-term effects to farm business and farm viability as a result of the loss of agricultural land due to the Proposed Development (reduction in the area of farmable land available to the landholding) is considered to be fully mitigated through the process of discussion and negotiation between the Applicant, the landowners and the agricultural tenant. Therefore, an assessment of potential impacts to farm business will not be included in the ES.

- 16.34. The short-term impacts to the farm business and farm viability due to the severance of farmable areas or farmland access issues (restrictions to normal farming practices) are also scoped out of assessment within the ES. This is because the Site comprises a single entire agricultural field and a field remnant bordered by non-agricultural land which would be permanently removed from agricultural use at the commencement of construction; and the Site is not used as the sole source of access to other agricultural land.

- 16.35. The potential impacts on soil resources arising during the construction phase of the Proposed Development include:

2) Loss of soil resource for reuse.

16.36. The incorrect removal, handling and storage of soils (including the peat deposits) could result in a loss of soil resource. This loss could occur through erosion, excess trafficking on plant wheels, or unauthorised export. The loss of soil resource could result in the impairment of the remaining soils' function, quality and resilience.

16.37. Incorrect handling of soils could also result in the mixing of topsoil and subsoils and peat, and/or the contamination of soil and peat with overburden or construction materials. These mixed or contaminated soils could no longer be of a quality suitable for reuse and could also be effectively 'lost'.

3) Damage to soil and peat resources resulting in impairment of their function, quality and resilience.

16.38. The incorrect management of soils and peat during construction could also result in damage through the impairment of their function, quality and resilience. This could be caused *in situ* or through soil/peat removal, handling, storage and subsequent reinstatement. The mixing of different soil and peat horizons or contamination with overburden or construction materials would also be considered as damage. The potential adverse effects include, but are not limited to:

- damage to soil structure and compaction, potentially creating conditions conducive to excessive drying or wetness;
- drying of peat leading to excess erosion;
- loss of soil nutrients;
- loss of soil biota (for example bacteria, fungi, earthworms) and/or reduction of its activity; and
- mixing of materials reducing potential for reuse and future productivity.

## Operational Phase

- 16.39. All agricultural land within the Site will undergo a permanent change of use to non-agricultural as a consequence of the construction phase of the Proposed Development. Therefore, as there would be no agricultural land present within the Site after completion / during operation there would be no further impact to (loss of) agricultural land. The potential effects on agricultural land after completion / during operation are consequently not discussed further in this chapter, as the loss of agricultural land is considered to have been fully considered in the assessment of construction phase effects.
- 16.40. After construction, the soils remaining on Site would most likely only experience very low levels of disturbance due to works connected with the maintenance of landscaped areas. The scale of this disturbance would be lower than is likely currently experienced within the Site due to agricultural activities, it is therefore considered that the low scale works which would occur after completion would result in no loss of or damage to soils or impairment of function. Consequently, it is considered that there would be no effects on soils after completion of the Proposed Development and this topic is not discussed further in this chapter.

## Methodology for the Environmental Statement

### Receptors

- 16.41. The receptors considered in the assessment are the agricultural land and the soil resources (including peat deposits) present within the Site. The receptors are identified in accordance with Table 16.1.

Designation	Receptors
International	Receptors are not identified at this level.
National	Grade 1 agricultural land (Excellent quality).
Regional	Grade 2 agricultural land (Very Good quality).

Designation	Receptors
County	Subgrade 3a agricultural land (Good quality).
Borough/District	Subgrade 3a agricultural land (Moderate quality).  WBC Local Plan describes soils as a vital natural resource that the Council will seek to protect; and therefore, the soils within the Site are considered to be of importance at the Borough level.  The buried peat deposits within the Site are heavily drained and no longer display any characteristics of active peat formation. They are therefore considered to be of importance at the Borough level.
Local/Neighbourhood	Grades 4 and 5 agricultural land (Poor and Very Poor quality)

Table 16.1: Receptors

## Environmental Impacts

### Magnitude of impacts

- 16.42. The magnitude of impacts has been determined for each of the receptors in terms of magnitude of change from the baseline. The criteria are explained below and the impacts defined in Table 16.2.
- 16.43. There are no defined criteria for the assessment of effects on agricultural land (understood as a loss of agricultural land due to a permanent change to non-agricultural use due to built development or associated land use change), and no threshold given for the scale of loss which should be regarded as significant within an Environmental Impact Assessment (EIA).
- 16.44. Statutory Instrument 2015 No. 595, The Town and Country Planning (Development Management Procedure) (England) Order 2015, Schedule 4, Part (y), requires that the local planning authority consults Natural England if the area of a proposed permanent development exceeds 20 ha of BMV land. Although the guidance does not state that this threshold should be used to determine the significance of loss, for the purpose of EIA, it is a guide to consider significance where 20 ha or more of BMV is affected by a development. Therefore, the loss of agricultural land has been assessed by estimating the amount and quality of land that may be affected by the Proposed Development, using the 20 ha threshold.

16.45. There are no defined criteria, or policy guidance on the assessment of the effects of development on soil or peat resources. Therefore, the assessment of the impacts of the Proposed Development on soils (including the buried peats) within the Site will be based on professional experience and criteria which have been adopted in other assessments that have previously been agreed and accepted as best practice on other developments.

Magnitude	Environmental Impact		
	Loss of Agricultural Land	Loss of Soil Resource	Damage to Soil Resources
Substantial	No impact identified at this level	<5% of soil resources maintained in a condition suitable for reuse	Permanent irreversible damage to soil or peat quality for example through handling, stockpiling and heavy machinery traffic
High	Total agriculture land take >20 ha of which >20 ha is BMV	<25% of soil resources maintained in a condition suitable for reuse	Long-term (> two years) reversible damage to soil or peat quality for example through handling, stockpiling and heavy machinery traffic
Moderate	Total agriculture land take >20 ha of which <20 ha is BMV	25 - 50% of soil resources maintained in a condition suitable for reuse	Medium-term (6 months to two years) reversible damage to soil or peat quality for example through handling, stockpiling and heavy machinery traffic
Minor	Total agriculture land take (all Grades) <20 ha	51 - 95% of soil resources maintained in a condition suitable for reuse	Short-term (3 to 6 months) reversible damage to soil or peat quality for example through handling, stockpiling and heavy machinery traffic
Negligible	Total agriculture land take (all Grades) <5 ha	>95% of soil resources maintained in a condition suitable for reuse	Small-scale reversible (< 3 months) damage to agricultural soils or peat.

Magnitude	Environmental Impact		
	Loss of Agricultural Land	Loss of Soil Resource	Damage to Soil Resources
Neutral	No net loss of agricultural land	No net loss of soil resources greater than would be experienced during normal agricultural operations within the Site including retention of peat resources <i>in situ</i> .	No damage or very small-scale surface damage to agricultural soils equivalent to that done by typical farm machinery traffic / normal agricultural operations within the Site. Or peat resource stabilised <i>in situ</i> and not released for reuse, rendering any changes to the structure of the peat (physical damage) immaterial

Table 16.2: Environmental Impacts

### Significance of Effects

- 16.46. Once the receptors and impacts have been established they will be assessed against each other using the matrix presented in Chapter 3: Approach to Scoping to provide the likely significant effects.

### Impact Prediction Confidence

- 16.47. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 16.3: Confidence Levels

## Significance of Effects Without Mitigation

16.48. The following sections provide a summary of the likely significance of the environmental effects that may result from the Proposed Development. These have been considered for the construction phase without mitigation and are based on information gained from the known baseline position at this time. These effects will be reviewed as part of, and reported within, the comprehensive ES technical paper.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
1) Loss of agricultural land to built development or change of land use to non-agricultural	National to Local	Minor Negative	Moderate to Minor Adverse	High
2) Loss of soil for reuse	Soil – Borough/District	High Negative	Moderate Adverse	Low
	Peat – Borough/District	High Negative to Neutral	Moderate Adverse to Neutral	Low
3) Damage to soil resources resulting in impairment of their function, quality and resilience	Soil Borough/District	Substantial Negative	Moderate Adverse	Low
	Peat – Borough/District	Substantial Negative to Neutral	Moderate Adverse to Neutral	Low

Table 16.4: Significance of Impact Without Mitigation

## Mitigation

### Agricultural Land

16.49. The loss of all agricultural land within the Site due to the Proposed Development cannot be mitigated.

### Soil Resources

16.50. Under Option I, where the peat is excavated, the buried peat resource would be treated as a continuation of the soil profile. The soil resources within the Site would be protected against damage by the adoption of industry standard soil and peat management measures, such as those set out in Defra's 2009 Construction Code of Practice for the Sustainable Use of Soils

on Construction Sites. Typical working methods and techniques used to protect soil resources include, but are not limited to, the following:

- The handling of soil resources only when sufficiently dry to prevent compaction and damage to soil structure; or implementing strict procedures for the wet-handling of soils incorporating amelioration and restoration measures to reverse any damage which may occur for example through compaction.
- The separate stripping, handling, storage and transportation of different soil layers (topsoils, subsoils and peat) and soil types if there is variation across the Site.
- Appropriate seeding of soil storage mounds if required for a period longer than six months, to prevent erosion and to maintain soil structure, nutrient content and biological activity;
- De-compacting of the subsoil before topsoil re-instatement; and
- Minimising the number of machine movements across topsoil and defining haul routes to reduce compaction and retain soil structure.

16.51. By ensuring the quality of soil (and peat) resources are maintained at a level suitable to allow their reuse either within the Proposed Development (for example in landscaped areas) or elsewhere (subject to the receipt of the required permits or exemptions), these resources remain available for beneficial use and therefore no loss of soil/peat resource is considered to occur. The implementation of these standard measures will also ensure that upon replacement / reuse the soils and peat will also be able to deliver a range of vital ecosystem services. Loss of soil due to unauthorised export would be controlled through the Site security measures that would be in place during the construction phase which would ensure no material is taken off Site without prior knowledge and agreement with the Applicant.

16.52. It is known that there is insufficient capacity within the Site to accommodate the reuse of all peat resources. Therefore, currently, several possibilities for the beneficial reuse are being investigated, these include the donation of peat to neighbouring conservation areas or other sites requiring reinstatement/ restoration (as further discussed in Chapter 11: Ecology and Nature Conservation); or for (partial) use on site for the ecological enhancement of non-developed areas.

- 16.53. Prior to construction, in line with good practice and the Applicant’s own working procedures, soil and peat management within the Site would be defined through a detailed site specific Soil and Peat Management Plan (SPMP). The requirement for a SPMP could be formalised through planning condition, if desired.
- 16.54. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be developed through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

### Significance of Effects With Mitigation

- 16.55. As the mitigation measures to prevent the loss of and damage to the soil resource described above are considered to be standard industry practice and therefore would be automatically implemented during construction of the Proposed Development, it is considered appropriate to re-assess the significance of effects with this standard mitigation in place (Table 16.5).

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
1) Loss of agricultural land to built development or change of land use to non-agricultural	National to Local	Minor Negative	Moderate to Minor Adverse	High
2) Loss of soil for reuse	Soil - Borough/District	Negligible Negative	Negligible Adverse	Low
	Peat - Borough/District	Negligible Negative to Neutral	Negligible Adverse to Neutral	Low
3) Damage to soil resources resulting in impairment of their function, quality and resilience	Soil Borough/District	Negligible Negative	Negligible Adverse	Low
	Peat – Borough/District	Negligible Negative to Neutral	Negligible Adverse to Neutral	Low

Table 16.5: Significance of Impact with Mitigation

- 16.56. It is noted that as stated in paragraph 18.1, the loss of the agricultural land within the Site cannot be mitigated. Therefore the impacts remain as assessed in Table 16.4; and will or may result in a slight adverse environmental effect.
- 16.57. The routine adoption of standard management measures, reduces the potential impacts to soils and peat (under Option 1, where peat is removed) in terms of loss and /or damage to a level where there will be no notable effect. The potential impacts to peat under Option 2 (where peat is stabilised *in situ*) remain unchanged and will have no effect.

### Further Work Required

- 16.58. A detailed peat survey will be undertaken early in 2019. The survey will provide a comprehensive assessment of the extent and depth of the basin peat deposit in order for peat volumes to be accurately defined. The survey will be conducted on an approximate 50 m grid (allowing for a greater density in any areas where significant depth changes occur over a short geographical range, or where required to define the 'edge' of the deposit). The survey will be conducted by experienced soil and peat scientists using a gouge or Russian auger.
- 16.59. The survey will also incorporate peat characterisation at representative locations throughout the Site using the Von Post and Troels-Smith classification methods. Additionally, samples will be sent for laboratory analysis to determine texture, nutrient levels, pH and organic matter content.
- 16.60. The detailed peat data will be used to inform the iterative design process, for example to inform the discussion of potential peat stabilisation methodologies; or defining the volume of peat to be excavated or stabilised. A knowledge of the characteristics and condition of the peat will also be vital for identifying potential opportunities for the beneficial reuse of excavated peat. These potential opportunities are being investigated by the Applicant in collaboration with relevant technical disciplines (Agricultural Land and Soils, Ecology, Ground Conditions and Water Resources) (see paragraph 16.53). It is envisaged this will include consultation with the Environment Agency and Natural England.
- 16.61. Although detailed soils and ALC data are available for the Site from the 2006 SLR Consulting survey, and as discussed in paragraph 16.27, the baseline scenario for soils and agricultural land (ALC) within the Site will not change significantly as a result of natural processes; a detailed soil survey will be undertaken in conjunction with the peat survey. The survey will

illustrate whether there have been any changes in the condition of the agricultural land since 2006 and verify whether the ALC gradings assigned in 2006 remain current.

- 16.62. Soil survey will also be undertaken on the non-agricultural land (restored landfill) within the Site, which was not investigated in 2006. Although this area is non-agricultural and ALC is therefore not applicable, knowledge of the soil cover in this area will help inform the overall management of soils (as part of the SPMP for the Site) and potentially the landscape planting scheme during construction.

## Summary

- 16.63. An assessment will be undertaken to consider the potential impacts to agricultural land and soils associated with the construction phase of the Proposed Development.
- 16.64. The main potential impacts are associated with the management of the soil and peat resources present within the Site and the loss of agricultural land. Impacts relating to peat are also dependent on whether Option 1 (removal) or Option 2 (*in situ* stabilisation) is followed.
- 16.65. Tables 16.6 and 16.7 below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of Agricultural Land and Soils.

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Agricultural Land and Soils</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>4) Loss of agricultural land either to built development or change of land use to non-agricultural.</li> <li>5) Loss of soil for reuse; and</li> <li>6) Damage to soil resources resulting in impairment of their function, quality and resilience.</li> </ul> <p>Operation:</p> <p>There are not expected to be any impacts for operational phase.</p>	<p>Knowledge of the quality and loss of agricultural land is required to determine how the Proposed Development meets the requirements of NPPF 18 and the NPPG.</p> <p>The main environmental impacts in terms of soils and peat relate to the loss of and damage to these resources and their availability for reuse.</p>

Table 16.6: Receptors which are Scoped In

## Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Agricultural Land- Construction Phase</b></p> <p>The long-term effects to farm business and farm viability as a result of the loss of agricultural land due to the Proposed Development (reduction in the area of farmable land available to the landholding).</p>	<p>This issue is considered to be fully mitigated through the process of discussion and negotiation between the Applicant, the landowners and the agricultural tenant. Therefore, the assessment of potential impacts to farm business will not be included in the impact assessment presented in the ES.</p>
<p><b>Agricultural Land - Construction Phase</b></p> <p>The short-term effects to farm business and farm viability as a result of land severance or access issues due to the Proposed Development (restrictions to normal farming practices).</p>	<p>The Site comprises a single entire agricultural field, and a field remnant bordered by non-agricultural land, all of which would be permanently removed from agricultural use on commencement of construction. Therefore, there would be no severance of farmable areas or farmland access issues as a consequence of the Proposed Development and these potential impacts will not be included in the impact assessment presented in the ES.</p>
<p><b>Operational phase</b></p>	<p>After construction, the soils remaining on Site would most likely only experience very low levels of disturbance due to works connected with the maintenance of landscaped areas. The scale of this disturbance would be lower than is likely currently experienced within the Site due</p>

Environmental Issue	Reason for “scoping out”
	to normal agricultural activities, it is therefore considered that the low scale works which would occur after completion would result in no loss of or damage to soils or impairment of function.

Table 16.7: Receptors which are Scoped Out

## 17. Utilities

### Introduction

- 17.1. Wardell Armstrong has been instructed to undertake an ES scoping study relating to utilities in support of the proposed Motorway Service Area at Warrington, off Junction 11 of the M62. This paper sets out the baseline utilities provision at the Site. The assessment considers the potential environmental impacts resulting from the installation and supply of utilities in relation to the proposed development during the construction and operational phases of the development at existing sensitive receptor locations.
- 17.2. The nearest existing sensitive receptors to the Site comprise residential dwellings located circa 300m to the south, However, the M62 Motorway is located between these dwellings and the Site.
- 17.3. The generic potential utilities impacts associated with the proposed development include the alteration or disruption of existing ground, a temporary increase in noise levels during construction and a temporary increase in traffic at Junction 11 of the M62 Motorway.
- 17.4. There are no specific policy documents of relevance to the consideration of the effects of the development on utilities apart from the National Planning Policy Framework (the NPPF 18) and local policies.

### Baseline Information

- 17.5. Existing utilities services providers were contacted, and they have provided plans that serve the area. The available plans are assumed to be up to date and show the general location of the utilities/services. The following companies were contacted:
- Gas – Cadent Gas;
  - Electricity – Northern Power Networks;
  - Water – United Utilities;
  - Telecom – BT and Virgin Media;

- Foul Sewerage– United Utilities.

### **Electricity – Electricity North West**

- 17.6. 11kV underground cables are located within the south east of the site, adjacent to the motorway junction. 11kV underground cables are also located adjacent to the Site’s southern boundary and to the east of the Site, adjacent to the former landfill.
- 17.7. An electricity substation is located approximately 60m south west of the Site.

### **Gas – Cadent**

- 17.8. A National Gas Transmission pipeline is present within the east of the Site, on a north-south alignment. This pipeline has a total easement of 80ft (24.38m) in width.
- 17.9. The pipeline is classified by HSE as a “major accident hazard pipeline”, with current consultation zones of 96m for the inner zone, 190m for the middle zone and 335m for the outer zone.
- 17.10. A medium pressure gas main is located approximately 200m south west of the Site, serving the commercial units in Birchwood Technology Park. Low pressure gas mains are located approximately 300m south of the site, serving the existing residential properties. Both the Medium and Low Pressure gas mains are located on the opposite side of the M62 Motorway to the proposed development.

### **Potable Water – United Utilities**

- 17.11. There is no United Utilities potable water apparatus within the Site boundary.
- 17.12. A 160mm Ductile Iron (DI) potable water main is located approximately 250m south west of the Site, serving the commercial units in Birchwood Technology Park. A water main is also present approximately 300m south of the Site, serving the existing residential properties.

### **Foul Sewerage – United Utilities**

- 17.13. There are no United Utilities foul or surface water sewers located within the Site boundary.
- 17.14. Foul and surface water sewers are located approximately 300m south west of the Site, serving the commercial units in Birchwood Technology Park.

- 17.15. At this stage, it is not known whether a foul pumping station will be required, as this will depend upon the connection point identified through liaison with United Utilities.

#### **Telecoms – BT and Virgin Media**

- 17.16. BT apparatus is located in the south west of the Site, adjacent to Junction 11 of the M62 Motorway.
- 17.17. There are no Virgin Media assets located within the Site, or in the vicinity.

### **Potential Environmental Impacts**

- 17.18. The potential utilities impact during construction is typically associated with the development of the site, and include the following:

- Ground disturbance in terms of trench excavation;
- Change in levels of noise and vibration during construction; and
- Change in traffic volume as a result of excavation along the highway.

- 17.19. Other than the foul sewerage and clean water supply all other services appear to be immediately available within close proximity to the Site boundary. At this early stage we are unable to assess if the services have sufficient capacity until a full utilities assessment is carried out. Although in theory the increase in load on the utility network appears to be an environmental impact, should the utility provider confirm that a connection can be made the impact will have been fully mitigated. If insufficient supplies are available, the network will be reinforced and again the effect will be mitigated. A full utilities assessment will be carried out as a technical appendix to support the ES.

- 17.20. Once in place operational phase impacts from utilities are considered unlikely and will not be considered further.

#### **Construction Phase**

- 17.21. A range of construction activities related to the installation of services are proposed that could lead to impacts on the local environment. Depending on each particular service and location the environmental impact will differ.

17.22. The potential utilities impacts typically associated with the construction phase of the development include the following:

- An increase in noise is envisaged during installation of the main utilities that require excavation of trenches. According to the existing services locations all the services will extend outside the Site boundary. Apart from the unconfirmed foul and potable water connection to the Site, all other services should connect to the apparatus in the immediate vicinity of the Site.
- Alteration or disruption of existing traffic flows on Junction 11 of the M62. According to the existing services locations all the services will extend outside the Site boundary.
- Temporary ground disturbance during trench excavation. Stockpiles to be no more than 1m in height.

17.23. A technical appendix will provide an assessment of these potential impacts to support the ES.

#### **Operational Phase**

17.24. Once in place operational phase impacts from utilities are considered unlikely and will not be considered. Any maintenance works will be occasional and typical of any built environment.

## **Methodology for the Environmental Statement**

#### **Receptors**

17.25. Receptors associated with the Warrington MSA site are detailed in the table below.

<b>Designation</b>	<b>Receptors</b>
International	None
National	None
Regional	None
County	None
Borough/District	None

Designation	Receptors
Local/Neighbourhood	Existing utilities infrastructure/Local highway network/Nearby residential dwellings/Future site users

Table 17.1: Summary of Potential Receptors

- 17.26. **Environmental Impacts** It is considered likely that the impacts from the development will occur during the construction phase of the development. To classify the impact the following criteria will be used.

Magnitude	Environmental Impact
Substantial	Having a long term significant impact on receptors
High	May have a medium to long term significant impact on receptors
Moderate	Will have a slight impact which may be perceptible to receptors
Minor	Will have a slight or temporary impact imperceptible to receptors
Negligible	Will have little or no impact
Neutral	No change

Table 17.2: Environmental Impacts

### Impact Prediction Confidence

- 17.27. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 17.3: Confidence Levels

## Significance of Effects

17.28. The following tables provide a summary of the likely significance of the impacts that may result from the proposed development of the site. These have been considered for the construction and operational stage without mitigation and are based on information gained from the known baseline position at this time. Effects will be reviewed as part of the comprehensive technical appendix that will support the ES.

### Construction Phase

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Temporary change in noise at existing sensitive receptors due to construction works. This would mainly be associated with trench excavation to connect utility services to the Site.	Local existing sensitive receptors	Minor Negative	Minor Adverse	High
Alteration/disruption in traffic on Junction 11 of the M62 due to construction works as well	Local existing sensitive receptors	Minor Negative	Minor Adverse	High
Ground disturbance/ temporary stockpiles (approx. 1m high) / Ground Level	Local existing sensitive receptors	Minor Negative	Minor Adverse	High
*The requirement for a foul pumping station will depend upon the recommended point of connection identified by United Utilities. Should a foul pumping station not be needed, there will be no air quality impact.				

Table 17.4: Significance of Impact - Construction

### Operational Phase

17.29. There are not expected to be any significant impacts for the operational phase as identified in section 17.4 above.

## Mitigation

- 17.30. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the technical appendix to support the ES.
- 17.31. Specific requirements for the connections of new services to the site will be progressed with the utility provider as the development progresses. All efforts will be made to minimize disruption to the existing environment.

## Further Work Required

- 17.32. A full utility capacity assessment will be carried out and presented as a technical appendix to support the ES. Further liaison with the relevant utility companies will be required to identify potential points of connection for the required utilities, and to determine available capacity within the local network. If capacity is not available, further liaison will be required to determine the scope of reinforcement works required and the estimated cost.
- 17.33. Diversion requirements, in particular with regards to the access off Junction 11 of the M62, will also need reviewing. Should the diversion of services be required, the scope of works and estimated cost of these diversions will need to be determined.

## Summary

- 17.34. An assessment will be undertaken to consider the potential utility impacts associated with the construction phase. In respect to the impact to the local receptors as a result of the service installations this will be temporary and controlled by working hours and other best practice measures to be detailed in the Construction Management Plan.
- 17.35. There are no impacts that will be associated with the operational phase of the proposed development, apart from those associated with a proposed foul pumping station if one is required.
- 17.36. The tables below confirm the details to be Scoped In and Scoped Out of the technical appendix for Utilities.

## Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Utilities</b></p> <p><i>Construction:</i></p> <p><i>Provision of the Site with the required utility infrastructure</i></p>	<p><i>Provision of the Site with the required utility infrastructure will require temporary construction works which may have a minor adverse effect on nearby local existing sensitive receptors, including residential dwellings, the local highway network and the local utility network.</i></p>

## Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Utilities</b></p> <p><i>Operation:</i></p> <p><i>There are not expected to be any significant impacts for operational phase</i></p>	<p><i>Once in place operational phase impacts from utilities are considered unlikely and will not be considered further within the ES. Any maintenance works will be occasional and typical of any built environment.</i></p>

## 18. Waste

### Introduction

- 18.1. This Scoping Chapter, on the impact of the Proposed Development on wastes management has been prepared by Wardell Armstrong LLP. It provides an assessment of the likely significant effects of solid waste generation associated with the construction and operational phases of the Proposed Development. The effects will be assessed in the context of relevant national, regional and local waste management policies and regional waste management treatment and disposal capacity. Mitigation measures to reduce the quantity of waste generated, increase the re-use, recycling and recovery of materials and improve waste management have been identified where feasible.
- 18.2. All relevant policy related to waste are considered, including:
- Waste Prevention Programme for England (2013);
  - Waste Management Plan for England (2013) [Resources and Waste Strategy for England (expected Dec 2018)];
  - Strategy for Sustainable Construction (2008);
  - Litter Strategy for England (2017);
  - Warrington Borough Council's Design and Construction Supplementary Planning Document (2010) and Environmental Protection Supplementary Planning Document (2013).
- 18.3. The principal objective of sustainable resource and waste management is to use material resources more efficiently and to reduce the amount of waste requiring final disposal by landfill. Where waste is generated it should be managed in accordance with the waste hierarchy as displayed in Figure 18.1. The waste hierarchy advocates an order of preference for the management of wastes.

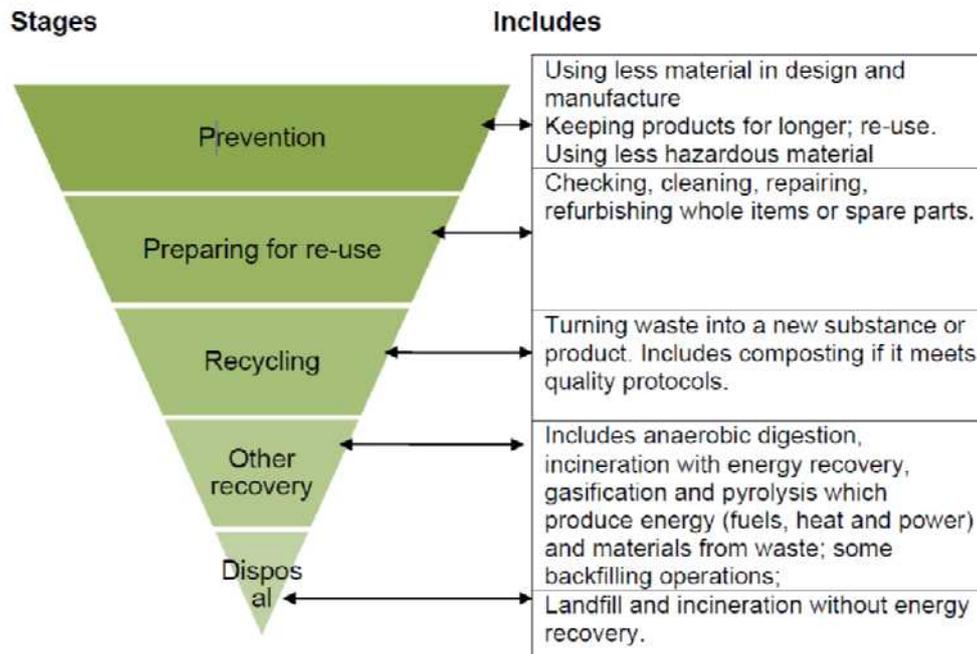


Figure 18.1: The Waste Hierarchy (Source: Defra<sup>23</sup>)

- 18.4. Resource and waste management should actively contribute to the economic, social and environmental goals of sustainable development.

### Baseline Information

- 18.5. The Site of the Proposed Development is currently utilized for agriculture, and it is anticipated that the majority of the waste generated through this activity is managed on site and reused on the land. There are no construction-related or any additional operational activities taking place. The baseline in terms of existing waste generation is, therefore, considered to be zero.

<sup>23</sup> Department for the Environment, Food and Rural Affairs (Defra) (2013), Waste Management Plan for England

## Potential Environmental Impacts

- 18.6. The development of the Site will result in additional waste generation both during the construction and operational phases which will have some impact, for example on waste management infrastructure capacity.

### Construction Phase

- 18.7. The generation of construction waste associated with the construction phase will have an impact upon the local and regional waste management infrastructure. Therefore, an assessment of the impacts of the Proposed Development on waste management infrastructure during construction will be carried out.
- 18.8. To assess the effects of waste generated from the construction of the Proposed Development, the estimated waste values will be compared with sub-regional level recycling and recovery infrastructure, future inert and non-hazardous landfill capacity for Cheshire, Merseyside and Greater Manchester that have been identified by the Environment Agency<sup>24</sup>. Please refer to the Waste Receptor Plan in **Appendix 6** for further details of the local waste management infrastructure.
- 18.9. Materials generated during construction are likely to include inert construction materials as well as packaging such as wood and plastic, alongside materials generated during activities like tarmacking or roads and parking area, concreting etc.
- 18.10. It is the intention that, where possible, excavation materials will be reused on Site for landscaping and all other materials will be segregated and stored for onward processing and recycling as a priority. A detailed plan for the management of construction waste materials will be developed.

### Operational Phase

- 18.11. The generation of waste materials and litter through the operation of the Proposed Development will have an impact upon the local and regional waste management

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<sup>24</sup> Using:

- Environment Agency (2018) Waste Data Interrogator 2017 (online - <https://data.gov.uk/dataset/dd8629ad-bd32-4db3-a07a-879737964f23/waste-data-interrogator-2017> - last accessed December 2018)
- Environmental Permit details.

infrastructure. Commercial wastes from all proposed activities, including the MSA, fuel filling station forecourts and Hotel and are likely to include green waste, food waste, packaging and residual waste. Therefore, an assessment of the impacts of the Proposed Development on waste management infrastructure during operation will be carried out.

- 18.12. The commercial non-hazardous waste forecast to be recycled or recovered will be compared to the sub regional recycling and recovery capacity available in Cheshire, Merseyside and Greater Manchester that has been identified by the Environment Agency<sup>25</sup>.

## Methodology for the Environmental Statement

- 18.13. The project designers will provide an initial estimation for the volume of excavated materials that would be generated through the cut and fill activities as part of the submission.
- 18.14. In addition to this, wider construction waste streams will be identified and the mass of each waste stream likely to be generated during the construction phase of the Proposed Development will be estimated using BRE SMARTWaste Benchmarks<sup>26</sup>. Floor areas of the Facility Buildings, carparks etc. will be provided by the project client.
- 18.15. The future predictions of operational waste generation from the Proposed Development will be based on existing operational waste data provided by Extra MSA Group and its partners. Where existing information is not available BS 5906:2005<sup>27</sup> will be used for guidance. Following the assessment, appropriate mitigation measures will be identified to reduce the quantity of waste sent for final disposal and to apply sustainable waste management practices within the Proposed Development. These might include back filling of delivery vehicles, optimising construction scheduling for material use, identification of synergies across the Proposed Development and neighbouring businesses/land users for use of waste materials, and partnership with local recycling facilities.

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<sup>25</sup> Using:

- Environment Agency (2018) Waste Data Interrogator 2017 (online - <https://data.gov.uk/dataset/dd8629ad-bd32-4db3-a07a-879737964f23/waste-data-interrogator-2017> - last accessed December 2018)
- Environmental Permit details.

<sup>26</sup> Buildings Research Establishment (BRE) (2012), BRE Waste Benchmark Data, Online ([http://www.smartwaste.co.uk/filelibrary/benchmarks%20data/Waste\\_Benchmarks\\_for\\_new\\_build\\_projects\\_by\\_project\\_type\\_31\\_May\\_2012.pdf](http://www.smartwaste.co.uk/filelibrary/benchmarks%20data/Waste_Benchmarks_for_new_build_projects_by_project_type_31_May_2012.pdf) - last accessed 30/11/2018)

<sup>27</sup> British Standards Institution (2005), BS 5906:2005 – Waste Management in Buildings – Code of Practice

18.16. The methodology of this Scoping assessment identifies potential receptors, environmental impacts and significant effects, as outlined in the following sections.

**Receptors**

18.17. The receptors which will be considered in the assessment relating to construction and operational waste are identified below.

Designation	Receptors
International	None applicable
National	None applicable
County / Regional	Recycling and recovery infrastructure in Cheshire, Merseyside and Greater Manchester Inert and recovery infrastructure in Cheshire, Merseyside and Greater Manchester
Borough/District	None applicable
Local/Neighbourhood	Residents, businesses and sites from litter dispersal.

Table 18.1: Receptors

18.18. The receptors identified reflect that the overwhelming majority of generated waste will be controlled and collected in specially designed infrastructure before processing at a suitable location in the sub-region. During the operational phase of the Proposed Development there is potential for airborne litter to leave the Site, however this will be limited by the provision of suitable litter bins throughout the Site encouraging Site users into acting responsibly.

18.19. Receptors will be identified, as detailed in 18.8 and 18.10. Please refer to **Appendix 6** for the Waste Receptor Plan outlining local waste management infrastructure. Suitable receptors will be those that accept the specified material, as permitted by the Environment Agency. Receptors will be chosen on their ability to accept the waste material, capacity available, geographic proximity to the Development Site and position in the waste hierarchy.

18.20. The receptor facility will differ by material produced. During the construction phase the majority of waste is anticipated to be inert, non-hazardous construction waste materials. This will typically be reused on Site for landscaping, recycled as aggregate, or as a last resort, disposed of to landfill. Some construction materials will be recoverable for either recycling or energy recovery applications such as metals, plastics and wood. When this is possible waste

will be separated and a suitable Materials Recycling Facility (MRF) or Energy Recovery Facility (ERF) utilised.

18.21. During the operational phase of the Proposed Development a range of wastes will be generated, such as green, food, packaging and residual wastes. Where possible waste will be separated into different material streams at the point of generation. This will enable different treatment methods to be employed by material stream. Residual wastes will be treated by ERF or landfill, as dictated by commercial availability and geographic proximity. Recycling streams will be treated through a recycling reprocessor or MRF plant, as appropriate dependent on material characteristics.

18.22. A brief, non-exhaustive, review of available facilities in the vicinity of the Development Site has identified potential receptors for the construction phase materials, as shown in Table 18.2. these all accepted construction waste in 2017.

Site name	Permit number	Site description	Distance from Site (straight line)	Quantity of construction and excavation waste received in 2017	Operator
Woolston Deposit Ground	YP3794CN	Deposit to land for recovery (development of nature park)	4 km	~274,000 tonnes	Churchill Enviro Limited
Southworth Quarry	QP3994CH	Inert landfill	5 km	~14,000 tonnes	Gaskell Brothers (W M & C) Limited
Frank O' Gara (Irlam)	VP3298CT	Inert & excavation Waste treatment	5 km	~ 52,000 tonnes	Frank O' Gara
Whitehead Landfill	ZP3433AQ	Non-hazardous landfill	6 km	~ 416,000 tonnes	Whitehead Restoration Limited
Morleys Quarry	LP3597SR	Inert landfill / recovery	6 km	~ 179,000 tonnes (of which 30,000 recovered)	Astley Sand & Aggregates Limited
Lymeand Wood Pits Integrated Waste Management Facility	BX7886J	Non-hazardous landfill	10 km	~ 191,000 tonnes	Cory Environmental (Central) Limited

Table 18.2: Potential Construction Phase Receptors

18.23. A brief, non-exhaustive, review of available facilities in the vicinity of the Development Site has identified potential receptors for the operational phase materials, as shown in Table 18.3. these all accepted commercial and similar wastes in 2017.

Site name	Permit number	Site description	Distance from Site (straight line)	Quantity of municipal waste in 2017	Operator
Lymeand Wood Pits Integrated Waste Management Facility	BX7886IJ	Non-hazardous landfill	10 km	~ 1,500 tonnes	Cory Environmental (Central) Limited
Harwood Landfill	BV8741IL	Non-hazardous landfill	20 km	~ 60,000 tonnes	Booth Ventures Limited
Pilsworth Landfill	BS7951IB	Non-hazardous landfill	22 km	~ 112,000 tonnes	Viridor Waste Management Limited
Bolton ERF	BS3042IM	ERF	16 km	120,000 tonnes *	Viridor Waste (Greater Manchester) Limited
Runcorn ERF	RP3638CG	ERF	21 km	890,000 tonnes *	Viridor Waste Management Limited
Irlam Material Recycling Centre	CP3093MH	MRF	4 km	~ 55,000 tonnes	Biffa Waste Services Limited
Swinton	NP3692EQ	MRF	16 km	~ 17,000 tonnes	Roydon Group PLC
Manchester (J W S)	PP3894CG	MRF	16 km	~ 57,000 tonnes	J W S Waste and Recycling Services Limited
* Permitted throughput per annum					

Table 18.3: Potential Operation Phase Receptors

18.24. For the purposes of this Scoping Chapter the focus has been on those receptor facilities within close proximity to the Development Site. The Development Site is immediately adjacent to the strategic motorway network and so has excellent transport links for this offtake.

18.25. From Table 18.2 and 18.3 it is clear that locally there is a wide range of processing/treatment/disposal provision available. Should the capacity and/or commercial viability at the time required not be suitable, additional processing/disposal capacity can be sought across a wider radius from the Development Site.

- 18.26. Please refer to the Waste Receptor Plan at **Appendix 6** for a map showing the location of the local facilities identified in table 18.2 and 18.3.

### Environmental Impacts

- 18.27. The generation of waste associated with the construction and operational phases of this Proposed Development will have an impact upon the local and sub-regional waste management infrastructure. Therefore, an assessment of the impacts of the Proposed Development on waste management infrastructure during construction and operation will be carried out.
- 18.28. No industry standard significance criteria have yet been established for the assessment of waste effects from new developments. The proposed assessment criteria is consistent with those adopted when waste management has been considered as part of an EIA. This relates to scheme effects and the approximate expected increase in waste generation from the Proposed Development. The assessment, detailed in Table 18.4, ranges from substantial, where the Proposed Development results in a 10% increase in construction (during the construction phase) or commercial waste (during the operational phase), to neutral, where no net waste generation is anticipated.

Magnitude	Environmental Impact
Substantial	> 10% increase in waste generation and treatment relative to sub-regional baseline Severe or irreversible adverse environmental or human health effects (e.g. pollution of controlled waters and terrestrial habitats, and/or uncontrolled landfill gas emissions), or major detrimental effects to local amenities from dust, litter, odour or pests. Severe permanent reduction in landfill void space capacity on a local and regional scale. Need for large-scale waste treatment facilities to protect against adverse environmental effects. During construction this is a short-term effect. When operational this is a long-term effect.
High	5-10% increase in waste generation and treatment relative to sub-regional baseline. Major environmental or human health effects or major effects to local amenities. Major, local-scale reduction in landfill void space capacity. Need for appropriate waste treatment facilities to protect against adverse environmental effects.

Magnitude	Environmental Impact
Moderate	2-5% increase in waste generation and treatment relative to sub-regional baseline. Moderate environmental or human health effects or moderate adverse effects to local amenities. Moderate, local-scale reduction in landfill void space capacity. Need for medium-scale waste treatment facilities to protect against adverse environmental effects.
Minor	1-2% increase in waste generation and treatment relative to sub-regional baseline. Minor environmental or human health effects or insignificant detrimental effects to local amenities. Slight local scale reduction in landfill void space capacity reversible with time. Need for small-scale waste treatment facilities to protect against adverse environmental effects.
Negligible	<1% increase in waste generation and treatment relative to sub-regional baseline. No appreciable adverse environmental or human health effects or detrimental effects to local amenities.
Neutral	No change in net waste generation. No impact is predicted.

Table 0.4: Environmental Impacts

- 18.29. Construction phase and operational phases effects will differ by timescale as well as magnitude. Construction phase effects will be short-term in impact, and operational phase effects are likely to have more long-term impacts.

#### Impact Prediction Confidence

- 18.30. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 18.5: Confidence Levels

## Significance of Effects

- 18.31. The significance of effect is determined using the significance matrix in Chapter 3 of this Scoping Request Report. This identifies the receptor level across the top of the matrix and the environmental impact down the side and where they meet within the matrix identifies the significance of the effect.

### Construction Phase

- 18.32. An estimated significance of the Proposed Development, based on preliminary identification of receptors and impacts, is included in Table 18.6 for the Proposed Development during the construction phase.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Generation of inert and combustible material	Regional Inert and recovery waste disposal and treatment infrastructure in Cheshire, Merseyside and Greater Manchester	Negligible	Negligible	Low *
Generation of materials such as packaging for separation, sorting and recycling.	Regional Recycling and material recovery infrastructure in Cheshire, Merseyside and Greater Manchester	Negligible	Negligible	Low **

\* The current confidence level of this effect is low because the quantity of waste for disposal or treatment has yet to be determined<sup>28</sup>.  
 \*\* The current confidence level of this effect is low because the quantity of waste for disposal or treatment has yet to be determined.

Table 18.6: Significance of Impact - Construction

<sup>28</sup> Assuming 50% of the site is developed, 8,225 ha, generating waste at a rate of 2,000 m<sup>3</sup>/ha, then there will be 16,450 m<sup>3</sup> of waste generated. At a bulk density of 0.87 t/m<sup>3</sup> (WRAP (2010), Guidelines for measuring and reporting construction, demolition and excavation waste) this converts to 14,312 tonnes of construction waste. Assuming all waste is generated in a 12-month period (the construction of the Proposed Development is anticipated to exceed this, meaning a lower tonnage per annum should be anticipated) this represents 1.27% of the capacity of all facilities listed in table 18.2 (the facilities identified in table 18.2 represent the six in closest proximity to the Development Site, and are not an exhaustive list of available regional capacity). Due to the greater anticipated regional capacity and expected lower annual construction waste output of the Proposed Development, it is anticipated that the Proposed Development will represent under 1% of existing regional capacity.

### Operational Phase

18.33. An estimated significance of the Proposed Development, based on preliminary identification of receptors and impacts, is included in Table 18.6 for the Proposed Development during the operational phase.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Generation of materials such as packaging for separation, sorting and recycling.	Regional Recycling and recovery infrastructure in Cheshire, Merseyside and Greater Manchester	Negligible	Negligible	Low *
Litter dispersal in immediate vicinity	Local	Negligible	Negligible	Low *

\* The current confidence level of this effect is low because the quantity of waste for disposal or treatment has yet to be determined.

Table 18.7: Significance of Impact – Operation

### Mitigation

18.34. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES but might include back filling of delivery vehicles, optimising construction scheduling for material use, identification of synergies across the Proposed Development and neighbouring businesses/land users for use of waste materials, and partnership with local recycling facilities.

### Further Work Required

18.35. In order to complete the waste EIA, the following activities will be carried out:

- Estimate the quantities of construction waste, operational waste and litter generated by the Proposed Development;

- Establish the capacity of existing sub-regional appropriate waste management infrastructure;
- Assess the impacts of the construction and operational waste generated by the Proposed Development;
- Identify appropriate mitigation measures.

## Summary

- 18.36. The waste EIA will provide an assessment of the likely significant effects of waste generation during the construction and operation of the Proposed Development.
- 18.37. These effects will be assessed in the context of relevant national, regional and local waste management legislation and policies as well as sub-regional waste management treatment and disposal capacity. Mitigation measures to reduce the quantity of waste sent to landfill and to recover materials for reuse on-site and recycling where feasible will be suggested.
- 18.38. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of wastes management.

### Scoped In

Environmental Issue	Reason for “Scoping In”
<p><b>Waste</b></p> <p><i>Construction:</i></p> <ul style="list-style-type: none"> <li>• Inert and recovery waste generation requiring treatment / disposal</li> <li>• Recycling material generation requiring separation and/or further processing</li> </ul> <p><i>Operation:</i></p> <ul style="list-style-type: none"> <li>• Recycling material generation requiring separation and/or further processing</li> <li>• Litter dispersal in immediate vicinity</li> </ul>	<p>Scoped in due to demand placed on regional infrastructure to handle and manage material, and the associated environmental impacts of the available waste management techniques utilised.</p>

**Scoped Out**

Environmental Issue	Reason for “Scoping Out”
N/A	N/A

## 19. Climate Change

### Introduction

- 19.1. This Scoping Chapter has been prepared by Wardell Armstrong LLP and considers the potential impacts associated with the Warrington MSA, J11 M62 ('the Site') on climate change, energy and sustainability.
- 19.2. The undertaking of such assessments is a requirement of both national and local planning policy and will adhere to the relevant criteria highlighted within these.
- 19.3. Due to the nature of the methodology for carrying out the climate change assessment, it is not feasible to independently quantify the baseline information for scoping. As such, this section will focus on how the baseline scenario for carbon dioxide emissions is developed and consider how the energy use and sustainability of the project will be assessed.

### Baseline Information

- 19.4. Due to the relatively recent introduction of the new Environmental Impact Assessment regulations regarding climate change, guidance is limited on scope and methodology. However, the assessment will be based upon 'Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment: European Commission, 2013', 'Assessing Greenhouse Gas Emissions and Evaluating their Significance, IEMA, 2017' and 'Methodologies for the Assessment of Project GHG Emissions and Emission Variations: European Investment Bank, 2014' as well as standards that dictate GHG accounting methods.
- 19.5. As part of the climate change assessment the Proposed Development will be compared to a standardized development, which will form the baseline scenario for the impact assessment.
- 19.6. The standardized development, on an alternate site, would produce the same deliverables and meet the legislated and policy requirements.
- 19.7. The baseline scenario and the Proposed Development will then be compared in terms of CO<sub>2</sub> emissions, and the significance of difference assessed. The method for this is expanded in the following 'Methodology for the Environmental Statement' section.

## Potential Environmental Impacts

### Construction Phase

- 19.8. The potential environmental impact of the construction phase of the Proposed Development, associated with climate change, energy and sustainability, is the release of greenhouse gas emissions into the environment.
- 19.9. These would include the emissions associated with on-site machinery, plant equipment and welfare facilities typically being the emissions associated with diesel fuel combustion. Carbon emissions associated with construction or decommissioning, the use of vehicles, and production of building materials are largely tied to actions beyond the applicants reasonable control.
- 19.10. It would therefore not be possible to accurately quantify greenhouse gas emissions associated with these activities. These emissions are expected to be small and for a temporary period when compared with the Proposed Development's operational life time emissions and therefore is not considered significant and may be reasonably scoped out of the assessment.

### Operational Phase

- 19.11. The potential environmental impact of the operational phase of the Proposed Development, associated with climate change, energy and sustainability, is the release of greenhouse gas emissions into the environment as a result of a weak/non-existent energy strategy that utilizes renewable technologies in combination with energy inefficient building materials and non-sustainable design.
- 19.12. The assessment of greenhouse gas emissions from the operation of the Proposed Development is scoped in and will be assessed within the climate change ES paper.
- 19.13. The production of an energy statement for the Proposed Development is scoped in and will be included as a technical appendix to the climate change ES paper, that will inform a potential strategy for the utilization of renewable technologies to limit emissions from the Proposed Development, in line with policy requirements.
- 19.14. The sustainability of the Proposed Development is also scoped in and will be assessed through a sustainability statement appended to the climate change ES paper.

## Methodology for the Environmental Statement

### Legislation, Policy and Guidance

- 19.15. The applicable legislative framework that will be considered is summarized as follows:
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017;
  - The National Planning Policy Framework (2018);
  - Part L of the Building Regulations (2016);
  - Climate Change Act (2008); and
  - Warrington Borough Council Local Policy
- 19.16. The EIA Regulations 2017 is the key legislation that incorporates European Directive 2014/52/EU into English Law, which requires the consideration of climate change to be included in an EIA. This includes “*the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change*” and “*the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change*”.
- 19.17. Part L of the Building Regulations is also considered in discussion relating to energy use of the project. This is included due to the direct relationship between energy and greenhouse gas emissions. These regulations set fabric energy efficiency standards, energy efficiency requirements and CO<sub>2</sub>emissions limits for dwellings and non-residential buildings. Approved document ‘L1A and L2A 2013 edition incorporation 2016 amendments’ provide details on the assessment criteria and methodologies used to test whether buildings are compliant. Aside from any local planning policy requirements it must be demonstrated that a building is compliant with the building regulations to be approved by building control. These regulations are the government’s key mechanism for reducing CO<sub>2</sub> emissions in buildings.
- 19.18. The site falls under the administrative boundary of Warrington Borough Council of which the Local Planning Framework is underpinned by the overarching Local Plan Core Strategy. This document was adopted on 21st July 2014, replacing the existing Adopted Unitary Development Plan, and sets out guidance for the local and level of development within the borough up to 2027.

- 19.19. In relation to the proposed work outlined below the strategic objective (W6) is relevant and states “*to minimise the impact of development on the environment through the prudent use of resources and ensuring development is energy efficient, safe and resilient to climate change*”.
- 19.20. Policy QE1 (Decentralized Energy Networks and Low Carbon Development) highlights that “*The Council will encourage proposals that maximize opportunities for the use of decentralized renewable and low carbon energy*”. This policy also makes reference to a target of 10% of energy needs to be met from renewable or low carbon sources and for developments to adhere to the energy hierarchy.
- 19.21. The plan also clearly states that all development proposals, regardless of scale or nature, will be assessed against the first core policy detailing the delivery of sustainable development, in line with National Planning Policy Framework (July 2018).
- 19.22. Warrington Borough Council are currently undertaking a review of the Local Plan. A ‘Preferred Development Option’ Consultation report was published in July 2017. Due to the high volume of responses to this report the publication of the Draft Local Plan was delayed and is now expected by the end of 2018, ready for public consultation in early 2019. The consultation report notes that the Council proposes to carry forward current adopted policies which are consistent with the new objectives.
- 19.23. Other policy documents that will need to be consulted include:
- Supplementary Planning Documents e.g. Planning Obligations (2017); Design and Construction (Amended 2016); Environmental Protection (2013); and Transport and Highway guidance.
  - Sustainability Appraisal Report (September 2012)
  - Sustainability Appraisal Report Addendum (January 2014)
  - Sustainability Appraisal Alteration Scoping Report (May 2015)
- 19.24. A review of the Council’s interactive policy map indicates the site location is privy to the following specific policies:
- Local Plan Core Strategy (CS5) Overall Spatial Strategy Green Belt
  - Local Plan Core Strategy (MP3) Active Travel

## Method for Climate Change Assessment

- 19.25. The IEMA guidance does not provide a definitive best practice methodology but rather a review of topics the climate change paper should consider, and example methodologies adopted in similar fields.
- 19.26. The European Investment Bank has released guidance on methodologies for the assessment of GHGs on projects which are financed by the bank. This methodological approach is recommended by the European Commission in its guidance document; Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (2013).
- 19.27. Clear guidance is given on the methodology to use in the assessment of CO<sub>2</sub> emissions. Specifically, it details what should be considered as the baseline scenario in terms of climate changes as this differs to the baseline scenario in other technical sections.
- “The project baseline scenario (or “without project” scenario) is defined as the expected alternative means to meet the output supplied by the proposed project. The baseline scenario must therefore propose the likely alternative to the proposed project with (i) in technical terms can meet required output; and (ii) is credible in terms of economic and regulatory requirements. The choice of baseline should normally be approached in the same way as the expected alternative scenario is determined for the project economic analysis.”*
- 19.28. The guidance further states that first, a baseline scenario should be identified which is able to meet the demands of the Proposed Development in technical terms, for instance the baseline must be able to technically meet the outputs of the proposed project.
- 19.29. Second, that the scenario is credible by meeting these simplified tests:
- The socio-economic test: The baseline scenario should be financially viable with similar financial rates of return to that of the proposed project.
  - The legal requirement test: The baseline emissions alternative scenario could not fail to comply with binding legal requirements.
  - The life-expired test: The baseline alternative could not assume continuing use of existing assets beyond their economic life.
- 19.30. By definition, emissions for a particular activity prior to developing on a greenfield site are zero, unless the proposed activity has the same deliverables as the existing use. Hence,

applying a simple “before and after” approach gives rise to a zero baseline. By contrast, the baseline scenario defined above, i.e. without project scenario, places no weight on whether development is greenfield, brownfield or partial replacement – the key issue is how the projected demand could otherwise have been met, which is not addressed in the ‘before and after’ scenario. This provides a more reasonable assessment as it allows for a comparison against a similar scheme that produces the same deliverables.

- 19.31. In terms of CO<sub>2</sub> emissions, the project is assessed for its "relative emissions (Re)" or net emissions which is expressed as the difference between absolute emissions generated by the proposed project and the baseline emissions.

$$\text{Relative Emissions (Re)} = \text{Absolute Emissions (Ab)} - \text{Baseline Emissions (Be)}$$

- 19.32. The assessment will not formally assess the carbon emissions associated with construction or decommissioning, the use of vehicles, nor those emissions produced during the production of building materials. This is due to these emissions being largely tied to actions beyond the applicants reasonable control. Scope 1 and 2 emissions, which are reasonably quantified and within the applicants reasonable control, will be assessed and these are associated with the combustion of fossil fuels, such as natural gas in building heating systems and the generation of electricity associated with lighting and ventilation.

- 19.33. The paper will also consider long term scenarios for climate change in the region and use these, alongside assessments from other technical papers e.g. flood risk to determine if any particular risks may occur, as a result of climate change, over the projected life of the project. This will include a qualitative discussion of the developments potential vulnerability to climate change and where necessary make recommendations to increase resilience to projected climate change effects.

#### **Method for Energy Statement**

- 19.34. An Energy Statement will be delivered as a technical report that will be appended to, and inform, the climate change chapter of the Environmental Statement. This will demonstrate how the project will comply with energy hierarchy, address renewable energy technology obligations and contribute towards sustainable development in the area.
- 19.35. Emissions can most accurately be predicted when the energy statement is informed by Simplified Building Energy Model (SBEM) assessments. In the absence of these being available

due to the stage of the project design, energy demand and consumption can be estimated using industry benchmarks based on the Proposed Development's build mix, floor areas and intended uses.

- 19.36. Additionally, data of energy consumption for other operational Extra MSAs will be obtained, where possible, to help inform the modelling process.
- 19.37. Energy demands are converted into equivalent CO<sub>2</sub> emissions using the latest DEFRA/BEIS conversion factor for grid electricity and heating fuels.
- 19.38. A renewable energy / emissions reduction target will be identified and various renewable / low carbon energy options assessed for suitability at the site which are expected to include the following technologies:
- Air Source Heat Pumps;
  - Ground Source Heat Pumps;
  - Solar Photovoltaic;
  - Solar Thermal;
  - CHP (Including Fuel Cell CHP); and
  - District Heating.
- 19.39. The assessment will recommend which technologies and their quantity are best positioned to achieve local policy requirements and those which are practically effective options at the site.
- 19.40. If no specific planning policy exists requiring onsite renewable energy, the assessment will explore renewable energy options that are suitable for the site to achieve compulsory standards set out in Part L of the Building Regulations. The assessment undertakes a high-level review of suitable renewable/low carbon technologies but will not include detailed system design or a feasibility study.

#### **Method for Sustainability Statement**

- 19.41. An Sustainability Statement will also be delivered as a technical report that will be appended to, and inform, the climate change chapter of the Environmental Statement. This will review how the project will meet National Policy requirements and specific local objectives set out in the Local Plan Core Strategy in relation to securing high standards of sustainable development.

19.42. The statement is prepared by reviewing the technical information from other chapters and summarizing those aspects pertaining to the Proposed Development’s overall sustainability. Considerations, whilst policy led, can be expected to cover the following areas:

- Energy & Carbon Emissions;
- Materials;
- Travel;
- Waste & Recycling;
- Water Use & Flooding;
- Air Quality & Environmental Pollution;
- Effects on Biodiversity
- Building Design & Layout; and
- Adapting to Climate Change.

**Receptors**

19.43. Unlike other ES papers, individual receptors are not applicable to a climate change impact assessment. It is understood that certain regions, populations, and species are more sensitive to climate change than others. It would not be reasonable to provide an assessment of the Proposed Development’s potential impact on these receptors as any single development would have an infinitesimal impact on climate change overall. However, it is still important to undertake the assessment to ensure the Proposed Development does not emit unacceptable levels of emissions in an effort to reduce future climate change impacts.

**Environmental Impacts**

19.44. There is at present no formal guidance on a significance criteria to use for the assessment of climate change in EIA. A significance criteria has been provided for the purposes of this assessment in relation to the relative emissions of the project, representing a strict and conservative approach. The significance criteria is provided in Table 19.1.

Magnitude	Environmental Impact
Substantial	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are over 25% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are over 25% lower than the baseline scenario.
High	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are over 20% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are over 20% lower than the baseline scenario.

Magnitude	Environmental Impact
Moderate	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are over 15% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are over 15% lower than the baseline scenario.
Minor	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are over 10% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are over 10% lower than the baseline scenario.
Negligible	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are over 5% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are over 5% lower than the baseline scenario.
Neutral	<b>Negative:</b> Relative CO <sub>2</sub> Emissions are less than 5% higher than the baseline scenario. <b>Positive:</b> Relative CO <sub>2</sub> Emissions are no higher, or, less than 5% lower, than the baseline scenario.

Table 19.1: Environmental Impacts

### Impact Prediction Confidence

- 19.45. It is also of value to attribute a level of confidence by which the predicted impact has been assessed. The criteria for these definitions are set out below:

Confidence Level	Description
High	The predicted impact is either certain i.e. a direct impact, or believed to be very likely to occur, based on reliable information or previous experience.
Low	The predicted impact and its levels are best estimates, generally derived from first principles of relevant theory and experience of the assessor. More information may be needed to improve confidence levels.

Table 19.2: Confidence Levels

## Significance of Effects

- 19.46. Effects that are deemed to be significant for the purposes of this assessment are those that are described as substantial, high, moderate or minor adverse or, substantial, high, moderate or minor beneficial. This goes beyond the standard EIA practice and represents a strict and conservative approach, which aligns with the magnitude of climate change as a global issue. Environmental impacts of a negligible or neutral magnitude are deemed non-significant.
- 19.47. The environmental impact assessment and allocation of significance is only applicable to the climate change assessment. The production of the energy and sustainability statements are to

support and inform the climate change chapter but are not themselves impact assessments. These technical papers are produced through the discussion of modelling outputs and information review and it is not possible to assign a magnitude nor significance criteria to the results.

### Operational Phase

19.48. The anticipated significance of effects are detailed in Table 19.4 below.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
The release of CO <sub>2</sub> emissions, associated with the use of fuel and electricity, that will contribute to the effects of climate change.	International	Negligible	Negligible	Low*
The release of CO <sub>2</sub> emissions, associated with the use of fuel and electricity, that will contribute to the effects of climate change.	Local	Minor Beneficial	Minor Beneficial	Low*

Table 19.4: Significance of Impact – Operation

\* Confidence level can only be assessed as low at this stage due to complex nature of the modelling that takes place. The predicted impact is a best estimate based on previous experience, with the assumption that it is the Applicant's intention to complete the project using high energy efficiency and sustainable design techniques.

19.49. As stated above, the assessment of climate change does not isolate singular receptors within the biosphere as climate change, being a global issue, has the potential to impact everything on Earth. Therefore, emissions must be allocated the receptor 'international' to reflect this, as well as considering the contribution to local emissions. The significance of the environmental impact on an international scale can only be negligible, due to scale of the project compared to the wider issue. None the less, it is important to include as the global commitment to reducing emissions is the motivation behind including climate change assessments in the context of planning.

19.50. The climate change assessment uses a baseline scenario for a development with equal parameters and output built in line with standard Building Regulations. Assuming an aspiration to use sustainable design and high efficiency building fabrics to considerably exceed emission targets set by Building Regulations, then it is likely that the Proposed Development will be assessed as beneficial compared to the baseline scenario i.e. will produce less emissions than

the baseline scenario. This will be ascertained more definitively by detailed modelling as the project design evolves.

## Mitigation

19.51. Mitigation measures that could be recommended to reduce the Proposed Development's carbon emissions may include:

- Improved fabric energy efficiency
- Deployment of micro renewable energy technologies
- Deployment of decentralized energy networks; and
- Contribution to carbon funds

19.52. The detailed design and evolution of the scheme is ongoing and as such the mitigation requirements will be determined through the full environmental assessment to reduce any effects where considered necessary. These mitigation measures will be confirmed in the ES.

## Further Work Required

19.53. The methodology for the ES put forward in this Scoping Paper details the work required to undertake the impact assessment, which can be summarized as:

- Identifying the baseline scenario for the Proposed Development;
- Model the estimated CO<sub>2</sub> emissions for the operational phase of the Proposed Development;
- Compare the predicted relative emissions of the Proposed Development to the baseline scenario in order to determine the significance of impact;
- The development of an energy statement that strategizes the use of renewable energy technologies to limit CO<sub>2</sub> emissions from the Proposed Development, taking into consideration the requirements outlined in Part L of the Building Regulations and Local Policy; and
- A review of the Proposed Development's sustainability through an evaluation of technical impact assessments and project design.

19.54. The impact assessment for climate change will not require any formal, external consultation however it is more than likely that discussions will be required with the Applicant, Warrington Borough Council and other authors of technical papers to compile the necessary data.

## Summary

19.55. This Scoping Paper has focused on how a baseline scenario will be developed to assess the operational CO<sub>2</sub> emissions from the Proposed Development against. As part of this, emissions arising from activities associated with construction or decommissioning phases have been scoped out of the assessment.

19.56. The chapter has also highlighted the importance in considering energy use, efficiency and sustainable design, as this directly impacts the emissions of the Proposed Development. As such, an energy and sustainability statement have been scoped in, which will be used to inform the climate change paper.

19.57. These will be produced as technical appendices to the ES climate change paper. The statements do not form ES chapters as an 'impact assessment' is not undertaken. These technical appendices are produced through the discussion of modelling outputs and information review. It is not possible to assign a magnitude nor significance criteria to these results. Having said which, these technical appendices provide pertinent data that can be used to inform the impact assessment in the climate change chapter.

19.58. The tables below confirm the details to be Scoped In and Scoped Out of the environmental assessment in respect of Climate Change.

### Scoped In

Environmental Issue	Reason for "scoping in"
<b>Climate Change</b> Construction: None. Operation: CO <sub>2</sub> Emissions (associated with electricity use and fossil fuels within buildings) Energy Efficiency (associated with building materials and the utilization of renewable technologies) Sustainable Design	<i>The requirement by EIA regulations for greenhouse gas emissions of developments to be assessed, and the requirements of local policy to ensure developments are energy efficient and contribute towards the sustainable development of the area.</i>

## Scoped Out

Environmental Issue	Reason for “scoping out”
<p><b>Climate Change</b></p> <p><i>Construction:</i></p> <p><i>Greenhouse Gas Emissions from:</i></p> <p><i>On site Machinery</i></p> <p><i>Plant Equipment</i></p> <p><i>Welfare Facilities</i></p> <p><i>Use of Vehicles</i></p> <p><i>Production of Building Materials</i></p> <p><i>Operation:</i></p> <p><i>Greenhouse gases other than CO<sub>2</sub>.</i></p>	<p><i>Carbon emissions associated with these activities are largely tied to actions beyond the applicants reasonable control. It would therefore not be possible to accurately quantify greenhouse gas emissions associated with these activities.</i></p> <p><i>These emissions are considered to be minimal in volume by comparison to the operational carbon dioxide emissions and have therefore not been considered significant.</i></p>

## 20. Conclusion

- 20.1. The redevelopment of this Site provides an opportunity to deliver a 'New Concept' MSA in a suitable location.
- 20.2. Whilst the proposals are considered to be appropriate for the Site, it is accepted that the Proposed Development will have an impact on the environment both in the context of the Site and the wider areas. These impacts can be both positive and negative. The aim of the Scoping Report is to set out the baseline information, where possible, and provide an initial assessment of environmental impacts, in order to be able to identify those impacts that are likely to be of significance, and therefore, need consideration through Environmental Assessment, as well as those that are not likely to be significant, and can be scoped out of the Environmental Assessment. The Scoping Report also sets out the methodology by which the significance of these impacts will be assessed.
- 20.3. The Scoping exercise shows that the primary focus for the environmental assessment is:
- traffic and transport matters and the associated impact in respect of noise and air quality
  - landscape and visual impact, given the nature and location of the Site and the development proposed
  - the impacts of the development on ecological habitats and species, given those present, and likely to be present on the Site, and the Site's location with regard to water features
  - agricultural land and soils, given the Site's existing agricultural use and as it is partially underlain by peat and its associated impacts in respect of ground, ecology and water resources
  - water resources, including drainage, flood risk and ground water
  - geology and ground conditions
  - the impact on heritage assets, given the Site's location in respect of assets
  - utilities, waste, climate change and socio economic
- 20.4. The scoping of matters associated with Human Health are addressed through the Geology and Ground Conditions; Air Quality, Odour and Dust; Noise and Vibration; Traffic and Transport (in respect of highway safety); and Socio Economic Chapters. Matters associated

with Climate are addressed within the Climate Change Chapter, as well as Water Resources; and Ecology and Nature Conservation. Matters associated with ground, agricultural land and soils and water resources as interlinked, and as such, each of these technical chapters are clear as to how the various likely environmental impacts and their effects will be assessed within the ES.

20.5. It is however considered that some impacts and their effects are not significant and as such can be scoped out of the Environmental Assessment. The justification for this is set out in each of the Technical Chapters (Chapters 7-19) and summarised in the tables below:

### Scope In

20.6. The areas to be included and therefore ‘scoped in’ to the ES are summarised in the table below. These matters will be the subject of further assessment:

### Scoped In

Environmental Issue	Reason for “scoping in”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>9. Introduction of contamination into ground through spillage/leakage during construction</li> <li>10. Impacts associated with unstable ground, slopes or excavations</li> <li>11. Impacts on construction workers from ground gas</li> <li>12. Impacts associated with the treatment of the Peat</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>7. Impact on ground from leakage from proposed fuel tanks and pipework or accidental spillage from vehicles</li> <li>8. Impact on site/adjacent sites from unstable ground or instability from treatment of Peat or changes to topography</li> <li>9. Impacts on future Users from ground gas.</li> </ul>	<p>The main risks to the site relate to introduction of contamination in both construction and operation; ground gas generated from either Peat or the offsite landfill and stability associated with the Peat or and changes to current site topography. Impacts associated with these risks are scoped in.</p>

Environmental Issue	Reason for “scoping in”
<p><b>Traffic and Transport</b></p> <p>Construction:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p> <p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p> <p>Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11</p>	<p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels at these locations as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p> <p>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</p>
<p><b>Traffic and Transport</b></p> <p>Operation:</p> <p>Driver delays and road traffic accidents at M62 Motorway J11 including at slip roads and on the J10 – J11 weaving section of M62 Motorway.</p> <p>Driver delays and road traffic accidents at A574 Birchwood Way / Daten Avenue Moss Gate Junction</p> <p>Bus user delays in the vicinity of the site.</p>	<p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p>

Environmental Issue	Reason for “scoping in”
<p>Pedestrians in terms of impacts on pedestrian delay and amenity, fear and intimidation and severance, at M62 Motorway J11 and along A574 Birchwood Way.</p> <p>Pedestrians in terms of pedestrian delay and amenity, fear and intimidation and severance on the site access arm from M62 Motorway J11</p>	<p><i>Because of the increased traffic levels at these locations as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</i></p> <p><i>Because of the increased traffic levels and pedestrian activity as a result of the Proposed Development.</i></p>
<p><b>Water Resources</b></p> <p>Construction:</p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p> <p>Operation:</p> <p>Impacts on water quality</p> <p>Impacts on water regime and flow (surface water and groundwater)</p> <p>Flood Risk</p>	<p><i>The proximity to the restored (future county park) Risley Landfill Site as well as the potential for the Proposed Development to cause disruption to groundwater flow pathways. In addition, the Proposed Development has the potential to result in releases of pollution materials and sediment into the water environment including the underlying principal aquifer, which is in a SPZ3.</i></p>
<p><b>LVIA</b></p> <p>Visual receptors as follows:</p> <ul style="list-style-type: none"> <li>- Dwellings</li> <li>- PRoVs in local open space</li> <li>- Landfill site</li> <li>- Non-designated access tracks</li> <li>- Elevated railway line</li> <li>- Places of work</li> <li>- Motorway</li> <li>- Roads</li> <li>- Holcroft SSSI</li> </ul>	<p><i>Construction</i></p> <p><i>Operational</i></p> <p>The significance of the effect will potentially be greater than negligible</p>

Environmental Issue		Reason for “scoping in”
identified within an area of 5km from the Site boundary (the Study area).		
Landscape receptors identified within the Study Area especially where there is a distinct change in character or type to the current landscape	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
Security and compound lighting	<i>Construction</i> <i>Operational</i>	The significance of the effect will potentially be greater than negligible
<p><b>Ecology</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>19) Hydrological connectivity to statutory and non-statutory Sites;</li> <li>20) Habitat loss and indirect lighting impacts to bats roosting, foraging and commuting habitats;</li> <li>21) Loss of badger sett creation habitat;</li> <li>22) Impacts to water vole foraging and burrowing habitat;</li> <li>23) Impact on grass snake basking habitat;</li> <li>24) Impacts on great crested newt terrestrial habitat;</li> <li>25) Impacts on barn owl foraging habitat;</li> <li>26) Impacts on wintering bird assemblages; and</li> <li>27) Impacts on breeding bird assemblages.</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>19) Indirect hydrological impacts to statutory and non-statutory Sites;</li> <li>20) Disturbance to bat roosting, foraging and commuting habitats;</li> <li>21) Disturbance to badgers within sett creation habitat;</li> <li>22) Disturbance to water vole within foraging and burrowing habitat</li> <li>23) Disturbance to reptile (grass snake) within basking habitat</li> <li>24) Disturbance to great crested newt within terrestrial</li> </ul>	<p><i>Information from the Preliminary Ecological appraisal including desk study data has shown that the receptors are likely to be impacted by the development, however further survey is required to assess the level of impact and inform appropriate mitigation.</i></p>	

Environmental Issue	Reason for “scoping in”
25) Disturbance to barn owl foraging habitat; 26) Disturbance of over-wintering birds; and 27) Impacts on breeding bird assemblages.	
<p><b>Socio Economic</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>○ Population and Demographics – the inward migration of people for job opportunities.</li> <li>○ Economic Growth –net increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the construction works as well as in the wider economy and impact on socio-economic challenges in the local economy.</li> <li>○ Retail and Leisure – Increased demand and expenditure in local shops, services, and facilities</li> <li>○ Community Infrastructure – Impact on existing community infrastructure</li> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>○ Population and Demographics – commuting and migration of people for jobs opportunities.</li> <li>○ Economic Growth – long term increase in GVA and additional expenditure locally.</li> <li>○ Employment – creation of jobs in the operation of the MSA and associated development and impact on socio-economic challenges in the local economy.</li> <li>○ Transport – Increase motorway vehicle use; increase public transport and active travel opportunities; reduce accident numbers and mortality rates</li> <li>○ Retail and Leisure – Increased demand and expenditure on local shops, services, and facilities</li> <li>○ Community Infrastructure – creation of new community infrastructure</li> </ul>	<p><i>The Proposed Development has the potential to have significant impact during both the construction and operation stages.</i></p>

Environmental Issue	Reason for “scoping in”
<ul style="list-style-type: none"> <li>○ Quality of Life – impact on health, security, crime, and education in respect to opportunities for skills training for residents and workers</li> <li>○ Image – the perception of the local area</li> <li>○ Wider socio-economic impacts</li> </ul>	
<p><b>Noise and Vibration</b></p> <p>Construction noise at existing sensitive receptors</p> <p>Operational phase noise at existing and proposed sensitive receptors</p>	<p><i>These effects will need to be assessed to determine the requirements for any mitigation measures as appropriate.</i></p>
<p><b>Air Quality, Odour and Dust</b></p> <p>Construction:</p> <p>Dust and PM10 emissions from construction phase activities (human receptors)</p> <p>NO2 and PM10 emissions from construction phase vehicles (human and ecological receptors)</p> <p>Odour associated with former landfill site</p> <p>Operation:</p> <p>NO2 and PM10 emissions from operational phase vehicles (human receptors)</p> <p>Odour associated with former landfill site</p>	<p><i>Construction:</i></p> <p><i>Representative human receptors located within 350m of where construction activities will take place,</i></p> <p><i>Representative human and ecological receptors potentially located within 200m of construction vehicle routes.</i></p> <p><i>Construction workers may be present at the Site for extended periods of time</i></p> <p><i>Operational:</i></p> <p><i>Representative human receptors located within 200m of where a change in vehicles could occur at Junction 11 due to re-routing.</i></p> <p><i>Potential for sensitive receptors to stay overnight at the proposed Hotel or use outdoor facilities</i></p>
<p><b>Cultural Heritage and Archaeology</b></p> <p>Construction:</p> <p>Direct impacts to buried archaeological remains remaining on site (recorded findspots having been removed)</p> <p>Operation:</p> <p>Potential impact to the setting of Grade II* Holcroft Hall</p>	<p><i>The potential for ground disturbance to remove/truncate buried archaeological remains</i></p> <p><i>The potential for changes within the setting of Holcroft Hall which could affect its significance</i></p>

Environmental Issue	Reason for “scoping in”
<p><b>Agricultural Land and Soils</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>7) Loss of agricultural land either to built development or change of land use to non-agricultural.</li> <li>8) Loss of soil for reuse; and</li> <li>9) Damage to soil resources resulting in impairment of their function, quality and resilience.</li> </ul> <p>Operation:</p> <p>There are not expected to be any impacts for operational phase.</p>	<p><i>Knowledge of the quality and loss of agricultural land is required to determine how the Proposed Development meets the requirements of NPPF 18 and the NPPG.</i></p> <p><i>The main environmental impacts in terms of soils and peat relate to the loss of and damage to these resources and their availability for reuse.</i></p>
<p><b>Utilities</b></p> <p>Construction:</p> <p><i>Provision of the Site with the required utility infrastructure</i></p>	<p><i>Provision of the Site with the required utility infrastructure will require temporary construction works which may have a minor adverse effect on nearby local existing sensitive receptors, including residential dwellings, the local highway network and the local utility network.</i></p>
<p><b>Waste</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>• Inert and recovery waste generation requiring treatment / disposal</li> <li>• Recycling material generation requiring separation and/or further processing</li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>• Recycling material generation requiring separation and/or further processing</li> <li>• Litter dispersal in immediate vicinity</li> </ul>	<p><i>Scoped in due to demand placed on regional infrastructure to handle and manage material, and the associated environmental impacts of the available waste management techniques utilised.</i></p>
<p><b>Climate Change</b></p> <p>Construction:</p> <p>None.</p> <p>Operation:</p> <p>CO2 Emissions (associated with electricity use and fossil fuels within buildings)</p>	<p><i>The requirement by EIA regulations for greenhouse gas emissions of developments to be assessed, and the requirements of local policy to ensure developments are energy efficient and contribute</i></p>

Environmental Issue	Reason for “scoping in”
Energy Efficiency (associated with building materials and the utilization of renewable technologies) Sustainable Design	<i>towards the sustainable development of the area.</i>

**Table 19.1: Matters Scoped into the ES**

### Scope Out

20.7. The issues that are not considered relevant to the Proposed Development or that are not considered to result in significant environmental effects as a result of the Proposed Development are to be ‘scoped out’ of any further assessment. These are summarised in the table below:

Environmental Issue	Reason for “scoping out”
<p><b>Ground Conditions</b></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>5. <i>Permanent loss of geological strata (Glacial Till or Helsby Sandstone)</i></li> <li>6. <i>Impact on construction workers from excavation into contaminated soils.</i></li> </ul> <p>Operation:</p> <ul style="list-style-type: none"> <li>3. <i>Impact on underground infrastructure/buildings from contaminated soils</i></li> </ul>	<p>There is unlikely to be significant loss of geological strata.</p> <p>Baseline data indicates that contamination is likely to be minimal and the risk to construction worker and buildings/underground infrastructure is low and as such is not likely to be significant.</p>
<p><b>Traffic and Transportation</b></p> <p>Construction:</p> <p>All other traffic related environmental impacts</p>	<p>Because the Proposed Development is not anticipated to materially increase traffic flows and/or travel movements at other locations.</p>
<p><b>Traffic and Transport</b></p> <p>Operation:</p> <p>All other traffic related environmental impacts</p>	<p>Because the Proposed Development is not anticipated to materially increase traffic</p>

Environmental Issue	Reason for “scoping out”
	flows and/or travel movements at other locations.
<p><b>LVIA</b> No Visual receptors within the Study Area will be scoped out at this stage</p>	It is unlikely that receptors over 5km from the Site boundary will be affected by the Proposed Development
<p><b>Ecology</b> Construction: 17) Woolston Eyes SSSI 18) Rixton Clay Pits SSSI 19) Covert Mounds LWS 20) Rixton Moss LWS Operation: 21) Woolston Eyes SSSI 22) Rixton Clay Pits SSSI 23) Covert Mounds LWS 24) Rixton Moss LWS</p>	Receptor is of a distance and or lack of ecological connectivity to Site. Once further surveys have been concluded it is likely that other receptors may be scoped out.
<p><b>Air Quality, Odour and Dust</b> Construction: Dust and PM10 emissions from construction phase activities (ecological receptors) Operation: NO2 and PM10 emissions from operational phase vehicles (ecological receptors)</p>	<p>Construction: No statutory designated ecological receptors located within 50m of where construction activities will take place,</p> <p>Operational: No significant change in vehicles is expected to occur on the M62 Motorway to the east and west of Junction 11</p>
<p><b>Cultural Heritage and Archaeology</b> Assessment of impacts to recorded findspots</p>	Findspots within the site having been removed
<p><b>Agricultural Land- Construction Phase</b> The long-term effects to farm business and farm viability as a result of the loss of agricultural land due to the Proposed Development (reduction in the area of farmable land available to the landholding).</p>	This issue is considered to be fully mitigated through the process of discussion and negotiation between the Applicant, the landowners and

Environmental Issue	Reason for “scoping out”
	<p>the agricultural tenant. Therefore, the assessment of potential impacts to farm business will not be included in the impact assessment presented in the ES.</p>
<p><b>Agricultural Land - Construction Phase</b> The short-term effects to farm business and farm viability as a result of land severance or access issues due to the Proposed Development (restrictions to normal farming practices).</p>	<p>The Site comprises a single entire agricultural field, and a field remnant bordered by non-agricultural land, all of which would be permanently removed from agricultural use on commencement of construction. Therefore, there would be no severance of farmable areas or farmland access issues as a consequence of the Proposed Development and these potential impacts will not be included in the impact assessment presented in the ES.</p>
<p><b>Agricultural Land - Operational phase</b></p>	<p>After construction, the soils remaining on Site would most likely only experience very low levels of disturbance due to works connected with the maintenance of landscaped areas. The scale of this disturbance would be lower than is likely currently experienced within the Site due to normal agricultural activities, it is therefore considered that the low scale works which would occur after completion would result in no loss of or damage to soils or impairment of function.</p>

Environmental Issue	Reason for “scoping out”
<p><b>Utilities</b></p> <p>Operation:</p> <p>There are not expected to be any significant impacts for operational phase</p>	<p>Once in place operational phase impacts from utilities are considered unlikely and will not be considered further within the ES. Any maintenance works will be occasional and typical of any built environment.</p>
<p><b>Climate Change</b></p> <p>Construction:</p> <p>Greenhouse Gas Emissions from:</p> <p>On site Machinery</p> <p>Plant Equipment</p> <p>Welfare Facilities</p> <p>Use of Vehicles</p> <p>Production of Building Materials</p> <p>Operation:</p> <p>Greenhouse gases other than CO2.</p>	<p>Carbon emissions associated with these activities are largely tied to actions beyond the applicants reasonable control. It would therefore not be possible to accurately quantify greenhouse gas emissions associated with these activities. These emissions are considered to be minimal in volume by comparison to the operational carbon dioxide emissions and have therefore not been considered significant.</p>

**Table 19.2: Matters Scoped out of the ES**

20.8. Although technical areas are described in this report under separate headings, the final ES will pay close attention to the inter-relationship of the various factors in order to assemble a holistic picture of the likely impacts and mitigation measures. It should be noted that the EIA is an interactive process, enabling matters not recognised at the preliminary stage to be addressed in the final ES. Further assessment is on-going regarding the technical areas scoped into the Environmental Assessment, and where significant environmental impacts are identified, appropriate mitigation will be proposed to address the significance of impact accordingly.

20.9. The structure of the final ES will therefore be as follows:

**Part I Report:**

- Introduction

- Project Description
- The Need for Development
- Alternative Development Options
- Plans and Policies
- Environmental Assessment Methodology and Approach
- Summary of Environmental Impacts
- Key Mitigation Measures
- Interaction of Effects and Cumulative Impact
- Conclusions
- Reference List
- Appendices

**Part 2 – Technical Papers (each with their own technical appendices):**

- Geology and Ground Conditions
- Traffic and Transportation
- Water Resources
- Landscape and Visual Impact
- Ecology and Nature Conservation
- Socio Economic
- Noise and Vibration
- Air Quality and Dust
- Cultural Heritage and Archaeology
- Agricultural Land and Soils
- Utilities
- Waste
- Climate Change

Each Technical Paper will include the following subsections:

- Introduction
- Documents Consulted
- Consultations
- Methodology and Approach
- Baseline Information

- Alternatives Considered
- Potential Environmental Impacts
- Proposed Mitigation
- Potential Residual Effects
- Additive Impacts (Cumulative Impacts and their Effects)
- Conclusion
- Reference List
- Appendices

#### **Non-Technical Summary**

- Separately bound report

20.10. The consideration and ranking of the issues in the Scoping Report is preliminary. The scoping process will be on-going with the Council, key consultees and the public up until the finalization of the final ES, and will be reported through the ES. The Council and consultees are therefore invited to comment on the intended scope of the ES and highlight any potential matters or alternative emphasis.

## ES Scoping Appendices

# **ES Scoping Appendix I – Glossary and Abbreviations**

## Abbreviations

### A a

AADT	Annual Average Daily Traffic
AAWT	Average Annual Weekday Traffic
ABI	Annual Business Inquiry Data
ACM	Asbestos Containing Materials
ADF	Average Daylight Factor
AGL	Above Ground Level. A measurement of altitude above a specific land mass.
AOD	Above Ordnance Datum
APSH	Annual Probable Sunlight Hours
APZ	Archaeological Priority Zone
AQAP	Air Quality Action Plan
AQMA(s)	Air Quality Management Area(s)
AQS	Air Quality Strategy
AVR	Accurate Visual Representations

### B b

BAME	Black, Asian and Minority Ethnic
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BMT	BMT Fluid Mechanics Limited. Wind Microclimate specialist consultant
BRMC	Biodiversity Recording and Monitoring Centre
BS	British Standard
BSI	British Standard Institute

BT	British Telecom
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
BUG	Bicycle User Groups

### C c

CCTV	Closed Circuit Television
CEMP	Construction Environmental Management Plan
CFD	Computational Fluid Dynamics
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Land Exposure Assessment
CLP	Construction Logistics Plan
CLR	Contaminated Land Report
CMS	Construction Management System
CMSC	Construction Management System Contractor
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
COCP	Code of Construction Practice
COP	Code of Practice
CPZ	Controlled Parking Zone
CRN	Calculation of Rail Noise
CRTN	Calculation of Road Traffic Noise
CS	Core Strategy
CWS	County Wildlife Site

## D d

dB	Decibel
dBA	The unit of noise measurement (measured on a logarithmic scale), which expresses the loudness in terms of decibel (dB) scale and the frequency factor
DCLG/CLG	Department for Communities and Local Government
DDA	Disability Discrimination Act
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of Environment, Transport and the Regions (now Department for Transport)
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DoE	Department of Environment
DoT	Department of Transport
DPD	Development Plan Document

## E e

EA	Environment Agency
EAPPG	Environment Agency Pollution Prevention Guidelines
EDBP	Economic Development Business Plan
EH	English Heritage
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMSE	Environmental Management Act 1990
Environmental Management	

StrategyPA	
EN	English Nature
EPS	European Protected Species
EQS	Environmental Quality Standard
ES	Environmental Statement
EU	European Union

## F f

FRA	Flood Risk Assessment
FE	Form of Entry – cohorts of 30 children
FTE (Jobs)	Full Time Equivalent (Jobs)

## G g

GDP	Gross Domestic Product. A measure of the national economic performance.
GEA	Gross External Area
GIA	Gross Internal Area
GP	General Practitioner
GQA	General Quality Assessments
GVA	Gross Value Added

## H h

Ha	Hectare
HDV(s)	Heavy Duty Vehicle(s)
HER	Historic Environment Record
HGV(s)	Heavy Goods Vehicle(s)
HSMS	Health and Safety Management System
HVAC	Heating, Ventilation, Air Conditioning
HWR	Hazardous Waste Regulations 2005
Hz / kHz	Hertz / Kilohertz

**I i**

ICE	Institute of Civil Engineers
IDP	Infrastructure Delivery Plan
IEA	Institute of Environmental Assessment
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
IHT	Institute of Highways and transportation
IMD	Index of Multiple Deprivation

**J j**

JMP	Inclusive Access Consultants
JSA	Job Seekers Allowance
JSNA	Joint Strategic Needs Assessment

**K k**

Kg	Kilogram
KS1	Key Stage 1 – Primary education between years 1-2
KS2	Key Stage 2 – Primary education between years 3-6
Kw	Kilowatt

**L l**

LA10	The noise level exceeded for 10% of the measurement time
LAeqT	Equivalent continuous sound level
LAQM	Local Air Quality

	Management
LDF	Local Development Framework
LDV	Light Duty Vehicles
LEZ	Low Emission Zone
LGV	Light Goods Vehicle
LNR	Local Nature Reserve
LoWR	List of Waste Regulations
LPA	Local Planning Authority
LSOAs	Lower Super Output Areas
LW	Long Wave

**M m**

m	Metre
m <sup>2</sup>	Square metres
m <sup>3</sup>	Cubic metres
MAGIC	Multi-Agency Geographic Information for the Countryside
mm	millimetres
MMP	Materials Management Plan
MNL	Music Noise Level
MOL	Metropolitan Open Land
m/s	Metres per second

**N n**

NAQS	National Air Quality Strategy
NE	Natural England
NEC	Noise Exposure Category
NGR	National Grid Reference
NHBC	National House Building Council
NHS	National Health Service
NIA	Net Internal Area
NMR	National Monuments Record
NNR	National Nature Reserve
No <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxide
NPPF	National Planning Policy

	Framework
NPS	National Planning Statement (NN NPS National Networks National Planning Statement)
NSCA	National Society for Clean Air
NTS	Non-Technical Summary

## O o

ONS	Office of National Statistics
OS	Ordnance Survey

## P p

PAH(s)	Polycyclic Aromatic Hydrocarbons
PAL	Published Admissions Limit
PANs	Published Admissions Numbers
PCBs	Polychlorinated Biphenyls
PCT	Primary Care Trust
PERS	Pedestrian Environment Review System
PIA	Personal Injury Accidents
PPE	Personal Protective Equipment
PPG	Planning Policy Guidance
PPPL	Primary Place Planning Location
PPS	Planning Policy Statement
PTAL	Public Transport Accessibility Level
PV	Photovoltaics

## Q q


## R r

R&A	Review and Assessment
RC	Reinforced Concrete
RF	Radio Frequency
RPG	Registered Park and Garden

## S s

SAC	Special Areas of Conservation
SAM	Scheduled Ancient Monument
SAP	Species Action Plan
SFRA	Strategic Flood Risk Assessment
SHMA	Strategic Housing Market Assessment
SIC	Standard Industrial Classification
SIL	Strategic Industrial Land
SINC	Site of Importance for Nature Conservation
SMR	Sites and Monuments Records
SNCI	Sites of Nature Conservation Importance
SO <sub>2</sub>	Sulphur dioxide
SOC	Standard Occupational Classification
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Urban Drainage System
SVOCs	Semi Volatile Organic Compounds
SWMP	Site Waste Management Plan

**T t**

T	Total Annual Probable Sunlight Hours (APSH)
TA	Transport Assessment
TfL	Transport for London
TG	Technical Guidance
TPH	Total Petroleum Hydrocarbons
TPO	Tree Preservation Order

**U u**

UDP	Unitary Development Plan
UK	United Kingdom
UK BAP	United Kingdom Biodiversity Action Plan
USA	Updating and Screening Assessment
UXO	Unexploded Ordnance

**V v**

VCM	Volatile Correction Model
VOCs	Volatile Organic Compounds
VSC	Vertical Sky Component

**W w**

WFD	Water Framework Directive
WHO	World Health Organisation
WM	Winter Months Component of APSH
WRA	Water Resources Act 1991
WW	First World War
WWII	Second World War

**X x**


**Y y**


**Z z**


## Glossary of Terms

### A a

**Adoption** - the final confirmation of a plan as a statutory document by the local planning authority.

**Affordable Housing** - low cost housing for sale or rent, often from a housing association, to meet the needs of local people who cannot afford accommodation through the open or low cost market, or subsidised housing.

**Aged or veteran tree:** A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally.

**Agricultural Dwelling** - a dwelling which is subject to a condition or legal agreement that it shall only be occupied by someone who is employed or was last employed solely or mainly in agriculture, forestry or other appropriate rural employment.

**Air Quality Management Areas:** Areas designated by local authorities because they are not likely to achieve national air quality objectives by the relevant deadlines.

**Alternative option/solution.** Alternative methods of achieving the objectives of the project. They may include: alternative locations that are suitable; or different approaches in terms of design, manufacturing, transportation, energy, or supply of materials etc.

**Ambient:** Background levels

**Amenity** - the pleasant or normally satisfactory aspects of a location which contribute to its overall character and the enjoyment of residents or visitors.

**Anemometer.** Measures the wind speed and transmits wind speed data to the controller.

**Ancient woodland:** An area that has been wooded continuously since at least 1600 AD.

**Ancillary Use** - a subsidiary use connected to the main use of a building or piece of land.

**AOD:** Above Ordnance Datum, the height above acknowledged sea level.

**Appeal** - the process whereby an applicant can challenge an adverse decision on an application by means of written representations, an informal hearing or formal inquiry proceedings. Appeals can also be made against the failure of the planning authority to issue a decision, against conditions attached to a permission and against the issue of an enforcement notice.

**Aquifer:** A water bearing bed of strata, either by virtue of its porosity or because it is pervious.

**Archaeological interest:** There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

**Archaeological watching brief:** Attendance on site of a suitable qualified or experienced archaeologist during the course of ground excavations, usually working to a brief agreed with the Local planning Authority.

**Area of Outstanding Natural Beauty** - area designated by the Countryside Agency or the Countryside Council for Wales where the primary purpose is the conservation and enhancement of natural beauty including flora, fauna, geology and landscape.

**Area of Special Control of Advertisements** - an area which is specifically defined by the local planning authority because they consider its scenic, historical, architectural or cultural features are so significant that a stricter degree of advertisement control is justified in order to conserve visual amenity within that area. Such areas can only be designated with the approval of the Secretary of State.

**Article 4 Direction** - an order made by the Secretary of State, the National Assembly for Wales or the local planning authority, requiring a planning application to be made where normally permitted development rights would apply.

**Article 14 Direction** - issued by the Secretary of State or the National Assembly for Wales to restrict the grant of planning permission by a local planning authority, either indefinitely or for a specified period, normally to give the Department time to decide whether to call in the application.

**Assessment:** An umbrella term for description, analysis and evaluation.

### B b

**Background Noise:** The background noise level is the underlying level of noise present at a particular location for the majority (usually 90%) of a period of time. As such it excludes any short duration noises, such as individual passing cars (but not continuous traffic), dogs barking or passersby. Sources of background noise typically include such things as wind noise, traffic and continuously operating machinery (e.g. air conditioning or generators).

**Back-land** - land which is behind existing development with no, or very limited, road frontage.

**Baseline conditions.** The conditions that would pertain in the absence of the proposed project at the time that the project would be constructed/operated/decommissioned. The definition of these baseline conditions should be informed by changes arising from other causes (e.g. other consented developments).

**BPEO (Best Possible Environmental Option)** - The option that provides the most benefits or the least damage for the environment, as a whole, at acceptable cost, in the long term as well as the short term. (defined in the 12th report of the Royal Commission on Environmental Pollution)

**Best and most versatile agricultural land:** Land in grades 1, 2 and 3a of the Agricultural Land Classification.

**Betterment** - the amount by which the value of land is increased by development or by the grant of planning permission, or because of the development of neighbouring land.

**Bio-diversity** - a measure of the number and range of species and their relative abundance in a community. / The biological diversity of the earth's living resources. The total range of variability among systems and organisms at all levels of organisation and the structural and functional relationships within and between these different levels.

**Bio-diversity Action Plan (BAP)** - the means by which the UK government commitment to the Convention on Biological Diversity at Rio de Janeiro (1992) is to be met.

**Birds and Habitats Directives:** European Directives to conserve natural habitats and wild fauna and flora.

**Borehole:** A deep hole bored into the ground as part of intrusive investigations typically to test depth and quality of ground water.

**Brown-field Site** - land which has been previously developed, excluding mineral workings or other temporary uses.

**Bronze Age:** Prehistoric time period from 2,000 to 700 BC.

**Buffer zone.** An area (human-made or natural) that helps to protect a habitat from damage, disturbance or pollution. It is managed to protect the 'integrity' of the valued habitat and/or the conservation status of species that it supports

**Building Preservation Order** - a notice under Section 3 of the Planning (Listed Buildings and Conservation Areas) Act 1990 to protect buildings of special architectural or historic interest from demolition or alterations that would affect their interest.

## C c

**Cadw** - government agency supporting the preservation, conservation, enhancement, interpretation and appreciation of historic buildings and monuments in Wales.

**Called-in Application** - a planning application referred to the Secretary of State or the National Assembly for Wales for determination by virtue of the powers contained in section 77 of the Town and Country Planning Act 1990.

**Change of Use** - more correctly referred to as a 'material change of use'. A change in the use of land or buildings that is of significance for planning purposes, often requiring planning permission.

**Circular** - guidance, including policy, issued by a government department usually, but not always, in support of legislation.

**Commercial (activity):** Activities involved in buying and selling things, such as office workplaces. Commercial sites are not often open to the public.

**Commitments** - All land with current planning permission or allocated in local plans.

**Community Forests** - A joint initiative between the Countryside Agency and the Forestry Commission to promote the creation, regeneration of well-wooded landscapes around major towns and cities.

**Community Infrastructure Levy:** A levy allowing local authorities to raise funds from owners or developers of land undertaking new building projects in their area.

**Community Right to Build Order:** An Order made by the local planning authority (under the Town and Country Planning Act 1990) that grants planning permission for a site-specific development proposal or classes of development.

**Competent person (to prepare site investigation information):** A person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation.

**Comparison Goods** - 'non perishable' goods for retail sale which are often stocked in a wide range of sizes, styles, colours and qualities, including furniture, carpets, televisions etc.

**Competent Authority.** The authority which determines the application for a consent, permission, license or other authorisation to proceed with a development. It is the authority that must consider the environmental information before granting any kind of authorisation. For example, for projects requiring planning permission this will usually be the Local Planning Authority.

**Compulsory Purchase Orders (CPOs)** - notice issued by the government or a local authority to acquire land or buildings for public interest purposes.

**Conditions** - stipulations attached to a planning permission to limit or direct the manner in which a development is carried out.

**Contaminated Land** - land which has been polluted or harmed in some way rendering it unfit for safe development and most practical uses.

**Controlled Parking Zone (CPZ)** - an area in which all kerbside space is controlled by either waiting or loading restrictions or by designated parking spaces.

**Conservation (for heritage policy):** The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.

**Conservation Area** - an area given statutory protection under the Planning Acts, in order to preserve and enhance its character and townscape.

**Conservation Area Consent** - consent required from the local planning authority before demolishing an unlisted building in a conservation area.

**Contamination:** Contamination is the addition, or the result of addition, or presence of a material or materials to, or in, another substance to such degree as to render it unfit for its intended purpose.

**Consultation** - procedures for assessing public opinion about a plan or major development proposal, or in the case of a planning application, the means of obtaining the views of affected neighbours or others with an interest in the proposal.

**Consultation bodies (consultees).** Any body specified which has been consulted in respect of the Environmental Statement. See **Statutory Consultee** below.

**Convenience Shop** - supermarket, grocers, newsagents, confectioners, tobacconists, off-licences or other shops selling goods which tend to be purchased regularly.

**Conversions** - the sub-division of residential properties into bedsits, self-contained flats or maisonettes.

**Countryside Agency** - organisation responsible for advising government and taking action on issues affecting the social, economic and environmental well-being of the English countryside.

**Countryside Council for Wales (CCW)** - government agency promoting the interests and well-being of rural Wales.

**CO<sub>2</sub>:** (Carbon Dioxide) Contributes about 60% of the potential global warming effect of man made emissions of greenhouse gases. Although this gas is naturally emitted by living organisms, these emissions are offset by the uptake of carbon dioxide by plants during photosynthesis; they

therefore tend to have no effect on atmospheric concentrations. The burning of fossil fuels, however, releases carbon dioxide fixed by plants many millions of years ago and thus increases its concentration in the atmosphere.

**Cumulative effects / impacts:** The summation of effects / impacts that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.

**Cumulative landscape effects:** There is the potential for cumulative landscape effects where there would be:

- An incremental change to the fabric of the landscape, as the result of two or more operational, permitted and/or proposed wind farms.
- An incremental change in the character and/or quality of the landscape as a result of the simultaneous, successive and/or sequential visibility of two or more operational, permitted and/or proposed wind farms from various locations.

**Cumulative visual effects:** can occur where there would be:

- Simultaneous visibility of two or more operational, permitted and/or proposed wind farms at a viewpoint location, in the same sector of the view (within 45degrees).
- Successive visibility of two or more operational, permitted and/or proposed wind farms at a viewpoint location, where each wind farm is in a different sector of the view (>45 percent apart). Sequential visibility of two more operational, permitted and/or proposed wind farms along a linear route.

**Cumulative ZVI:** Areas within which a number of proposed developments may have an influence or effect on visual amenity.

## D d

**Decentralised energy:** Local renewable energy and local low-carbon energy usually but not always on a relatively small scale encompassing a diverse range of technologies.

**Decommissioning:** A process where the site is made safe by removing hazards.

**Deemed Consent** - this allows the display of certain "specified classes" of advertisement without first having to make an application to the local planning authority. Under the Control of Advertisements Regulations there are 14 Classes, all of which are subject to strict conditions and limitations.

**Density** - in the case of residential development, a measurement of either the number of habitable rooms per hectare or the number of dwellings per hectare.

**Departure** - a proposed development which is not in accordance with a local plan but which due to exceptional circumstances the local planning authority proposes to accept - after due publicity and possible referral to the Secretary of State or the National Assembly for Wales.

**Designated heritage asset:** A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.

**Derelict Land** - Land so damaged by industrial or other development that it is incapable of beneficial use without treatment.

**Detailed/Full Application** - The most common type of planning application is one that seeks full or detailed planning permission. It should contain all the information needed for the LPA to reach its decision, but the LPA may seek further information.

**Determination** - local planning authority process to decide whether a proposed development requires planning permission.

**Developer:** The applicant for authorisation for a private project or the public authority which initiates a project.

**Development** - the carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or land.

**Development Area** - a priority area for environmental, social or economic regeneration or a combination of these.

**Development Brief** - document providing detailed information to guide developers on the type of development, design and layout constraints and other requirements for a particular, usually substantial, site.

**Development Consent:** The decision of the Competent Authority or Authorities which entitles the Developer to proceed with the project.

**Development Control** - the process whereby a local planning authority decides whether a planning application meets the requirements of planning policy, particularly as set out in development plans.

**Development Plan** - document (a structure or local plan) that sets out in writing and/or in maps and diagrams a local planning authority's policies and proposals for the development and use of land and buildings in the authority's area.

**Directive:** European Commission (EC) Directives impose legal obligations on European Member States. They are binding as to the results to be achieved, but allow individual states the right to decide the form and methods used to achieve the results.

**Discontinuance Notice** - notice served by a local planning authority requiring the discontinuance of the display of any advertisement, or the use of a site for the display of an advertisement, which has the benefit of deemed consent under the Control of Advertisements Regulations. Action to serve a discontinuance notice may only be taken if the planning authority is satisfied it is necessary to do so to remedy a substantial injury to the

amenity of the locality or a danger to members of the public.

**Displacement:** The extent to which the benefits of a project are offset by reductions of output or employment elsewhere.

## E e

**EA:** Environment Agency

**Economic development:** Development, including those within the B Use Classes, public and community uses and main town centre uses (but excluding housing development).

**Ecology:** The study of living organisms in relation to their surroundings.

**Ecological networks:** These link sites of biodiversity importance.

**Ecosystem services:** The benefits people obtain from ecosystems such as, food water, flood and disease control and recreation.

**Effects/Impacts:** A predicted change in the environmental baseline as a result of the proposed development. Effects can be positive or negative.

**Effluent:** A fluid discharged or emitted to the external environment.

**Employment uses:** Any undertaking or use of land that provides paid employment.

**Employment density:** Average floor space per person in a given building

**EN:** English Nature

**Enforcement** - procedures by a local planning authority to ensure that the terms and conditions of a planning decision are carried out, or that development carried out without planning permission is brought under control.

**Enforcement Notice** - notice requiring the discontinuance of an unauthorised use and/or the removal of buildings, including restoration of land, where development has been begun without permission or in breach of a condition.

**Edge-of-centre** - For retail purposes, a location that is well connected and up to 300 metres of the primary shopping area. For all other main town centre uses, a location within 300 metres of a town centre boundary. For office development, this includes locations outside the town centre but within 500 metres of a public transport interchange. In determining whether a site falls within the definition of edge of centre, account should be taken of local circumstances.

**Emission:** A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.

**English Heritage (Historic Buildings and Monuments Commission for England)** - a national body funded by the government to promote and give advice on building conservation matters.

**English Nature** - a national body funded by the government to promote and give advice on the conservation of England's wildlife and natural features.

**Environmental Appraisal** - the process of weighing all the policies in a development plan for their global, national and local implications.

**Environmental Baseline:** The existing (pre-development) context of a study area.

**Environmental Capacity:** The ability of the environment to accommodate a particular activity or rate of activity without unacceptable change.

**Environmental Impact Assessment (EIA)** - under the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, proposers of certain scheduled developments are required to submit a planning application with an accompanying environmental statement, evaluating the likely environmental impacts of the development, together with an assessment of how the severity of the impacts could be reduced. / This is an assessment carried out under the EIA Regulations. It is the whole process of gathering environmental information; describing a development or other project; predicting and describing the environmental effects of the project; defining ways of avoiding, reducing or compensating for these effects; consulting the general public and specific bodies with responsibilities for the environment; and ensuring that measures are prescribed to avoid, reduce or compensate for environmental effects.

**Environmental Information** - The information that must be taken into account by the decision maker (the Competent Authority) before granting any kind of authorisation in any case where the EIA process applies. It includes the Environmental Statement, including any further information, any representations made by any body required by the Regulations to be invited to make representations, and any representations duly made by any other person about the environmental effects of the development.

**Environmental Statement (ES)** - The report on the assessment carried out under the EIA Regulations, on the environmental effects of a development; normally submitted with the planning application.

**Environmental Studies:** The surveys and investigations carried out by the developer and the EIA team in order to prepare the Environmental Information for submission to the competent authority.

**EIA Regulations** - The UK statutory instruments that are designed to meet the requirements of Council Directive

85/337/EEC on the Assessment of the effects of certain public and private projects on the environment, as amended by Council Directive 97/11/EC, 2003/35/EC and 2009/31/EC.

**EIA Team:** The team which carries out the environmental studies and prepares the environmental information for submission to the competent authority.

**Established use** - a use which does not conform to a plan but against which enforcement proceedings cannot be taken, often because of the length of time a use has been in operation.

**Established Use Certificate** - these were issued by a planning authority before July 1992 where it could be shown that a use of land or buildings had existed since before 1964. It gave immunity from enforcement action. Since July 1992 these have been replaced by Lawful Development Certificates.

**European Spatial Development Perspective (ESDP)** - non-binding regional structure plan for the European Union.

**Examination in Public (EIP)** - consideration of public views on a draft structure plan or proposed changes to it, held before an independent inspector.

**Exclusion List:** A list of threshold and criteria for specified categories of projects defining those projects for which EIA is not required because they are considered to be unlikely to have significant effects on the environment.

**Express Consent** - this is needed to display an advertisement, which does not benefit from deemed consent under the Town and Country Planning (Control of Advertisements Regulations).

## F f

**Fauna:** Animal Life.

**Floodplain:** Land adjacent to a watercourse over which water flows, or would flow but for defences in place, in times of flood.

**Flora:** The plant life of a particular geographical area.

**Footprint:** perimeter of building's ground floor plan.

**Frequency:** The frequency of a sound is equivalent to its pitch in musical terms. The units of frequency are Hertz (Hz), which represents the number of cycles (vibrations) per second.

**Fugitive dust emissions:** Dust emissions escaping from a construction site.

## G g

**General Permitted Development Order (GPDO)** - the Town and Country Planning (General Permitted Development) Order 1995 grants rights (known as permitted development rights) to carry out certain limited forms of development without the need to make an application for planning permission.

**Green Belt** - specially designated area of countryside protected from most forms of development in order to stop urban sprawl and the coalescence of settlements, preserve the character of existing settlements and encourage development to locate within existing built-up areas.

**Green infrastructure:** A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

**Green-field Site** - an area not previously used for built development.

**Grid (also “National Grid” and “Power Grid”)**. A common term referring to the electricity transmission and distribution system.

**Gross:** The sum total without reduction.

**Gross Value Added** - A productivity metric that measures the difference between output and intermediate consumption. Gross value added provides a pound value for the amount of goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

**Ground Investigation (GI)**. An intrusive sub-surface investigation by mechanised plant or hand held tools. Designed to characterise soil or rock by sample recovery or exposure of subsurface strata; thus enabling the correct and accurate design of foundations, slopes or earthworks.

**Ground Water:** Water associated with soil or rocks below the ground surface but is usually taken to mean water in the saturated zone.

## H h

**ha:** 1 hectare = 10,000 sq. metres = 2.47 acres.

**Horizon:** A time - plane recognisable in rocks by some characteristic feature such as flora, fauna or lithology.

**Habitable Room** - all living rooms and bedrooms, but not kitchens, bathrooms, WCs or circulation space, are normally regarded as habitable for the purposes of density calculations.

**Habitat** - A place in which a particular plant or animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together.

**Heritage asset:** A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

**Heritage Coast:** Areas of undeveloped coastline which are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors.

**Historic environment:** All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.

**Historic environment record:** Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.

**Hoarding:** A temporary board fence set up on the perimeter of a building site.

**Hydraulic piling:** A piling mechanism used for pressing in and pulling out sheet piles with minimized noise and vibration generation.

**Hydrogeology:** The study of the geological factors relating to the Earth's water.

**Hydrology:** The study of the distribution, conservation, use of the water of the earth and its atmosphere.

**Hz:** Sound frequency refers to how quickly the air vibrates, or how close the sound waves are to each other (in cycles per second, or Hertz; Hz).

## I i

**Impact** - The way in which a receptor or natural resource is affected by a proposed development.

**Improved grassland:** Grassland that has been modified to increase its agricultural value, often using ploughing and re-seeding, land drainage and treatment with fertilisers and herbicides.

**Inclusive design:** Designing the built environment, including buildings and their surrounding spaces, to ensure that they can be accessed and used by everyone.

**Inert waste:** Wastes that do not undergo any significant physical, chemical or biological transformation.

**In-situ preservation:** Preserving archaeological remains in the natural, original or appropriate position.

**Invertebrate:** An animal lacking a backbone and internal skeleton.

**Indirect impacts:** Impacts on the environment, which are not a direct result of the Development but are often produced away from it or as a result of a complex pathway. Sometimes referred to as secondary impacts.

**Infrastructure** - permanent resources serving society's needs, including roads, sewers, schools, hospitals, railways, communication networks etc.

**Integrated Transport Strategy** - the integration of land-use and transportation planning to allow transport provision and the demand for travel to be planned and managed together, balancing the use of different modes of transport to encourage easy transfer between them and reduced reliance on the private car.

**Iterative process** - A process repeated until the best solution has been found. In the context of EIA, it can be understood as the process of assessment and reassessment until the most appropriate development is achieved.

## J j

## K k

**kWh:** kilowatt hour = 1 unit of electricity.

## L l

**Land Compensation** - concerns the assessment of compensation where land, or some other interest in land, is being acquired, either compulsorily, or by agreement, by an authority possessing compulsory purchase powers.

**Landscape:** Landscape results from the way that different aspects of our environment (physical, social, aesthetic and perceptual) interact together and are perceived by us:

- Physical elements- e.g. geology, landform, soils, flora and fauna.
- Social elements- e.g. land use, enclosure patterns, and the patterns, form and scale of settlements and other built development.
- Aesthetic factors- e.g. colour, form, visual texture and pattern, sounds, smells and touch.
- Perceptual factors- e.g. memories, associations, stimuli and preferences.

**LBAP:** Local Biodiversity Action Plan.

**Landscape character:** the distinct and recognisable pattern of elements that occur consistently in a particular type of landscape, and how these are perceived by people. It reflects particular combinations of geology, landform,

soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.

**Landscape character type:** A landscape type will have broadly similar patterns of geology, landform, soils, vegetation, land use, settlement and field pattern discernible in maps and field survey records.

**Landscape effects:** Change in the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be negative or positive.

**Landscape value:** is concerned with the relative value that is attached to different landscapes. In a policy context the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by different communities of interest for many different reasons without any formal designation, recognising, for example, perceptual aspects such as scenic beauty, tranquility or wildness; special cultural associations; the influence and presence of other conservation interests; or the existence of a consensus about importance, either nationally or locally.

**Lawful Development Certificate** - a procedure by which existing or proposed uses and other forms of development can be certified as lawful for planning purposes. An application has to be made to the local planning authority and there is a right of appeal against their decision.

**Listed Building** - building or other structure of special architectural or historic interest included on a statutory list and assigned a grade (I, II\* or II).

**Listed Building Consent** - a permission required for the alteration or demolition of a listed building.

**Local Development Order:** An Order made by a local planning authority (under the Town and Country Planning Act 1990) that grants planning permission for a specific development proposal or classes of development.

**Local Enterprise Partnership:** A body, designated by the Secretary of State for Communities and Local Government, established for the purpose of creating or improving the conditions for economic growth in an area.

**Local Nature Partnership:** A body, designated by the Secretary of State for Environment, Food and Rural Affairs, established for the purpose of protecting and improving the natural environment in an area and the benefits derived from it.

**Local planning authority:** The public authority whose duty it is to carry out specific planning functions for a particular area. All references to local planning authority apply to the district council, London borough council, county council, Broads Authority, National Park Authority and the Greater London Authority, to the extent appropriate to their responsibilities.

**Local Nature Reserve (LNR)** - area designated under the National Parks and Access to the Countryside Act 1949 as being of particular importance to nature conservation and where public understanding of nature conservation issues is encouraged.

**Local Plan** - statutory development plan prepared by a local planning authority setting out detailed policies for environmental protection and development.

**Local Planning Authority** - the local authority or council that is empowered by law to exercise planning functions. This is normally the local borough or district council, but in National Parks and some other areas there is a different arrangement.

## M m

**Made Ground:** Soils or other material that has been deposited by man rather than natural processes, for example to make up ground levels.

**Magnitude:** A combination of the scale, extent and duration of an effect.

**Mandatory List:** A list of thresholds and criteria for specified categories of projects defining those projects for which EIA is always required because they are considered to be likely to have significant effects on the environment.

**Material Consideration** - a matter which should be taken into account in deciding on a planning application or on an appeal against a planning decision.

**Medieval:** Historic time period from AD1066 – AD1485.

**Megawatt (MW)** - A million watts.

**Megawatt-hour (MWh)** - One million watt-hours. Equal to one thousand kilowatt-hours (kWh) or 'units' of electricity.

**Metropolitan** - constituting a large urban area, usually including a city, its suburbs and outlying areas.

**Micro climate:** The climate of a small localised area.

**Mineral Planning Guidance Notes (MPGs)** - a series of documents issued by the Office of the Deputy Prime Minister (ODPM) (previously Department of Transport, Local Government and the Regions (DTLR)) setting out government policy and advice on planning issues relating to mineral resources.

**Minerals Planning Policy Wales** - Document setting out the policy of the Welsh Assembly Government in relation to short and long term future use and safeguarding of mineral deposits.

**Mitigation** - Measures taken to avoid or reduce negative impacts. Measures may include: locating the development and its working areas and access routes away from areas of high ecological interest, fencing off sensitive areas during

the construction period, or timing works to avoid sensitive periods.

**Multiplier:** Figure used to calculate the number of induced and indirect jobs created.

**Multiplier Effects:** Further economic activity (jobs, expenditure or income) associated with additional local income and local supplier purchasing.

## N n

**National Assembly for Wales** - Government body in Wales that debates and approves legislation and holds the Welsh Assembly Government to account.

**National Nature Reserve** - area designated by English Nature to protect and conserve nationally important areas of wildlife habitat and geological formations and to promote scientific research; in Wales it is an SSSI that the Countryside Council for Wales (CCW) has designated of national or international importance for nature conservation. (Note: on the CCW website I noticed that they also refer to National Nature Reserves, as well as SSSIs)

**National Park** - tract of predominantly open and attractive countryside designated under the National Parks and Access to the Countryside Act 1949 with its own administration and management role and function as a local planning authority.

**National Planning Policy Framework – NPPF** sets out the Government's policies on different aspects of planning.

**Nature Conservation** - the preservation, management and enhancement of natural plant and animal communities, and occasionally modified vegetation, as representative samples of their kind.

**Net:** After all deductions have been made.

**Net Additional Jobs:** The number of jobs created in the construction and operating phases, less the number of jobs likely to happen anyway (deadweight), those jobs that are filled by non-impact area residents (leakage) and those jobs displaced in existing businesses or activities by the development (displacement).

**Natural Area:** Sub-division of England, each with a characteristic association of wildlife and natural features.

**Negative List:** See exclusion List

**New Town** - free-standing new settlement designated and planned under the New Towns Act 1946 and subsequent legislation.

**NGR:** National Grid Reference used for identifying locations on OS maps.

**Noise:** Unwanted sound. May refer to both natural (e.g. wind, birdsong etc) and artificial sounds (e.g. traffic, noise from wind turbines, etc)

**Noise sensitive receptors:** Locations that may potentially be adversely affected by the addition of a new source of noise. Can include residential properties, outdoor areas and sensitive species.

**Non-aquifer:** A below ground layer of soil or rock that does not yield water.

**Non-conforming Use** - a use which does not conform to the general provisions of the development plan for the area in which it is located.

**Non-Fossil Fuel Obligation (NFFO)** - a provision of the Electricity Act 1989 requiring regional electricity companies to take a proportion of their electricity from energy sources other than fossil fuels.

**Non-Technical Summary:** A brief report summarising the principle sections of the Environmental Statement in non-technical language. The Non-Technical Summary is bound into the main report, but is also available as a free-standing document.



**Office of the Deputy Prime Minister (ODPM)** - (previously Department of Transport, Local Government and the Regions (DTLR)) government department responsible for town and country planning policy and administration.

**Open space:** All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs) which offer important opportunities for sport and recreation and can act as a visual amenity.

**Original building:** A building as it existed on 1 July 1948 or, if constructed after 1 July 1948, as it was built originally.

**OS:** Ordnance Survey

**Outline application** - a general application for planning permission to establish that a development is acceptable in principle, subject to subsequent approval of detailed matters.

**Out-of-Centre** - a location that is separated from a town centre but is not necessarily outside the built-up area.

**Out-of-town** - an out-of-town development on a green-field site or on land not clearly within the current urban boundary.



**Palaeolithic:** Prehistoric time period from 450,000 – 12,000 BC.

**Park and Ride** - scheme enabling motorists to leave their vehicles at edge-of-town car parks and travel into town centres by public transport.

**Parks and Gardens of Special Historic Interest (GSHI)** - parks and gardens containing historic features dating from 1939 or earlier and registered by English Heritage in three grades as with historic buildings.

**Pathways:** The routes by which impacts are transmitted through air, water, soils or plants and organisms to their receptors.

**Permeability:** The ease at which liquids (or gases) can pass through rocks or a layer of soil.

**Permitted Development Rights** - rights to carry out certain limited forms of development without the need to make an application for planning permission, as granted under the terms of the Town and Country Planning (General Permitted Development) Order 1995.

**pH:** Scale of 0-14 defining the acidity/alkalinity of solutions including those in soils and water bodies; 0 = extremely acid, 14 = extremely alkaline and 7 = neutral.

**Phase I Habitat Survey:** first stage of strategy recommended by Nature Conservancy Council (1990) for ecological surveys. Seeks to provide general description of habitat/vegetation types within a study area, and to fit these to as standard classification so that they can be readily compared.

**Photomontage:** computer aided process which incorporates a photograph of the existing site/view/landscape with a representation of the development to provide an impression of the visual impact of the Development.

**Planning condition:** A condition imposed on a grant of planning permission (in accordance with the Town and Country Planning Act 1990) or a condition included in a Local Development Order or Neighbourhood Development Order.

**Planning Obligations and Agreements** - legal agreements between a planning authority and a developer, or offered unilaterally by a developer, ensuring that certain extra works related to a development are undertaken, usually under Section 106 of the Town and Country Planning Act 1990.

**Planning Gain** - the principle of a developer agreeing to provide additional benefits or safeguards, often for the benefit of the community, usually in the form of related development supplied at the developer's expense.

**Planning Policy Wales** - document setting out the land use planning policies of the Welsh Assembly Government.

**Plant:** A building's generator, heating, ventilation, and/or electricity-production system.

**Playing field:** The whole of a site which encompasses at least one playing pitch as defined in the Town and Country Planning (Development Management Procedure) (England) Order 2010.

**Population** - A collection of individuals (plants or animals), all of the same species and in a defined geographical area.

**Positive List:** See Mandatory List.

**Previously developed land:** Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure.

**Proposals Map** - an obligatory component of a local plan showing the location of proposals in the plan on an Ordnance Survey base map.

**Protected Species** - plant and animal species, including all wild birds, protected under the Conservation (Natural Habitats and Conservation) Regulations 1994, the Wildlife and Countryside Act 1981 and subsequent amendments, or other species protected under legislation specific to them and the Wildlife and Countryside (Amendments) Act 1985.

**Public Open Space (POS)** - land provided in urban or rural areas for public recreation, though not necessarily publicly owned.

**Public Realm** - outdoor areas accessible to the public.

**Public Right of Way** - a way where the public has a right to walk, and in some cases ride horses, bicycles, motorcycles or drive motor vehicles, which will be designated either as a footpath, a bridleway, a road used as a public path (RUPP) or a byway.

**Purchase Notice** - this requires a local planning authority to purchase an interest in land where a planning decision conflicts with the private interests of landowners.

## Q q

**Quasi-static equipment:** moves sufficiently slowly to be considered stationary for the purpose of noise assessment.

## R r

**Ramsar Site** - area identified under the internationally agreed Convention on Wetlands of International Importance, especially as waterfowl sites and as Sites of Special Scientific Interest focusing on the ecological importance of wetlands generally.

**Receptor** - Any environmental or other defined feature (e.g. human beings) that is sensitive to or has the potential to be affected by an impact.

**Recycling** - the recovery of reusable materials from waste.

**Regional Planning Guidance Notes (RPGs)** - policy guidance and advice issued for each region in England by the Secretary of State.

**Regional Shopping Centre** - out-of-town concentration of shops, usually containing over 50,000 square metres gross retail area, typically offering a wide range of comparison goods.

**Regionally Important Geological/Geomorphological Sites (RIGS)** - non-statutory sites of regional importance recognised by English Nature and local authorities.

**Regulation 7 Direction** - a Direction made by the Secretary of State to remove from a particular site or defined area the benefit of deemed consent normally provided by the Town and Country Planning (Control of Advertisements) Regulations.

**Renewable Energy** - energy generated from resources that are unlimited, rapidly replenished or naturally renewable such as wind, water, sun, wave and refuse, and not from the combustion of fossil fuels.

**Residual Effects/Impacts:** Effects/Impacts predicted as a consequence of the development assuming successful implementation of the identified mitigation measures.

**Review:** The process of establishing whether an EIS is adequate for the Competent authority to use it to inform the decision on Development consent.

**Ribbon development** - a narrow band of development extending along one or both sides of a road.

**Risk Assessment:** An assessment of the likelihood and severity of an occurrence.

**RSPB:** Royal Society for the Protection of Birds.

**Rural Development Area** - priority area for economic and social development.

**Rural Diversification** - activities undertaken on surplus land to support farming incomes, including, for example, forestry, leisure and tourism.

## S s

**Scheduled Ancient Monument** - a structure placed on a schedule compiled by the Department of National Heritage in England and Cadw in Wales for protection under the Ancient Monuments and Archaeological Areas Act.

**Scoping** - Is the procedure whereby the Competent Authority and the relevant statutory and other consultees are consulted at the outset, or very early in the EIA process, by the developer to agree what effects should be

covered in the Environmental Statement, how they should be covered and the methods to be used to assess them. If requested by the developer the Competent Authority must give a scoping opinion.

**Screening** - Is the process of deciding whether a particular project that is proposed is subject to the EIA process. It involves checking whether the project falls within the classes of project in Schedules 1 or 2 of the Regulations (or Annexes I or II of the Directives) and if in Schedule 2, whether it would be likely to have significant effects on the environment.

**Section 106 Agreement (see Planning Gain)** - a binding agreement between a council and a developer associated with a grant of planning permission and regarding matters linked to the proposed development.

**Site of Importance for Nature Conservation (SINC):** An area of land designated by a local authority because it supports nature conservation of significance in a county context. Designation criteria and policy context may vary between different local authority areas but they are usually linked with planning policies relating to nature conservation.

**Site of Special Scientific Interest (SSSI)** - area identified by English Nature or Countryside Council for Wales for protection by reason of the rarity of its nature conservation or wildlife features.

**Special Area of Conservation:** Land protected under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora. Data supplied has a status of 'Candidate'.

**Special Needs Housing** - housing to meet need arising from homelessness or overcrowding, and purpose-built or supported housing for the elderly or disabled people or those requiring care.

**Special Protection Area:** Land classified under Directive 79/409 on the Conservation of Wild Birds. Data supplied has a status of 'Classified'.

**Statutory** - required by law (statute), usually through an Act of Parliament.

**Statutory Consultee** - Any body specified in the relevant EIA Regulations which the Competent Authority must consult in respect of an Environmental Statement, and which also has a duty to provide information or advice during the EIA process

**Statutory Undertakers/Statutory Utilities** - providers of essential services such as gas, electricity, water or telecommunications.

**Stop Notice** - a notice served in respect of land subject to enforcement proceedings prohibiting the carrying out or continuing of specified operations which are alleged to constitute a breach of planning control and designed to stop work going on pending the outcome of an appeal.

**Structure Plan** - statutory plan setting out key strategic policies which provide the framework for more detailed policies in local plans.

**Sui Generis** - uses of land or buildings which do not fall into any of the use classes identified by the Use Classes Order, for example theatres, launderettes, car showrooms and filling stations.

**Supplementary Planning Guidance** - additional advice issued by a local planning authority expanding upon its statutory policies.

**Sustainable Development** - environmentally responsible development, commonly defined as "development which meets the needs of the present generation without compromising the ability of future generations to meet their own needs".

## T t

**TANs** - technical advice notes for Wales which provide topic-based supplements to the policy document Planning Policy Wales.

**Threshold:** A level of effect above which an assessment will be taken of whether any changes to procedures need to be made.

**Topography:** The natural or artificial features, level and surface form of the ground surface.

**Town Centre** - describes city, town and traditional suburban centres which provide a broad range of facilities and services and which fulfil a function as a focus for a community and for public transport.

**Town Centre Management** - partnership of local organisations, businesses and individuals to promote the common good of a town by developing, managing, promoting and improving facilities, the useful resources, the economy and the environment of a town centre.

**Townscape** - the appearance and character of buildings and all other features of an urban area taken together as a whole.

**Traffic Calming** - management measures designed to lower traffic speeds or redirect traffic to alternative routes to avoid congestion, reduce accidents and injuries and prevent excess levels of pollution.

**Transport assessment:** A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

**Travel plan:** A long-term management strategy for an organisation or site that seeks to deliver sustainable

transport objectives through action and is articulated in a document that is regularly reviewed.

**Transport Policy and Programme (TPP)** - statutory document setting out a transport authority's bid for the programming and funding of transport measures, produced annually for submission to central government.

**Transport statement:** A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

**Travel to Work Area (TTWA)** - a broadly self-contained labour market area usually focused on an urban employment centre.

**Tree Preservation Order (TPO)** - direction made by a local planning authority that makes it an offence to cut, top, lop, uproot or wilfully damage or destroy a tree without that authority's permission.

**Trial pits:** intrusive investigation positions excavated by a mechanical excavator.

## U u

**Unitary Development Plan** - local plan produced by certain unitary district authorities and London boroughs which have responsibility for the full range of local authority services.

**Urban Fringe** - predominantly open land on the edge of an existing urban area.

**Urban Regeneration** - the re-use or redevelopment of decaying or run-down parts of older urban areas to bring them new life and economic vitality.

**Use Classes Order** - the Town and Country Planning (Use Classes) Order 1987 puts uses of land and buildings into various categories, planning permission not being required for changes of use within the same use class. In practice changes between use classes are likely to require planning permission.

## V v

**Vibration:** In this context, refers to vibration carried in structures such as the ground or buildings, rather than airborne noise

**Village envelope** - boundaries defined on a map beyond which the local planning authority proposes that a village should not be allowed to extend.

**Visual amenity:** The value of a particular area or view in terms of what is seen.

**Visual effect:** Change in the appearance of the landscape as a result of development. This can be positive (i.e.

beneficial or an improvement) or negative (i.e. adverse or a detraction).

**Visual envelope:** Extent of potential visibility to or from a specific area or feature.

## W w

**Welsh Assembly Government** - a body that develops and implements policy in Wales via the civil service and a range of sponsored bodies.

**Wildlife Corridor** - a continuous area facilitating the movement of wildlife through rural or urban environments.

**Wind Farm** - large open site where wind speeds are consistently high on which a number of wind turbines generate electricity for private or commercial use.

**Wind turbine.** A term used for a wind energy conversion device that produces electricity.

**Wireline perspective:** computer aided process which shows landform and number and extent of wind turbines visible from a view.

**Written Statement** - documentary statement of policy, forming part of a development plan submitted by a local planning authority and requiring formal approval.

## X x

## Y y

## Z z

**Zone of influence.** The areas/resources that may be affected by the biophysical changes caused by activities associated with a project.

**Zone of Theoretical Visibility (ZTV):** representation (usually presented as a map with markings or colourings) of the area over which a site and/or a proposed development may be visible. Does not account for buildings or trees local to the viewer that may obscure a view.

## **ES Scoping Appendix 2 – National and Regional Context Plans**





# **ES Scoping Appendix 3 – Local Context Plan and Redline Plan**

**Culceth**

**Risley Country Park**

**Proposed  
MSA  
Site**

**M62**

**Birchwood Technology Park**

**Gorse Covert**





DO NOT SCALE FROM THIS DRAWING

REFERENCE

PROPOSED RED LINE ———  
 BOUNDARY FOR SCOPING

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT  
 EXTRA MOTORWAY  
 SERVICE AREA GROUP

PROJECT  
 POTENTIAL WARRINGTON MSA

DRAWING TITLE  
 PROPOSED RED LINE BOUNDARY  
 FOR SCOPING

DRG No. SH11739-006 REV

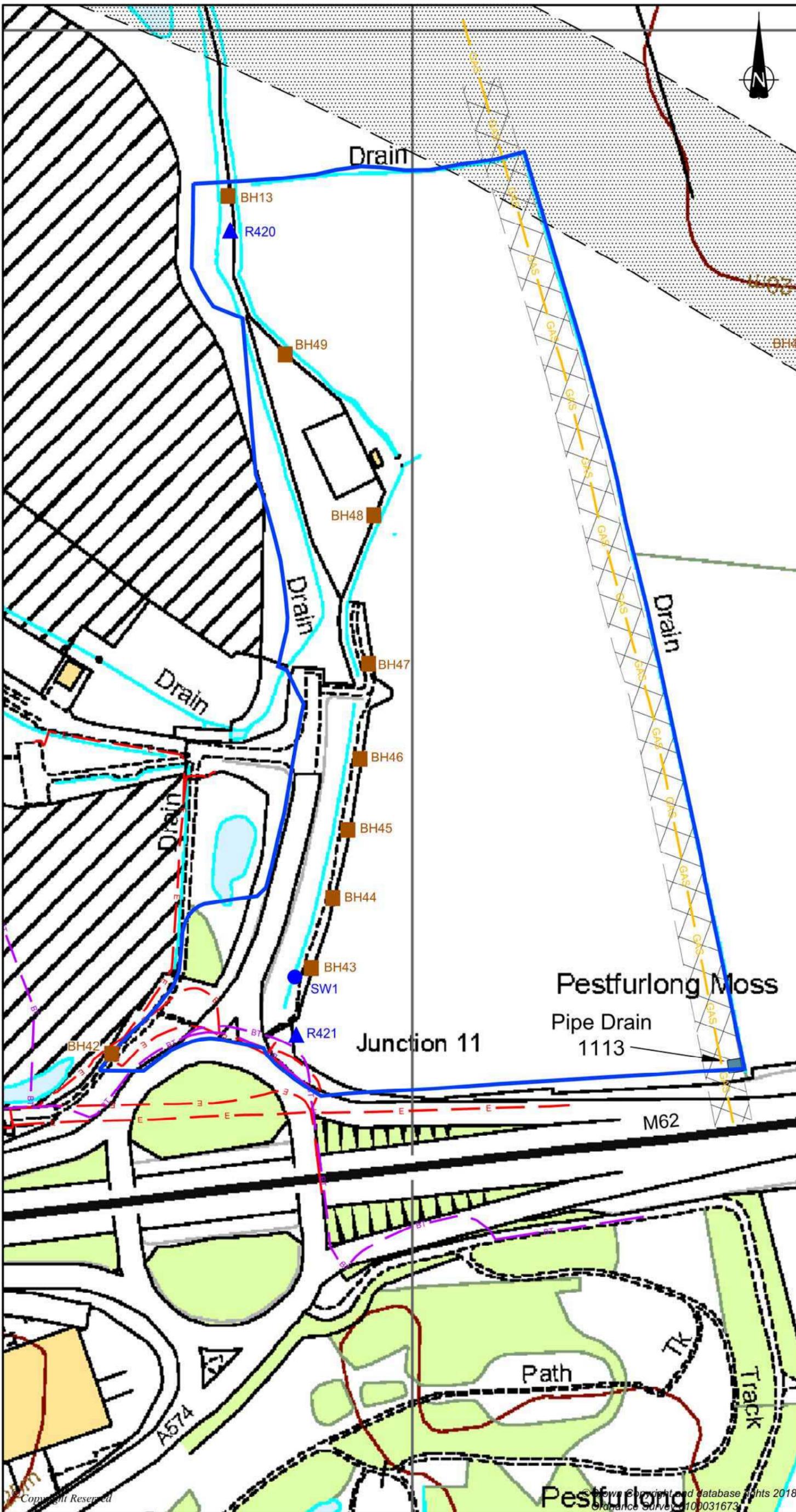
DRG SIZE A3 SCALE 1:2500 DATE 23/11/18

DRAWN BY DP CHECKED BY APPROVED BY

- SHEFFIELD
- BIRMINGHAM
- EDINBURGH
- MANCHESTER
- CARDIFF
- GLASGOW
- NEWCASTLE UPON TYNE
- CARLISLE
- LEIGH
- STONE ON TRENT
- CROYDON
- LONDON
- TAUNTON



## **ES Scoping Appendix 4 – Site Constraints Plan**



DO NOT SCALE FROM THIS DRAWING

REFERENCE

- SITE BOUNDARY —
- APPROXIMATE LOCATION OF GAS PIPELINE WITH 24m WIDE EASEMENT — GAS —
- APPROXIMATE LOCATION OF ELECTRICITY - - - E - - -
- APPROXIMATE LOCATION OF BT - - - BT - - -
- APPROXIMATE LOCATION OF PIPE DRAIN 1113 TAKEN FROM TITLE DEED CH319763 ■
- APPROXIMATE LOCATION OF HS2 SAFE GUARDING ZONE [Hatched Area]
- APPROXIMATE LOCATION OF BIFFA GW MONITORING POINT ▲ R420
- APPROXIMATE LOCATION OF BIFFA SW MONITORING POINT ● SW1
- APPROXIMATE LOCATION OF BIFFA GAS MONITORING BH ■ BH13

P1						
REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D	

CLIENT  
EXTRA MOTORWAY SERVICE AREA GROUP

PROJECT  
POTENTIAL WARRINGTON MSA

DRAWING TITLE  
CONSTRAINTS PLAN

DRG No.	SH11739-003	REV	
DRG SIZE	A3	SCALE	1:2500
		DATE	05/06/18
DRAWN BY	DP	CHECKED BY	
		APPROVED BY	

- SHEFFIELD
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- EDINBURGH
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- CARDIFF
- GLASGOW
- NEWCASTLE UPON TYNE
- CARLISLE
- LEIGH
- STOKE ON TRENT
- CROYDON
- LONDON
- TAUNTON



## **ES Scoping Appendix 5 – Parameter Plans**



Notes

The site boundary is based on Wardell Armstrong drawing no SH11739-006, Proposed red line boundary for scoping.

Site and surrounding information as Ordnance Survey Plan licence no. 100022432 supplied by Spawforths. A topographical survey is required.

Red line boundary for scoping as SH11739-006

RESTRICTIVE ZONES:

Approximate position of gas pipeline as Wardell Armstrong constraints drawing SH11739-003

Extents of HSE 96m Inner Consultation Zone from gas pipeline. No buildings of sensitive end-use to be located within this area.

Approximate location of safe guarding HS2 safe guarding zone as Wardell Armstrong drawing SH11739-003

DEVELOPMENT CELLS:

Zone of Facilities and Hotel Buildings (including incidental landscaped areas) - Max building height 15m. This area also includes the service yard and external amenity spaces. With +5m tolerance to allow for scheme evolution and datum level adjustments. (Maximum Approx 40.3 AOD)

Zone of Fuel Filling Station and internal vehicular circulation (including incidental landscaped areas) - Max building height 6.5m. With +5m tolerance to allow for scheme evolution and datum level adjustments. (Maximum Approx 33 AOD)

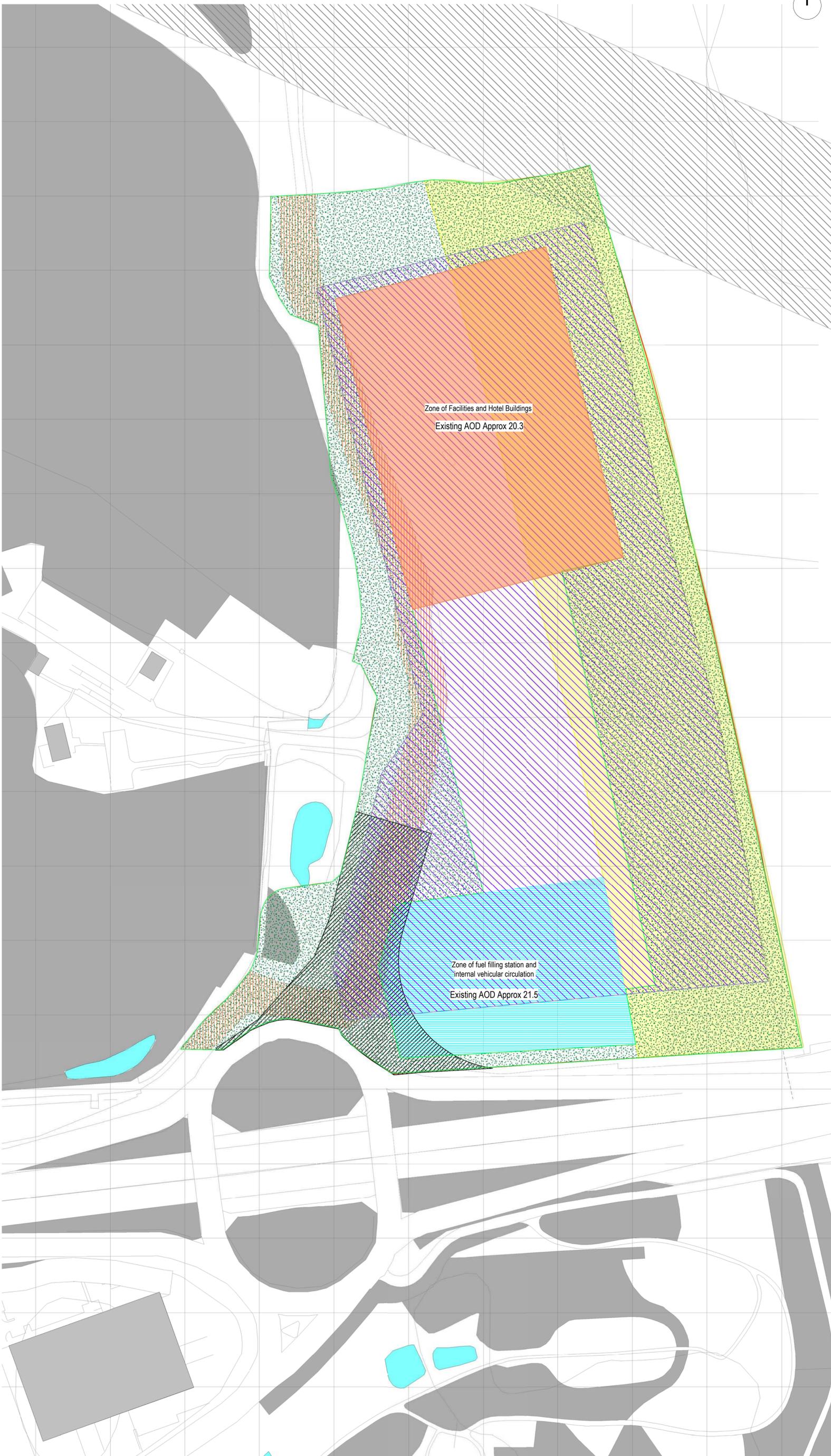
Zone of car parking and internal vehicular circulation and HGV parking.

Extent of proposed access in and out of the site area.

GREEN INFRASTRUCTURE:

Existing and proposed landscaping, including ecological habitats, drainage and existing footpaths.

Route of existing and proposed footpath parameters zone.



WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

Rev:	Date:	Description:	By:	Rev:
P3	18.12.18	Updated parameter plans following client comment	SK	JR
P2	04.12.18	Parameters Plans revised following updated layouts	SK	JR
P1	03.12.18	Parameters Plans revised to Spawforths and Extra's comment	SK	JR

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Client: Extra MSA Group

Project No: 2562 Project Name: Risley Motorway Services, Warrington

Document Reference:				
Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - XX - D - A - 0703</b>				
<b>Combined Parameter Plan (for Scoping)</b>				
Status:	Code	Suitability description		
	S0	Work In Progress		
Revision:	Code	Revision status		
	P3			

Created By: SK Reviewed By: SB Date: 03.12.18 Scale at A1: 1 : 1250

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**Notes**

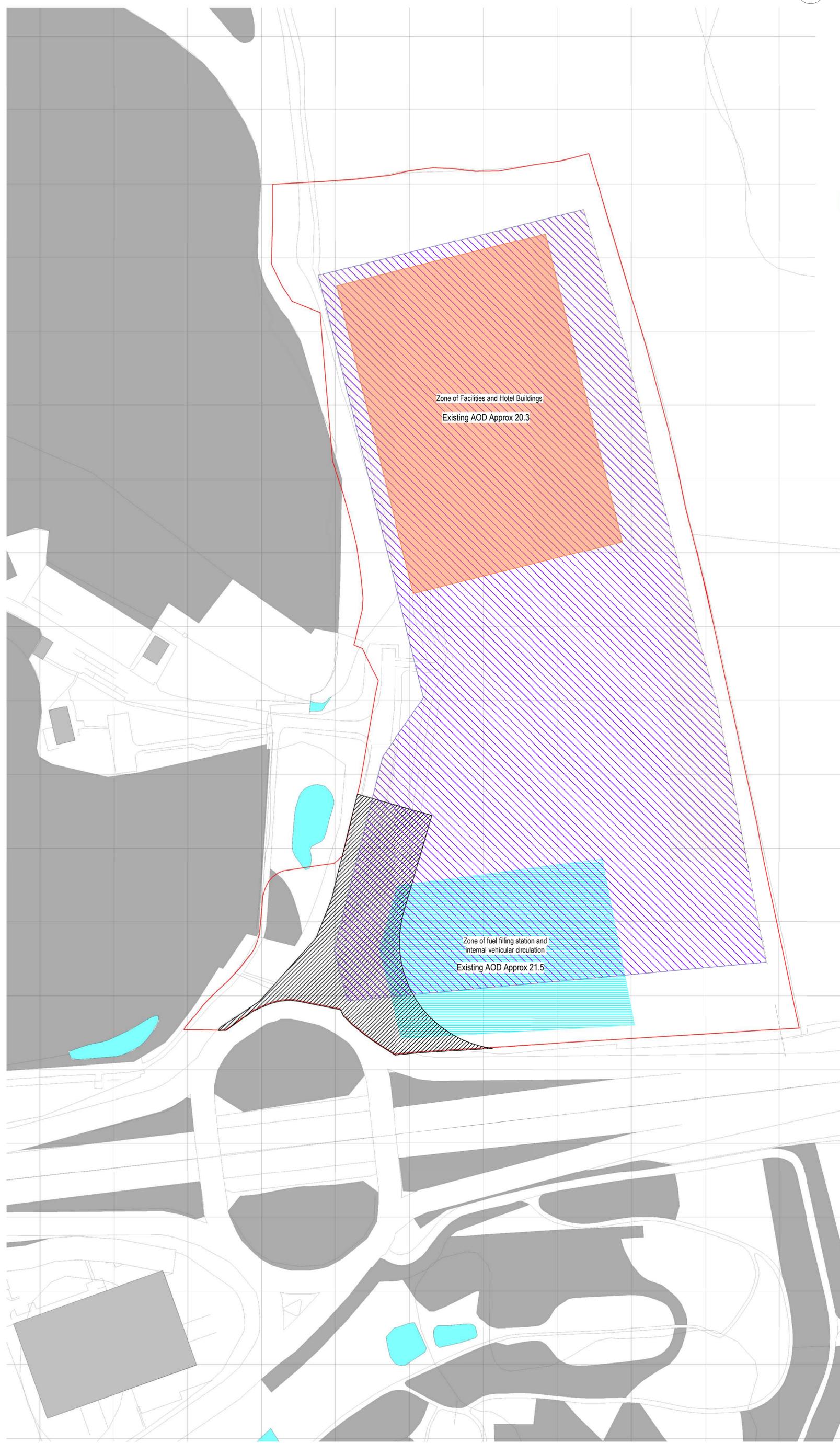
The site boundary is based on Wardell Armstrong drawing no SH11739-006, Proposed red line boundary for scoping.  
Site and surrounding information as Ordnance Survey Plan licence no. 100022432 supplied by Spawforths.  
A topographical survey is required.

**Key**

 Red line boundary for scoping as SH11739-006

**DEVELOPMENT CELLS:**

-  Zone of Facilities and Hotel Buildings (including incidental landscaped areas) - Max building height 15m. This area also includes the service yard and external amenity spaces. With +5m tolerance to allow for scheme evolution and datum level adjustments. (Maximum Approx 40.3 AOD)
-  Zone of Fuel Filling Station and internal vehicular circulation (including incidental landscaped areas) - Max building height 6.5m. With +5m tolerance to allow for scheme evolution and datum level adjustments. (Maximum Approx 33 AOD)
-  Zone of car parking and internal vehicular circulation and HGV parking.
-  Extent of proposed access in and out of the site area.



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WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

Rev:	Date:	Description:	By:	Rev:
P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

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Client:  
**Extra MSA Group**

Project No: 2562  
Project Name: Risley Motorway Services, Warrington

Document Reference:				
Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - A - 0720</b>				
<b>Development Cells Parameter Plan (for scoping)</b>				
Status:	Code	Suitability description		
	S0	Work In Progress		
Revision:	Code	Revision status		
	P2			

Created By: Author  
Reviewed By: Approver  
Date:  
Scale at A1: 1 : 1250

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**Notes**

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Site and surrounding information as Ordnance Survey Plan licence no. 100022432 supplied by Spawforths.  
A topographical survey is required.

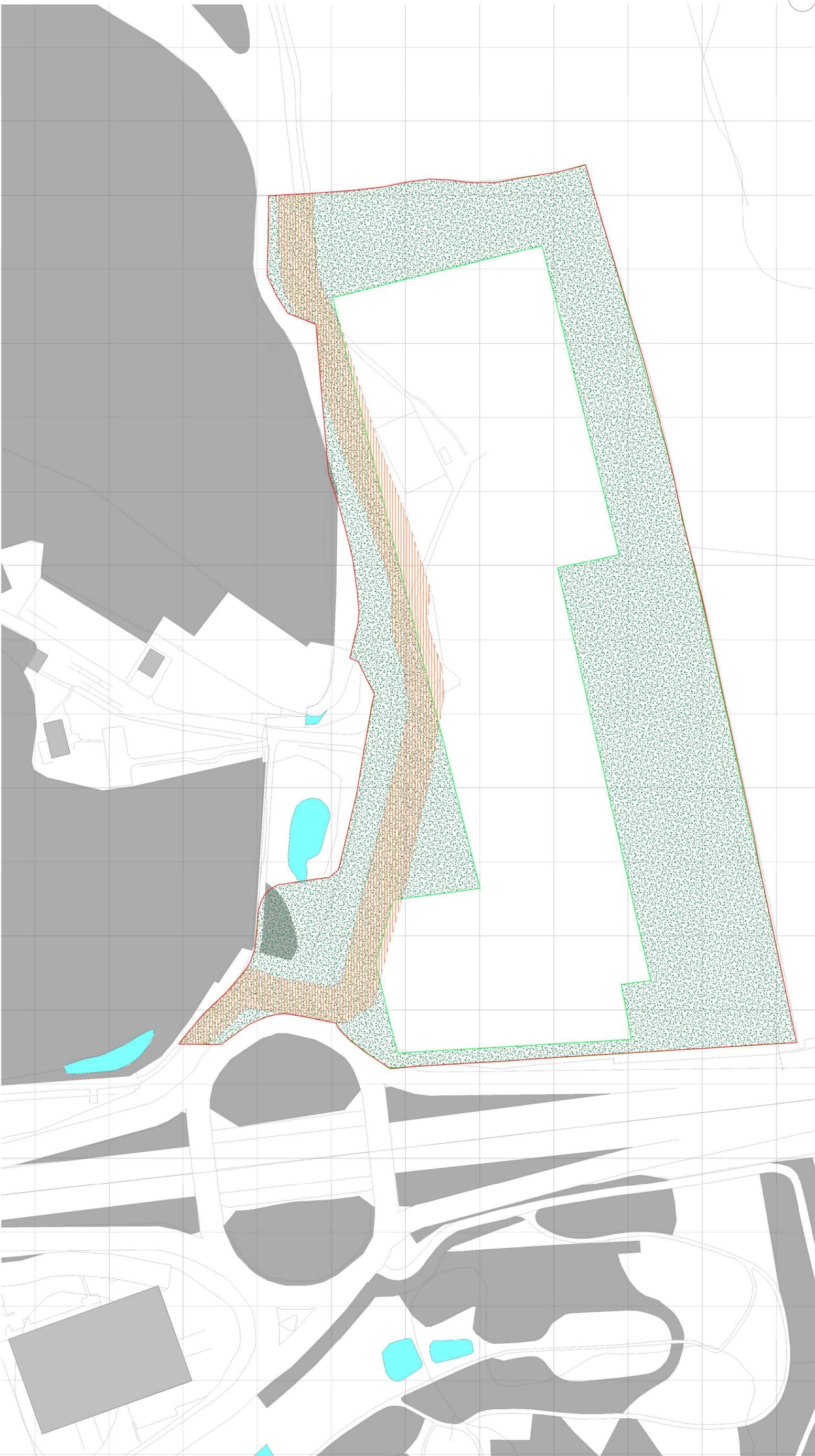
**Key**

 Red line boundary for scoping as SH11739-006

**GREEN INFRASTRUCTURE:**

 Existing and proposed landscaping, including ecological habitats, drainage and existing footpaths.

 Route of existing and proposed footpath parameters zone.



WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

WORK IN PROGRESS - ISSUE FOR INFORMATION ONLY

P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

Rev:	Date:	Description:	By:	Rev:
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Client: Extra MSA Group

Project No: 2562  
Project Name: Risley Motorway Services, Warrington

Document Reference:				
Project	Originator	Volume	Level	Type - Role - Number
<b>RMS - 519 - ZZ - A - 0721</b>				
<b>Green Infrastructure Parameter Plan (for scoping)</b>				
Status:	Code	Suitability description		
	S0	Work In Progress		
Revision:	Code	Revision status		
	P2			

Created By: Author  
Reviewed By: Approver  
Date:  
Scale at A1: 1 : 1250

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**Notes**

The site boundary is based on Wardell Armstrong drawing no SH11739-006, Proposed red line boundary for scoping.

Site and surrounding information as Ordnance Survey Plan licence no. 100022432 supplied by Spawforths.  
A topographical survey is required.

**Key**

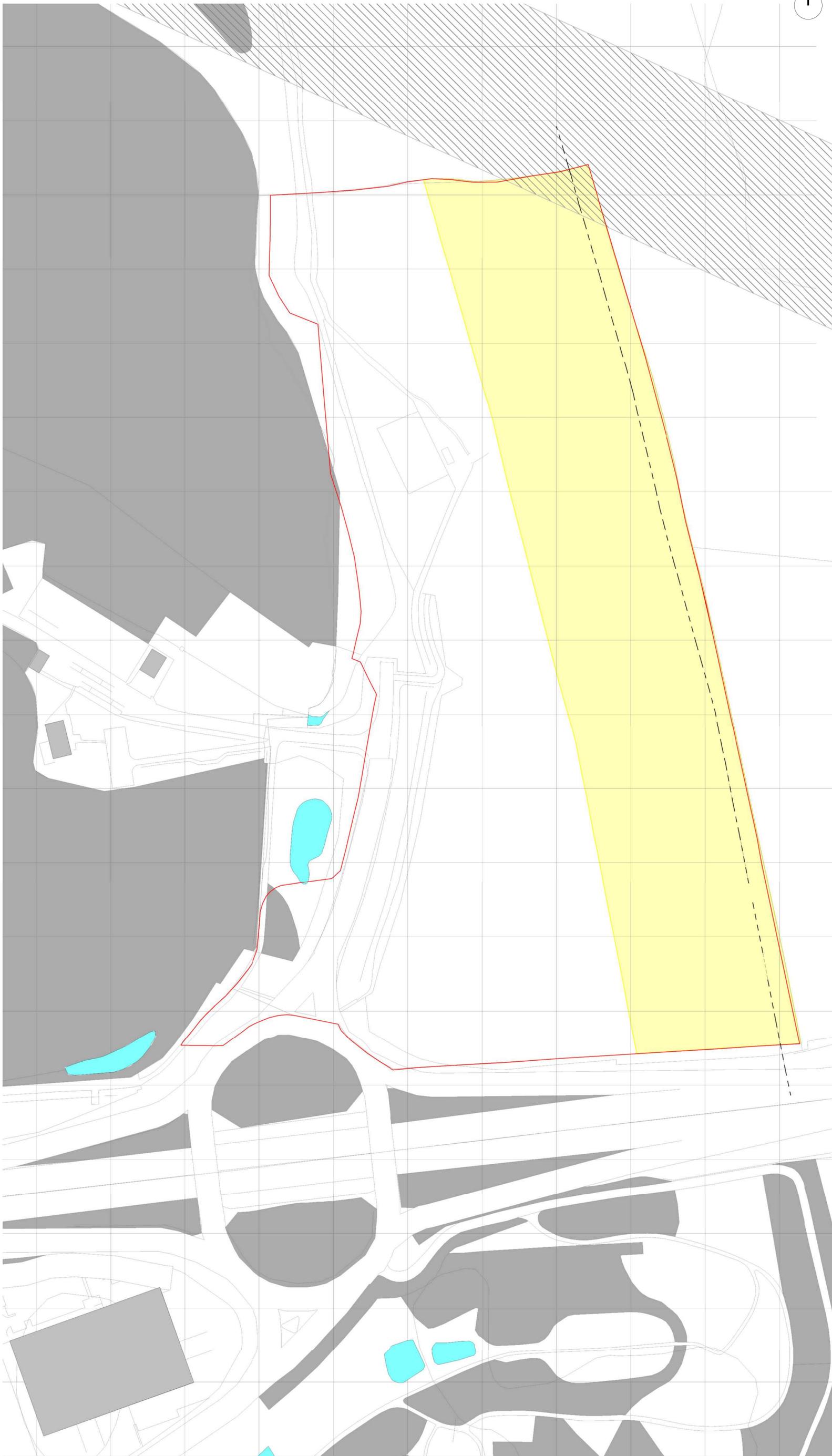
 Red line boundary for scoping as SH11739-006

**RESTRICTIVE ZONES:**

 Approximate position of gas pipeline as Wardell Armstrong constraints drawing SH11739-003

 Extents of HSE 96m Inner Consultation Zone from gas pipeline. No buildings of sensitive end-use to be located within this area.

 Approximate location of safe guarding HS2 safe guarding zone as Wardell Armstrong drawing SH11739-003



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Rev:	Date:	Description:	By:	Rev:
P2	18.12.18	Updated parameter plans following client comment	SK	JR
P1	04.12.18	Parameters Plans revised following updated layouts	SK	JR

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e. Leeds@architecture519.com  
w. www.architecture519.com  
t. 0113 213 5656

Client:  
**Extra MSA Group**

Project No: 2562  
Project Name: Risley Motorway Services, Warrington

Document Reference:				
Project	Originator	Volume	Level	Type - Role - Number
<b>RZS - 519 - ( - A - 0722</b>				
<b>Restrictive ( ones Parameter Plan ) for scopingM</b>				
Status:	Code	Suitability description		
	<b>S0</b>	<b>Work In Progress</b>		
Revision:	Code	Revision status		
	<b>P2</b>			

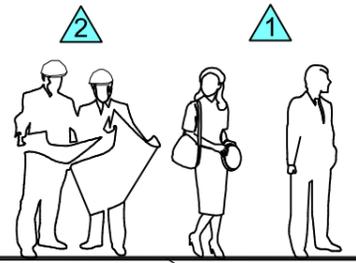
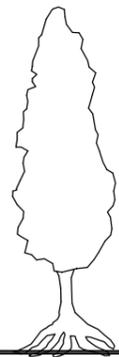
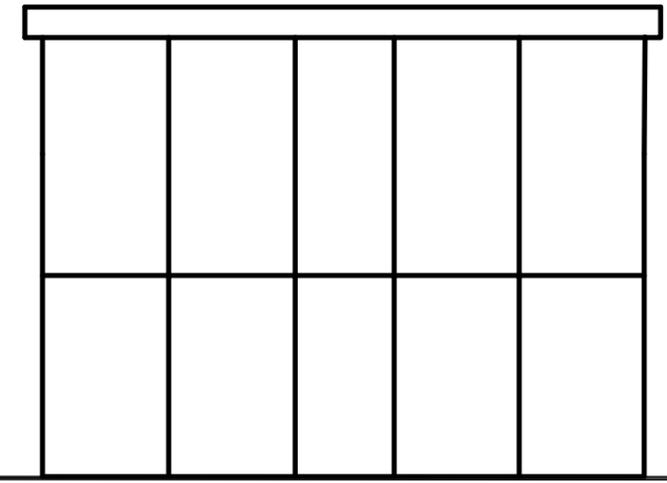
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Reviewed By: Approver  
Date:  
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## **ES Scoping Appendix 6 – Key Receptor Plans**

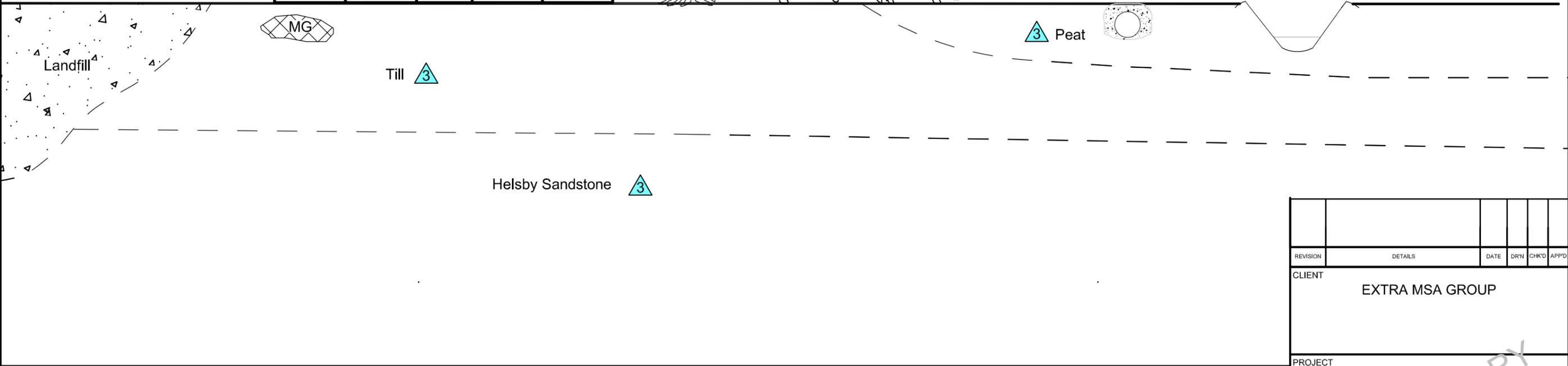
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Proposed Motorway Services Area



River Glaze

Holcroft Moss



- Receptor
- ▲ Future Occupiers - Human Health Receptor
  - ▲ Construction Workers - Human Health Receptor
  - ▲ Peat and other Geological Strata
  - ▲ HP Gas Main - Stability and other issues to be considered

REVISION	DETAILS	DATE	DRN	CHK'D	APP'D

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PROJECT  
POTENTIAL WARRINGTON MSA

DRAWING TITLE  
RECEPTOR PLAN  
- GROUND CONDITIONS

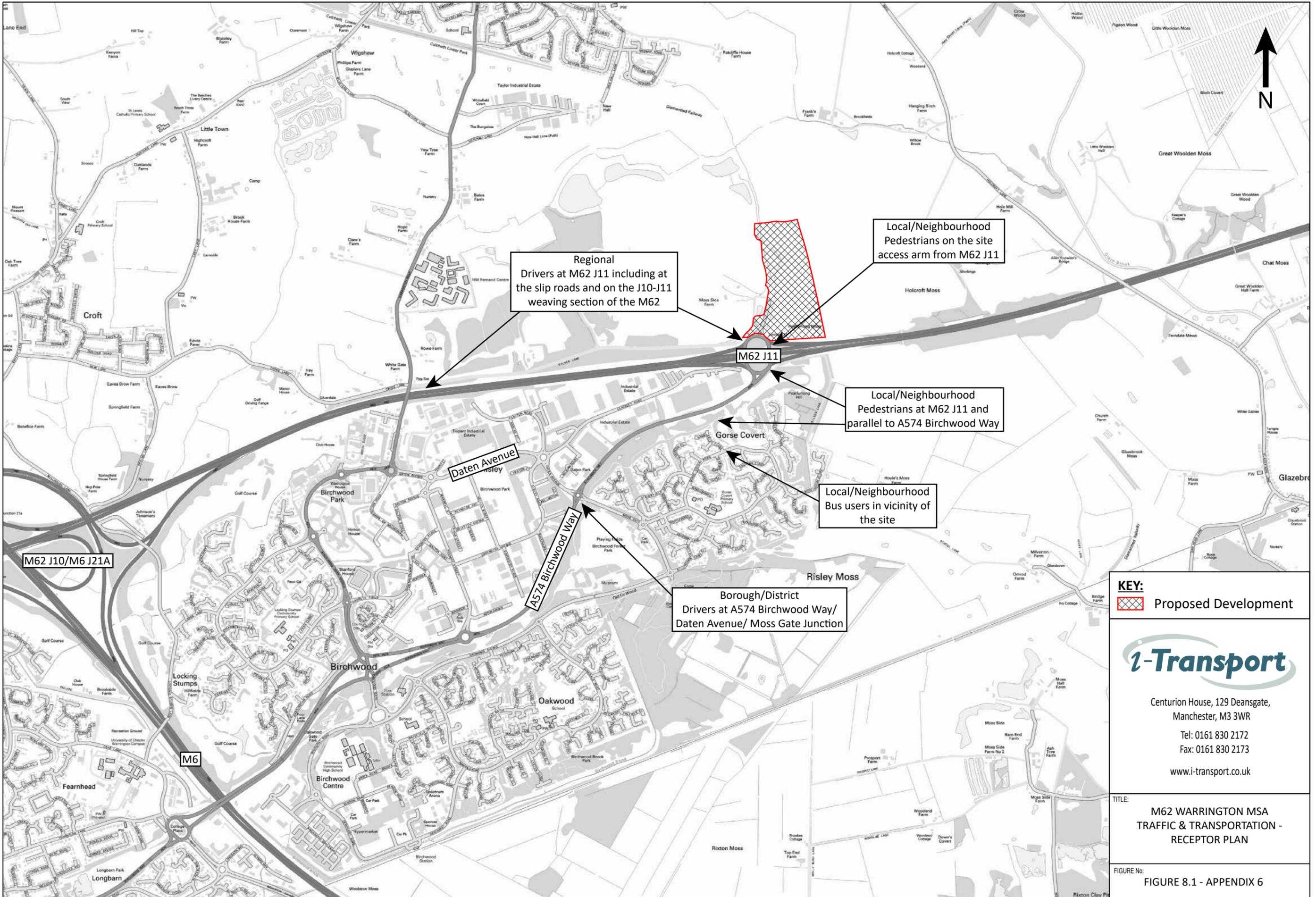
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DRG SIZE A3 SCALE NTS DATE 05/12/18

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<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> STOKE ON TRENT



Regional Drivers at M62 J11 including at the slip roads and on the J10-J11 weaving section of the M62

Local/Neighbourhood Pedestrians on the site access arm from M62 J11

Local/Neighbourhood Pedestrians at M62 J11 and parallel to A574 Birchwood Way

Local/Neighbourhood Bus users in vicinity of the site

Borough/District Drivers at A574 Birchwood Way/Daten Avenue/ Moss Gate Junction

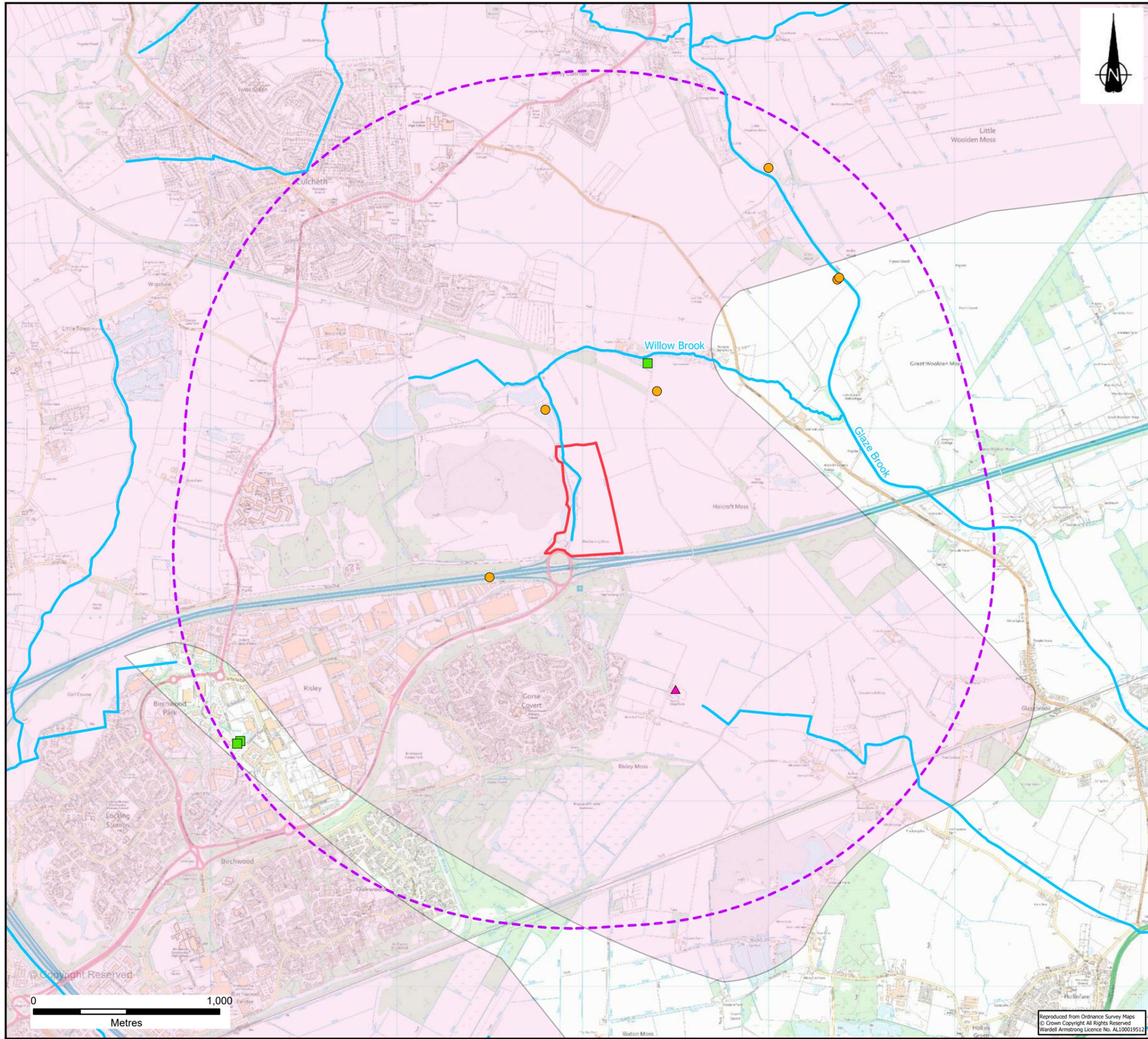
**KEY:**  
 Proposed Development



Centurion House, 129 Deansgate,  
 Manchester, M3 3WR  
 Tel: 0161 830 2172  
 Fax: 0161 830 2173  
 www.i-transport.co.uk

TITLE:  
 M62 WARRINGTON MSA  
 TRAFFIC & TRANSPORTATION -  
 RECEPTOR PLAN

FIGURE No:  
 FIGURE 8.1 - APPENDIX 6



**KEY**

- Site Boundary
- Main Rivers
- 2 km Buffer of Site Boundary
- Source Protection Zone 3: (Total Catchment)
- ▲ Discharge Consent: Surface Water
- Water Abstraction: Groundwater
- Water Abstraction: Surface Water



A	Label watercourses	13/12/18	EF	RG	HK
REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

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**EXTRA MSA GROUP**

PROJECT  
**MOTORWAY SERVICES, WARRINGTON**

DRAWING TITLE  
**PRELIMINARY WATER RESOURCES RECEPTORS**

DRG No.	SH11739-012	REV	A
DRG SIZE	A3	SCALE	1:20,000
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		APPROVED BY	HK

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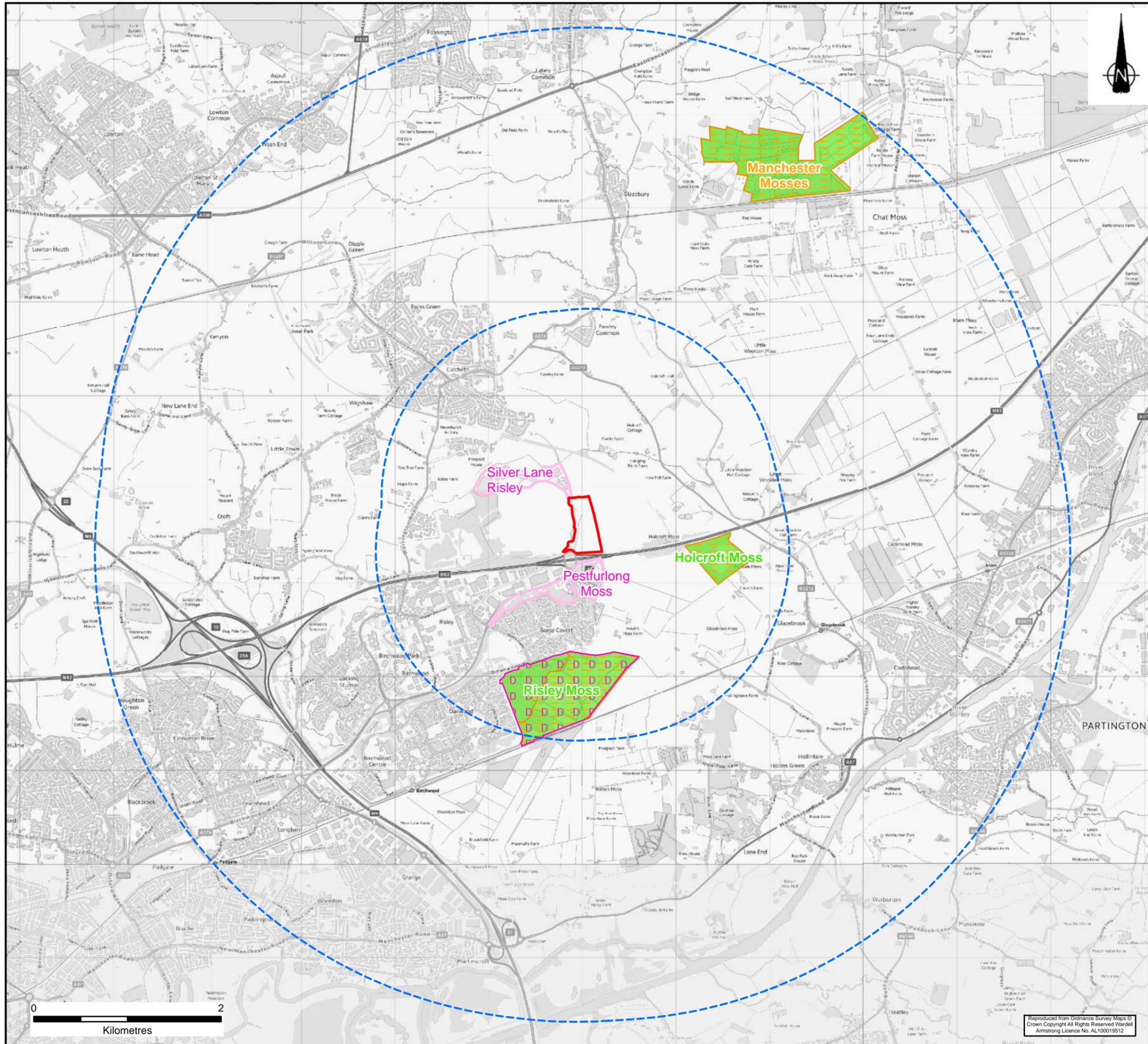
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- KEY**
- Proposed Application Boundary and offsets
  - Residential receptors**
  - R1 - properties with front, rear or side elevations facing site, within 1.5km (representative view is VP1)
  - Recreation receptors**
  - R2 - Public Right of Way within the Site (VP2, 3,4 and 5)
  - R3 - Public Right of Way within 100m of Site Boundary (VP5 and 6)
  - R4 - Public Right of Way within 500m of Application Boundary (VP8)
  - R5 - Public Rights of Way within 2km of Application Boundary (VP2 and 8)
  - R6 - Former (restored) landfill site within 500m of Application Boundary (VP9, 10, 11 and 12)
  - R7 - Non-designated access track within 500m of Application Boundary (VP13 and 14)
  - R8 - Elevated disused railway line within 1km of Application Boundary (VP15)
  - Place of work receptors**
  - R9 - No Places of Work receptors have been identified as having views of the site, other than land and buildings included under Recreation Receptors above, and adjacent agricultural land (VP15)
  - Transport receptors**
  - R10 - M1 Motorway and slip roads within 100m of Application Site boundary (VP16)
  - R11 - M1 Motorway and slip roads within 1km of Application Site boundary (no views included)
  - R12 - A-Roads within 500m of the Application Site boundary (VP18)
  - R13 - B-Roads within 1km of the Application Site boundary (VP19)
  - R14 - B-Roads within 2km of the Application Site boundary (VP20 and 21)
  - R15 - Holcroft Moss SSSI

Please refer to Photoviews

Figure 1 - Visual Receptors Map



**KEY**

- Site Boundary
- 2km and 5km Distance Buffer
- Local Nature Reserves
- Special Areas of Conservation
- Sites of Special Scientific Interest
- Local Wildlife Sites



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PROJECT	MOTORWAY SERVICES, WARRINGTON
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DRAWING TITLE	RECEPTORS PLAN
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		DATE	14/12/2018
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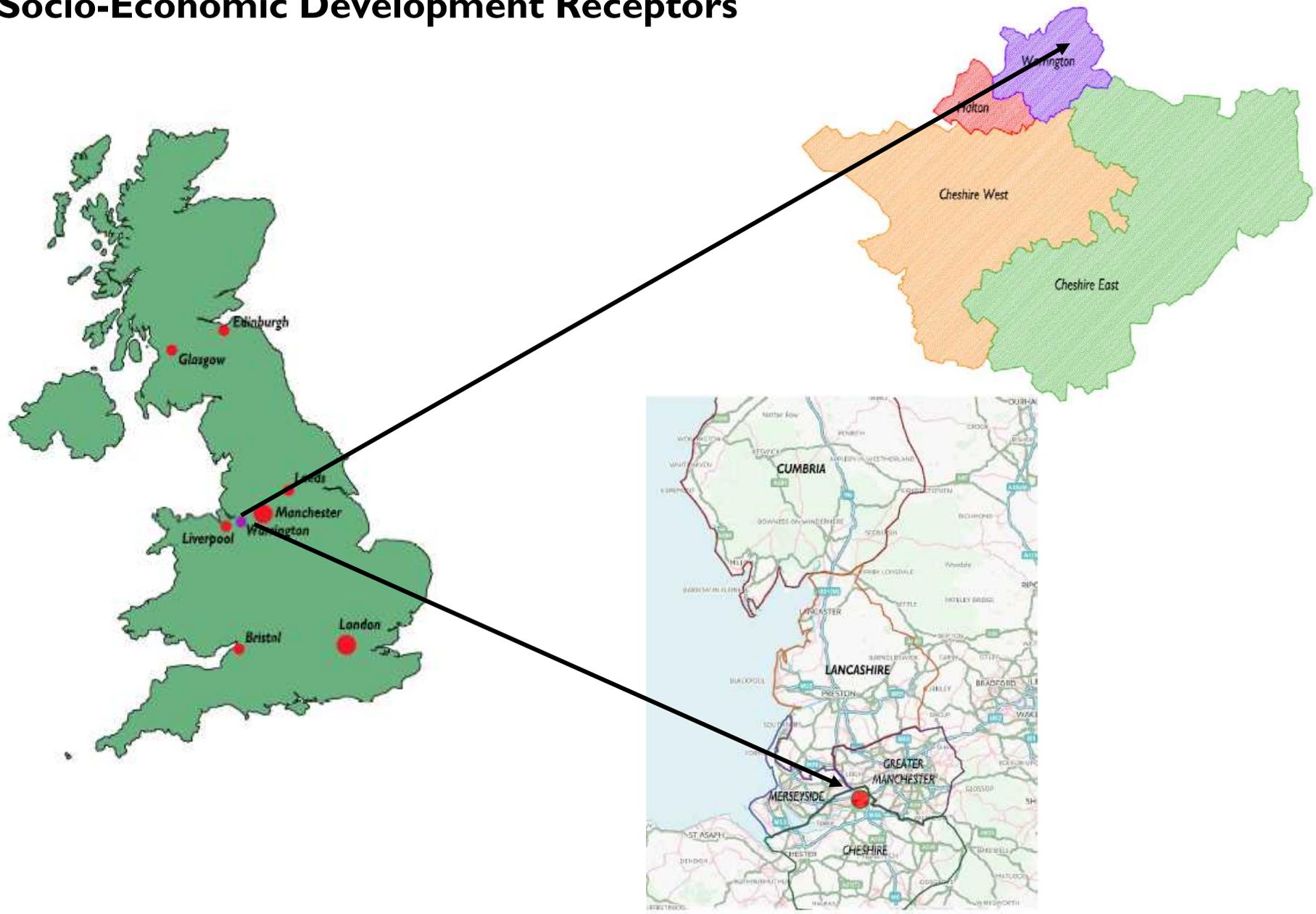
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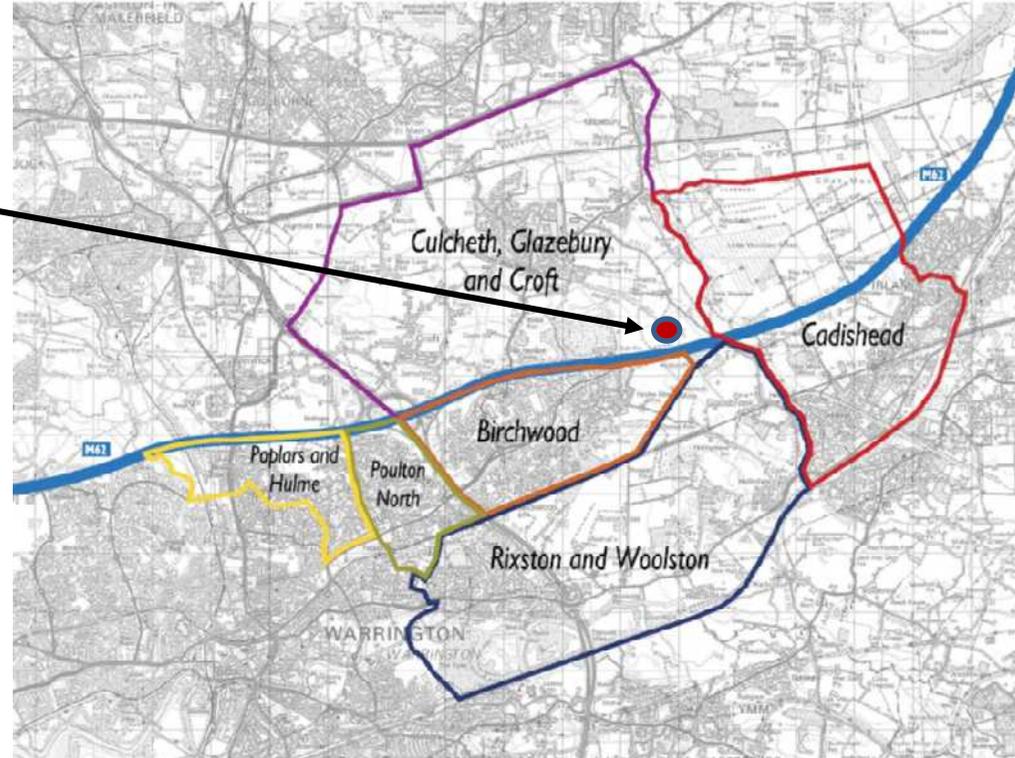
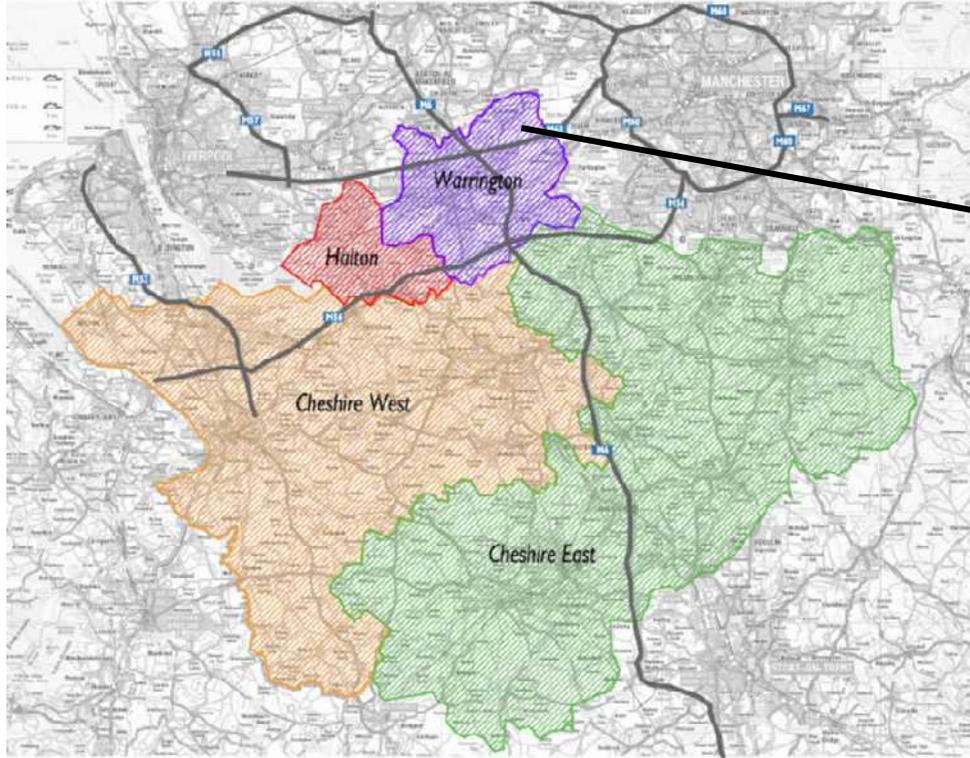
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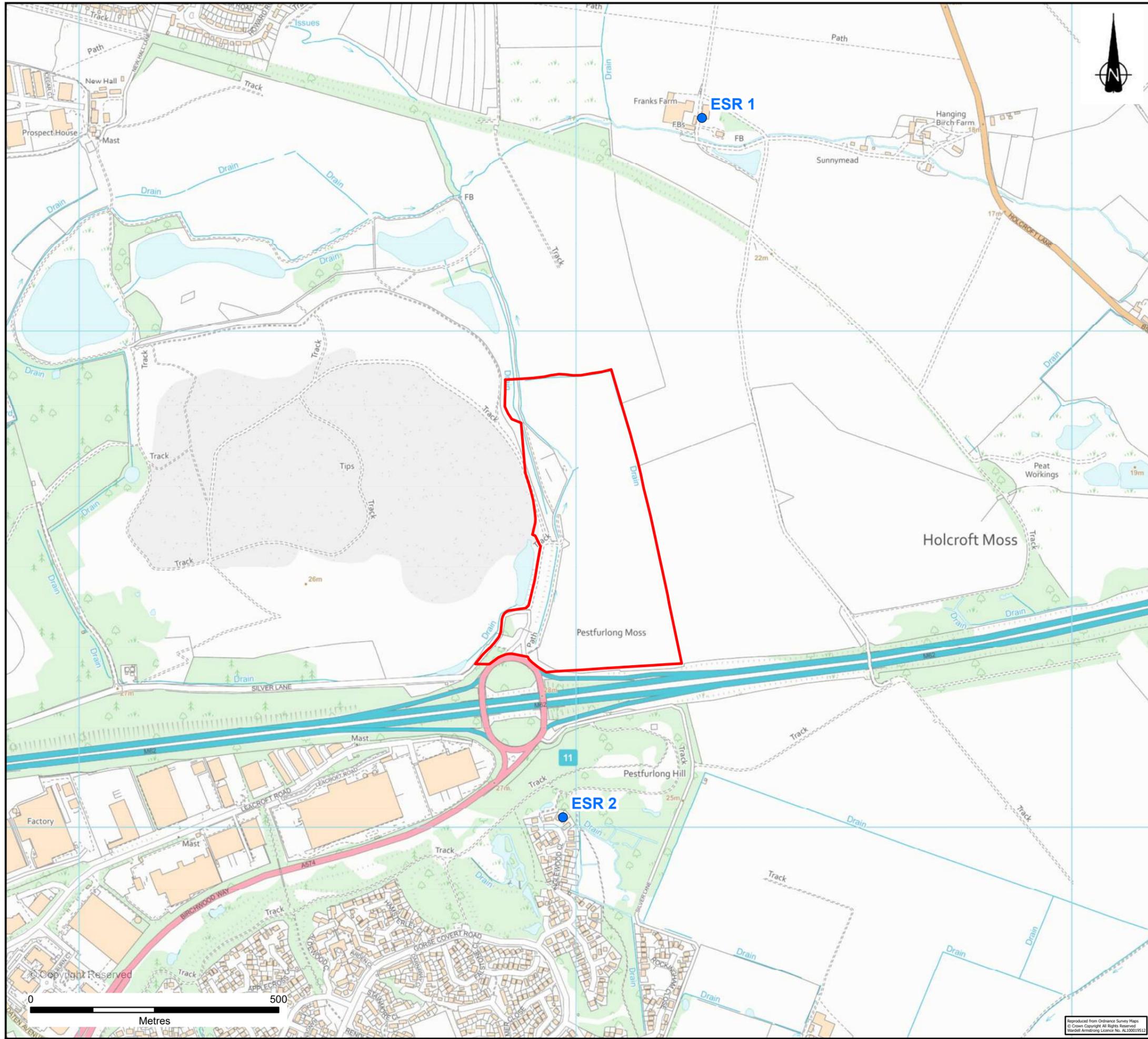


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# Socio-Economic Development Receptors







**KEY**

- Site Boundary
- Noise Sensitive Receptors



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PROJECT  
**WARRINGTON MSA**

DRAWING TITLE  
**NOISE SENSITIVE RECEPTOR PLAN**

DRG No. SH11739-013 REV A

DRG SIZE A3 SCALE 1:7,500 DATE 13/12/2018

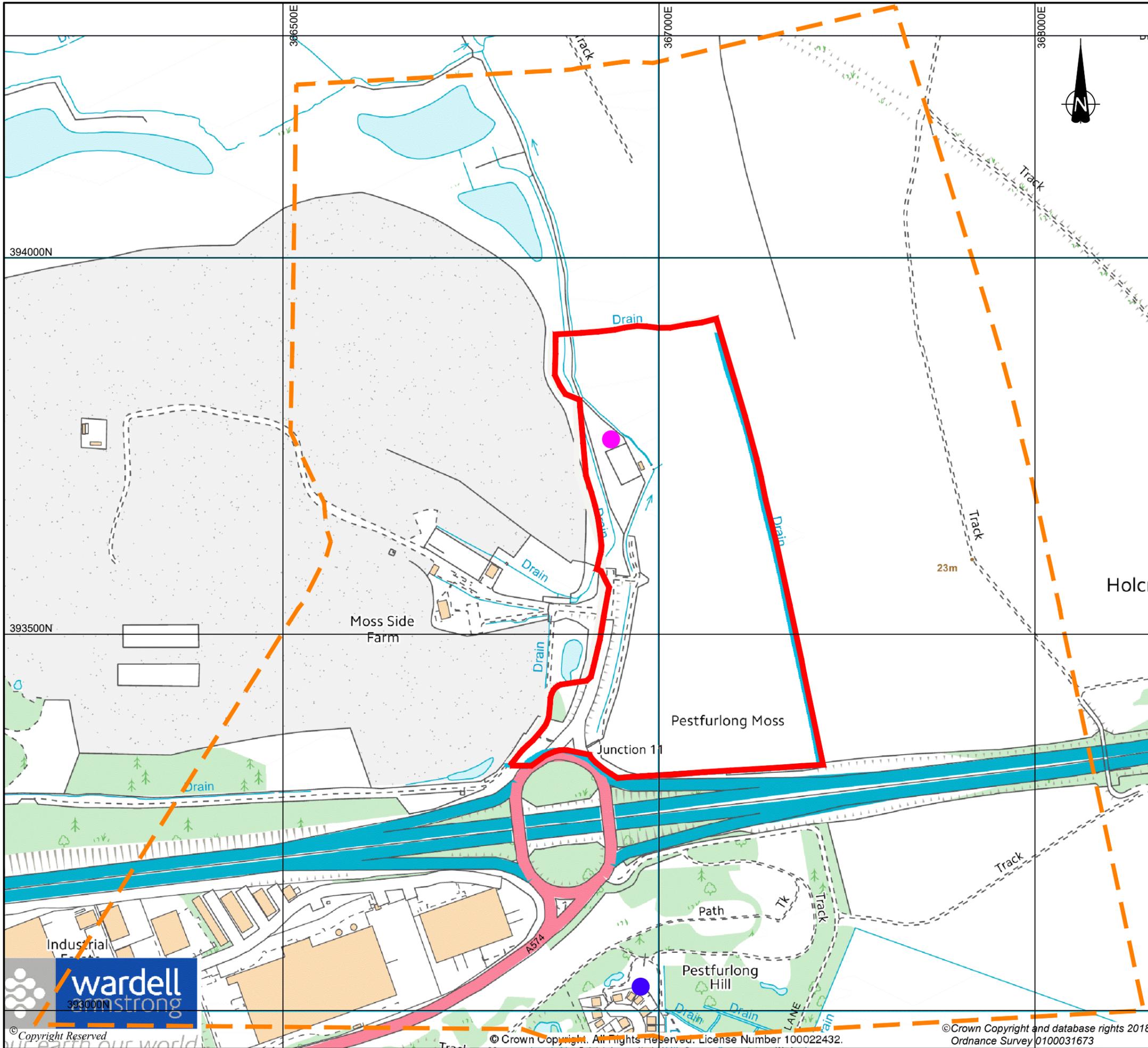
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KEY	
	PROPOSED MSA BOUNDARY
	350m CONSTRUCTION PHASE IMPACT ZONE
	PROPOSED HOTEL
	CLOSEST RESIDENTIAL PROPERTIES

A	First Issue	13-12-18	DR	RF	MTW
REVISION	DETAILS	DATE	DRN	CHKD	APPD

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PROJECT  
**POTENTIAL WARRINGTON MSA**

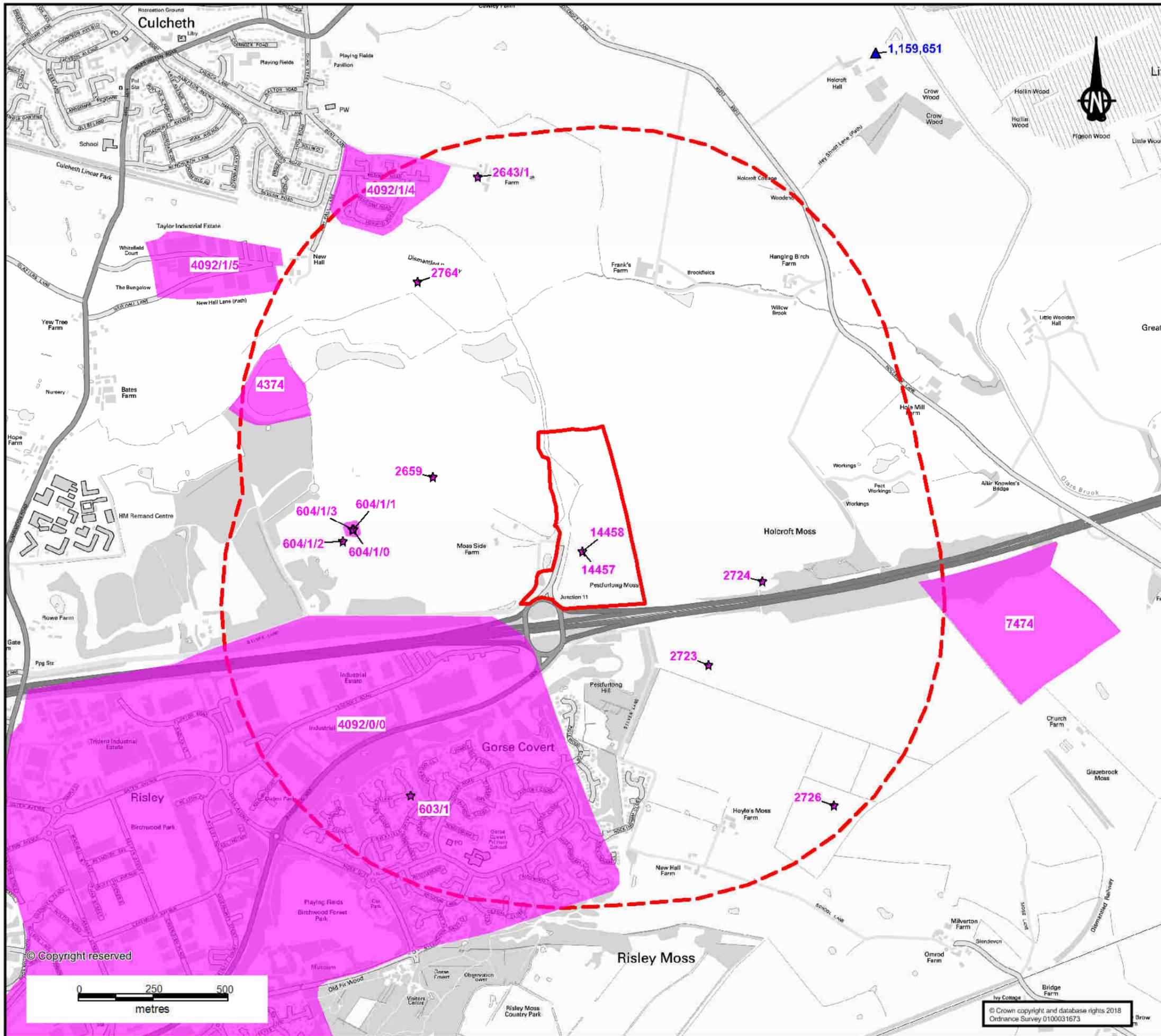
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**AIR QUALITY, ODOUR AND DUST RECEPTOR PLAN**

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- Redline Boundary
- Search Area (1km)
- ▲ Grade II\* Holcroft Hall (included at professional discretion)
- Historic Environment Record Entry

- 14458 Roman coin from Pestfurlong Moss
- 14457 Finds from Pestfurlong Moss
- 2659 Prehistoric flint
- 2723 Possible geological features
- 2724 Circular cropmark undated
- 2726 Cropmark enclosure
- 2764 Cropmark enclosure
- 4374 HMS Aerial
- 7474 Holcroft Moss
- 4092/01/04 Accomodation for ROF Risley (East)
- 2643/1 Ratcliffe House Farmhouse
- 4092/0/0 Royal Ordnance Factory at Risley Moss
- 603/1 Risley Old Hall
- 604/1/0 Medieval Manor of the Pesfurlong Family
- 604/1/1 Site of seventeenth century marmhouse
- 604/1/2 Site of former seventeenth century barn
- 604/1/3 Site of Abbey Farm medieval Moat

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
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Extra Motorway  
Service Area Group

Potential Warrington MSA

Figure 15.1  
Heritage Assets

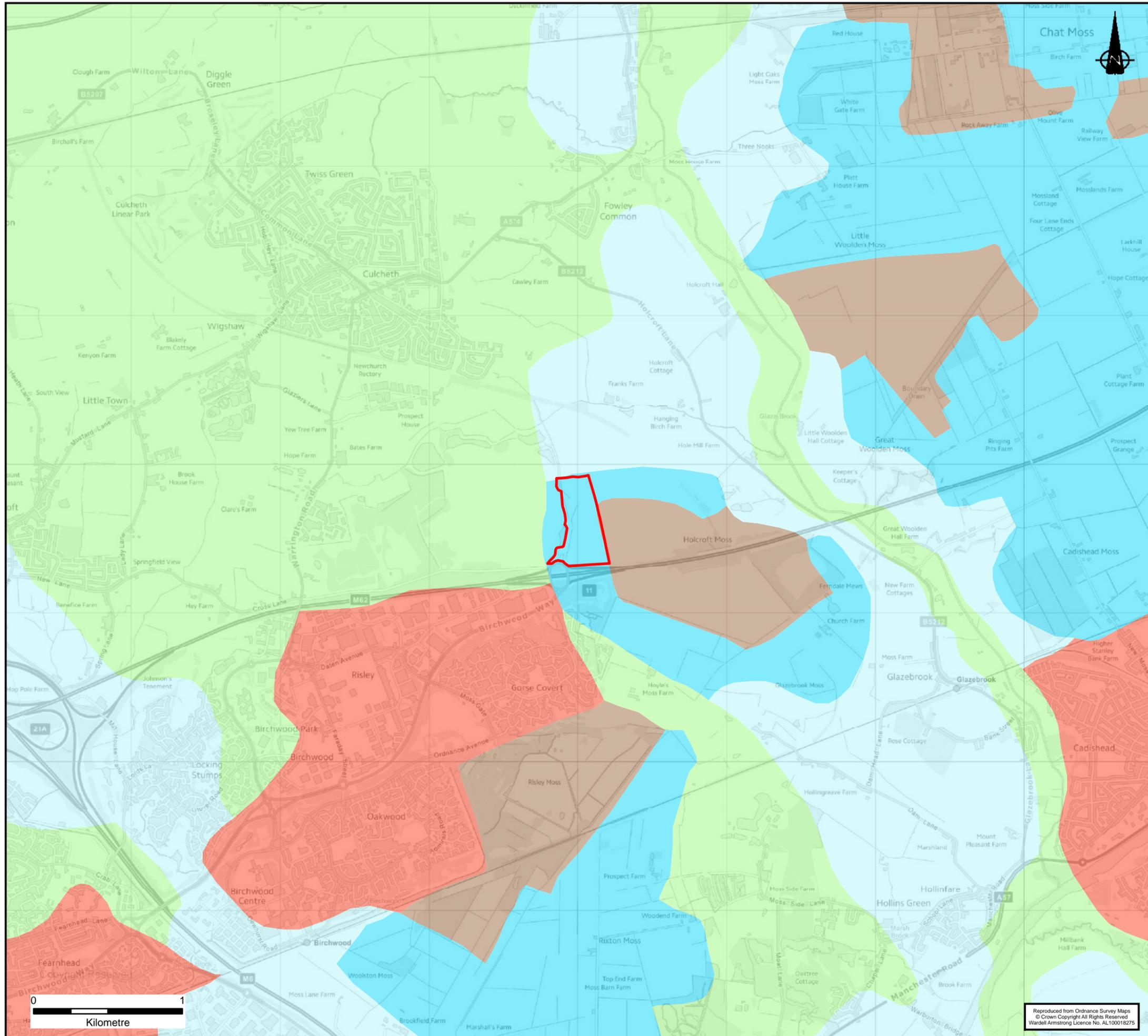
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**KEY**

- Site Boundary
- Agricultural Land Classification**
- Grade 1
- Grade 2
- Grade 3
- Grade 5
- Urban



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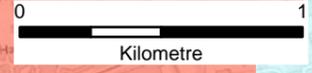
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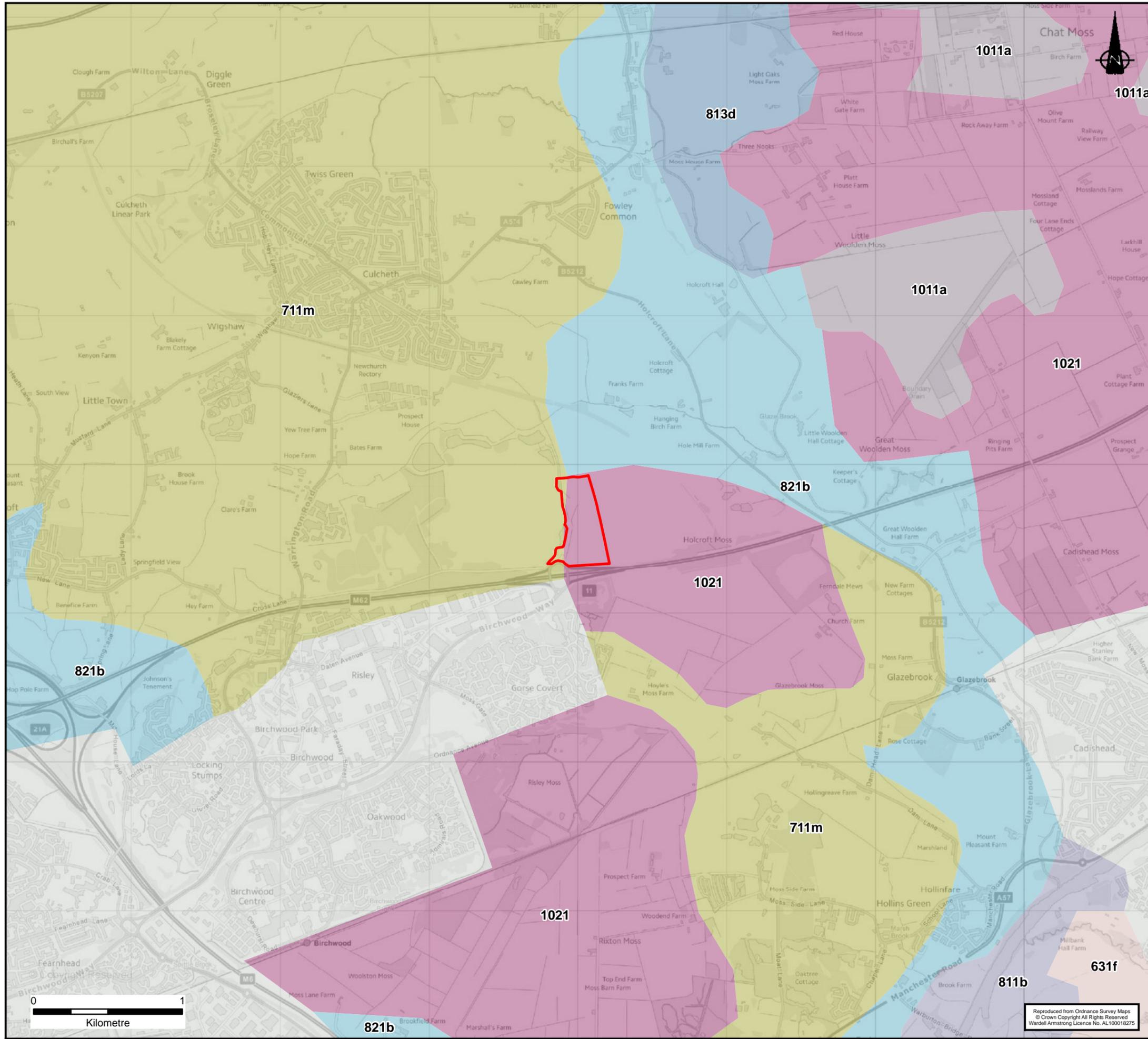
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**KEY**

Site Boundary

Soil Associations

- Blackwood (821b)
- Conway (811b)
- Crannymoor (631f)
- Fladbury 3 (831d)
- Longmoss (1011a)
- Salop (711m)
- Turbary Moor (1021)
- Urban

Soil Association data reproduced from the Soils of England and Wales Sheet 1 Northern England (Soil Survey for England and Wales)

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**EIA SCOPING - WARRINGTON MSA, J11, M62**

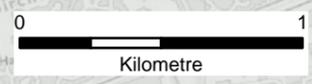
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# Warrington MSA - Local Waste Receptor Plan

- Development Site**
  -  Development Site

---

- Material Recycling Facilities**
  -  Swinton MRF - MRF
  -  Manchester (J W S) - MRF
  -  Irlam MRC - MRF

---

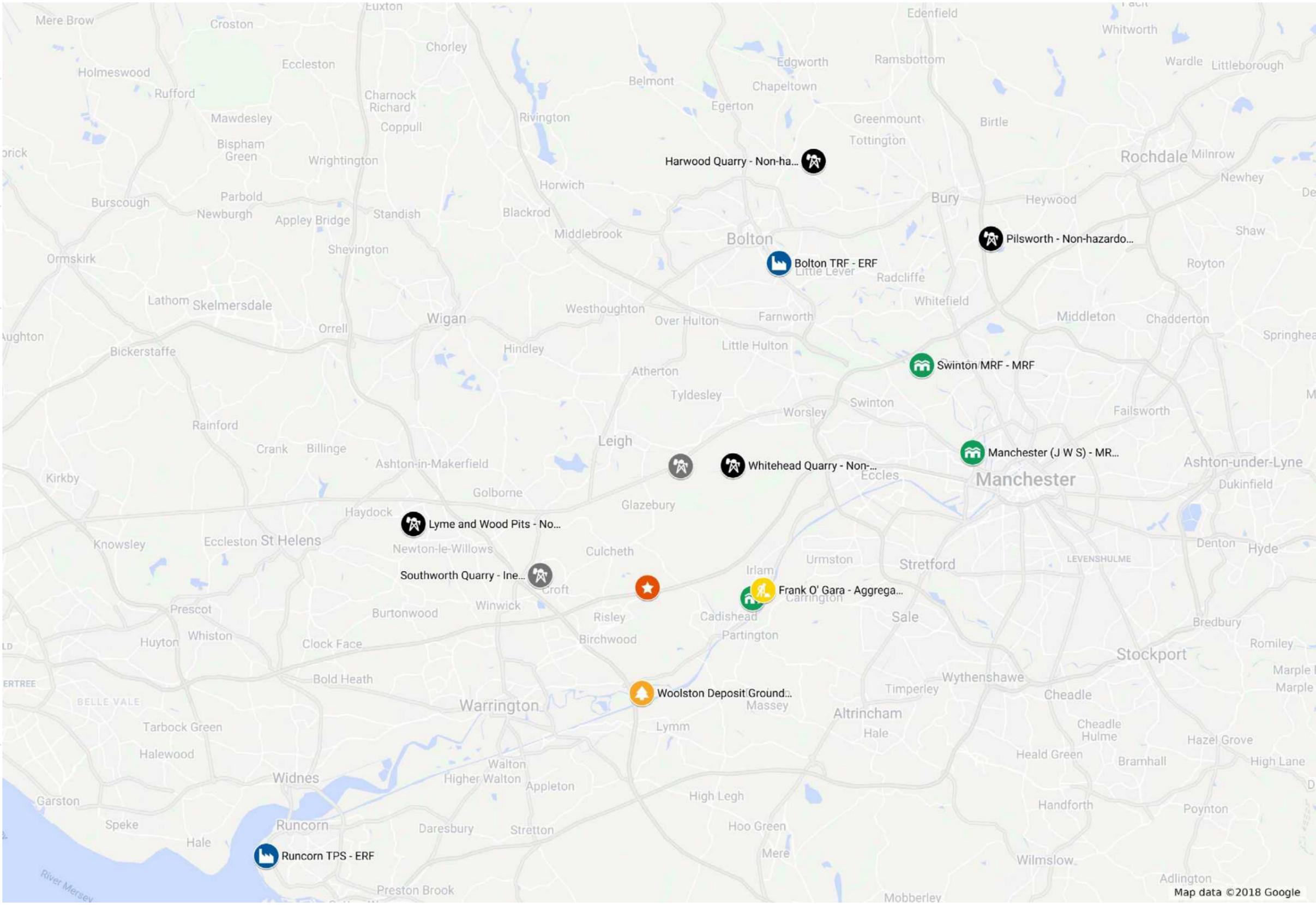
- Energy Recovery Facilities**
  -  Runcorn TPS - ERF
  -  Bolton TRF - ERF

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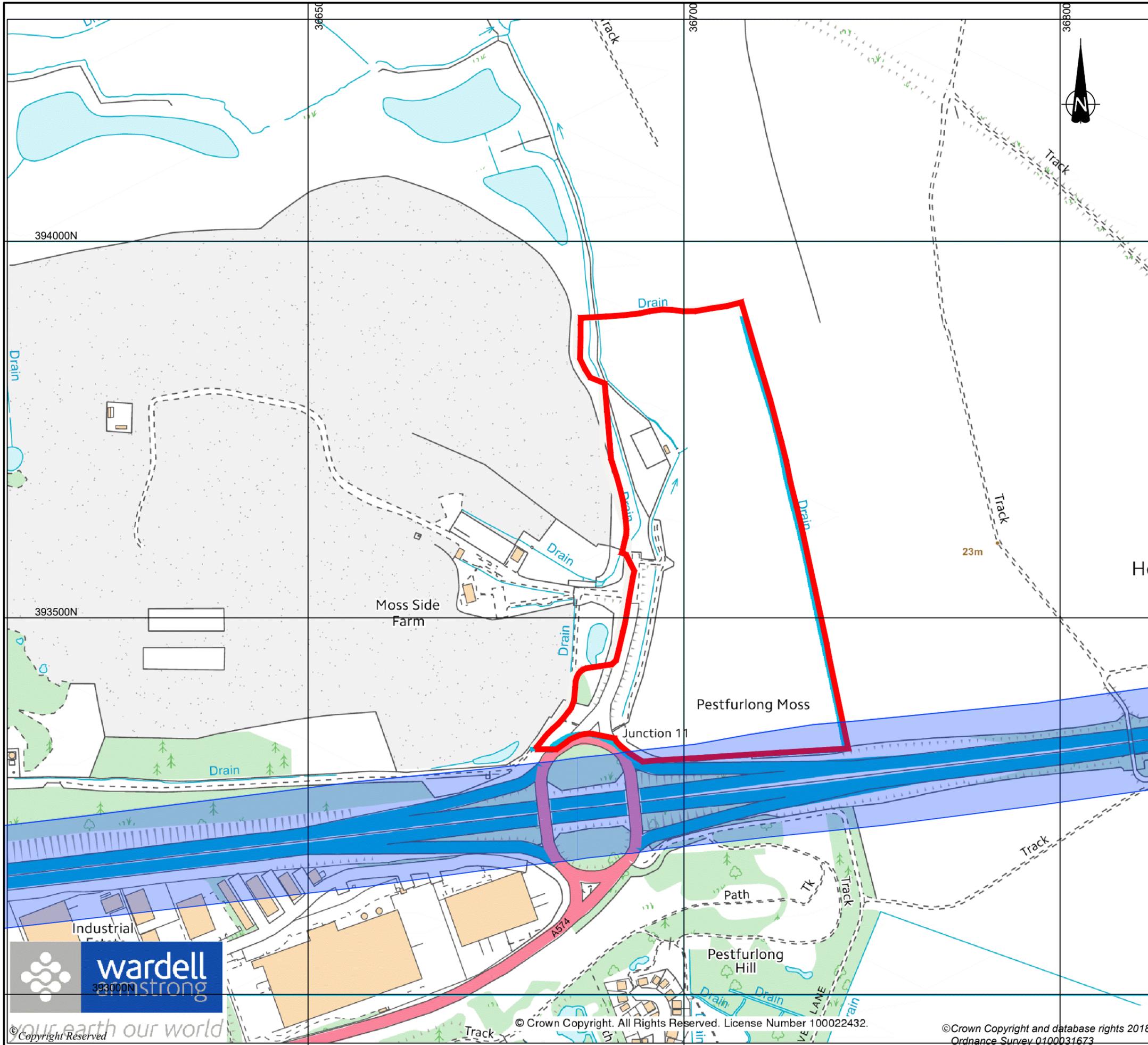
- Landfill**
  -  Harwood Quarry - Non-hazardous Landfill
  -  Pilsworth - Non-hazardous Landfill
  -  Whitehead Quarry - Non-hazardous Landfill
  -  Morleys Quarry - Inert Landfill / Recovery
  -  Lyme and Wood Pits - Non-hazardous Landfill
  -  Southworth Quarry - Inert Landfill

---

- Recovery**
  -  Woolston Deposit Ground - Recovery
  -  Frank O' Gara - Aggregate Processing



## **ES Scoping Appendix 7 – Motorway AQMA Plan**



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KEY

— PROPOSED MSA BOUNDARY

AQMA BOUNDARY



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PROJECT  
**POTENTIAL WARRINGTON MSA**

DRAWING TITLE  
**AIR QUALITY MANAGEMENT AREA**

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# **ES Scoping Appendix 8 – Phase I Desk Study Report**

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ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT



**EXTRA MSA GROUP**

**WARRINGTON MSA, J11 M62 MOTORWAY**

**PHASE I ENVIRONMENTAL ASSESSMENT**

**December 2018**

**DATE ISSUED:** December 2018  
**JOB NUMBER:** SH11739  
**REPORT NUMBER:** RPT-004

**EXTRA MSA GROUP**

**WARRINGTON MSA, J11 M62 MOTORWAY  
PHASE I ENVIRONMENTAL ASSESSMENT**

**PREPARED BY:**

J A Shaw Technical Director, MSc CGeol



**REVIEWED AND APPROVED BY:**

A J Dunhill Technical Director, BSc, CEng



**DOCUMENT RECORD**

Issue No.	Date	Details
1	3rd December 2018	First issue - DRAFT
2	14 <sup>th</sup> December 2018	Final

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Appendix IV	Data from Landmark Information Group Report
Appendix V	Site Visit Record
Appendix VI	Landfill Permit
Appendix VII	List of Land Uses and Associated Chemicals of Potential Concern

**DRAWINGS**

<b>Drawing No.</b>	<b>Title</b>	<b>Scale</b>
SH11739-007	Site Location Plan	1:50,000
SH11739-008	Site Plan	1:5,000
SH11739-010	Conceptual Site Model	NTS

## 1 EXECUTIVE SUMMARY

1.1 This report is prepared for a change of owner and use of the site and in accordance with instructions from Mr D Enuson of Extra MSA Group dated 26<sup>th</sup> November 2018. The site is the Proposed Warrington Motorway Services Area (MSA) and comprises approximately 15.33 Ha of agricultural land and grassland adjacent to J11 of the M62 Motorway. A summary of pertinent information relating to the site along with a qualitative assessment of the potential risk is provided in Table I.

TABLE I: Summary of Overall Risk			
Issue	Summary	Risk Category	
		Humans	Property/ Environment
<b>Present and past site use.</b>	Agricultural fields and grassland.	Low	Low
<b>Adjacent land uses.</b>	Landfill. M62 Motorway. Agricultural use.	Moderate	Moderate
<b>Environmental setting.</b>	Pollution Incident on site but likely to be related to adjacent landfill. Several IPPCs in area which relate to adjacent landfill.	Low to Moderate	Low to Moderate
<b>Asbestos</b>	Asbestos is likely to be present in the farm buildings on site and may also be present in any made ground.	Low to Moderate	Low
<b>Other issues.</b>	Peat is present in the east of the site.	Moderate	Moderate
<b>Geology and Mining</b>	Potential Made ground overlying Peat/Till. Solid strata is Helsby Sandstone. Six opencast sites identified within 1km of site for Peat, Sand and Common Clay and Shale.	n/a	n/a
<b>Geotechnical</b>	Peat in the east of the site will need consideration in development proposals.	Moderate	Moderate
<b>Groundwater and surface water</b>	Principal Aquifer and Total catchment of SPZ. Nearest graded watercourse is 1.4km east but a number of ungraded watercourses/drains are present on site.	Low	Moderate to High
<b>Flooding</b>	Flood Zone 1.	Low	Low
<b>Infrastructure Risk</b>	An HP Gas main is identified in the East of the site.	Low	Low to Moderate

<b>TABLE I: Summary of Overall Risk</b>			
<b>Issue</b>	<b>Summary</b>	<b>Risk Category</b>	
		<b>Humans</b>	<b>Property/ Environment</b>
<b>Recommended further work</b>	Site investigation is recommended to inform detailed design for contamination and geotechnical purposes and to assess gas risk.	n/a	n/a
<b>Overall Risk:</b>	<b>Low to Moderate</b>		

- 1.2 The executive summary forms part of the overall report and should not be considered in isolation.

## 2 INTRODUCTION

### Instructions

- 2.1 This report is prepared in accordance with instructions from Mr D Enuson of Extra dated 26<sup>th</sup> November 2018. This follows a proposal dated 22<sup>nd</sup> November 2018 by Wardell Armstrong.

### Site Location

- 2.2 The site is the proposed Warrington MSA, and is located as shown on Drawing No. SH11739-007 (1:50,000 scale). A more detailed site plan is shown on Drawing No. SH11739-008 (1:5,000 scale). The site comprises approximately 15 hectares of agricultural land and grassland and is bounded by further agricultural fields to the north and east, by the M62 motorway to the south and by a landfill site to the west. The site is located approximately 6km north east of Warrington.

### Scope and Objectives

- 2.3 The purpose of this report is to identify and examine in broad terms readily available information relating to the:
- past and current uses of the site and surrounding area;
  - environmental setting including geology, mining, hydrogeology and hydrology;
  - potential contamination sources, pathways and receptors as part of a preliminary conceptual model;
  - potential stability and contamination constraints and liabilities that may arise in connection with the present use or proposed use of the site; and
  - requirement or otherwise for future studies including potential intrusive site investigation prior to redevelopment.
- 2.4 The report has been produced in general accordance with the first incremental stage of a Land Quality Statement as set out by the Royal Institution of Chartered Surveyors (RICS) in their publication "Contamination, the Environment and Sustainability" dated April 2010. The report also draws on Environment Agency Report 11 entitled "Model Procedures for the Management of Land Contamination" dated September 2004. Further background to government guidance on contamination and the purpose and use of Land Quality Statements in assessing the risk of contamination at a site is described at Appendix II.

- 2.5 The report does not constitute or contain a valuation nor is it a full rigorous environmental audit. In this instance the report is prepared for a change of owner and use.

**Proposed Site Use**

- 2.6 It is proposed that the site is redeveloped for commercial use as a Motorway Services Area.

### 3 SITE HISTORY AND CURRENT LAND USE

#### Data Sources

- 3.1 The history of the site and the surrounding land has been investigated by consultation with a range of archive sources as summarised at Appendix III. The topographical and environmental data is based primarily on an Envirocheck report prepared by the Landmark Information Group and dated 26<sup>th</sup> November 2018 (LIG report, Appendix IV).
- 3.2 In addition, the following reports have been provided for information and review:
- *Preliminary Site Investigation, Wardell Armstrong LLP, Ref: SH11739-Rep-002, December 2018.*

#### Site History

- 3.3 Historic maps provided in the LIG report have been used to identify previous land uses, including any significant potentially contaminative uses. Where other features that may have an effect on development of the site have been identified, they are described.
- 3.4 Table II summarises the history of the site and its immediate vicinity from about 1849 to the present day.

TABLE II: Summary of Land Use		
Date	Site Land Use	Adjacent Land Use
1849 -1870's	The site is shown as part of Pestfurlong Moss and is undeveloped with a number of tracks crossing it.	The area is generally undeveloped with just a few farms shown in the vicinity.
1880 -1890's	Pestfurlong Moss Farm is shown in the central area and a track connects to Moss Side Farm to the west of the site. A pond is shown in the north west corner of the site.	Holcroft Firs (Woodland) and Holcroft Moss are shown bordering the site to the east. A railway line (Wigan Junction Branch) is seen c. 400m north east of the site.
1900 -1910's	No significant changes.	No significant changes.
1920-1930's	Some of the "tracks" previously identified are identified to have flow and are therefore likely to be drains/small watercourses. Some of the farm buildings also appear to have been demolished.	Holcroft Moss has a series of drains and tracks cut through and is likely to be subject to peat cutting.
1940-1950's	No significant changes.	Tramways are shown through Holcroft Moss and the woodland area of Holcroft Firs has reduced in size. The Royal Ordnance Factory (ROF) Risley is seen c. 300m south west of the site.

TABLE II: Summary of Land Use		
Date	Site Land Use	Adjacent Land Use
1960-1970's	The farm buildings are no longer shown. Three new buildings are shown in the north of the site – their use is not evident. The M62 Motorway and Junction 11 are constructed on plans dated 1975.	Holcroft Firs is no longer labelled. Drains are indicated across Holcroft Moss.
1980-1990's	The pond in the north west corner is no longer evident and is labelled as Scrub. Drains are indicated in the west of the site and along the northern and eastern perimeters. Issues are labelled in the south. An access road is constructed from J11 onto the southwest of site in late 1990's.	The railway line is shown as dismantled. ROF Risley is redeveloped as residential housing. Moss Side Farm to the west is expanded and a large spoil tip is seen to the west of this.
2000's	Only one building is now shown on site in the north and a fenced area is shown adjacent to it.	No significant changes.
Present day	The site comprises agricultural fields with some rough grass land. An agricultural building is present in the north of the site	The area around the site is largely agricultural with the M62 motorway located to the south and a landfill site to the west.

### Current Site Use

3.5 The site was visited on 30th November 2018. At the time of the visit the site comprised agricultural fields with some grassland. The following points are of note:

- the site was accessed from J11 of the M62 Motorway via a locked gate;
- the site comprised predominantly agricultural fields but some areas of rough grassland were noted in the west;
- the site was noted to slope down from the access road in the south west corner onto the main area of the site;
- soil was noted to be peaty in the south and east;
- agricultural buildings were noted in the north west of the site. Potential asbestos containing materials were noted in the roof;
- flytipping was noted in the vicinity of the agricultural buildings, including general household and construction waste;
- two 250L drums were also noted adjacent to the agricultural buildings; and
- a gas main was noted in the east of the site.

3.6 A site visit record is attached at Appendix V.

## Asbestos

- 3.7 The Health and Safety at Work Act, the Control of Asbestos Regulations and the Construction (Design and Management) Regulations impose duties upon employers, site owners, their agents and contractors in respect of hazardous materials including asbestos. Other health and safety and welfare regulations place duties on Employers to undertake appropriate risk assessments. This could include the commissioning of surveys, identification and management of hazardous materials including any proposals for remedial work.
- 3.8 A site walkover survey has been completed. However, the walkover survey does not constitute an asbestos survey and not all areas of the site may have been visited or made available for inspection.
- 3.9 Asbestos has been identified during our site walkover within farm buildings and a full asbestos survey should be carried out prior to any redevelopment. Guidance on the need for asbestos surveys and the method of carrying them out are given in HSE Publication HSG264.

## Ecology

- 3.10 There are a number of legal and planning policy considerations relating to certain important habitats and species where they are present on or in the vicinity of a site. Protected habitats and species can also be linked to development related activities via surface or groundwater and effects such as human/vehicular presence, noise, dust or pollution.
- 3.11 Reference to the LIG report indicates the presence of a Special Area of Conservation and a Site of Special Scientific Interest within 1km of the site.

TABLE III: Ecology	
<b>Special Area of Conservation:</b> Grid Ref: 368099 393393 Distance from Site: 887m East	Name: Manchester Mosses Source: Natural England Area: 1715154.68m <sup>2</sup> Reference: UK0030200 Status: Designated
<b>Site of Special Scientific Interest:</b> Grid Ref: 368099 393393 Distance from Site: 887m East	Name: Holcroft Moss Source: Natural England Area: 190417.08m <sup>2</sup> Reference: 1006461 Status: Notified

3.12 A Preliminary Ecological Assessment (PEA) has been carried out and is reported separately. No further consideration of ecology is made within this report.

**Environmental Management**

3.13 No issues relating to environmental management were identified during the site visit.

## 4 GEOLOGICAL AND HYDROGEOLOGICAL SETTING

### Geology

4.1 The assessment of the geology of the site is based on the published geological mapping sheet (Sheet No 97, Runcorn, Solid and Drift Edition, 1:50,000 scale) supplemented by the Preliminary Site Investigation (SH11739-Rep 004, December 2018), topographical plans and site visit. A summary of relevant geological information is provided below in Table IV.

TABLE IV: Summary of Relevant Geological Data	
Strata	Description
Made ground.	Made ground of an unknown nature, thickness and extent may be present on site associated with the demolition of former buildings however none was observed during the preliminary site investigation.
Natural superficials.	Peat was identified in varying thicknesses in the eastern part of the site (0.30m to 1.40m) with increasing thickness toward the south east. The western part of the site is shown to be underlain by Till deposits. These were observed in the north west of the site to comprise cohesive deposits comprising sandy clay with a minor component of fine to coarse gravel with a generally rounded angularity. Lithologies were variable from igneous granite to sedimentary mudstone, shale and red sandstone
Solid strata.	Helsby Sandstone Formation. Not observed during preliminary SI.
Landslides.	Low risk
Ground stability.	British Geological Information Services indicate a high potential for compressible ground stability hazards on site.

### Hydrogeology

4.2 Hydrogeological information has been obtained from a review of:

- LIG Envirocheck report;
- Groundwater Protection Policy and Groundwater Vulnerability maps published by the Environment Agency;
- hydrogeological maps published by the British Geological Survey; and
- Groundwater Protection: Policy and Practice (Environment Agency, 2006).

4.3 This information indicates the site to be underlain by superficial deposits of Peat and Till which are classified as Unproductive Strata and Secondary Undifferentiated Aquifer respectively. The underlying solid strata are classified as a Principal Aquifer.

- 4.4 Principal aquifers are highly permeable formations usually with a known or probable presence of significant fracturing. They are usually highly productive, strategic reserves able to support large abstractions, public water supply and river base flow.
- 4.5 Secondary Undifferentiated aquifers typically have variable characteristics and may be identified as Secondary A or B aquifers (minor or non-aquifers).
- 4.6 Unproductive strata have low permeability and contribute negligible flow for water supply or river base flow.
- 4.7 There are nine active groundwater abstraction licences within influencing distance of the site (2km). The closest is c. 500m north east of the site (NGR: 367350 394350) and is operated by J & JR Allen Ltd which is licensed to abstract 2,000,000m<sup>3</sup> of groundwater per year for Agricultural irrigation purposes.
- 4.8 The site lies within Source Protection Zone III (Total Catchment) for a major public groundwater supply located 4km north west of the site.

#### **Soil Vulnerability Classification – Leaching Potential**

- 4.9 The soil vulnerability classification groups the many different soil types of England and Wales into three soil vulnerability classes and six sub-classes. Each is based on the physical and chemical properties of the soil, which affect the downward passage of water and contaminants. This classification is not applied to soil above non-aquifers. Soil information for urban areas is based on fewer observations than elsewhere. A worst case vulnerability is therefore assumed until proved otherwise.
- 4.10 The soil in the east of the site has an intermediate leaching potential (I2), which indicates that they can possibly transmit non- or weakly adsorbed pollutants and liquid discharges but are unlikely to transmit adsorbed pollutants.
- 4.11 The soil in the west of the site has a low leaching potential (L), which indicates that the pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants. Lateral flow from these soils may contribute to groundwater recharge elsewhere in the catchment.

#### **Hydrology**

- 4.12 The nearest graded surface watercourse is the Glaze Brook, which is approximately 1.4km east of the site. This watercourse was assessed to have an overall poor quality in 2006. A number of small drains are present across the site which are not graded.

- 4.13 The Environment Agency maintains national flood maps based on ground levels, predicted flood levels, information on flood defences and local knowledge. The flood maps show the predicted likelihood of flooding in an area in the context of current and also the proposed land use considered in development planning.
- 4.14 For existing land use purposes, the likelihood of flooding is classed as very low, low, medium or high based on the Environment Agency map entitled Risk of Flooding from Rivers and Sea. The site is within a Very Low risk area. The chance of flooding each year is between less than 1 in 1000 (0.1%). The surface water flooding map shows some flooding is possible in the western areas of the site in the vicinity of the drain and existing farm buildings.
- 4.15 For planning purposes, the likelihood of flooding is classed as low, medium or high based on flood zones identified in National Planning Policy Guidance (2014) attached to the National Planning Policy Framework (2012) and the EA map entitled Flood Map for Planning (Rivers and Sea). The Flood Map for Planning only applies if the site is intended for redevelopment. The site is within Zone 1 and has a low probability of flooding. The chance of flooding each year is less than 0.1% (1 in 1,000).
- 4.16 There are seven surface water abstraction licences within 2km of the site. The closest is c. 200m north of the site (NGR 366800 394100) from an un-named artificial watercourse and is operated by UK Waste limited, which is licensed to abstract an unspecified volumes of surface water per year for industrial purposes.

## 5 MINING AND QUARRYING

### General

- 5.1 Research of the mining setting is based on examination of the published topographical and geological information as described in Section 4 of this report along with other mining archive information. Examination has also been made of the Mining Instability Study of Great Britain for any evidence of past mining relating to workings other than coal.

### Surface Workings

- 5.2 Research of topographical, geological and other archive mining records has indicated evidence of surface workings in the vicinity of the site. The LIG report records six former opencast sites within 1km of the site. The commodities worked in these areas were Peat (two locations), Sand (two locations) and Common Clay and Shale (two locations). The closest of these was located c. 470m west of the site at Silver Lane (Common Clay and Shale). All six opencast sites have now ceased operation.

### Underground Workings

- 5.3 Published geological information indicates that this site is not in an area of underground mining. Therefore, the site is considered unlikely to be subject to any ground instability from this source and no mine entries should be present.

## 6 ENVIRONMENTAL SETTING AND CONSULTATIONS

### Statutory Sources

- 6.1 Information from various statutory sources has been summarised from the LIG report prepared specifically for this site and abridged at Appendix IV. A full copy of the LIG report is available on request. The results from a site visit have also been considered as part of this assessment.

### Contaminated Land Register Entries and Notices

- 6.2 No contaminated land entries or notices are identified within 1km of the site.

### Waste Management

- 6.3 The LIG report identifies that the western part of the site is within a landfill operated by Biffa Ltd. This landfill has been subject to a Partial Permit surrender by consolidated notice (ref: EPR/BV7877IR/S009) and the area within the boundary of the site is now excluded. The surrender was effective from 7<sup>th</sup> August 2018 and the documents are included at Appendix VI.
- 6.4 Information supplied has indicated the presence of one landfill (4 records within LIG but relate to the same site) within 1km of the site boundary. There are also four Environment Agency historic recorded landfill sites, and three records of other types of waste management located within 1km of the site. The closest recorded facility of each type is shown in Tables V, VI and VII.
- 6.5 In addition to the recorded/licensed landfilling activities in the vicinity of the site, the possibility, although remote of there being unrecorded landfilling activities within influencing distance of the site cannot be entirely discounted. If at some time in the future, the presence of such an unrecorded landfill is revealed then its potential influence on the site may need to be investigated and dealt with as necessary.

TABLE V: Recorded Landfill Sites	
Location	Details
Licensed Waste Management Facility: Risley landfill Licence Holder: Biffa Waste Services Ltd Distance from Site: Adjacent to western boundary	Site Location: Silver Lane, Risley Licence Number: Not given Authority: Environment Agency Site Category: Waste landfilling; .10T/D with capacity >25,000T excluding inert waste Licence Status: Effective.

TABLE VI: Historic Landfill Sites	
Location	Details
Licensed Waste Management Facility: Historic Landfill Licence Holder: Wimpey Waste Management Grid Ref: 366069 393340 Distance from Site: 716m West	Site Location: Silver Lane, Risley (Old Abbey Farm) Licence Number: EAHL16702 Input dates: Not clear (1980's) Waste Type: Special Waste.

TABLE VII: Registered Waste Transfer Sites	
Location	Details
Licence Holder: Christian Salveson Food Servs t/a Salveson rec Grid Ref: 366208 392888 Distance from Site: 736 south west	Site Location: 8 Leacroft Road, Risley Industrial Estate Licence Number: X61532 Authority: EA – NW Region Site Category: Transfer Waste Type: Commercial Waste – Specifically Plastic gown covers and film, PVC food trays, Rigid Flower Containers, Solid Finished Plastics Licence Status: Lapsed, cancelled, defunct, not applicable, surrendered, cancelled.

## Radon

- 6.6 Radon can be a hazard within built developments and especially within enclosed or confined spaces. The Health Protection Agency and British Geological Survey document "Indicative Atlas of Radon in England and Wales" (2007) provides a summary of the number of homes in a given area above the "Action Level" for radon. Although the radon atlas relates directly to measurements taken from homes or dwellings, it is also relevant to employers assessing risks for enclosed underground and ground floor work places.
- 6.7 The BRE document "Radon: guidance on protective measures for new buildings" (2015) provides guidance for reducing the concentration of radon in new buildings and a two stage procedure using accompanying maps needed to determine the level of protection for a given site.
- 6.8 These documents have been consulted and the site is shown to lie in an area where no protection against radon is needed should development of residential dwellings or new structures of similar form of construction and compartmentation occur.

## Environmental Issues

- 6.9 The Environment Agency data via the LIG report records the following environmental issues at or in the vicinity of the site (within 250m):

- 1 No. category two (significant) pollution incidents to controlled waters (Table VIII); and
- 9 No. Integrated Pollution Prevention and Controls (Table IX);

6.10 No discharge consents, local Authority Pollution Prevention Controls or Prosecutions or Enforcements were noted.

TABLE VIII: Pollution Incidents to Controlled Waters	
Incident	Details
Property Type: Tip Drainage Grid Ref: 367000 393700 Distance from Site: On site	Reference: 94652578 Pollutant: Tip Leachate Incident Date: 25/11/94 Note: Poor operational practice. Holcroft Brook Incident Severity: Category 2 – Significant incident.

TABLE IX: Integrated Pollution Prevention and Controls	
Operator	Details
Operator: Biffa Waste Services Ltd Grid Ref: 366720 393546 Distance from Site: 179m West	Permit Reference: BV7877 Effective Date: Not supplied Description: Waste Landfilling: Any other landfill to which the 2002 landfill regulations apply. Status: Valid.
NB. All nine IPPC entries relate to this operation. Five entries are permit variations with a total of 4 entries (including the one above) being currently valid.	

## Archaeology

- 6.11 Preliminary examination of historical maps indicate no apparent features of significant archaeological interest in the general vicinity of the site.
- 6.1 An archaeological Watching Brief was present during the preliminary site investigation in order to assess any potential archaeological finds. This was carried out due to the likely presence of peat and previous knowledge of nearby sites.
- 6.2 Artefacts recovered from the surface of the harvested area of the site consisted mostly of 18th and 19th century pottery, including Buckley type coarse red earthenware, Victorian transfer print and some refined white earthenware. Glass, slag and copper alloy were also recovered.
- 6.3 No other significant archaeological features were encountered during the excavation work.

### **Unexploded Ordnance**

- 6.4 A Zetica regional unexploded ordnance (UXO) risk map has been reviewed. The map shows the site to be in a Low risk area.
  
- 6.5 Examination of historic plans identified ROF Risley located c. 300m south west of the site. As a result of this land use, it is possible that a risk from unexploded ordnance may exist in the area and it may be prudent to carry out a UXO specialist desk study to identify any potential higher risk areas prior to redevelopment of the site.

## 7 CONCEPTUAL SITE MODEL

### Environmental Issues

- 7.1 Conclusions are drawn from the preceding information in terms of potential sources of contamination, possible receptors that may be affected by any sources of contamination and the pathways that exist between source and receptor. This basic risk assessment allows identification of the suitability of the site for its current and future use and evaluation of any potential environmental liability that may attach to the site. A description of past or existing uses and any chemicals of potential concern is attached at Appendix VII. The issues can be broadly addressed as follows: land contamination, groundwater contamination, surface water contamination, ground gases and air pollution.
- 7.2 The land use history has identified the following potentially significant sources of contamination both on the site and adjacent to the site.

#### ***Potentially Significant Contamination Source On Site:***

1. Potential made ground.
2. Potential asbestos containing material.
3. Ground gas – Peat.

#### ***Potentially Significant Contamination Source Off Site:***

4. Adjacent landfill.

- 7.3 As a result of the land use history presented in previous sections of this report the site may have a number of sources of contamination. For land or groundwater to be designated as polluted a linkage must exist between:
- a source of contamination capable of causing significant harm;
  - human or environmental receptors; and
  - a pathway by which the contamination can reach the receptor.
- 7.4 A diagrammatic Conceptual Site Model is presented as Drawing No. SH11739-010.

**TABLE X – Conceptual Site Model**

<b>Source (Contaminant)</b>	<b>Pathway</b>	<b>Receptor</b>
No. 1 Made ground potentially present on site (heavy and phytotoxic metals, PAH, asbestos).	1. Inhalation. 2. Dermal contact. 3. Ingestion. 4. Surface runoff. 5. Groundwater migration. 6. Direct contact (aggressive attack).	1. Future occupiers. 2. Construction workers. 3. Groundwater. 4. Surface water. 5. Subsurface building materials [sulphur] and plastic service pipes [phenol]. 6. Flora and Fauna.
No. 2 Historic building material and made ground (asbestos).	1. Disturbance and inhalation.	1. Future occupiers. 2. Construction workers.
No. 3 Ground gas – Peat (gas).	1. Inhalation. 7. Gas migration.	1. Future occupiers. 2. Construction workers. 6. Flora and Fauna.
No. 4 Adjacent Landfill (leachate, gas).	1. Inhalation. 2. Dermal contact. 3. Ingestion. 4. Surface runoff. 5. Groundwater migration. 6. Direct contact (aggressive attack). 7. Gas migration.	1. Future occupiers. 2. Construction workers. 3. Groundwater. 4. Surface water. 5. Subsurface building materials [sulphur] and plastic service pipes [phenol]. 6. Flora and Fauna.

## 8 ENVIRONMENTAL RISK ASSESSMENT

### Introduction

8.1 The main issues considered in the risk assessment are:

- the environmental risks identified, if any, that may have implications for the current and the proposed use of the site.
- how likely it is that the environmental risks identified may affect the site. This is considered against a background of continuation of the current use and potential for the site to be redeveloped in accordance with the proposed use.
- other areas of primary concern from a ground engineering and environmental viewpoint that may have been revealed as a result of the research carried out. These features are limited to the scope of work/research carried out and may not cover such factors as the wider planning constraints, archaeology, ecology etc.

8.2 The Model Procedures for the Management of Land Contamination (CLR 11) states that, *“Risk is a combination of the probability or frequency of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.”*

8.3 For ease of reference and understanding the risks are assessed against 3 possible levels/categories:

- **Low risk** - site considered suitable for use and environmental setting. Contaminants may be present but unlikely to have an unacceptable impact on key targets. Action unlikely to be needed;
- **Moderate risk** - site may not be suitable for use and environmental setting. Contaminants probably or certainly present and likely to have an unacceptable impact on key targets. Action may be needed in the medium term; and
- **High risk** - site probably or certainly not suitable for use and environmental setting. Contaminants probably or certainly present and very likely to have an unacceptable impact on key targets. Urgent action needed in short term.

8.4 Under each of the categories the environmental issues which have been identified have been assessed with regard to a wide range of topics including (where appropriate):

- the 'source-pathway-receptor' concept;
- the behaviour of potential contaminants within the environment;
- environmental processes;
- industrial operations and best practice;

- current environmental legislation;
- the views and practices of the environmental regulators;
- the likelihood of environmental notices, orders or other enforcement action;
- any requirements to remove waste, contaminated or hazardous materials;
- the health and safety of occupiers or neighbours;
- any redevelopment plans for the site;
- effects on the fabric of buildings caused by contamination; and
- financial and cost implications.

### Qualitative Risk Assessment

8.5 From the combination of the foregoing information a qualitative assessment of the potential geo-environmental risk is provided in Table XI. Where indicated, these risks may need to be considered for any future redevelopment of the land.

8.6 The effect of the present site use on the surrounding area is assessed with regard to the possible contaminant migration from the site off site and with regard to the general environmental setting and land quality of the surrounding area in order to put the on site assessment in context.

TABLE XI – Qualitative Risk Assessment			
Issue	Summary	Risk Category	
		Humans	Property/ Environment
<b>Contamination Potential:</b>			
Present site use.	Agricultural fields and grassland.	Low	Low
Past site use.	Agricultural fields and grassland. Some previous farm buildings that are likely to have been demolished.	Low	Low
Impact to site from past and present adjacent land uses.	Adjacent Landfill site.	Moderate	Moderate
Mining history.	A number of opencast sites in the vicinity for Peat, Sand and Common Clay and Shale.	Low	Low
Emissions, pollution incidents, discharges etc.	A pollution incident is recorded on site, but this is likely to relate to the Landfill. There are a number of Local Authority Pollution Prevention Controls within influencing distance of the site which relate to the adjacent landfill.	Low to Moderate	Low to moderate
Asbestos.	Asbestos is likely be present in the farm buildings on site. It may also be present in any made ground as a result of demolition of former buildings.	Low to Moderate	Low

<b>TABLE XI – Qualitative Risk Assessment</b>			
<b>Issue</b>	<b>Summary</b>	<b>Risk Category</b>	
		<b>Humans</b>	<b>Property/ Environment</b>
Other issues.	Peat is present in the eastern part of the site.	Moderate	Moderate
<b>Environmental Sensitivity:</b>			
Geology.	Potential Made ground overlying Peat/Till. Solid strata is Helsby Sandstone.	n/a	n/a
Groundwater vulnerability.	This sandstone underlying the site is a Principal aquifer. The closest active groundwater abstraction licences is c. 500m north east. The site is within a Total Catchment Area for a Source protection Zone.	Low	Moderate to High
Surface water vulnerability.	The nearest graded surface watercourse is the River Glaze located 1.4km east of the site. A number of small watercourses/drains are present on the site. The closest surface water abstraction licence is c. 200m north.	Low	Low to Moderate
<b>Geological constraints:</b>			
Made ground / superfcials / solid geology	Peat is present in the east of the site and will have implications for construction on the site.	Low	Moderate – to High
Mining setting	None on site but a number of opencast sites identified in the vicinity (Peat, Sand and Common Clay and Shale).	Low	Low
<b>Risks relating to other constraints (miscellaneous):</b>			
Services	A HP Gas main is identified in the east of the site.	Low	Low to Moderate
Flooding.	The site does not lie within a designated floodplain.	Low	Low
Ecology.	Addressed in separate report.	-	-
<b>Liability Issues:</b>			
Risk of liability with past use of site.	Agricultural fields and grassland.	Low	Low
Risk of liability with current use of site.	Agricultural fields and grassland.	Low	Low
Risk of liability for proposed use of site.	Motorway Services Area.	Low	Low to Moderate
Overall Risk for Site:	<b>Low to Moderate</b>		

## 9 CONCLUSIONS AND RECOMMENDATIONS

- 9.1 Based on the available information summarised in this report, the site is considered to present an overall Low to Moderate risk from past and present use and adjacent operations.
- 9.2 The potential for existing contamination at the site is considered to be limited however it is possible that some made ground may be present associated with previous demolition on site. There is a risk of ground gas from the Peat deposits in the east of the site and also a risk of leachate and gas migration onto site from the adjacent landfill.
- 9.3 The site is situated on a Principal Aquifer and within a Source Protection Zone (Total Catchment Area). The nearest watercourse is 1.4km from the site but there are a number of small watercourses/drains on site which will provide connectivity.
- 9.4 The presence of Peat in the east of the site will need to be considered within development proposals.
- 9.5 Some preliminary information on the Peat and general ground conditions at the site has been gained from the preliminary investigation. It is likely that a contamination investigation would be required prior to redevelopment of the site to confirm the presence and extent of any made ground and/or contamination on the site and also to assess the gas risk both from the Peat and the adjacent landfill. Some minor remedial measures may be necessary depending on the nature and extent of the made ground present.
- 9.6 We would recommend that a more detailed geotechnical investigation is carried out to assist with detailed design for the proposed development.
- 9.7 Due to the sensitivity of the site it is likely that mitigation measures to protect the underlying aquifer and Source Protection Zone would be required in any development on the site.
- 9.8 It is recommended that a UXO specialist desk study is completed prior to redevelopment due to the proximity of ROF Risley.

## **A P P E N D I X I**

### **Standard Terms and Conditions and Limitations to Reports**

## **STANDARD TERMS AND CONDITIONS AND LIMITATIONS TO REPORTS**

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The methodology adopted and the sources of information used by Wardell Armstrong LLP in providing the services are outlined in this Report. The work described in this Report is based on the conditions and information as stated at the date the Report was completed. The scope of this Report and the services are accordingly limited by these circumstances. The findings outlined in the Report together with any opinions expressed and recommendations made are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. Whilst a walk over site visit may have been carried out as part of the work this has been limited to observations only and no other physical investigations, sampling and testing work has been carried out as part of this work.

Wardell Armstrong LLP disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to Wardell Armstrong LLP's attention after the date of the Report. Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

Where any site observations have been carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results from any site observations made may vary and further confirmatory work should be made after the issuance of this Report. Wardell Armstrong LLP does not guarantee or warrant any estimates or projections contained in this Report.

## **APPENDIX II**

### **Guidance on Contamination and Land Quality Statements**

## **CONTAMINATION**

### **Environmental Protection Act Part IIA**

Contaminated land was defined for the first time under Part IIA of the Environmental Protection Act 1990. Part IIA was inserted into the 1990 Act by section 57 of the *Environment Act 1995*. The regime came into effect in England on 1 April 2000, Scotland on 12 July 2000 and Wales on 15 September 2001.

Contaminated land is defined as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

- (a) significant harm is being caused or there is a significant possibility of such harm being caused; or
- (b) significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused.”

Harm is described in the EPA 1990 as being “*harm to the health of living organisms or other interference with ecological systems of which they form part and, in the case of man, includes harm to his property*”.

There are a number of important government policies and priorities underlying the Act. The first priority is to prevent the creation of new contamination by use of this Act and other controls such as Environmental Permitting (formerly regulated by Integrated Pollution Prevention and Control and Waste Management licensing). The second is to identify and remove unacceptable risks to human health and the environment. In addition there is a desire to bring contaminated land back into beneficial use whilst seeking to ensure that the cost burdens faced by individuals, companies and society as a whole are proportionate, manageable and economically sustainable.

Under Part II(a), Local Authorities are responsible for the inspection of contaminated land and for ensuring that remediation is undertaken where necessary. Local Authorities also maintain a Public Register detailing the regulatory actions that they have implemented. The Environment Agency has a complementary role and acts as the enforcing Authority for designated special sites.

The policy objectives are underlain by the "suitable for use" approach to the remediation of contaminated land, which the Government considers is the most appropriate approach to

achieving sustainable development. This approach recognises that the risks presented by any given level of contamination will vary greatly on a site by site basis.

In general the responsibility for paying for remediation will, where feasible, follow the "polluter pays" principle. In the first instance, any person who caused or knowingly permitted the contaminating substance to be in, or under the land will be the appropriate person(s) to undertake the remediation and meet its costs. If it is not possible to find such a person, responsibility will pass to the current owner or occupier of the land.

### **Planning Regime**

Land contamination, or the possibility of it, is a material consideration for the purposes of town and country planning. This means that the planning authority has to consider the potential implications of contamination both when it is developing structure or local plans and when it is considering individual applications for planning permission. Under the suitable for use approach, risks should be assessed and remediation requirements set, on the basis of both the current use and its proposed new use.

### **Model Procedures for the Management of Contaminated Land - CLR 11**

The Model Procedures for the Management of Contaminated Land (CLR11) was published by the Environment Agency and DEFRA in September 2004. It provides a technical framework for applying a risk management process when dealing with land affected by contamination in a way that is consistent with government policies and legislation within the UK.

The approach presented is designed to be applicable to a range of regulatory and non-regulatory contexts including:

- i. Development or redevelopment of land under the planning regime;
- ii. Regulatory intervention under Part IIA of the EPA 1990;
- iii. Voluntary investigation and remediation; and
- iv. Managing potential liabilities of those responsible for individual sites or a portfolio of sites.

The definition of contaminated land is based upon the principles of risk assessment. *"Risk is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence"*.

CLR 11 uses the concept of "pollutant linkage" and identifies that there are three essential

elements for any risk:

- A **contaminant** – a substance that is in, on or under the land and has the potential to cause harm or cause pollution
- A **receptor** – something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body; and
- A **pathway** – a route or means by which a receptor can be exposed to, or affected by, a contaminant.

Each of these elements can exist independently, but they only create a risk when all three are present and linked together.

CLR 11 is structured as follows:

Chapter 1 Overview of Model Procedures		
Chapter 2 Risk Assessment	Chapter 3 Options Appraisal	Chapter 4 Implementation of the Remediation Strategy
Preliminary Risk Assessment	Identification of feasible remediation options	Preparation of the implementation plan
Generic quantitative risk assessment	Detailed evaluation of options	Design, implementation and verification
Detailed quantitative risk assessment	Developing the remediation strategy	Long term monitoring and maintenance
Chapter 5 References and Glossary		

A Phase I Environmental Assessment provides the first stage of the risk assessment (Preliminary Risk Assessment in the table above). Further risk assessment (described in Chapter 2) and the subsequent sections (Chapters 3 and 4) of CLR11 are dealt with through site investigation and any subsequent remediation reports.

CLR11 defines the purpose of the Preliminary Risk Assessment to “*develop an initial **conceptual model** of the site and establish whether or not there are potentially unacceptable risks*”. It identifies that during a preliminary risk assessment “*the assessor collects and reviews largely desk-based information to prepare an initial conceptual model to identify possible*

*pollutant linkages. The assessor then evaluates the possible linkages, using criteria appropriate to the risk assessment context”.*

CLR 11 states that *“Development of the conceptual model forms the main part of preliminary risk assessment, and the model is subsequently refined or revised as more information and understanding is obtained through the risk assessment process”.* The Conceptual model presents the characteristics of the site in diagrammatic or written form and shows the possible relationships between potential contaminants, pathways and receptors. This then forms the basis of the further risk assessment and any site investigation or other works.

**RICS Guidance Note: Contamination, the environment and sustainability (GN13/2010)**

The document is intended to provide guidance to chartered surveyors (members of RICS). It supersedes an earlier document "Contamination and its implications for Chartered Surveyors" (September 1997) which promoted the concept of a Land Quality Statement (LQS) as the written output of an environmental risk assessment.

In addition to contamination, the document provides a summary and guidance on other factors which might affect land value and environmental duties and/or liabilities. These factors assist with the overall assessment of the site and often provide valuable information to consider within the conceptual model required in CLR11. These factors include, but are not limited to, flooding and flood risk management, invasive species, mineral workings, shallow mining subsidence, natural subsidence risk and radon.

Section 11.8 of the RICS guidance note which sets out what is usually incorporated within a Land Quality Statement as follows:

- *a detailed description of the site and its location, by reference to a plan;*
- *a description of the current uses of the land and of the adjacent land;*
- *a summary of the site history, produced by reference to historical maps, archive records, and statutory, local authority and water authority registers and records;*
- *identification of potential contaminants associated with existing and previous uses, or with geological and hydrogeological features, through site investigation reports and the specialists’ own observations;*
- *identification of other relevant issues, including those pertaining to archaeology, ecology, sites of special scientific interest (SSSIs), human population exposure and characteristics*

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*of off-site locations that could have an environmental impact or be sensitive to effects from the subject site;*

- *conclusions as to:*
  - *whether remedial treatment is necessary or prudent to enable the continued use of the property for its current use without undue risk to the health of persons using the property;*
  - *whether remedial treatment is necessary or prudent to reduce the risk of damage to a third party's health or property, or damage to the environment, which may give rise to a claim for damages, prosecution or action by the appropriate regulatory authorities;*
  - *if remedial treatment is not warranted, whether a residual risk of future claims from third parties and regulatory authorities remains;*
  - *whether concern regarding the risks associated with the known or suspected presence of contamination restricts the prudent use of the property compared with its likely range of possible uses if the site were uncontaminated;*
  - *if the property is to be redeveloped for a specified purpose, how much additional expense would be incurred in investigating contamination of the property further, and in carrying out any necessary remedial work, as compared with an uncontaminated property. Estimates produced prior to intensive investigations are often extremely broad; and*
  - *whether there is a likely implication from the foregoing for the value and/or the viability of development.*

Further information is available from a range of public and professional bodies including central government, local Council and the Environment Agency. Pertinent documents for additional information include Safe Development of Housing on Contaminated Land, 2014; , Managing and Reducing Land Contamination: Guiding Principles, 2010 and the Water Framework Directive (2000/60/EC, 23 October 2000).

## **APPENDIX III**

### **Sources of Information**

The following principal sources of information have been consulted in the preparation of this report:

- Landmark Envirocheck report dated 26<sup>th</sup> November 2018 (*a review of information provided by Landmark Information Group Ltd who were commissioned to provide an “Envirocheck” report consisting of published historical plans, environmental data sheets and environmental sensitivity plans;*
- Ordnance Survey County and National Grid Series Plans;
- British Geological Survey published maps and memoirs;
- Environment Agency;
- Other Mining Archives including the Mining Instability Study of GB prepared by Ove Arup;
- Inhouse Wardell Armstrong archives;
- Statutory Undertakers;

**APPENDIX V**

**Data from Landmark Report**

## STATUTORY SOURCES OF INFORMATION

Information from the Landmark Information Group Ltd has been summarised in the Table below.

The site sensitivity map and full copy of the Envirocheck data is available on request.

Distance from an Approximate Central Point on Site*				
Agency & Hydrological	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2km)
BGS Groundwater Flooding Susceptibility	Yes		Yes	
Contaminated Land Register Entries and Notices				
Discharge Consents			1	1
Prosecutions Relating to Controlled Waters				
Enforcement and Prohibition Notices				
Integrated Pollution Controls				
Integrated Pollution Prevention and Control		9		2
Local Authority Integrated Pollution Prevention and Control				
Local Authority Pollution Prevention and Controls				1
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	Yes			
Pollution Incidents to Controlled Waters	1	2	4	3
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions		1	2	1 (*12)
Water Industry Act Referrals		1		
Groundwater Vulnerability	Yes			
Drift Deposits	1			
Bedrock Aquifer Designations	Yes			
Superficial Aquifer Designations	Yes			
Source Protection Zones	1			
Extreme Flooding from Rivers or Sea without Defences				
Flooding from Rivers or Sea with Defences				
Areas Benefiting from Flood Defences				
Flood Water Storage Areas				
Flood Defences				
Detailed River Network Lines				
Detailed River Network Offline Drainage				
OS Water Network Lines	7	11	42	86
Waste	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2km)
BGS Recorded Landfill Sites				
Historic Landfill Sites				4
Integrated Pollution Control Registered Waste Sites				
Licensed Waste Management Facilities (Landfills Boundaries)	1			
Licensed Waste Management Facilities (Locations)			2	1
Local Authority Landfill Coverage	1			
Local Authority Recorded Landfill Sites				
Potentially Infilled Land (Non-Water)				3
Potentially Infilled Land (Water)				
Registered Landfill Sites			3	3
Registered Waste Transfer Sites				2
Registered Waste Treatment or Disposal Sites				1

<b>Hazardous Substances</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2km)</b>
Control of Major Accident Hazards Sites (COMAH)				
Explosive Sites				
Notification of Installations Handling Hazardous Substances (NIHHS)				
Planning Hazardous Substance Consents				
Planning Hazardous Substance Enforcements				
<b>Geological</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2km)</b>
BGS 1:625,000 Solid Geology	Yes			
BGS Estimated Soil Chemistry	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites			1	5
BGS Urban Soil Chemistry				
BGS Urban Soil Chemistry Averages				
CBSCB Compensation District				
Coal Mining Affected Areas				
Mining Instability				
Man-Made Mining Cavities				
Natural Cavities				
Non Coal Mining Areas of Great Britain				
Potential for Collapsible Ground Stability Hazards	Yes			
Potential for Compressible Ground Stability Hazards	Yes			
Potential for Ground Dissolution Stability Hazards				
Potential for Landslide Ground Stability Hazards	Yes			
Potential for Running Sand Ground Stability Hazards	Yes			
Potential for Shrinking or Swelling Clay Ground Stability Hazards	Yes			
Radon Potential - Radon Affected Areas				
Radon Potential - Radon Protection Measures				
<b>Industrial Land Use</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2km)</b>
Contemporary Trade Directory Entries		3	12	22
Fuel Station Entries				
Points of Interest - Commercial Services		1	2	8
Points of Interest - Education and Health				
Points of Interest - Manufacturing and Production		1	7	18
Points of Interest - Public Infrastructure		2		1
Points of Interest - Recreational and Environmental				
Gas Pipelines	1			1
Underground Electrical Cables				
<b>Sensitive Land Use</b>	<b>On Site</b>	<b>0 to 250m</b>	<b>251 to 500m</b>	<b>501 to 1000m (*up to 2km)</b>
Ancient Woodland				
Areas of Adopted Green Belt	1			
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas				
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
National Sensitive Areas				
Nitrate Vulnerable Zones	1			
RAMSAR Sites				
Sites of Special Scientific Interest				1
Special Areas of Conservation				1
Special Protection Areas				
World Heritage Sites				

\*The distances recorded are approximate and measured from the site boundary.

\*\* Where 'Yes' and 'No' are referred to this indicates the presence or absence of data and does not imply a potential risk or hazard.

**APPENDIX IV**

**Site Visit Record**



Site Ownership: MSA  
 Project: Motorway Services, Warrington  
 Job Number: SH11739

Date: 30/11/18  
 Visited by: Ryan O'Neill  
 Site Area: Approximately 25 Hectares

Assessment Topic	Summary Note
<b>Boundary and Access</b>	
Type of Boundary (N,S,E and W)	N.A
Extent of boundary	Eastern boundary follows the treeline / Southern Boundary adjacent to the motorway
Location of site entrances(s)	South West Corner / Road Access by Motorway Junction
Restrictions to access	Padlocked Steel Metal Gate
Access for plant?	Gate onto slip road south west corner
Traffic issues / restrictions?	Wide road access / busy surrounding roads
<b>Current Land Use</b>	
Land use type	Agricultural farmland
Buildings - No., size, construction	Two steel framed open sided portal structures
Defined areas / divisions	Separated by 10m of open space
Surface type and condition	Very poor / Holes in roof / Appear structurally unstable
Approx. % of surface coverings	< 1%
Adjacent land use(s)	Quarrying to the West / Farmland East and North / Industrial and residential to the South
Noise, dust, odours & emissions	Emissions from traffic on adjacent motorway
Env. Management	Good
Fly tipping	In a few places / west central parts of site near buildings and in the south adjacent to the motorway
<b>Structures and Services</b>	
Notable structures	Steel framed structures
Storage Facilities e.g. tanks, bunding etc.	None
Waste management	Fly tipping in a few places
Presence of ACM in structures	None
Structural condition	Buildings in very poor condition
Settlement / Subsidence	None
Below ground structures	Pipeline (Gas) sign noted in the south east of the site / Building foundations with concrete hardstanding
Electrical substations	None
Manhole covers – Culverts?	None
Pipeline markers	South east corner adjacent to motorway
Overhead Services	None
<b>Topography</b>	
Abrupt changes in slope	Along embankment south west corner, following western site boundary and along the drainage path.
Overburdened slopes	No
Excavations at base of slopes (Natural?)	No
Depressions	West of building 10m small depression linked with drainage path
Mounds	No
Evidence of landslip	No
Local subsidence / settlement	No
Imported soils	No
Evidence of mining	No
<b>Soil and Geology</b>	
Surface soil type	None visible
Soil / rock outcrops	None

Visible geological boundaries	None
Evidence of desiccation	None
Shrinkable soils (Peat / Silt)	None
<b>Flora and Fauna</b>	
Vegetation cover	Farmland i.e. crops 95% of site
Quality of vegetation	Good
Trees	Trees along the eastern site boundary
Habitat suitability	Good
Presence of ponds	No ponds noted / drainage path trending north to south on site
Invasive species incl. location	N. A
<b>Ground and surface water</b>	
Ground saturation / ponding	None
Evidence of flooding	None
Water loving plant species	N.A
Water bodies / sources	Drainage paths
Water quality – Flow, colour.	Good
<b>Local Knowledge</b>	
Place / street names	Site leading onto Birchwood Way.
Local industrial records	N.A
Site history	N.A
<b>Health and Safety</b>	
Hazards identified	N.A
Security?	N.A
Mitigation?	N.A

### Additional Notes / Sketch Plans / Photographs

- Two buildings on site surrounded by trees, more metal structures than a typical building. Both steel framed portals separated by approximately 10m of open space, both are open at either side.
- Fly tipping within the area surrounding the buildings, two 250L drums noted in this vicinity.
- General household waste noted on the south west corner of the site, near the slip road adjacent to the motorway.

**APPENDIX VI**

**Landfill Permit**

# Notice of surrender and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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Biffa Waste Services Limited

Risley Landfill Site  
Silver Lane  
Risley  
Warrington  
Cheshire  
WA3 6BY

**Variation application number**

EPR/BV7877IR/S009

**Permit number**

EPR/BV7877IR

# Risley Landfill Site

## Permit number EPR/BV7877IR

### Introductory note

#### This introductory note does not form a part of the notice

The following notice gives notice of the surrender in part and variation of an environmental permit.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to a right of appeal.

The partial surrender is for a non-operational area of land which is outside the engineered landfill cells. The permit is varied to amend the site plan in schedule 7 of the permit to reflect the new installation boundary after the partial surrender.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application received	03/12/2003	Application for a non-hazardous landfill
Request for information Schedule 4 notice	10/05/2004	Additional technical detail in support of the application
Additional information received	09/06/2004 & 21/06/2004	Technical information in support of the application
Request for information Schedule 4 notice	08/12/2004	Additional technical detail in support of the application
Additional information received	22/12/2004	Technical information in support of the application
Permit determined BV7877IR	21/04/2005	Issued to Biffa Waste Services Limited
Variation determined EPR/BV7877IR/V002 (Billing ref. TP3434LX)	26/06/2008	Permit Review - variation and consolidation
Application EPR/BV7877IR/V003 (variation)	01/07/2010	Variation to amend permitted waste types
Variation determined EPR/BV7877IR/V003 (Billing ref. UP3932KC)	15/07/2010	Permitted healthcare waste type 20 01 99 added
Agency variation determined EPR/BV7877IR/V004 (Billing ref. FP3235NV)	14/05/2013	Agency variation to implement the changes introduced by IED.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/BV7877IR/V005 (variation)	Duly made 15/07/2013	Relocation of the tanker offloading point of the leachate treatment plant
Variation determined EPR/BV7877IR/V005 (Billing ref. RP3538NV)	13/09/2013	Varied permit issued.
Application EPR/BV7877IR/V008 (variation)	Duly made 08/01/2016	An application was submitted on 03/12/2015 prior to this application dated 08/01/2016. As the earlier application was not determined at the time of this permit variation issue, we have logged correspondence for this application dated 08/01/2016 as V007 and correspondence for the earlier application dated 03/12/2015 as V006.
Variation determined EPR/BV7877IR/V006 (Billing ref. WP3936RU)	01/04/2016	Financial provision amendment. Varied permit issued.
Application EPR/BV7877IR/V007 (variation)	Duly made 26/02/2016	Application for the installation and operation of Siloxane gas treatment plant. Another variation application was submitted on 08/01/2016 after this application, which was submitted on 03/12/2015. As this application was submitted before the other permit variation application, we have logged correspondence for this application using the permit reference number suffix V006 and correspondence for the later application using suffix V007. The issued permit reference numbers, as shown in the status log, have been updated so that they are in numerical order.
Additional information	Received 23/03/2016 and 04/04/2016	Additional information regarding the operation and maintenance of the Siloxane gas treatment plant.
Variation determined EPR/BV7877IR/V007	18/04/2016	Varied permit issued.
Environment Agency Landfill Sector Review Permit reviewed Variation determined EPR/BV7877IR/V008 Permit EPR/BV7877IR	22/11/2017	Varied and consolidated permit issued in modern condition format
Partial surrender application EPR/BV7877IR/S009	Duly made 11/05/2018	Application to surrender a non-operational area of land as a low risk surrender
Partial surrender determined EPR/BV7877IR/S009  (PAS billing reference MP3330QA)	07/08/18	Partial surrender notice issued as a consolidated notice

End of introductory note

# Notice of surrender and consolidation

## The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 and 25 of the Environmental Permitting (England and Wales) Regulations 2010 accepts the surrender in part and varies

### Permit number

EPR/BV7877IR

### Issued to

**Biffa Waste Services Limited** (“the operator”)

whose registered office is

**Coronation Road  
Cressex Business Park  
High Wycombe  
Buckinghamshire  
HP12 3TZ**

company registration number 0946107

to operate a regulated facility at

**Risley Landfill Site  
Silver Lane  
Risley  
Warrington  
Cheshire  
WA3 6BY**

to the extent set out in the schedules.

The notice shall take effect from 07/08/2018

Name	Date
Anne Nightingale	07/08/2018

Authorised on behalf of the Environment Agency

## **Schedule 1**

The following conditions were varied as a result of the application made by the operator:

The site plan in schedule 7 of the permit.

## **Schedule 2 – consolidated permit**

Consolidated permit issued as a separate document.

# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

### Permit number

**EPR/BV7877IR**

This is the consolidated permit referred to in the surrender and consolidation notice for application EPR/BV7877IR/S009 authorising,

**Biffa Waste Services Limited** (“the operator”),

whose registered office is

**Coronation Road  
Cressex Business Park  
High Wycombe  
Buckinghamshire  
HP12 3TZ**

company registration number 0946107

to operate a regulated facility at

**Risley Landfill Site  
Silver Lane  
Risley  
Warrington  
Cheshire  
WA3 6BY**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Anne Nightingale	07/08/2018

Authorised on behalf of the Environment Agency

# Conditions

## 1 Management

### 1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

### 1.2 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency dated 21 April 2005 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.
- 1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
  - (b) the costs of the financial provision required by condition 1.2.1; and
  - (c) the estimated costs for the closure and aftercare of the landfill.

### 1.3 Energy efficiency

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
  - (b) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) Implement any appropriate measures identified by a review.

### 1.4 Efficient use of raw materials

- 1.4.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
  - (b) maintain records of raw materials and water used in the activities;
  - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
  - (d) take any further appropriate measures identified by a review.

## **1.5 Avoidance, recovery and disposal of wastes produced by the activities**

1.5.1 The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every four years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

## **2 Operations**

### **2.1 Permitted activities**

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1, table S1.1 (the “activities”).

### **2.2 The site**

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

### **2.3 Operating techniques**

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **2.4 Improvement programme**

2.4.1 The operator shall complete the improvements specified in schedule 1, table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

### **2.5 Landfill Engineering**

2.5.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.5.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.

2.5.3 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:

(a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

(b) a change has otherwise been agreed in writing by the Environment Agency.

2.5.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.

2.5.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.5.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:

- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
  - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.5.7 The operator shall submit a CQA Validation Report within four weeks of the completion of the construction of the relevant landfill infrastructure, or other time period agreed in writing with the Environment Agency.
- 2.5.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.5.5 and 2.5.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.5.9 For the purposes of conditions 2.5.1, 2.5.2, 2.5.4 and 2.5.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.
- 2.5.10 Where the Environment Agency has required further information under condition 2.5.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
- (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.

## **2.6 Waste acceptance**

- 2.6.1 For the following activities referenced in schedule 1, table S1.1(A1) Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 2, table S2.1; and
  - (b) they are non- hazardous waste; and
  - (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm); and
  - (d) they are not shredded used tyres; and
  - (e) they are not liquid waste (including waste waters but excluding sludge[and excluding liquid waste accepted at a permitted leachate treatment activity]); and
  - (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown; and
  - (g) all the relevant waste acceptance procedures have been completed; and
  - (h) they fulfil the relevant waste acceptance criteria; and
  - (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria; and
  - (j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, [or liquid waste accepted for treatment at a permitted leachate treatment activity]; and
  - (k) they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

- 2.6.2 For the following activities referenced in schedule 1, table S1.1(A2 and A4) waste shall only be accepted for treatment if:
- (a) it is of a type and quantity listed in schedule 2, table S2.2; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.6.3 For the following activities referenced in schedule 1, table S1.1(A3) waste shall only be accepted for treatment if:
- (a) it is of a type and quantity listed in schedule 2, table S2.4; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.6.4 Wastes shall only be accepted for restoration where:
- (a) they are listed in schedule 2, table S2.3; and
  - (b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.
- 2.6.5 The operator shall:
- (a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and
  - (b) be satisfied that the waste conforms to the requirements of condition 2.6.1.
- 2.6.6 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.6.7 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.6.8 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing ESID6 (R3230700) dated 03.12.03.
- 2.6.9 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1, table S1.4.
- 2.6.10 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

## **2.7 Leachate levels**

- 2.7.1 The limits for the level of leachate listed in schedule 3, table S3.1 shall not be exceeded.

## **2.8 Closure and aftercare**

- 2.8.1 The operator shall maintain a closure and aftercare management plan.

## **2.9 Landfill gas management**

- 2.9.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:
- (a) collect landfill gas; and
  - (b) control the migration of landfill gas.

2.9.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.

2.9.3 The operator shall:

- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;
- (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **3 Emissions and monitoring**

### **3.1 Emissions to water, air or land**

- 3.1.1 The limits in schedule 3 shall not be exceeded.
- 3.1.2 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3, tables S3.2, S3.3 and S3.6.
- 3.1.3 The limits given in schedule 3, table S3.2 shall not be exceeded, save that compliance with an emission limit in that table shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.
- 3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:
  - (a) between nine and six months prior to the fourth anniversary of the granting of the permit; and
  - (b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.
- 3.1.6 For the following activities referenced in schedule 1, table S1.1 (A2, A3 and A4) Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on systematic appraisal of the risk of contamination.
  - (a)

### **3.2 Emissions of substances not controlled by emission limits**

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

### **3.3 Odour**

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **3.4 Noise and vibration**

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **3.5 Monitoring**

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:

- (a) Leachate specified in tables S3.1 and S3.10;
- (b) Point source emissions specified in tables S3.2, S3.3 and S3.6;
- (c) Groundwater specified in tables S3.4 and S3.8;
- (d) Landfill gas specified in tables S3.5, S3.7 and S3.9; and
- (e) Surface water specified in table S3.11.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:

- (a) Annually; and
- (b) prior to the disposal of waste in any new cell or new development area of the landfill; and
- (c) following closure of the landfill or part of the landfill.

### **3.6 Pests**

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;
- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## 4 Information

### 4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
  - (i) the results of groundwater monitoring;
  - (ii) sub-surface landfill gas monitoring;
  - (iii) leachate levels, quality and quantities;
  - (iv) landfill gas generation and collection;
  - (v) waste types and quantities; and
  - (vi) the specification and as built drawings of the basal, sidewall and capping engineering systems.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

### 4.2 Reporting

4.2.1 The operator shall send reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year ('the annual report') shall be submitted to the Environment Agency by 31st January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;
- (b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3
- (c) the annual production/treatment set out in schedule 4, table S4.2;
- (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
- (e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
- (f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;

- (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
  - (h) a plan(s) ('the monitoring and extraction point plan – MEPP') showing the locations of existing and any new leachate and landfill gas extraction and monitoring points.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4, table S4.1;
  - (b) using the forms specified in schedule 4, table S4.4 or other reporting format as agreed in writing with the Environment Agency; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

### 4.3 Notifications

- 4.3.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
    - (i) inform the Environment Agency;
    - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident; and
    - (iii) take the measures necessary to prevent further possible incidents or accidents.
  - (b) of a breach of any permit condition the operator must immediately—
    - (i) inform the Environment Agency; and
    - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time.
  - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (c) the death of any of the named operators (where the operator consists of more than one named individual);
- (d) any change in the operator's name(s) or address(es); and
- (e) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.4 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

## **4.4 Interpretation**

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

## Schedule 1 – Operations

<b>Table S1.1 activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A1	D5 – Specially engineered landfill for non-hazardous waste and R10 – Land treatment resulting in benefit to agriculture or ecology.	Section 5.2 Part A(1)(a), The disposal of waste in a landfill.	Landfill for non-hazardous waste and landfill restoration	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.6, as an integral part of landfilling.
A2	D8 – Biological treatment of waste for the purpose of disposal.	Section 5.3A(1)(a)(i) Biological treatment of hazardous waste.	Treatment of hazardous leachate in a facility with a capacity of >10 tonnes/day	Biological treatment of hazardous leachate arising from the permitted landfill, Risley III and other hazardous liquid wastes in a sequence batch reactor. Receipt, storage, tankering and treatment of hazardous leachate, consisting of the types and quantities specified in Schedule 2 Table S2.2 to point of entry to sewer.
A3	D8 – Biological treatment of waste for the purpose of disposal and R10 – Land treatment resulting in benefit to agriculture or ecology.	Section 5.3A(1)(a)(i) Biological treatment of hazardous waste.	Treatment of hazardous soils in a facility with a capacity of >10 tonnes/day	Biological treatment of hazardous soils in a bio-pile treatment process for recovery and disposal. Handling, Storage and Treatment of hazardous waste soils, consisting of the types and quantities specified in Schedule 2 Table S2.4 to produce soils for restoration or as daily cover.
A4	D8 – Biological treatment of waste for the purpose of disposal.	Section 5.4 A(1)(a)(i) Biological treatment of non-hazardous waste.	Treatment of non-hazardous leachate in a facility with a capacity of >50 tonnes/day	Biological treatment of non-hazardous leachate arising from the permitted landfill, Risley III and other non-hazardous liquid wastes in a sequence batch reactor. Receipt, storage, tankering and treatment of non-hazardous leachate, consisting of the types and quantities specified in Schedule 2 Table S2.2 to point of entry to sewer.

<b>Table S1.1 activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
<b>Directly Associated Activities</b>				
A5	R1 – use principally as a fuel to generate energy		Pre-treatment and utilisation of landfill gas for energy recovery in an appliance with a rated thermal input <50MW	Treatment and utilisation of landfill gas arising from the permitted landfill and Risley III
A6	N/A	-	Flaring of landfill gas for disposal in an appliance.	Flaring of landfill gas arising from the permitted landfill and Risley III.
A7	N/A	-	Secondary pre-treatment of landfill gas to remove Siloxanes and other trace impurities using filter medium.	Secondary treatment of landfill gas arising from the permitted landfill and Risley III using PpTek Siloxane removal system and vent air burner (enclosed flare).
A8	D6 – release to controlled waters	-	Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.
A9	N/A	-	Storage of fuel for operation of plant and equipment.	Fuel storage tank.

<b>Table S1.2 Operating Techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form excluding: Sections 1.1.17 Drawing ESID 7a; 1.1.20 and 1.1.25 Drawing ESID 8; 1.1.28 and 1.1.30 Drawing ESID 11; Sections 1.2.27; 2.3.9; 2.3.38; 2.3.42; 2.3.43; 2.3.78; 3.1.3 to 3.1.18 (inclusive).	03/12/2003
Meeting dated 14/04/2004	All parts	Response dated 20/04/2004
Request for information	All parts	Responses dated; 04/05/2004, 23/07/2004, 09/02/2005, 16/02/2005, 03/03/2005, 08/03/2005,

<b>Table S1.2 Operating Techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
		14/03/2005, 19/04/2005.
Response to Schedule 4 Notice dated 10/05/2004	All parts	Responses dated 09/06/2004 and 21/06/2004
Response to Schedule 4 Notice dated 08/12/2004	All parts except air dispersion modelling	Response dated 22/12/2004
Request for information condition 1.4.1.13 of permit BV7877IR	All parts	Response date 10/02//2006
Request for information condition 1.4.1.14 of permit BV7877IR	None	Response dated 20/06/2005
Request for information condition 1.4.1.15 of permit BV7877IR	All parts	Response dated 18/05//2005
Request for information condition 2.2.4.8 of permit BV7877IR	None	Response dated 21/07/2005
Request for information condition 2.2.4.9 of permit BV7877IR	Landfill gas monitoring plan and location of new extraction system between BH33 and BH35.	Response dated 17/10/2005
Variation Application EPR/BV7877IR/V005	Responses to questions in parts C2 and C3 of the variation application including supporting documents.	Response dated 15/07/2013
Request for information (email dated 08/08/2013)	Responses to questions 1 and 2.	Response dated 08/08/2013
Variation Application EPR/BV7877IR/V006	Variation supporting statement, Air Dispersion Model document, Accident/Environmental Risk Assessment.	Response dated 26/02/2016
Request for information (emails dated 22/03/2016 and 24/03/2016)	Responses to questions 1) a), b) and c) of email dated 23/03/2016 and responses to questions 1 d) and 3 of email dated 04/04/2016, regarding operation and maintenance of the Siloxane treatment plant.	Responses dated 23/03/2016 and 04/04/2016

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
1	The operator shall submit a revised site plan which amends the installation boundary to include the private piped connection for leachate between the site boundary and the private sewer.	28/02/2018
2	The operator shall submit to the Environment Agency in writing for approval waste acceptance criteria for leachate accepted from offsite.	28/02/2018

<b>Table S1.4 Annual waste input limits</b>	
<b>Category</b>	<b>Limit Tonnes/ Year</b>
Non-hazardous waste	0
Waste for restoration	200,000
Leachate from offsite accepted at the onsite Leachate Treatment Plant	164,250

## Schedule 2 – List of permitted wastes

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals</b>
<b>01 01</b>	<b>wastes from mineral excavation</b>
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
<b>01 03</b>	<b>wastes from physical and chemical processing of metalliferous minerals</b>
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 10
<b>01 04</b>	<b>wastes from physical and chemical processing of non-metalliferous minerals</b>
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
<b>01 05</b>	<b>drilling muds and other drilling wastes</b>
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>
<b>02 01</b>	<b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 01 10	waste metal
<b>02 02</b>	<b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
02 02 01	sludges from washing and cleaning
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
<b>02 03</b>	<b>wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation</b>
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
<b>02 04</b>	<b>wastes from sugar processing</b>
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
<b>02 05</b>	<b>wastes from the dairy products industry</b>
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
<b>02 06</b>	<b>wastes from the baking and confectionery industry</b>
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
<b>02 07</b>	<b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
<b>03</b>	<b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>
<b>03 01</b>	<b>wastes from wood processing and the production of panels and furniture</b>
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
<b>03 03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
<b>04</b>	<b>Wastes from the leather, fur and textile industries</b>
<b>04 01</b>	<b>wastes from the leather and fur industry</b>
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 06	sludges, in particular from on-site effluent treatment containing chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
<b>04 02</b>	<b>wastes from the textile industry</b>
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 15	wastes from finishing other than those mentioned in 04 02 14
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
<b>05</b>	<b>Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal</b>
<b>05 01</b>	<b>wastes from petroleum refining</b>
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	bitumen
<b>05 06</b>	<b>wastes from the pyrolytic treatment of coal</b>
05 06 04	waste from cooling columns
<b>05 07</b>	<b>wastes from natural gas purification and transportation</b>
05 07 02	wastes containing sulphur
<b>06</b>	<b>Wastes from inorganic chemical processes</b>
<b>06 03</b>	<b>wastes from the MFSU of salts and their solutions and metallic oxides</b>
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16	metallic oxides other than those mentioned in 06 03 15
<b>06 09</b>	<b>wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes</b>

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
<b>06 11</b>	<b>wastes from the manufacture of inorganic pigments and opacifiers</b>
06 11 01	calcium-based reaction wastes from titanium dioxide production
<b>06 13</b>	<b>wastes from inorganic chemical processes not otherwise specified</b>
06 13 03	carbon black
<b>07</b>	<b>Wastes from organic chemical processes</b>
<b>07 01</b>	<b>wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals</b>
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
<b>07 02</b>	<b>wastes from the MFSU of plastics, synthetic rubber and man-made fibres</b>
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	waste plastic
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 17	waste containing silicones other than those mentioned in 07 02 16
<b>07 03</b>	<b>wastes from the MFSU of organic dyes and pigments (except 06 11)</b>
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
<b>07 04</b>	<b>wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides</b>
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
<b>07 06</b>	<b>wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics</b>
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
<b>07 07</b>	<b>wastes from the MFSU of fine chemicals and chemical products not otherwise specified</b>
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
<b>08</b>	<b>Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks</b>
<b>08 01</b>	<b>wastes from MFSU and removal of paint and varnish</b>
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
<b>08 02</b>	<b>wastes from MFSU of other coatings (including ceramic materials)</b>
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
<b>08 03</b>	<b>wastes from MFSU of printing inks</b>
08 03 07	aqueous sludges containing ink
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
08 03 18	waste printing toner other than those mentioned in 08 03 17
<b>08 04</b>	<b>wastes from MFSU of adhesives and sealants (including water proofing products)</b>
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
<b>09</b>	<b>Wastes from the photographic industry</b>
<b>09 01</b>	<b>wastes from the photographic industry</b>
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
<b>10</b>	<b>Wastes from thermal processes</b>
<b>10 01</b>	<b>wastes from power stations and other combustion plants (except 19)</b>
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21	sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23	aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	sands from fluidised beds
10 01 26	wastes from cooling-water treatment
<b>10 02</b>	<b>wastes from the iron and steel industry</b>
10 02 01	wastes from the processing of slag
10 02 02	unprocessed slag
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
<b>10 03</b>	<b>wastes from aluminium thermal metallurgy</b>
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
10 03 20	flue-gas dust other than those mentioned in 10 03 19
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
<b>10 04</b>	<b>wastes from lead thermal metallurgy</b>
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
<b>10 05</b>	<b>wastes from zinc thermal metallurgy</b>
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 11	dross and skimmings other than those mentioned in 10 05 10
<b>10 06</b>	<b>wastes from copper thermal metallurgy</b>
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 04	other particulates and dust
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
<b>10 07</b>	<b>wastes from silver, gold and platinum thermal metallurgy</b>
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
<b>10 08</b>	<b>wastes from other non-ferrous thermal metallurgy</b>
10 08 04	particulates and dust
10 08 09	other slags
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14	anode scrap
10 08 16	flue-gas dust other than those mentioned in 10 08 15
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
<b>10 09</b>	<b>wastes from casting of ferrous pieces</b>
10 09 03	furnace slag

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 14	waste binders other than those mentioned in 10 09 13
<b>10 10</b>	<b>wastes from casting of non-ferrous pieces</b>
10 10 03	furnace slag
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 10	flue-gas dust other than those mentioned in 10 10 09
10 10 12	other particulates other than those mentioned in 10 10 11
10 10 14	waste binders other than those mentioned in 10 10 13
<b>10 11</b>	<b>wastes from manufacture of glass and glass products</b>
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
<b>10 12</b>	<b>wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
<b>10 13</b>	<b>wastes from manufacture of cement, lime and plaster and articles and products made from them</b>
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
<b>11</b>	<b>Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy</b>
<b>11 01</b>	<b>wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)</b>
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
<b>11 02</b>	<b>wastes from non-ferrous hydrometallurgical processes</b>
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
<b>11 05</b>	<b>wastes from hot galvanising processes</b>
11 05 02	zinc ash
<b>12</b>	<b>Wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>
<b>12 01</b>	<b>wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>
12 01 02	ferrous metal dust and particles
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
<b>15</b>	<b>Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified</b>
<b>15 01</b>	<b>packaging (including separately collected municipal packaging waste)</b>
15 01 02	plastic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 09	textile packaging
<b>15 02</b>	<b>absorbents, filter materials, wiping cloths and protective clothing</b>
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
<b>16</b>	<b>Wastes not otherwise specified in the list</b>

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
<b>16 01</b>	<b>end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)</b>
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 19	Plastic
16 01 20	Glass
<b>16 03</b>	<b>off-specification batches and unused products</b>
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
<b>16 08</b>	<b>spent catalysts</b>
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
<b>16 11</b>	<b>waste linings and refractories</b>
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
<b>17</b>	<b>Construction and demolition wastes (including excavated soil from contaminated sites)</b>
<b>17 01</b>	<b>concrete, bricks, tiles and ceramics</b>
17 01 01	Concrete
17 01 02	Bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
<b>17 02</b>	<b>wood, glass and plastic</b>
17 02 02	Glass
17 02 03	Plastic
<b>17 03</b>	<b>bituminous mixtures, coal tar and tarred products</b>
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
<b>17 04</b>	<b>metals (including their alloys)</b>
17 04 11	cables other than those mentioned in 17 04 10
<b>17 05</b>	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
<b>17 06</b>	<b>insulation materials and asbestos-containing construction materials</b>

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
<b>17 09</b>	<b>other construction and demolition wastes</b>
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
<b>18</b>	<b>Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)</b>
<b>18 01</b>	<b>wastes from natal care, diagnosis, treatment or prevention of disease in humans</b>
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
<b>18 02</b>	<b>wastes from research, diagnosis, treatment or prevention of disease involving animals</b>
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 01</b>	<b>wastes from incineration or pyrolysis of waste</b>
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
<b>19 02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
<b>19 04</b>	<b>vitrified waste and wastes from vitrification</b>
19 04 01	vitrified waste
<b>19 05</b>	<b>wastes from aerobic treatment of solid wastes</b>
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>
19 08 01	Screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
<b>19 09</b>	<b>wastes from the preparation of water intended for human consumption or water for industrial use</b>
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
<b>19 10</b>	<b>wastes from shredding of metal-containing wastes</b>
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
<b>19 11</b>	<b>wastes from oil regeneration</b>
19 11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 04	plastic and rubber
19 12 05	Glass
19 12 08	Textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>
<b>20 01</b>	<b>separately collected fractions (except 15 01)</b>
20 01 08	biodegradable kitchen and canteen waste
20 01 10	Clothes
20 01 11	Textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	Plastics

<b>Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste</b>	
<b>Waste code</b>	<b>Description</b>
20 01 41	wastes from chimney sweeping
20 01 99	Other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
<b>20 03</b>	<b>other municipal wastes</b>
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

<b>Table S2.1A Waste types previously permitted for disposal</b>	
<b>Waste code</b>	<b>Description</b>
<b>16</b>	<b>Wastes not otherwise specified in the list</b>
<b>16 05</b>	<b>gases in pressure containers and discarded chemicals</b>
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
<b>16 06</b>	<b>batteries and accumulators</b>
16 06 04	Alkaline batteries (except 16 06 03)
16 06 05	Other batteries and accumulators
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>
<b>20 01</b>	<b>separately collected fractions (except 15 01)</b>
20 01 34	Batteries and accumulators other than those mentioned in 20 01 33

<b>Table S2.2 Permitted waste types accepted for Leachate treatment</b>	
<b>Waste code</b>	<b>Description</b>
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 07</b>	<b>landfill leachate</b>
19 07 02*	landfill leachate containing dangerous substances
19 07 03	landfill leachate other than those mentioned in 19 07 02

<b>Table S2.3 Permitted waste types for restoration</b>	
<b>Waste code</b>	<b>Description</b>
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals</b>
<b>01 01</b>	<b>wastes from mineral excavation</b>
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
<b>01 04</b>	<b>wastes from physical and chemical processing of non-metalliferous minerals</b>
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>
<b>02 04</b>	<b>wastes from sugar processing</b>
02 04 01	soil from cleaning and washing beet
<b>03</b>	<b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>
<b>03 03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
03 03 05	de-inking sludges from paper recycling
03 03 09	lime mud waste
<b>17</b>	<b>Construction and demolition wastes (including excavated soil from contaminated sites)</b>
<b>17 05</b>	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>
<b>19 05</b>	<b>wastes from aerobic treatment of solid wastes</b>
19 05 03	off-specification compost
<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>
19 08 05	sludges from treatment of urban waste water
<b>19 09</b>	<b>wastes from the preparation of water intended for human consumption or water for industrial use</b>
19 09 02	sludges from water clarification
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 09	minerals (for example sand, stones)
<b>19 13</b>	<b>wastes from soil and groundwater remediation</b>
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>

<b>Table S2.3 Permitted waste types for restoration</b>	
<b>Waste code</b>	<b>Description</b>
20 02 02	soil and stones

<b>Table S2.4 Permitted waste types and quantities for Bio-pile Soil Treatment Process</b>	
<b>0 tonnes/year</b>	
<b>Waste code</b>	<b>Description</b>
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals</b>
<b>01 05</b>	<b>drilling muds and other drilling wastes</b>
01 05 05 *	oil-containing drilling muds and wastes
01 05 06 *	drilling muds and other drilling wastes containing hazardous substances
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03 *	soil and stones containing hazardous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05 *	dredging spoil containing hazardous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07 *	track ballast containing hazardous substances
17 05 08	track ballast other than those mentioned in 17 05 07
<b>19</b>	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE.</b>
<b>19 13</b>	<b>wastes from soil and groundwater remediation</b>
19 13 01 *	solid wastes from soil remediation containing hazardous substances
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03 *	sludges from soil remediation containing hazardous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
* Wastes may not be mixed with non-hazardous wastes for the purpose of dilution.	

## Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring standard and method
<b>Operational Cells or Phases</b> (Any cells or phases that do not have a final engineered cap agreed in accordance with the landfill engineering condition, 2.5)			
-	-	-	-
<b>Non Operational Cells or Phases</b> (Any cells or phases that have a final engineered cap agreed in accordance with the landfill engineering condition, 2.5)			
Leachate compliance and monitoring points on Plan R3180101 revision 1 dated 06/06/2006 Phases 3, 4, 5, 6, 7, 9 and 10 Phases 1 and 2 Phase 8	1.2m above cell base 1.8m above cell base 2.6m above cell base	Quarterly	As specified in Environment Agency Guidance LFTGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with the Agency as part of a leachate monitoring plan.

<b>Table S3.2 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point Ref. &amp; Location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (including unit)</b>	<b>Reference Period</b>	<b>Monitoring Frequency</b>	<b>Monitoring Standard or Method</b>
A1 - Flare stacks (permanent) located in engine and flare compound as shown on drawing ESID8	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency. Monitoring is unnecessary where the flare is active for <10% of the year.
	CO		50 mg/m <sup>3</sup>			
	Total VOCs		10 mg/m <sup>3</sup>			
A2 - Existing engine exhausts located in engine and flare compound as shown on drawing ESID8	Oxides of Nitrogen	Gas utilisation plant	650 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency
	CO		1500 mg/m <sup>3</sup>			
	Total VOCs		1750 mg/m <sup>3</sup>			
A3 - Gas utilisation plant located in engine and flare compound as shown on drawing ESID8.	Oxides of Nitrogen	Gas utilisation plant	500 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency
	CO		1400 mg/m <sup>3</sup>			
	Total VOCs		1000 mg/m <sup>3</sup>			
A4 - Vent air burner (enclosed flare) of PpTek Siloxane removal system, as shown on drawing R303CB00 and labelled 'Vent Air Burner'.	Oxides of Nitrogen	PpTek siloxane removal system	150 mg/m <sup>3</sup>	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency. Monitoring is unnecessary where the flare is active for <10% of the year.
	CO		50 mg/m <sup>3</sup>			
	Total VOCs		10 mg/m <sup>3</sup>			

Table S3.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
SW 1 (95204010) S4 (95204040) as shown on drawing R3180101 revision 1 dated 06/06/2006	Suspended Solids	Surface Water Collection System	50 mg/l	Spot Sample	Monthly	Monitoring to be carried out in accordance with Environment Agency Guidance Document 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water (LFTGN02 February 2003), unless otherwise agreed in writing with the Agency.
	Visible oil and grease		No visible trace		Daily	
	pH		>5 and <9 pH units		Monthly	

Table S3.4 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
R418 (95202418) R422 (95202422) R423 (95202423) R424 (95202424) R425 (95202425) as shown on drawing R3180101 revision 1 dated 06/06/2006	Ammoniacal-N	1.70 mg/l	Spot Sample	Quarterly	As specified in Environment Agency Guidance LFTGN02 (February 2003), 'Monitoring of Landfill Leachate, Groundwater and Surface Water' <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride	250 mg/l			
	Phenol	0.0005 mg/l			
	Methylphenol	0.0001 mg/l			
	Bis (2-ethylhexyl) phthalate	0.001 mg/l			
	Dichloromethane	0.001 mg/l			
	Toluene	0.004 mg/l			
	o-xylene	0.003 mg/l			
	m,p-xylene	0.003 mg/l			

<b>Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements</b>				
<b>Monitoring point Ref. /description</b>	<b>Parameter</b>	<b>Limit (including units)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
BH26 (95201042), BH27 (95201041), BH28 (95201040), BH29 (95201039), BH30 (95201038), BH31 (95201037), BH32 (95201036), BH33 (95201035), BH34 (95201034), BH35 (95201033), BH36 (95201032), BH37 (95201031), BH38(95201030), BH39 (95201029), BH40 (95201028), BH41 (95201027), BH42 (95201026), BH34A (95201134), as shown on drawing BF4945/05/03 Dated 17/01/2017.	Methane	1%v/v	Weekly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.  Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	5 %v/v		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
BHN1 (95201052), BHN2 (95201053), BHN3 (95201054), BHN4 (95201055), BHN5 (95201056), BHN6 (95201057), BHN7 (95201058), BHN8 (95201059), BHN9 (95201060), BHN10 (95201061), BHN11 (95201062), BHN12 (95201063), BHN13 (95201064), BHN14 (95201065), BHN15 (95201066), BHN16 (95201067), BHN17 (95201068), BHN18 (95201069), BHN19 (95201070), BHN20 (95201071), BH6 (95201051), BH7 (95201050), BH8 (95201049), BH9 (95201048), BH10 (95201047), BH13 (95201018), BH14 (95201017), BH15 (95201016), BH16 (95201015), BH17 (95201014), BH18 (95201013), BH22 (95201048), BH23 (95201045), BH24 (95201044), BH25 (95201043), BH43 (95201025), BH44 (95201024), BH45 (95201023), BH46 (95201022), BH47 (95201021), BH48 (95201020), BH49 (95201019), as shown on drawing BF4945/05/03 Dated 17/01/2017.	Methane	1%v/v	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.  Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	5 %v/v		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		

**Table S3.6 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site – emission limits and monitoring requirements**

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
S1 Disposal point to sewer located at National Grid Map Reference SJ 6520 9320	Volume	Leachate treatment plant	450 m <sup>3</sup> /d	Spot sample	Daily	In accordance with the Application or as agreed otherwise with the Agency
	Flow		10 l/s			
	pH		>6 and <10 pH units			
	Ammonia		250 mg/l		Monthly	
	Phenol		20 mg/l			
	List 1 suite		-			
E1 to effluent treatment plant	pH and, NH <sub>4</sub> -N	Risley III <sup>1</sup>	In accordance with limits set for emission point E2	Spot Sample	Daily	In accordance with the Application or as agreed otherwise with the Agency
	Temperature, COD and EC				Monthly	
	TON (oxidised-N), TOC, BOD, Ca, Mg, Na, K, Alk (CaCo <sub>3</sub> ), SO <sub>4</sub> , Cl, Fe, Mn, Cr, Cu, Ni, Pb and Zn				Quarterly	
	List I substances				Annually	
E2 to effluent treatment plant	BOD	Landfill leachate originating off site arriving by tanker <sup>1</sup>	100,000 mg/l	Spot sample	Prior to acceptance for treatment	In accordance with the Application or as agreed otherwise with the Agency
	Fe		100 mg/l			
	Toxic metals(total)		25 mg/l			
	Toxic metals (soluble)		10 mg/l			
	pH		>6 and <10 pH units			
	phenol		20 mg/l			
	SO <sub>4</sub>		1000mg/l			
	Fats, oils and greases		250 mg/l			
	CN, Petroleum Spirit, Calcium Carbide, Carbon Disulphide		Nil			
	List I substances		Nil			

<sup>1</sup> Subject to Improvement Condition 2

**Table S3.7 Landfill gas emissions from capped surfaces for cells that have accepted non hazardous biodegradable waste – monitoring requirements**

<b>Monitoring point Ref. /description</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring Standard or method</b>
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Whole site	Total Methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other subsequent guidance as may be agreed in writing with the Environment Agency.

**Table S3.8 Groundwater – other monitoring requirements**

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method
Up gradient MEPP	Water level, Ammoniacal Nitrogen, Chloride, Electrical Conductivity, pH	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	
	Hazardous substances	Annually for first six years of operation	
Down or cross gradient MEPP	Water level, Ammoniacal Nitrogen, Chloride, Electrical Conductivity, pH	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency  After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
	Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	
	Hazardous substances	Annually for first six years of operation then every two years	
MEPP	Base of monitoring point (mAoD)	Annually	

<b>Table S3.9 Landfill gas – other monitoring requirements</b>				
<b>Monitoring Point Ref. /Description</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Gas collection system at well control valve, manifolds and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Gas flow rate or suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Monthly or at such other frequency as may be agreed in writing with the Environment Agency.	Calibrated handheld monitoring instrument	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken. Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken. Record the ambient air temperature and whether the ground is: waterlogged frozen snow covered
Gas collection system at well control valve	Hydrogen Sulphide	Six monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (Version 3 March 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans
Output to flare or LFG Utilisation Compound	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 (Version 3 March 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency [or a trace gas characterisation method agreed with the Environment Agency].	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.

<b>Table S3.9 Landfill gas – other monitoring requirements</b>				
<b>Monitoring Point Ref. /Description</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Output to flare or LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate Suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly		Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
Flare stacks (permanent) and A4 Vent air burner (enclosed flare) located in engine and flare compound as shown on drawing ESID8	Temperature	As per LFTGN05 (Version 2 March 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	
A2 - Existing engine exhausts and A3 - gas utilisation plant located in engine and flare compound as shown on drawing ESID8	NOx and CO	Quarterly	In accordance with Appendix C of LFTGN08, (Version 2 March 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.	Where monitoring using hand-held, electrochemical equipment indicates an exceedance of the emissions standards specified in table S3.2, these shall be used as action levels and the operator shall investigate the cause and take appropriate measures to reduce emissions.

<b>Table S3.10 Leachate – other monitoring requirements</b>				
<b>Monitoring point reference or description</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
<b>Operational Cells or Phases</b> (Any cell or phases that do not have a final engineered cap agreed in accordance with condition 2.5)				
MEPP	-	-	-	-
<b>Non Operational Cells or Phases</b> (Any cell or phases that have a final engineered cap agreed in accordance with condition 2.5)				
MEPP	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Nickel, pH, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	At leachate compliance points as listed in table S3.1.	None
MEPP	Hazardous substances	Once every four years	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> , or such other subsequent guidance as may be agreed in writing with the Environment Agency	
MEPP	Depth to base (mAOD)	Annually		

<b>Table S3.11 Surface water – other monitoring requirements</b>				
<b>Monitoring Point Ref. /Description</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
MEPP	Ammoniacal Nitrogen Chloride Electrical conductivity pH Suspended solids Visual Oil and Grease	Monthly	Spot sample	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> or such other subsequent guidance as may be agreed in writing with the Environment Agency.

## Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

<b>Table S4.1 Reporting of monitoring data</b>		
<b>Parameter</b>	<b>Reporting period</b>	<b>Period ends</b>
Leachate level As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to air As specified by schedule 3, table S3.2	Every 12 months	31 December
Point source emission to water (other than sewer) As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission to groundwater As specified by schedule 3, table S3.4	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in external monitoring boreholes As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to sewer, effluent treatment plant, tankering or other off site transfer As specified by schedule 3, table S3.6	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission of landfill gas from capped surfaces As specified by schedule 3, table S3.7	Every 12 months	31 December
Other groundwater monitoring As specified by schedule 3, table S3.8	Every 3 months	31 March, 30 June, 30 September, 31 December
Other Landfill gas monitoring As specified by schedule 3, table S3.9	Every 3 months	31 March, 30 June, 30 September, 31 December
Trace gas monitoring	Every 12 months	31 December
Other leachate monitoring As specified by schedule 3, table S3.10	Every 12 months	31 December
Other surface water monitoring As specified by schedule 3, table S3.11	Every 12 months	31 December
Meteorological data Landfill Directive, annex III, section 2	Every 12 months	31 December

\* - where the reporting period is 12 months, you may submit this information as part of the 'annual report' required by condition 4.2.2.

<b>Table S4.2: Annual production/treatment</b>	
Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Accepted from offsite for treatment at any onsite effluent treatment plant.	Cubic metres/year
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation. Average methane content entering the landfill gas utilisation or treatment compound (based on the annual average of Table S3.9 monitoring) Methane generation rate (50%ile from a representative model)	Normalised cubic metres/year  % methane v/v  m <sup>3</sup> /hr

<b>Table S4.3 Performance Parameters</b>			
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Annual total</b>	<b>Unit</b>
Energy used (including for leachate treatment)	Annually		MWh of electricity or natural gas

<b>Table S4.4 Reporting Forms</b>		
<b>Media/parameter</b>	<b>Reporting Format</b>	<b>Date of Form</b>
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Air	Form Air 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Particulate matter	Form Particulate 1 or other reporting format to be agreed in writing with the Environment Agency	10/11/2017
Waste Return	E-waste Return Form	-
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	10/11/2017

# Schedule 5 – Notification

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

## Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

<b>(a) Notification requirements for any incident or accident which significantly affects or may significantly affect the environment</b>	
<b>To be notified within 24 hours of detection</b>	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

<b>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

<b>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Measures taken, or intended to be taken, to stop the emission	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment</b>	
<b>To be notified within 24 hours of detection</b>	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

## Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* authorised to sign on behalf of the operator

## Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“background concentration” means such concentration of that substance as is present in:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge; or
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site.

“cell layout drawing” means:

- (a) A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:
  - (i) the location of the new cell on the site;
  - (ii) the proposed level (Above Ordnance Datum) of the base of the excavation;
  - (iii) the proposed finished levels of all containment and leachate drainage layers;
  - (iv) the positions of leachate management infrastructure; and
  - (v) the positions of landfill gas infrastructure (if appropriate).
- (b) A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:
  - (i) changes to slope length and gradient within the cell;
  - (ii) new leachate or landfill gas infrastructure construction design;
  - (iii) slope stability issues such as new basal excavation level; and/or
  - (iv) depth of waste.

“construction Proposals” means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

“CQA Validation Report” means the final “as built” construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- “As-built” plans and sections of the works;
- Copies of the site engineer’s daily records;

- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154 and words and expressions used in this permit which are also used in those Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“exceeded” means that a value is above a permitted limit, or where a range of values or a minimum value is set as a permitted limit it means a value outside that range or below the minimum value, whichever is applicable.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“hazardous substances” as defined by the Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154, schedule 22 and listed in our Hydrogeological risk assessment guidance.

“inert waste” means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater

“landfill Infrastructure” means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;
- lining within the installation.

within the site.

“LFTGN 02” means Environment Agency Guidance on monitoring of landfill leachate, groundwater and surface Water.

“LFTGN 03” means Environment Agency Guidance on the management of landfill gas.

“LFTGN 04” means Environment Agency Guidance for monitoring trace components in landfill gas

“LFTGN 05” means Environment Agency Guidance for monitoring enclosed landfill gas flares.

“LFTGN 07” means Environment Agency Guidance on monitoring landfill gas surface emissions.

“LFTGN 08” means Environment Agency Guidance for monitoring landfill gas engines.

“liquids” means any liquid other than leachate within the engineered landfill containment system.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“M2” means Environment Agency Guidance Monitoring of stack emissions to air.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“medicinal product” means any medicine licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) or their predecessors under the Medicines Act 1968, section 130.

“MEPP” Monitoring and extraction point plan, required by condition 4.2.2(h) to specify extraction points and routine monitoring locations.

“new cell” means any new cell, part of a cell or other similar new area of the site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;
- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

“no impact” means that the change made to the construction process will not affect the agreed design criteria, specification or performance in a way that has a negative effect.

“pests” means Birds, Vermin and Insects.

“previous year” means the 12 month period preceding the month the annual report is submitted in.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“relevant waste acceptance procedures” means the procedure for the acceptance of waste at landfills and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“relevant waste acceptance criteria” means the waste acceptance criteria and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“review of the Hydrogeological Risk Assessment” means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the EP Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the permit continue to meet the requirements of the EP Regulations.

'sustainably extracted' means where suction can be applied to the extraction wells such that a flow rate of landfill gas, with a methane content capable of either being combusted, or treated by bio-oxidation, can be extracted without increasing the risk of air ingress to the waste or inducing aerobic degradation within the waste.

'waste code' - See 'List of Wastes'.

"WFD" means Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [and repealing certain Directives] – the Waste Framework Directive.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.

Where the following terms appear in the waste code list in Tables S2.1, S2.3, S2.4, S2.5, S2.6 or S2.7 they have the meaning given below:

'hazardous substance' means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008;

'heavy metal' means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances;

'polychlorinated biphenyls and polychlorinated terphenyls' ('PCBs') means PCBs as defined in Article 2(a) of Council Directive 96/59/EC'.

Article 2(a) says that 'PCBs' means:

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 % by weight;

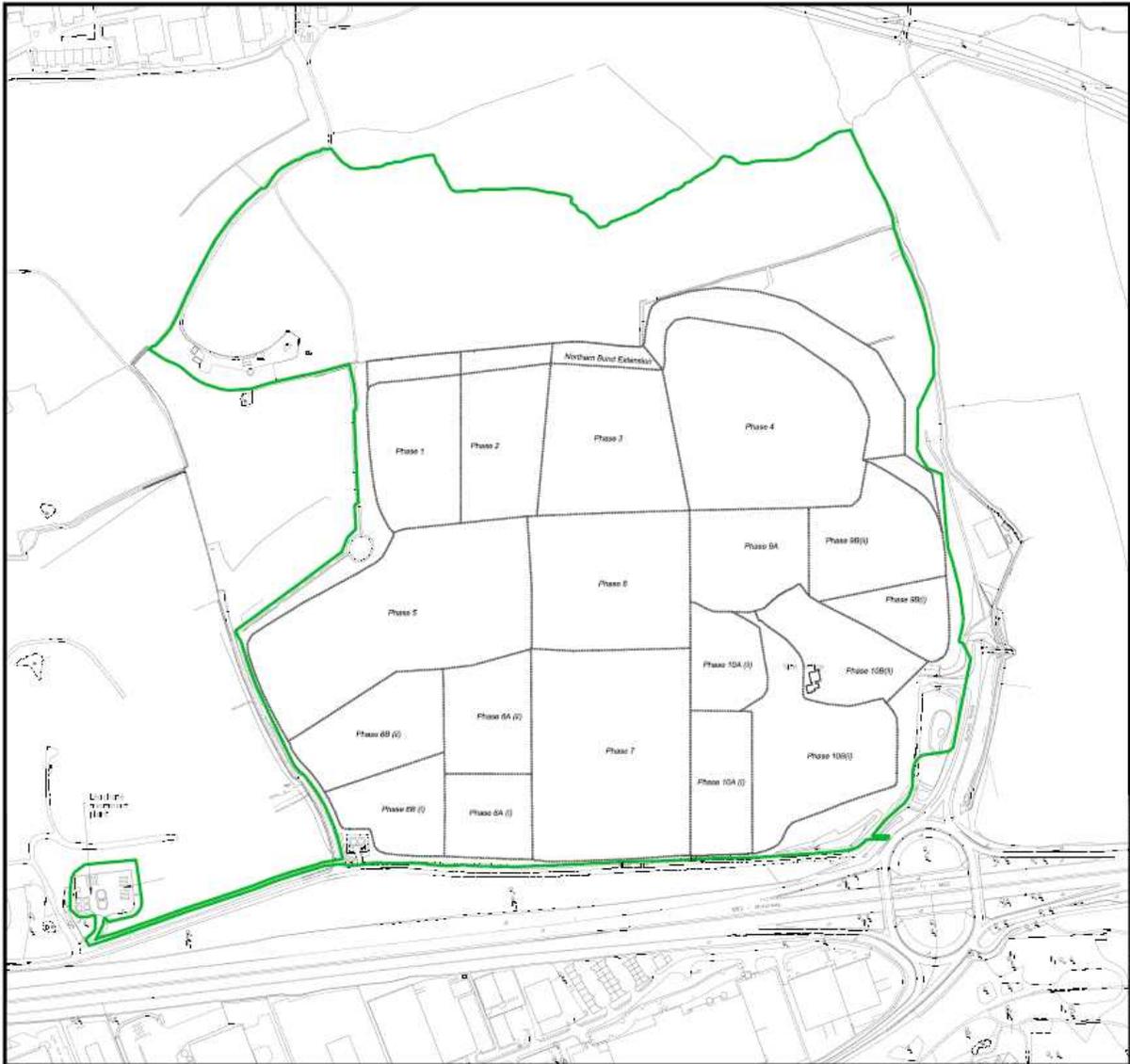
'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances;

'stabilisation' means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste;

'solidification' means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste;

'partly stabilised wastes' means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term.

# Schedule 7 – Site plan



## APPENDIX VII

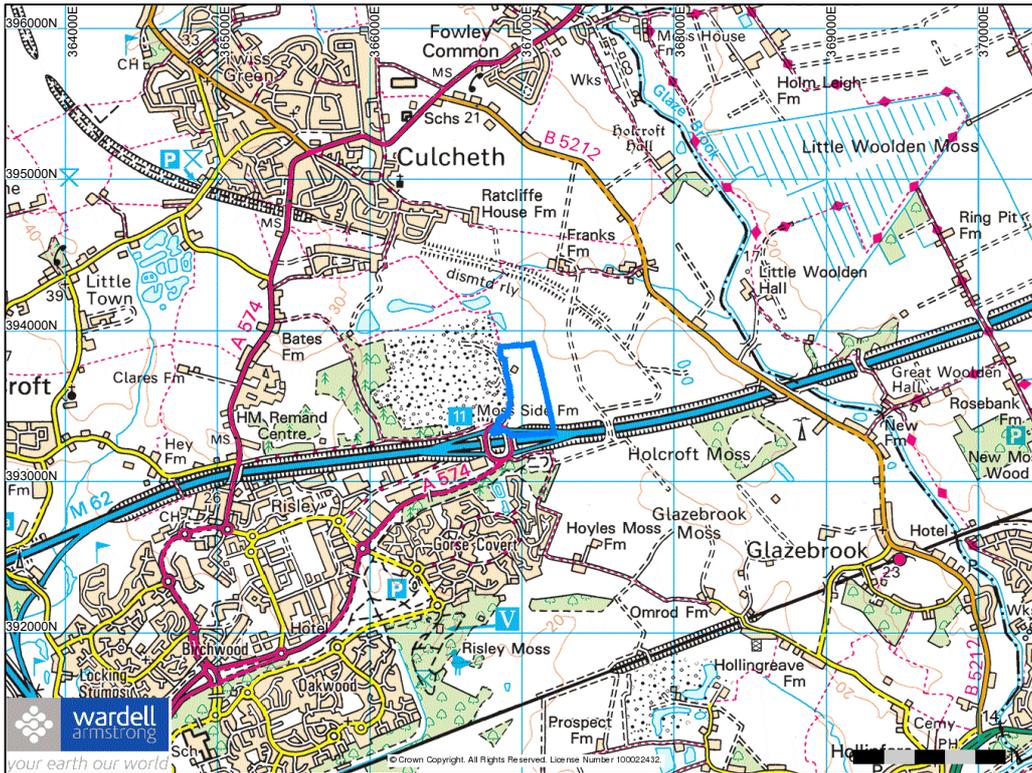
### List of Land Uses and Associated Chemicals of Potential Concern

Industry	Metals and non-metals					Inorganics					Organics					Other chemicals and compounds	
	Common metal suite (Cd, Cr, Cu, Ni, Pb, Zn)	Hg	As	B	Se	CN	Nitrate	Sulphate	Asbestos	pH	Phenol	Acetone	Hydrocarbons	PAHs	Chlorinated hydrocarbons		PCBs
Airports	✓					✓			✓	✓		✓	✓		✓	✓	
Animal and animal products processing works	✓		✓					✓		✓		✓	✓	✓	✓	✓	Dieldrin
Asbestos manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	
Ceramics, cement and asphalt manufacturing works	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Charcoal works	✓							✓	✓	✓		✓	✓	✓	✓	✓	Ba, S, organotin compounds
coatings (paints and printing inks) manufacturing	✓							✓	✓	✓		✓	✓	✓	✓	✓	
cosmetics and toiletries manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	Ba, chloro-phenol, dioxins/furans
disinfectants manufacturing works	✓	✓						✓	✓	✓		✓	✓	✓	✓	✓	Ba
explosives, propellants and pyrotechnics works	✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	Ba
fertiliser manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	V, dioxins/furans
fine chemical manufacturing works	✓	✓	✓				✓	✓	✓	✓		✓	✓	✓	✓	✓	Ba
inorganic chemicals manufacturing works	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	organotin compounds
linoleum, vinyl and bitumen-based floor coverings	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	Ba
mastics, sealants, adhesives, roofing felt works	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	V
organic chemicals manufacturing works	✓	✓	✓			✓		✓	✓	✓		✓	✓	✓	✓	✓	chloro-phenol, hexachloro-cyclohexane, Dieldrin, dioxins/furans, organotin
pesticides manufacturing works	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	
pharmaceuticals manufacturing works	✓		✓					✓	✓	✓		✓	✓	✓	✓	✓	S, Zn,
rubber processing works (including tyres)	✓							✓	✓	✓		✓	✓	✓	✓	✓	S, Zn,
soap and detergent manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	hexachloro-cyclohexane
Dockyards and dockland	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	hexachloro-cyclohexane
Dry cleaners	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Engineering work	✓							✓	✓	✓		✓	✓	✓	✓	✓	
aircraft manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	
electrical and electronic equipment works	✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	V, Be
mechanical engineering and ordnance works	✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	S
railway engineering works	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	organotin compounds
shipbuilding repair and shipbreaking	✓		✓					✓	✓	✓		✓	✓	✓	✓	✓	
vehicle manufacturing works	✓					✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Fibreglass and fibreglass resin manufacturing works	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	V, S
Gasworks, coke works and coal carbonisation plants	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	V, S
Glass manufacturing works	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓	✓	✓	
Metal works	✓							✓	✓	✓		✓	✓	✓	✓	✓	V, S
electroplating and other metal finishing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	V, S
iron and steelworks	✓							✓	✓	✓		✓	✓	✓	✓	✓	V
lead works	✓		✓					✓	✓	✓		✓	✓	✓	✓	✓	V
non-ferrous metals (excluding lead works)	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓	✓	✓	
precious metal recovery works	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓	✓	✓	organolead compounds
Oil refineries and bulk storage	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Photographic processing industry	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	V, Ba, Be
Power stations (excluding nuclear power stations)	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	V, Ba, Be
Printing and bookbinding works	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	hexachloro-cyclohexane, dioxins/furans
Pulp and paper manufacturing works	✓							✓	✓	✓		✓	✓	✓	✓	✓	hexachloro-cyclohexane, dioxins/furans
Railway land	✓							✓	✓	✓		✓	✓	✓	✓	✓	V
Road vehicle: garages and filling stations	✓							✓	✓	✓		✓	✓	✓	✓	✓	organolead compounds
Road vehicle: transport and haulage centres	✓							✓	✓	✓		✓	✓	✓	✓	✓	V, S, organolead compounds
Sewage works and sewage farm	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Textile works and dye works	✓							✓	✓	✓		✓	✓	✓	✓	✓	Dieldrin
Timber products and manufacturing works	✓		✓	✓				✓	✓	✓		✓	✓	✓	✓	✓	
Timber treatment works	✓		✓	✓				✓	✓	✓		✓	✓	✓	✓	✓	chloro-phenol, hexachloro-cyclohexane, Dieldrin, organotin
Waste management	✓							✓	✓	✓		✓	✓	✓	✓	✓	
drum and tank cleaning and recycling plants	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	V, Ba, hexachloro-cyclohexane, Dieldrin
hazardous waste treatment plants	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	
landfills and other waste treatment/disposal sites	✓		✓					✓	✓	✓		✓	✓	✓	✓	✓	dioxins/furans
solvent recovery works	✓							✓	✓	✓		✓	✓	✓	✓	✓	
metal recycling sites	✓	✓	✓					✓	✓	✓		✓	✓	✓	✓	✓	Ba

\* The information in this table is indicative only and does not present a comprehensive review. The data is summarised from R&D Publication CLR 8, Potential Contaminants for the Assessment of Land, DEFRA and EA, 2002. Assessment of individual sites requires knowledge of historic land use and specific site processes. Irrespective of the information present above there are several contaminants of concern such as hydrocarbons and PCBs, that can be found on any industrial site of significant size.

**DRAWINGS**

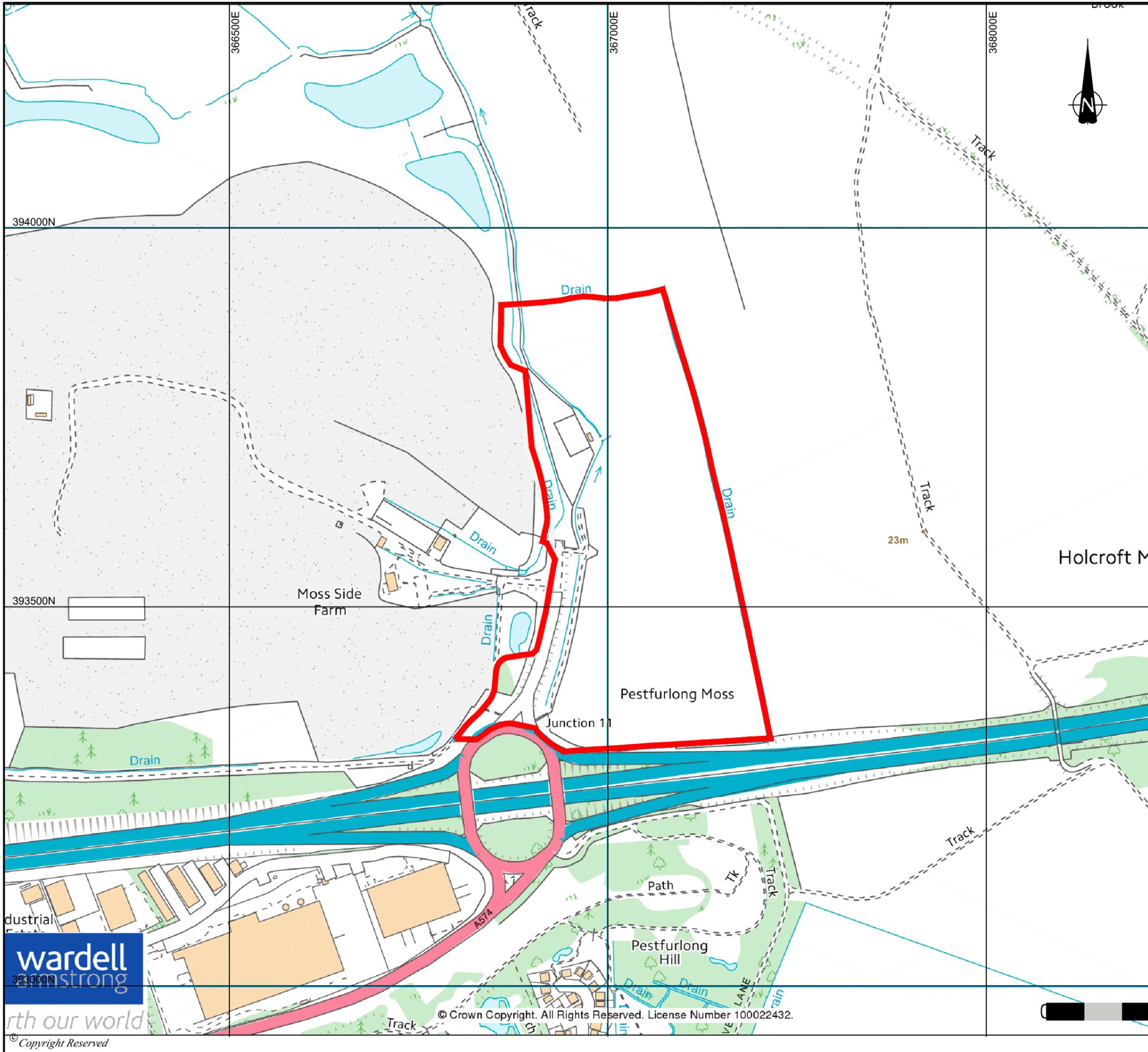
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CLIENT	WARRINGTON MSA, J11 M62 MOTORWAY		DRG No.	SH11739-007		REV	A		
	PROJECT	POTENTIAL WARRINGTON MSA		SIZE	A4		SCALE	1:50,000	
DRAWING TITLE		SITE LOCATION PLAN		DRAWN BY	DP		CHECKED BY	JAS	
							APPROVED BY		AJD
						■ SHEFFIELD   TEL 0114 245 6244 WWW.WARDELL-ARMSTRONG.COM <input type="checkbox"/> BIRMINGHAM <input type="checkbox"/> GLASGOW <input type="checkbox"/> BOLTON <input type="checkbox"/> LONDON <input type="checkbox"/> CARDIFF <input type="checkbox"/> MANCHESTER <input type="checkbox"/> CARLISLE <input type="checkbox"/> NEWCASTLE UPON TYNE <input type="checkbox"/> EDINBURGH <input type="checkbox"/> STOKE ON TRENT			



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REVISION		DETAILS	DATE	DRN	CHKD	APPD
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CLIENT  
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PROJECT  
**POTENTIAL WARRINGTON MSA**

DRAWING TITLE  
**SITE PLAN**

DRG No.	SH11739-008	REV	A
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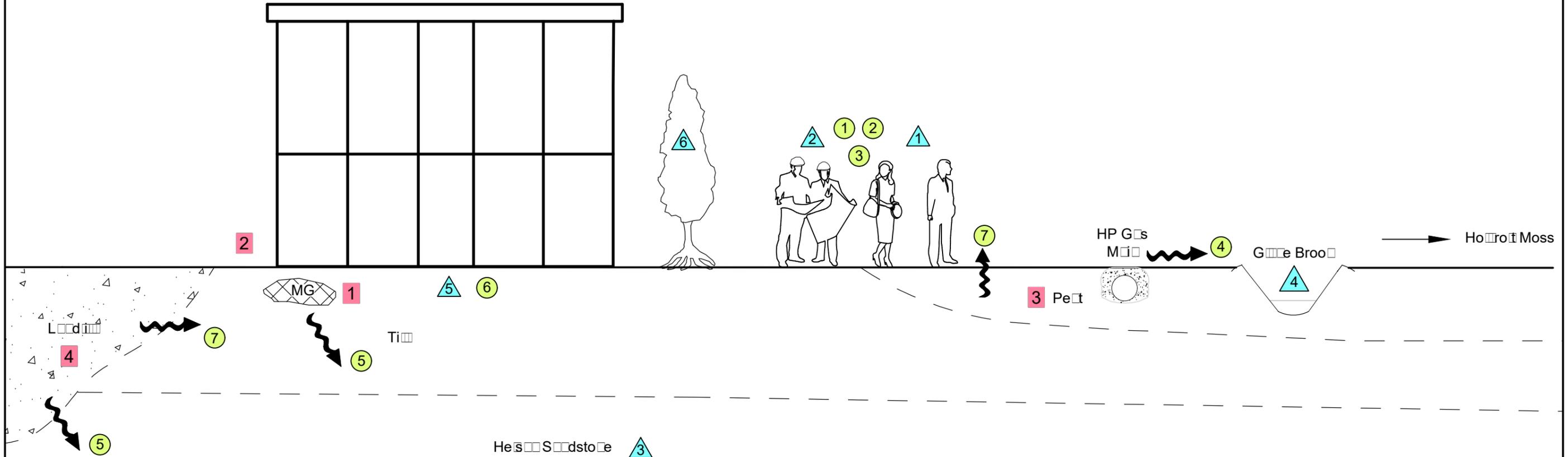
DRG SIZE	A3	SCALE	1:5000	DATE	27/11/18
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Proposed Motorway Services Area



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 J11 M62 MOTORWAY**

PROJECT  
**POTENTIAL WARRINGTON MSA**

DRAWING TITLE  
**SCHEMATIC CONCEPTUAL  
 SITE MODEL**

DRG No.	SH11739-010	REV	A
DRG SIZE	A3	SCALE	NTS
		DATE	04/12/18
DRAWN BY	DP	CHECKED BY	JAS
		APPROVED BY	AJD

**Source**

- 1 Made Ground
- 2 Historical Building Material
- 3 Ground Gas (Pet)
- 4 Admixed Limestone

**Pollutants**

- 1 Ionisation
- 2 Dermato-toxic or Soil/ or Dust
- 3 Ionisation of Soil/ or Dust
- 4 Surface Water Run Off
- 5 Groundwater Migration
- 6 Direct Contact
- 7 Gas Migration

**Receptor**

- 1 Future Occupiers
- 2 Construction Workers
- 3 Groundwater
- 4 Surface Water
- 5 Surrounding Building Materials
- 6 Flora & Fauna

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# **ES Scoping Appendix 9 – Phase 2 Preliminary Ground Investigation Report**

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ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT



**EXTRA MSA GROUP**

**WARRINGTON MSA, J11 M62 MOTORWAY**

**PRELIMINARY SITE INVESTIGATION**

**December 2018**

**Wardell Armstrong**

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**DATE ISSUED:** December 2018  
**JOB NUMBER:** SH11739  
**REPORT NUMBER:** RPT-002

**EXTRA MSA GROUP**

**WARRINGTON MSA, J11 M62 MOTORWAY  
PRELIMINARY SITE INVESTIGATION**

**PREPARED BY:**

M Biggins Environmental Geologist

**REVIEWED AND APPROVED BY:**

A J Dunhill Technical Director

**DOCUMENT RECORD**

Issue No.	Date	Details
1	24 September 2018	First issue
2	14 <sup>th</sup> December 2018	Final

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ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
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MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT

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## FIGURES

Figure 1           Aerial Image Showing the Approximate Site Boundary

## **APPENDICES**

Appendix I	Standard Terms and Conditions and Limitations to Report
Appendix II	Trial Pit Logs
Appendix III	Geotechnical Laboratory Results
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## **DRAWINGS**

<b>Drawing No</b>	<b>Title</b>	<b>Scale</b>
SH11739-001	Site Location Plan	1:50,000
SH11739-004	Site Investigation Locations Plan	1:2,500
SH11739-005	Geological Sections Plan	1:2,500

## 1 EXECUTIVE SUMMARY

1.1 This report is prepared in accordance with instructions from Dennis Enuson of Extra MSA Group. The site is Warrington MSA, J11 M62 Motorway and comprises approximately 12.2 hectares of agricultural land. A summary of pertinent information relating to the site along with a qualitative assessment of the potential risk is provided in Table I.

TABLE I: SUMMARY	
Issue	Description
Geological Conditions	The site is shown to be underlain by predominantly cohesive deposits of sandy slightly gravelly clay with a firm strength. The south east of the site is underlain initially by a thickness of peat, up to 1.4m prior to encountering cohesive deposits.
Archaeology	No significant archaeological evidence was encountered. Consideration should be given to the planning requirements for archaeology.
Geotechnical Assessment	The site is proven to have areas of peat, predominantly to the south east up to 1.4m thick. The remainder of the site, and areas underlying the peat deposits are proven to be dominated by cohesive sandy slightly gravelly clay with a firm to stiff strength. This material is likely to be suitable as a founding medium, dependant on the required future loads. Whilst the peat deposits are unlikely to be suitable as a founding medium in current form, the restricted area and depth of peat may allow either excavation of the peat and replacement with suitable fill or alternative engineering solutions such as surcharging to reduce the risk.
Recommended further work	Future site investigations to comply with planning requirements.

1.2 The executive summary forms part of the overall report and should not be considered in isolation.

## 2 INTRODUCTION

### Instructions

- 2.1 This report is prepared in accordance with instructions from Dennis Enuson of Extra MSA Group dated. This follows a proposal dated 27 September 2017 by Wardell Armstrong.

### Site Location

- 2.2 The site is Land off Junction 11 of them M62, and is located as shown on Drawing SH11739-001 (1:50,000 scale). A more detailed site plan is shown on Drawing SH11739-004 (1:2,500 scale). The site comprises approximately 12.2Ha of open agricultural land and is bounded by further fields to the north and east, the M62 motorway to the south and former Risley landfill to the west. The site is located c. 8.5km to the north east of Warrington city centre.

Figure 1: Aerial Image Showing the Approximate Site Area



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### Scope and Objectives

- 2.3 The purpose of this report is to present the findings of an intrusive investigation that was carried out to determine the geological conditions beneath the site. In particular to identify describe, and broadly delineate peat deposits present at the site. In addition, the report aims to provide preliminary geotechnical information of relevance to the proposed use of the site.

### Proposed Site Use

- 2.4 It is proposed that the site is redeveloped for a commercial land use.

### **3 GEOLOGICAL SETTING**

#### **Geology**

- 3.1 The assessment of the geology of the site is based on the published geological mapping sheet (Sheet SJ69SE 1:50,000 scale) supplemented by geological information and borehole logs held by the British Geological Survey.
- 3.2 Borehole logs available on the BGS website, drilled for the M62 construction and other water wells on site, suggest that up to 3.65m of peat directly underlie the surface, followed by variable depths of stiff glacial till (up to approximately 10m) followed by the Helsby Sandstone which is part of the Sherwood Sandstone group, a major aquifer.

## 4 SITE INVESTIGATION

### Introduction

- 4.1 A physical site investigation has been carried out to assess the geotechnical nature of the ground. The site investigation comprised of a series of sixteen trial pits across the site area. Locations were positioned to provide a broad coverage of the site. Site investigation locations are shown on Drawing No. SH12191-004 (1:2,500 scale).

### Scope

- 4.2 The investigation was designed as a series of tasks that are summarised below in Table II.

TABLE II: SUMMARY OF TASKS		
Task	Summary	Date(s)
Preparatory Work	Setting up site investigation contract, including services enquiries, contractor health & safety document and site meeting with contractor/client.	August 2018
Intrusive site investigation	Excavation of 16 no. trial pits to c. 4.0m bgl	21 <sup>st</sup> – 22 <sup>nd</sup> August 2018
Laboratory analysis	Geotechnical testing in accredited laboratory – 17 bulk soil samples.	August - September 2018

- 4.3 The investigation was completed in accordance with Construction (Design and Management) (CDM) Regulations 2015 and a site-specific Health & Safety plan. Contractors used during this project include; H&C Plant Hire Ltd. (trial pits) and Socotec (geotechnical analysis).

### Archaeological Watching Brief

- 4.4 Due to the likely presence of peat on the site and previous knowledge of nearby sites it was considered prudent to carry out an archaeological watching brief during the trial pit excavations in order to assess any potential archaeological finds.

### Trial Pit Excavations

- 4.5 Trial pit excavations were completed under the full-time supervision of a Wardell Armstrong engineer. Sixteen trial pits (TP101 – TP116) were excavated to depths of

between 2.3m and 3.3m below ground level (bgl) using a JCB 3CX Sitemaster hydraulic excavator. Excavations beyond these depths were not possible due to reaching the required depth and or limitations of the plant. Locations (see Drawing No. SH11739-004) were positioned to provide widespread coverage of the site.

- 4.6 Trial pit logs are included at Appendix II.
- 4.7 During trial pit excavations hand shear vane tests were conducted where possible to determine the undrained (total stress) shear strength and the residual shear strength of the soil profile with depth.
- 4.8 Trial pits remained stable throughout excavation.
- 4.9 Trial pit logs are included at Appendix II.

### **Sampling and Testing**

#### ***Geotechnical Sampling and Testing***

- 4.10 Seventeen soil samples were taken for geotechnical testing and the testing schedule is summarised below in Table III. Geotechnical Results are attached at Appendix III.

<b>TABLE III: SUMMARY OF GEOTECHNICAL ANALYSIS SCHEDULE</b>	
<b>Geotechnical Test</b>	<b>Superficial Deposits</b>
Natural moisture content	12
Particle size distribution	6
Atterberg limit	7
2.5kg Compaction Testing	4*
* One compaction test could be completed only.	

### **Quality Assurance and Quality Control**

- 4.11 The soil and groundwater samples were collected, transferred to the laboratory under chain of custody and analysed to ensure traceability and reliability of analytical results. Based on the laboratory QA data, the analytical results are considered acceptable for interpretative use.

### **Limitations of Site Investigation**

- 4.12 It should be noted that the interpretation of the results of the physical site investigation is based on a limited number of investigation points. The locations and

numbers of the investigation locations were governed by the physical state of the site and the location of known services at the time of the investigation. Although reasonable inferences have been made during the interpretation, it is possible that variances in the thickness, distribution and physical/chemical characteristics of the strata present will exist.

## 5 RESULTS OF SITE INVESTIGATION

### General Site Observations

- 5.1 The site was observed to be generally flat and slightly elevated above the M62 motorway. The area was divided into areas planted for arable crops and grassland and was noted by the landowner to be wet.

### Archaeological Watching Brief

- 5.2 An archaeological watching brief was undertaken on the 21st and 22nd August 2018 alongside the geotechnical trial pitting.
- 5.3 A waterlogged deposit containing organic material was observed to be present in trial pits 102 – 108 and 110 – 112 which were all situated in the southeast quadrant of the site. Depths between 0.1m and 1.4m were recorded. The depths increased towards the southeast corner of the area. This is consistent with the area labelled as 'Pestfurlong Moss' on the current Ordnance Survey map. No anthropogenic material was noted within the deposit.
- 5.4 Artefacts recovered from the surface of the harvested area of the site consisted mostly of 18th and 19th century pottery, including Buckley type coarse red earthenware, Victorian transfer print and some refined white earthenware. Glass, slag and copper alloy were also recovered. Further finds analysis is warranted.
- 5.5 No other significant archaeological features were encountered during the excavation work.

### Ground Conditions

#### *Natural Strata*

- 5.6 Topsoil was encountered across the site to depths of c. 0.3m bgl and varied geographically becoming peat and clay based coincident with underlying strata.
- 5.7 The natural materials encountered during the intrusive investigation showed a geographical variability across the site. Typically, Peat deposits, of a dominantly pseudo-fibrous nature were encountered in the south east of the site with a thickness varying from 0.3m to 1.4m with increasing distance toward the south east. Peat deposits were generally underlain by sand and firm sandy clay.
- 5.8 The northern site area was dominated by cohesive deposits comprising sandy clay with a minor component of fine to coarse gravel with a generally rounded angularity.

Lithologies were variable from igneous granite to sedimentary mudstone, shale and red sandstone.

5.9 A summary of the strata beneath the site is shown in Table IV.

TABLE IV: SUMMARY OF STRATA BENEATH THE SITE				
Depth to base of strata (mbgl)			Mean Thickness (m)	Typical Description
Max.	Min.	Mean		
0.7	0.2	0.34	0.34	Topsoil
1.7	0.6	0.87	0.74	Peat
3.7*	2.3	2.13	2.10	Superficial Deposits
Not encountered				Rockhead/Bedrock
* Base of strata not always proven.				

#### Observations of contamination

- No visual or olfactory evidence of contamination was identified within the trial pits

#### Groundwater

5.10 Groundwater was encountered within TP104 at 2.7m bgl with the strike depths recorded in the borehole logs.

## 6 GEOTECHNICAL RESULTS

### Introduction

- 6.1 Site investigation works have identified up to 1.4m of peat in the south western site area. This is underlain by superficial deposits of sandy slightly gravelly clay, which is also present below topsoil across the remainder of the site.
- 6.2 In total, seventeen samples of made ground, natural superficial material and rock were collected from various depths and tested for range of geotechnical parameters including:
- Moisture content;
  - Particle Size Distribution;
  - Atterberg Limits;
  - 2.5kg Rammer Compaction;
- 6.3 All tests were performed in an accredited geotechnical laboratory and in accordance with the appropriate British Standard.
- 6.4 Compaction tests could only be completed on one sample, the remaining samples comprising peat, could not be tested due to their geotechnical nature, high moisture and high organic content.

### Natural Deposits

#### *Particle Size Distribution Test*

- 6.5 Particle Size Distribution tests were performed on nine samples from the natural deposits. The range in quantities of each soil fraction is shown in Table V.

TABLE V: PSD NATURAL DEPOSITS	
Soil Fraction	Total Percentage
Cobbles	0
Gravel	2 - 77
Sand	8 - 70
Silt/Clay	3 - 96

### ***Moisture Content***

- 6.6 Seven samples of superficial deposits (excluding peat) were tested for natural moisture content, results varied between 11% and 27%. One sample was noted to have a higher moisture content of 42% and was described as organic, indicating a potential mix of peat into the sample resulting in a higher moisture content.
- 6.7 Five peat samples tested for moisture content reported moisture contents between 108 and 591%. One sample was described by the laboratory as brown sandy clay, however based on the moisture content of 591% it is interpreted the laboratory description is incorrect.

### ***Atterberg Limits***

- 6.8 Six samples from the superficial natural deposits (excluding peat) were tested for determination of liquid and plastic limits. The results determined low to intermediate plasticity material with a plasticity index (PI) ranging between 17% (TP113) and 20% (TP103). One sample (TP111) reported a non-plastic determination.
- 6.9 Two samples of peat were tested for determination of liquid and plastic limit with one sample reporting a plasticity index (PI) of 76% and the second sample determined as non-plastic result.

### ***Compaction (2.5kg Rammer)***

- 6.10 One sample of material representing natural clay deposits was subjected to the 2.5kg rammer compaction test. As a result of that testing, a maximum dry density of 1.63 and an optimum moisture content of 23.5% were reported. The 95% of maximum dry density value has been plotted on the compaction curve and resulted in two moisture content values that delimit moisture content range of 17.25% to 27.25% at which the material is likely to be suitable for compaction. Consideration should be given to the required air voids where re-compaction works are to take place.
- 6.11 Peat samples were unable to be adequately tested for compaction parameters.

### ***Rockhead***

- 6.12 Rockhead was not encountered in any of the trial pits.

## 7 CONCLUSIONS AND RECOMMENDATIONS

### General

- 7.1 A brief examination of freely available historic maps confirm that there has been no built development on the site other than Pestfurlong Moss Farm which was present to the west of the site in 1893 and was not present after 1963.
- 7.2 A total of 16 trial pits (to approximately 3.7m maximum depth) were completed as part of this preliminary investigation. Observations from the intrusive work have confirmed the presence of topsoil, peat, sands and clays over the majority of the site. The location of peat within the site is shown on geological sections in appendix IV and on drawing SH11739-004. Bedrock was not encountered during the investigation.
- 7.3 Seventeen soil samples from across the site were tested for geotechnical parameters.
- 7.4 At this stage no contamination testing has been carried out on soil samples and the extent of any contamination at the site is unknown. However, given the history of the site no significant contamination is expected. Contamination testing of soils is likely to be required as part of any future planning process. This should be taken into account in the Health and Safety plan under the CDM regulations. Where possible any groundworks on site should be designed and planned to minimise the exposure of workers to contaminated soil. Where risks cannot be removed entirely at this planning stage, mitigation measures should be employed and may include the use of personal protective clothing (PPE) including gloves and respiratory facemasks, dust suppression or other methods.

### Surface Water and Groundwater

- 7.5 Groundwater levels encountered at the site show that the groundwater is generally more than 3m below ground level with the exception of trial pit 104 where an inflow was encountered at 2.7m.
- 7.6 The risk to surface and groundwater from any potential contamination is considered to be low due to the cohesive nature of the superficial deposits and the sites geographical location, the nearest rated surface watercourse, Glaze Brook, being 1500m to the East of the site.

### Ground Gas

- 7.7 No ground gas monitoring has been carried out as part of this investigation. However, given the ground conditions it is likely that concentrations of ground gas may be

present on the site. The proximity of the landfill site may also increase the risk from ground gas. It is likely that monitoring of ground gas will be required as a part of any future planning application and may also result in gas protection measures for buildings a below ground structures.

### **Coal Mining**

- 7.8 The site is not in an area affected by shallow mining.

### **Geotechnical and foundation design**

- 7.9 Groundwater levels encountered at the site show that the groundwater is generally more than 3m below ground level with the exception of trial pit 104 where an inflow was encountered at 2.7m.
- 7.10 Excavations for trial pits largely remained stable for trial pitting purposes. However, it should be anticipated that excavations for the foundations might not remain stable for long periods of time in the areas where weak peat strata are present.
- 7.11 The clay deposits on the site are likely to be suitable as a founding medium, dependant on the required future loads. The peat deposits on the site are not suitable as a founding stratum and will either require ground improvement or removal and replacement.
- 7.12 Differential settlement is considered to be a significant risk at the site due to the presence of peat. However, the area and depth of peat may allow either excavation of the peat and replacement with suitable fill or alternative engineering solutions such as surcharging to reduce the risk.
- 7.13 In circumstances where abnormally heavy loading is to be catered for a piled solution may be appropriate.

### **Archaeology**

- 7.14 A watching brief was carried out during the trial pit excavations. No artefacts were found to signify significant archaeological interest at the site. Future works should consider involvement of archaeological regulatory bodies during the planning process.

## **APPENDIX I**

### **Standard Terms and Conditions and Limitations to Reports**

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## **STANDARD TERMS AND CONDITIONS AND LIMITATIONS TO REPORTS**

This Report is provided for the stated purpose and for the sole use of the client in accordance with the Terms and Conditions of Appointment under which the services were performed. The Report is confidential to the client and no other warranty, expressed or implied, is made as to the professional advice included in the Report or any other services provided by Wardell Armstrong LLP. This Report may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of Wardell Armstrong LLP.

The conclusions and recommendations contained in this Report are based upon information provided by others including details supplied by the client and/or professional advisors on the assumption that all relevant information from whom it has been requested and/or supplied is accurate. Information so provided and/or supplied has not been verified independently by Wardell Armstrong LLP, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by Wardell Armstrong LLP in providing the services are outlined in this Report. The work described in this Report is based on the conditions and information as stated at the date the Report was completed. The scope of this Report and the services are accordingly limited by these circumstances. The findings outlined in the Report together with any opinions expressed and recommendations made are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. .

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Where any site observations have been carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results from any site observations made may vary and further confirmatory work should be made after the issuance of this Report. Wardell Armstrong LLP does not guarantee or warrant any estimates or projections contained in this Report.

## **APPENDIX II**

### **Trial Pit Logs**



Unit 5 Newton Business Centre  
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# Trial Pit Log

TrialPit No  
**TP101**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 367022.04 - 393897.75      Date 21/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25  
 Client: Extra MSA Group      Depth 2.90      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.25			Soft brown organic sandy silty clay TOPSOIL.
				0.60			Medium dense white brown silty SAND.
				1.40			Firm grey brown mottled sandy CLAY.
				2.50			Soft red brown very sandy slightly gravelly CLAY. Gravel of rounded to subrounded fine to coarse sandstone and mudstone / shale.
		B		2.50			
				2.90			End of Pit at 2.90m
				3.30			

Remarks:  
 Stability:





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# Trial Pit Log

TrialPit No  
**TP102**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 367054.84 - 393797.98      Date: 21/08/2018

Location: Warrington      Dimensions (m):       Scale: 1:25

Client: Extra MSA Group      Depth: 3.30      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	1.50			0.30			Soft dark brown organic peat TOPSOIL.
				0.60			Soft dark brown organic fibrous PEAT. Wood fragments.
				3.30			Firm grey brown mottled silty CLAY. Rare rootlets and vegetation fragments.
							End of Pit at 3.30m

Remarks:  
 Stability:





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# Trial Pit Log

TrialPit No  
**TP103**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367088.19 - 393674.03  
 Level:

Date  
 21/08/2018

Location: Warrington

Dimensions (m):

Scale  
 1:25

Client: Extra MSA Group

Depth  
 3.00

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Soft dark brown organic peat TOPSOIL.
	0.50	B		0.65			Soft orange brown organic fibrous PEAT. Tree stump and numerous wood / vegetation fragments.
	1.30			1.80			Firm red brown very sandy CLAY.
	3.00	B		3.00			Firm grey brown mottled very sandy CLAY. Occasional pockets of sand and occasional gravel of angular to subrounded fine to coarse mudstone and sandstone.
							End of Pit at 3.00m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP104**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367115.19 - 393559.36  
 Level:

Date  
 21/08/2018

Location: Warrington

Dimensions (m):

Scale  
 1:25

Client: Extra MSA Group

Depth  
 3.00

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.40			Soft dark brown black organic peat TOPSOIL.
	1.60	B		1.70			Very soft dark brown clayey pseudo-fibrous PEAT. Numerous decomposing vegetation / woody fragments with intact pieces of wood and bark.
	3.00	B		3.00			Very soft grey very sandy gravelly CLAY. Gravel of subrounded to rounded fine mudstone, sandstone and red sandstone.
							End of Pit at 3.00m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP105**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367133.86 - 393476.75  
 Level:

Date  
 22/08/2018

Location: Warrington

Dimensions (m):

Scale  
 1:25

Client: Extra MSA Group

Depth  
 3.10

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Soft dark brown slightly sandy organic peat TOPSOIL.
				1.70			Soft dark brown pseudo-fibrous PEAT. Numerous wood and decomposing vegetation fragments.
				2.30			Soft light grey brown very sandy CLAY. Rare gravel of rounded medium quartzite.
				2.80			Soft red grey very sandy slightly gravelly CLAY. Gravel of subangular to subrounded fine shale, sandstone and quartz.
				2.90			Loose orange red slightly gravelly slightly clayey SAND. Gravel of rounded coarse mudstone and sandstone.
				3.10			Soft red brown slightly gravelly sandy CLAY. Gravel of rounded medium to coarse sandstone. Occasional vegetation fragments and rootlets.
							End of Pit at 3.10m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP106**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 367149.71 - 393399.13      Date 22/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25

Client: Extra MSA Group      Depth 3.10      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.40			Soft dark brown slightly sandy organic peat TOPSOIL.
	1.00	B		1.40			Soft dark brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood.
	2.30			2.80			Soft red grey mottled very sandy slightly gravelly CLAY. Gravel of subangular to rounded medium granite, mudstone and quartzite.
	2.50	B		3.10			Firm red grey sandy CLAY. Rare gravel of fine rounded quartz.
							End of Pit at 3.10m

Remarks:  
 Stability:





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# Trial Pit Log

TrialPit No  
**TP107**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367165.67 - 393336.44  
 Level:

Date  
 22/08/2018

Location: Warrington

Dimensions (m):



Scale  
 1:25

Client: Extra MSA Group

Depth  
 2.90

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
2.00				0.70			Soft dark brown slightly sandy organic peat TOPSOIL.
				1.40			Soft dark brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood.
				1.70			Soft to firm light grey sandy slightly gravelly CLAY. Gravel of subangular to angular fine mudstone, sandstone and quartzite.
				2.90			Soft to firm red grey sandy slightly gravelly CLAY. Gravel of subangular to rounded fine mudstone and quartzite.
							End of Pit at 2.90m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP108**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367111.44 - 393328.29  
 Level:

Date  
 22/08/2018

Location: Warrington

Dimensions (m):

Scale  
 1:25

Client: Extra MSA Group

Depth  
 2.40

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.20			Soft dark brown organic peat TOPSOIL.
	0.50	B					Soft dark brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood.
				1.00			Loose light brown grey SAND.
				1.50			Soft to firm red grey sandy CLAY.
	2.40	B		2.40			End of Pit at 2.40m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP109**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 366969.07 - 393355.59  
 Level:

Date  
 22/08/2018

Location: Warrington

Dimensions (m):

Scale  
 1:25

Client: Extra MSA Group

Depth  
 3.20

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Soft dark brown black slightly sandy organic TOPSOIL.
				1.10			Soft to firm grey brown sandy CLAY. Iron staining.
				2.10			Soft grey brown mottled sandy CLAY.
	1.70 1.70	B		3.20			Firm to stiff very sandy laminated grey brown CLAY.
							End of Pit at 3.20m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP110**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 367047.30 - 393431.13      Date 22/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25  
 Client: Extra MSA Group      Depth 2.70      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.40 - 1.60	B		0.40			Soft dark brown black slightly sandy organic peat TOPSOIL.
				1.60			Soft orange brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood. Tree trunk.
				2.10			Firm grey sandy slightly gravelly CLAY. Gravel of rounded fine to medium shale and sandstone.
				2.70			Firm red grey laminated sandy CLAY.
							End of Pit at 2.70m

Remarks:  
 Stability:





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# Trial Pit Log

TrialPit No  
**TP111**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 366979.31 - 393494.89      Date 22/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25

Client: Extra MSA Group      Depth 3.00      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Soft dark brown slightly clayey organic TOPSOIL.
				0.55			Soft dark brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood.
							Soft to firm red grey slightly sandy CLAY. Rootlets.
	1.80 1.90	B					
				2.60			Dense brown slightly silty SAND.
	2.90	B		3.00			End of Pit at 3.00m

Remarks:  
 Stability:





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# Trial Pit Log

TrialPit No  
**TP112**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 367051.61 - 393539.18  
 Level:

Date  
 22/08/2018

Location: Warrington

Dimensions (m):



Scale  
 1:25

Client: Extra MSA Group

Depth  
 2.30

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.20			Soft dark brown slightly sandy organic TOPSOIL.
				0.70			Soft orange brown pseudo-fibrous PEAT. Numerous fragments of vegetation and wood. Tree trunk.
							Firm to stiff grey brown mottled sandy silty CLAY. Rare gravel of rounded fine quartz.
	2.00						
	2.30	B		2.30			
	2.30						End of Pit at 2.30m

Remarks:

Stability:





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# Trial Pit Log

TrialPit No  
**TP113**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 366990.66 - 393587.78      Date 21/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25

Client: Extra MSA Group      Depth 2.50      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	1.40			0.30			Soft brown slightly sandy slightly gravelly clay TOPSOIL. Gravel of subrounded to rounded fine to medium sandstone.
				0.60			Loose grey white silty SAND.
				1.10			Firm red brown organic sandy CLAY. Interbeds of sand with rootlets and fragments of vegetation..
				1.50			Firm red brown sandy silty CLAY. Occasional red sandstone gravel.
				2.50	B		2.50
							End of Pit at 2.50m

Remarks:  
 Stability:





Unit 5 Newton Business Centre  
 Thorncliffe Park Estate  
 Chapeltown  
 Sheffield. S35 2PH

# Trial Pit Log

TrialPit No  
**TP114**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 366990.23 - 393679.33      Date: 21/08/2018

Location: Warrington      Dimensions (m):       Scale: 1:25

Client: Extra MSA Group      Depth: 3.70      Logged: MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	1.30	B		0.40			Soft dark brown organic slightly sandy silty clay TOPSOIL. Rare sandstone gravel.			
				0.60			Medium dense yellow white silty SAND.			
				1.10			Firm orange brown organic sandy CLAY. Occasional rootlets and pockets of sand.			
				3.30			Firm to stiff grey brown mottled sandy silty CLAY. Occasional gravel of subrounded fine to coarse shale and rare granite. Becoming friable with depth.			
				3.40			Soft red brown laminated silty CLAY.			
				3.50			Loose orange fine to medium grained SAND.			
				3.70			Firm red brown laminated silty CLAY.			
				3.70			End of Pit at 3.70m			

Remarks:  
 Stability:





Unit 5 Newton Business Centre  
 Thorncliffe Park Estate  
 Chapeltown  
 Sheffield. S35 2PH

# Trial Pit Log

TrialPit No  
**TP115**  
 Sheet 1 of 1

Project Name: Warrington MSA

Project No.  
 SH11739

Co-ords: 366934.43 - 393803.09  
 Level:

Date  
 21/08/2018

Location: Warrington

Dimensions (m):



Scale  
 1:25

Client: Extra MSA Group

Depth  
 3.20

Logged  
 MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Soft dark brown organic slightly sandy silty clay TOPSOIL.
				0.60			Firm yellow brown sandy silty CLAY.
				2.60			Firm grey brown mottled silty CLAY. Occasional gravel of rounded fine to medium shale and weathered red sandstone.
	2.80			3.20			Firm red brown laminated slightly sandy silty CLAY. Rare gravel of rounded to subrounded shale and sandstone.
							End of Pit at 3.20m

Remarks:

Stability:





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 Thorncliffe Park Estate  
 Chapeltown  
 Sheffield. S35 2PH

# Trial Pit Log

TrialPit No  
**TP116**  
 Sheet 1 of 1

Project Name: Warrington MSA      Project No. SH11739      Co-ords: 366910.81 - 393890.00      Date 21/08/2018

Location: Warrington      Dimensions (m):       Scale 1:25

Client: Extra MSA Group      Depth 3.00      Logged MB

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.40			Soft brown organic sandy silty clay TOPSOIL.
				0.60			Firm orange brown sandy silty CLAY. Rootlets.
				1.20			Firm grey brown mottled sandy CLAY. Occasional gravel of rounded fine to medium dark mudstone / shale and rootlets.
				2.90			Firm red brown sandy laminated CLAY. Occasional pockets of sand.
	3.00 3.00	B		3.00			Soft red brown very sandy gravelly CLAY. Gravel of rounded to subrounded medium to coarse quartz, igneous lithology and sandstone. End of Pit at 3.00m

Remarks:  
 Stability:



**APPENDIX III**

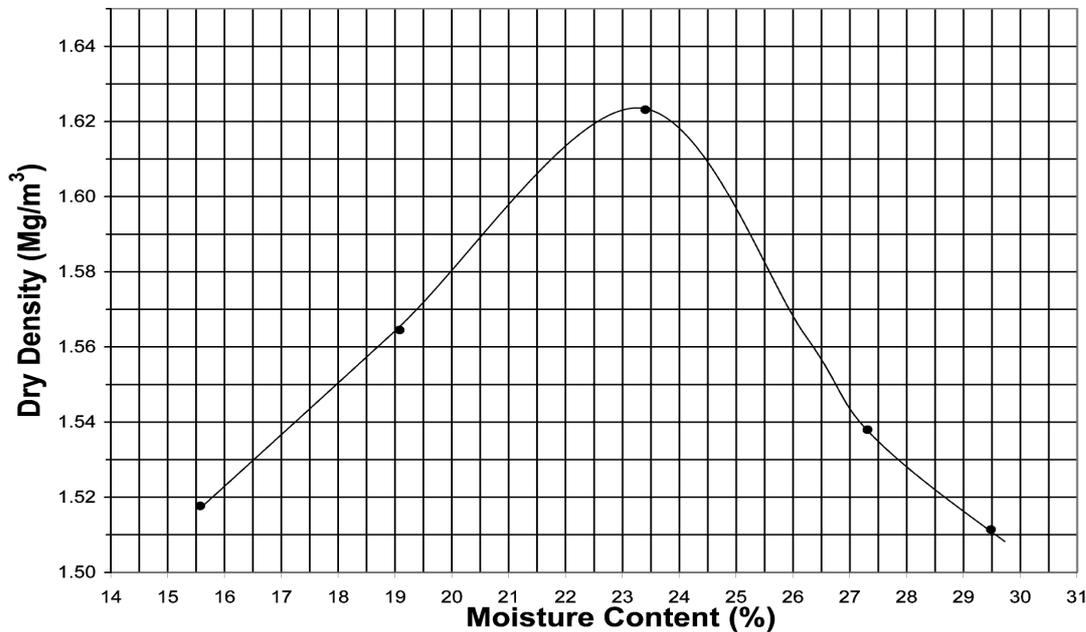
**Geotechnical Laboratory Results**

## Maximum Dry Density and Optimum Moisture Content

<b>Report No:</b>	<b>WAM0011630/705/S0</b>	<b>Report Date:</b>	<b>21 September 2018</b>
		Our Contract Ref:	51044945
Client:	WARDELL ARMSTRONG LLP	Sample No.	55040705
Address:	SIR HENRY DOULTON HOUSE FORGE LANE ETRURIA STOKE ON TRENT ST1 5BD	Client Sample Ref:	TP111 - B1
		Date Sampled:	23 Aug 2018
		Date Received:	24 Aug 2018
Client Contact:	Matthew Bigging	Date Tested:	19 Sep 2018
<b>Site:</b>	<b>Warrington</b>		
Location:	B1		
Description:	Brown CLAY		
Material Specification:	Not given	Material Supplier:	Not given
Sample Type:	Bulk Bag	Material Source:	Not given
Depth:	1.80 - 1.80	Sampling Certificate:	Not Received
Preparation Method:	BS1377: Part 1:1990 7.6.2 (Natural) & BS 1377-4:1990 3.2.4.1/3.2.6.1	Samples Submitted by:	Client
		Sampled by:	Client

**Results :**

Number of Samples Used:	Multiple	Amount Retained on 37.5mm sieve (%):	0.0	Prepared to Pass: 20mm
Particle Density (Mg/m <sup>3</sup> ):	Not Required	Amount Retained on 20.0mm sieve (%):	0.0	Method Used: Neither
		As received Moisture Content (%):	11	



**Optimum Moisture Content (%): 23.5**                      **Maximum Dry Density (Mg/m<sup>3</sup>): 1.63**

**Comments:** Air Voids lines not requested by Client

**Certified that the test was determined in accordance with BS1377: Part 4 1990: Clause 3.3**

**Signed:**  Paul Thomas - Field Section Manager  
**for and on behalf of SOCOTEC UK Limited**

## Plastic Limits

**Report No:** WAM0011630/707/M13 **Report Date:** 21 September 2018

Our Contract Ref: 51044945

Client: WARDELL ARMSTRONG LLP Tested By: SOCOTEC Warrington

Address: SIR HENRY DOULTON HOUSE  
FORGE LANE  
ETRURIA  
STOKE ON TRENT  
ST1 5BD

Date Sampled: 23 Aug 18

Date Received: 24 Aug 18

Client Contact: Matthew Bigging Date Tested: 13 Sep 18

Site: Warrington

Sample Type: BULK BAG

Sampling Cert Received: No

Samples Submitted by: Client

Sampled by: Client

Method of preparation: BS1377-2:1990 4.2.3

### Results:

Sample Reference	Client's Ref	Location	Description	Moisture Content (%)	Plastic Limit	% Passing 425 µm
55040706	TP111 - B2	** Error **	Red/Brown Sandy CLAY, Occ Gravel	N/A	Non Plastic	81
55040707	TP110 -B1	** Error **	Black PEAT	524	Non Plastic	80

**As Received, Coarse particles removed by hand prior to test**  
**\* Washed over 425µm BS Test Sieve**

Certified that the Plastic Limits were determined in accordance with BS1377-2: 1990 Clause 5.0  
Certified that the Moisture Content was determined in accordance with BS1377-2: 1990: 3.2  
Method of Preparation: BS 1377-1:1990 7.4.3 & BS1377-2:1990 4.2.3/4.2.4

**Signed:**



Paul Thomas - Field Section Manager  
for and on behalf of SOCOTEC UK Limited













## Liquid and Plastic Limits and Plasticity Indices

**Report No:** WAM0011630/703/M6 **Report Date:** 21 September 2018

Our Contract Ref: 51044945

Client: WARDELL ARMSTRONG LLP  
 Address: SIR HENRY DOULTON HOUSE  
 FORGE LANE  
 ETRURIA  
 STOKE ON TRENT  
 ST1 5BD  
 Tested By: SOCOTEC Warrington

Client Contact: Matthew Bigging  
 Site: Warrington  
 Date Sampled: 23 Aug 2018  
 Date Received: 24 Aug 2018  
 Date Tested: 13 Sep 2018

Method of preparation: BS1377-1:1990 7.4.3 & BS 1377-2:1990 4.2  
 Sample Type: BULK BAG  
 Sampling Certificate: Not Received  
 Samples Submitted by: Client  
 Sampled by: Client

### Results:

Sample Reference	Client's Ref	Location	Description	Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing on 425 µm
55040692	TP113 -B1	B1 2.50 - 2.50	Dark Brown CLAY, Occ Sand & Gravel	N/A	32	17	15	**92
55040694	TP116 - B1	Soft red brown CLAY, occ sand and f-m gravel 3.00 -	Red/Brown CLAY, Occ Sand & Gravel	N/A	26	20	6	**93
55040697	TP103-B2	B2 3.00 - 3.00	Brown/Grey CLAY	N/A	39	19	20	**95
55040702	TP108 - B1	B1 0.50 - 0.50	PEAT	108	132	56	76	**83
55040703	TP108 - B2	B2 2.40 - 2.40	Brown/Grey CLAY, Occ Sand & Gravel	N/A	25	16	9	**94

\* Washed over 425µm BS Test Sieve

\*\* As received, coarse particles removed by hand prior to test

### Comments:

Actual % passing 425µm BS Test Sieve from separate grading analysis Estimated % passing 425µm BS Test Sieve

Certified that the Liquid and Plastic Limits and Plasticity Indices were determined in accordance with BS1377-2: 1990 Clauses 4.4, 5.0 and 5.4 respectively  
 Certified that the Moisture Content was determined in accordance with BS1377-2: 1990: 3.2

### Signed:



Paul Thomas - Field Section Manager

for and on behalf of SOCOTEC UK Limited

## Moisture Content

**Report No:** WAM0011630/708/M12 **Report Date:** 21 September 2018

Our Contract Ref: 51044945

Client: WARDELL ARMSTRONG LLP Tested By: SOCOTEC Warrington

Address: Sir Henry Doulton House  
 Forge Lane  
 Etruria  
 Stoke On Trent  
 ST1 5BD

Date Sampled: 23 Aug 2018  
 Date Received: 24 Aug 2018  
 Date Tested: 4 Sep 2018

Client Contact: Matthew Bigging  
 Site: Warrington

Sampling Certificate: Not Received  
 Samples Submitted by: Client  
 Sampled by: Client

Method of preparation: BS1377-1:1990 7.4.2

### Results:

Sample Reference	Clients Reference	Location	Moisture Content(%)	Sample Type	Description
55040693	TP114 - B1	B1 3.70 - 3.70m	27	Bulk Bag	Brown CLAY
55040695	TP101 -B1	B1 2.50 - 2.50m	14	Bulk Bag	Brown Sandy CLAY & Gravel
55040696	TP103 -B1	B1 0.50 - 0.50m	150	Bulk Bag	PEAT
55040698	TP104 -B1	B1 1.60 - 1.60m	591	Bulk Bag	Brown Sandy GRAVEL
55040699	TP104 - B2	B2 3.00 - 3.00m	42	Bulk Bag	Brown Organic CLAY
55040700	TP106 - B1	B1 1.00 - 1.00m	530	Bulk Bag	PEAT
55040701	TP106 - B2	B2 2.50 - 2.50m	27	Bulk Bag	Brown Sandy CLAY

Certified that the Moisture Content were determined in accordance with BS1377-2: 1990: 3.2

**Signed:**



Paul Thomas - Field Section Manager  
 for and on behalf of SOCOTEC UK Limited

## Moisture Content

<b>Report No:</b>	<b>WAM0011630/708/M12</b>	<b>Report Date:</b>	<b>21 September 2018</b>
		Our Contract Ref:	51044945
Client:	WARDELL ARMSTRONG LLP	Tested By:	SOCOTEC Warrington
Address:	Sir Henry Doulton House Forge Lane Etruria Stoke On Trent ST1 5BD	Date Sampled:	23 Aug 2018
		Date Received:	24 Aug 2018
Client Contact:	Matthew Bigging	Date Tested:	4 Sep 2018
Site:	Warrington		
		Sampling Certificate:	Not Received
		Samples Submitted by:	Client
		Sampled by:	Client

Method of preparation: BS1377-1:1990 7.4.2

### Results:

Sample Reference	Clients Reference	Location	Moisture Content(%)	Sample Type	Description
55040702	TP108 - B1	B1 0.50 - 0.50m	108	Bulk Bag	PEAT
55040704	TP109 - B1	B1 1.70 - 1.70m	15	Bulk Bag	Brown CLAY
55040705	TP111 - B1	B1 1.80 - 1.80m	11	Bulk Bag	Brown CLAY
55040707	TP110 -B1	B1 0.40 - 1.60m	524	Bulk Bag	Black PEAT
55040708	TP112 - B1	B1 2.30 - 2.30m	15	Bulk Bag	Brown SAND

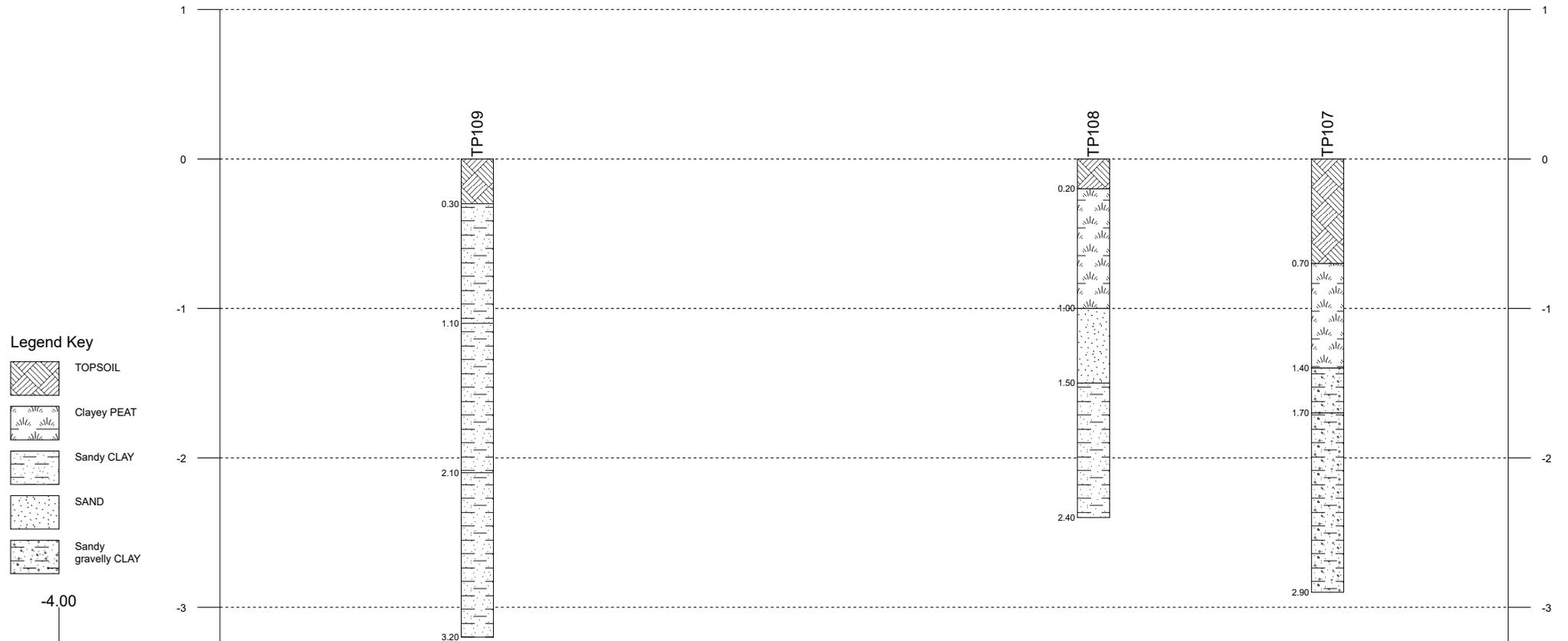
## **APPENDIX IV**

### **Geological Sections**



Project Id: SH11739  
 Project Title: Warrington MSA  
 Location: Warrington  
 Client: Extra MSA Group

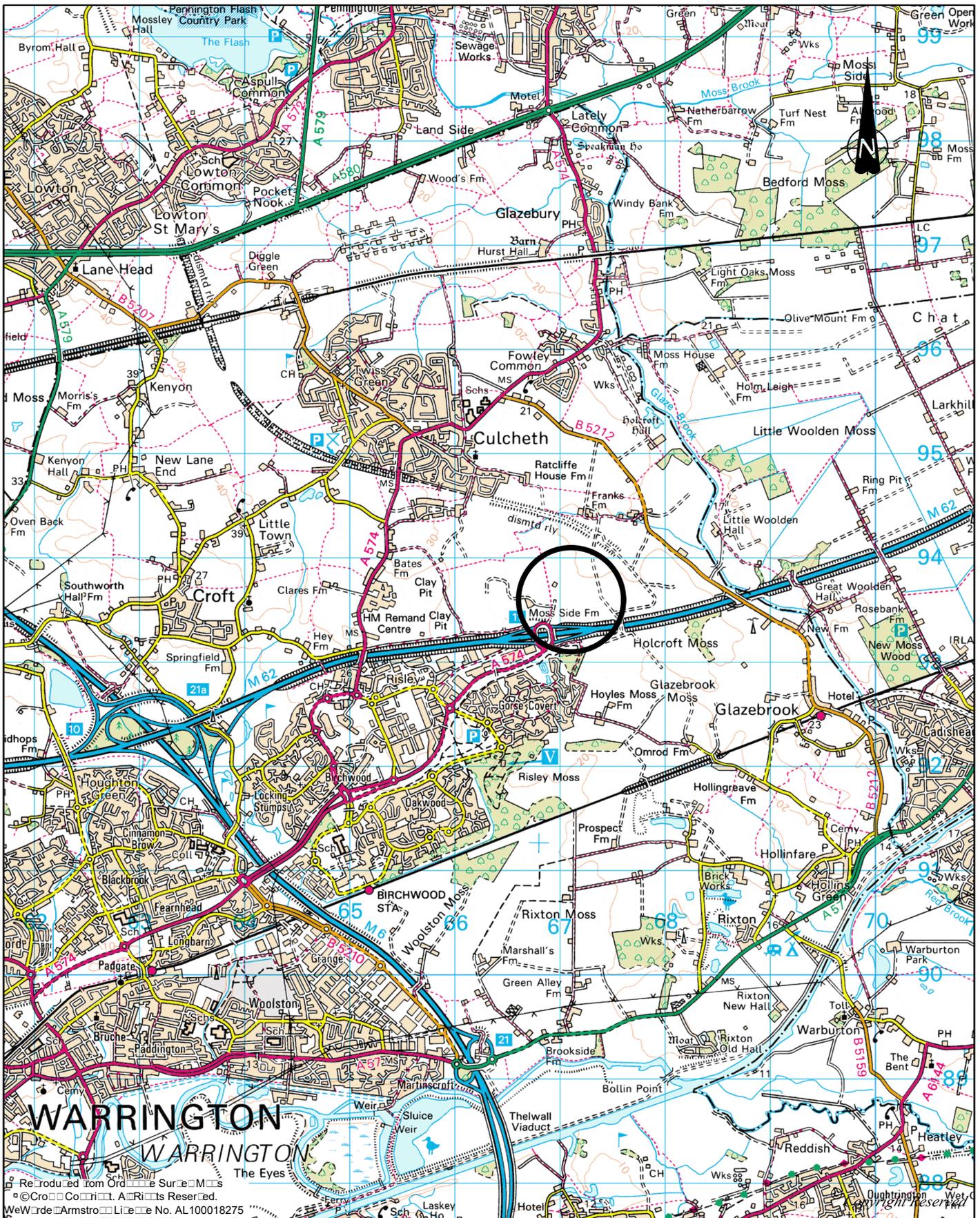
Title: Section line 2  
 Vertical Scale: 1:39  
 Horizontal Scale: 1:1338  
 Engineer: WA



-4.00

Chainage (m)	0.00	26.02	168.57	222.74	230.94
Offset (m)		18.56	7.73	0.80	
Elevation (mAOD)					

**DRAWINGS**



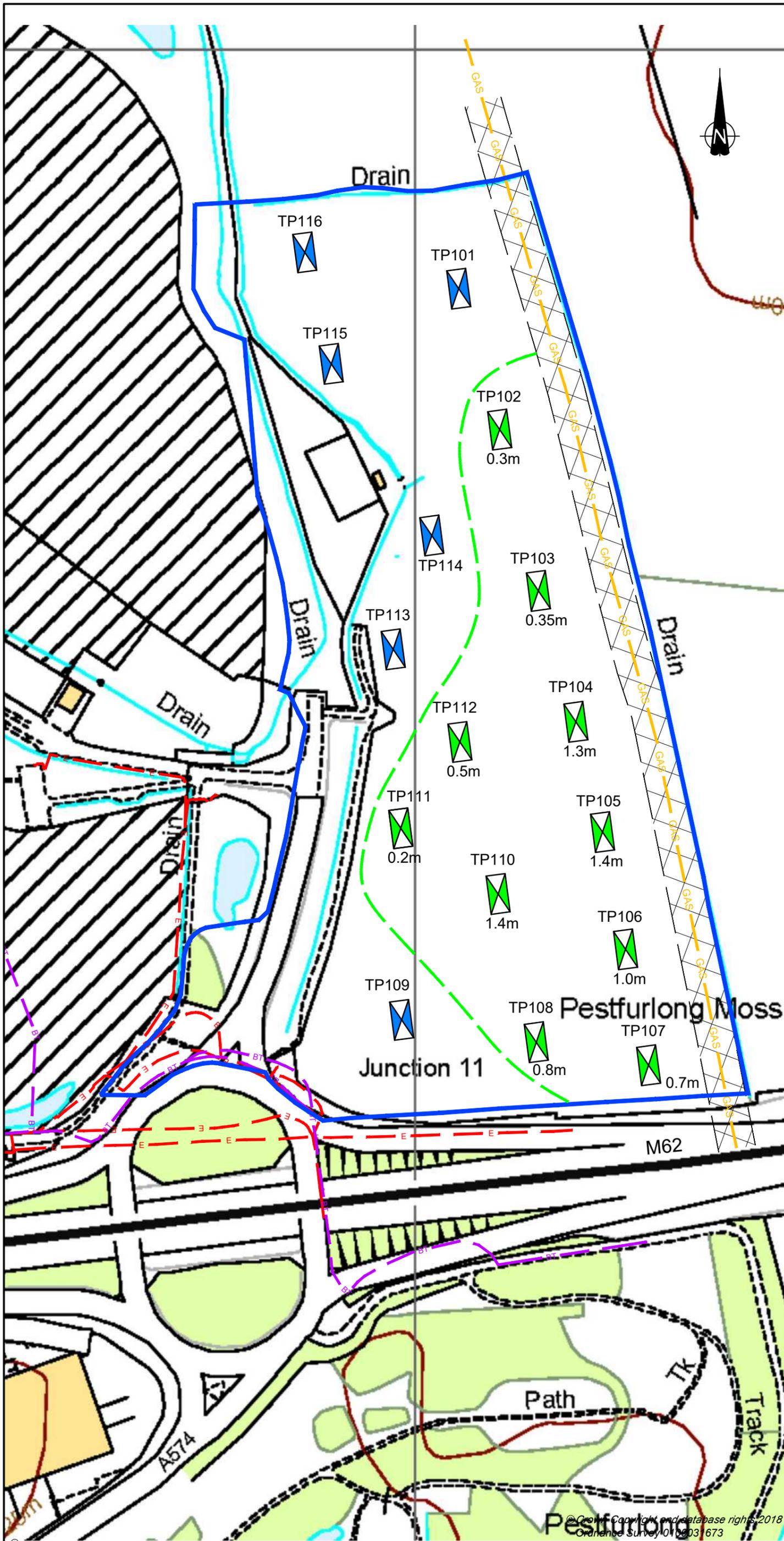
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PROJECT	POTENTIAL WARRINGTON MSA		SIZE	A4	SCALE	1:50000 □ A4
DRAWN BY	DP	CHECKED BY	AJD	APPROVED BY	AJD	

DRAWING TITLE

**SITE LOCATION PLAN**

STOKE ON TRENT | TEL 01782 276700  
WWW.WARDELL-ARMSTRONG.COM

<input type="checkbox"/> BIRMINGHAM	<input type="checkbox"/> GLASGOW
<input type="checkbox"/> BOLTON	<input type="checkbox"/> LONDON
<input type="checkbox"/> CARDIFF	<input type="checkbox"/> MANCHESTER
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> NEWCASTLE UPON TYNE
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> SHEFFIELD



DO NOT SCALE FROM THIS DRAWING

**REFERENCE**

SITE BOUNDARY	
APPROXIMATE LOCATION OF GAS PIPELINE WITH 24m WIDE EASEMENT	
APPROXIMATE LOCATION OF ELECTRICITY	
APPROXIMATE LOCATION OF BT	
APPROXIMATE LOCATION OF PROPOSED TRIAL PIT	
APPROXIMATE PEAT BOUNDARY	
TRIAL PIT ENCOUNTERING PEAT	

A	FIRST ISSUE	13/12/18	SJB	JAS	AJD
REVISION	DETAILS	DATE	DRN	CHKD	APPD
CLIENT WARRINGTON MSA, J11 M62 MOTORWAY					
PROJECT POTENTIAL WARRINGTON MSA					
DRAWING TITLE SITE INVESTIGATION PLAN					
DRG No.	SH11739-004		REV	A	
DRG SIZE	A3	SCALE	1:2500	DATE	08/06/18
DRAWN BY	DP	CHECKED BY	JAS	APPROVED BY	AJD

STOKE ON TRENT | TEL 01782 276700  
WWW.WARDELL-ARMSTRONG.COM

**wardell armstrong**

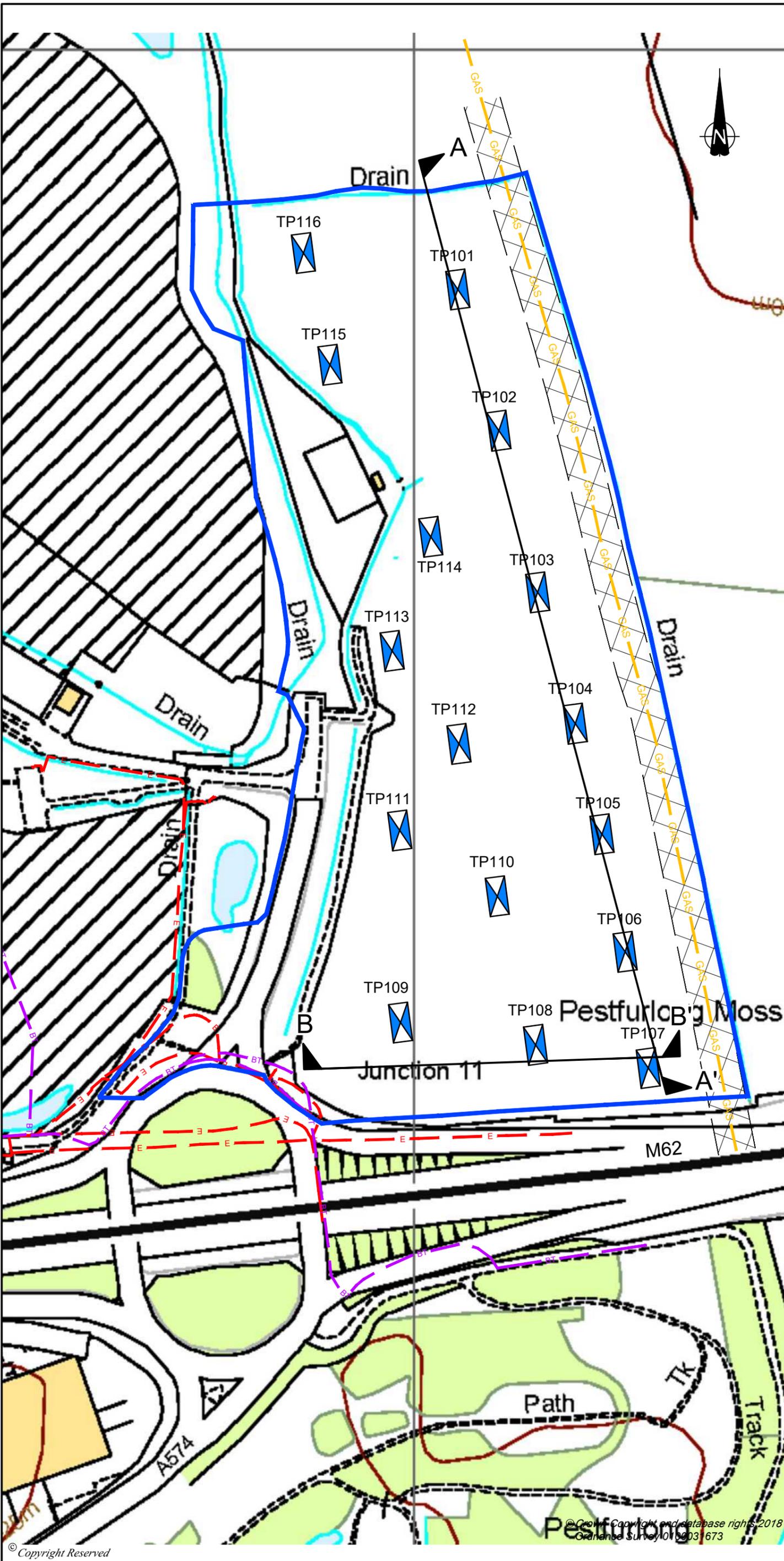
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<input type="checkbox"/> BOLTON	<input type="checkbox"/> LONDON
<input type="checkbox"/> CARDIFF	<input type="checkbox"/> MANCHESTER
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> N-U-T
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> SHEFFIELD

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DO NOT SCALE FROM THIS DRAWING

REFERENCE

- SITE BOUNDARY
- APPROXIMATE LOCATION OF GAS PIPELINE WITH 24m WIDE EASEMENT
- APPROXIMATE LOCATION OF ELECTRICITY
- APPROXIMATE LOCATION OF BT
- APPROXIMATE LOCATION OF PROPOSED TRIAL PIT
- APPROXIMATE LOCATION OF SECTION LINE



A	FIRST ISSUE	13/12/18	SJB	JAS	AJD
REVISION	DETAILS	DATE	DRN	CHK'D	APPD
CLIENT WARRINGTON MSA, J11 M62 MOTORWAY					
PROJECT POTENTIAL WARRINGTON MSA					
DRAWING TITLE GEOLOGICAL SECTION PLAN					
DRG No. SH11739-005		REV A			
DRG SIZE A3	SCALE 1:2500	DATE 06/09/18			
DRAWN BY DP	CHECKED BY JAS	APPROVED BY AJD			
<p><small>STOKE ON TRENT   TEL 01782 276700 WWW.WARDELL-ARMSTRONG.COM</small></p> <p><b>wardell armstrong</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> BIRMINGHAM</li> <li><input type="checkbox"/> BOLTON</li> <li><input type="checkbox"/> CARDIFF</li> <li><input type="checkbox"/> CARLISLE</li> <li><input type="checkbox"/> EDINBURGH</li> <li><input type="checkbox"/> GLASGOW</li> <li><input type="checkbox"/> LONDON</li> <li><input type="checkbox"/> MANCHESTER</li> <li><input type="checkbox"/> N-U-T</li> <li><input type="checkbox"/> SHEFFIELD</li> </ul>					

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Wheal Jane Earth Science Park  
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Almaty  
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050040  
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**MOSCOW**

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Moscow  
Russia  
Tel: +7(495) 626 07 67

# **ES Scoping Appendix 10 – LVIA Viewpoint Survey Report**



## EXTRA MSA GROUP | M62 J11 WARRINGTON SERVICES

### Survey of Viewpoints for Discussion with WBC Officers

All but one (VP17) of the views within this document were taken in December 2018, with screening provided by leaves largely absent, illustrating the extent of winter visual impacts.

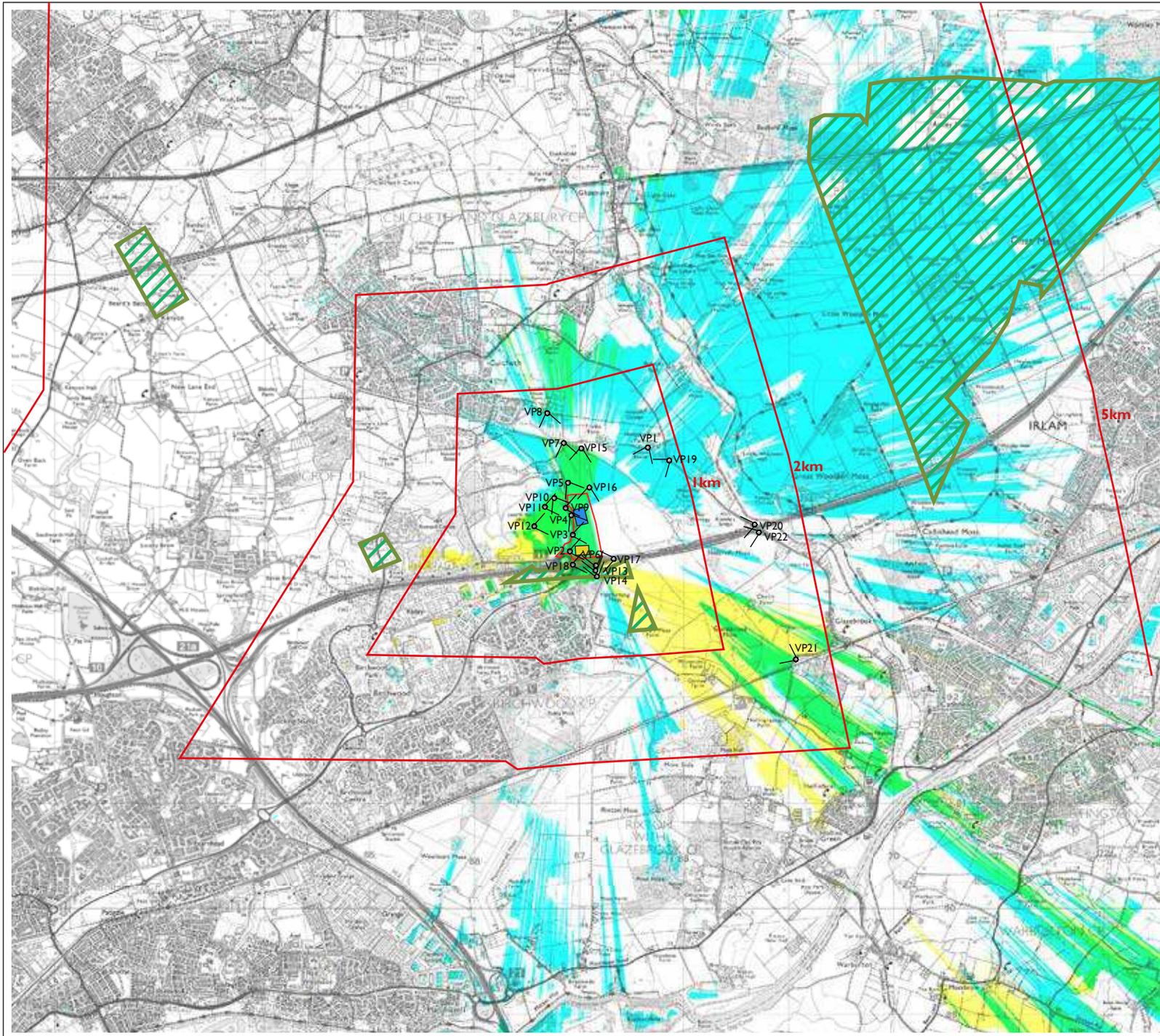
A second visual survey will be undertaken in spring 2018 to illustrate the extent of spring visual impacts.



- KEY**
- Proposed Application Boundary and offsets
  - Residential receptors**
  - R1 - properties with front, rear or side elevations facing site, within 1.5km (representative view is VP1)
  - Recreation receptors**
  - R2 - Public Right of Way within the Site (VP2, 3,4 and 5)
  - R3 - Public Right of Way within 100m of Site Boundary (VP5 and 6)
  - R4 - Public Right of Way within 500m of Application Boundary (VP8)
  - R5 - Public Rights of Way within 2km of Application Boundary (VP2 and 8)
  - R6 - Former (restored) landfill site within 500m of Application Boundary (VP9, 10, 11 and 12)
  - R7 - Non-designated access track within 500m of Application Boundary (VP13 and 14)
  - R8 - Elevated disused railway line within 1km of Application Boundary (VP15)
  - Place of work receptors**
  - R9 - No Places of Work receptors have been identified as having views of the site, other than land and buildings included under Recreation Receptors above, and adjacent agricultural land (VP15)
  - Transport receptors**
  - R10 - M1 Motorway and slip roads within 100m of Application Site boundary (VP16)
  - R11 - M1 Motorway and slip roads within 1km of Application Site boundary (no views included)
  - R12 - A-Roads within 500m of the Application Site boundary (VP18)
  - R13 - B-Roads within 1km of the Application Site boundary (VP19)
  - R14 - B-Roads within 2km of the Application Site boundary (VP20 and 21)
  - R15 - Holcroft Moss SSSI

Please refer to Photoviews

Figure 1 - Visual Receptors Map



- Areas where Hotel & Facilities are Visible
- Areas where Fuel Filling Station is Visible
- Additional visibility when Hotel & Facilities and Fuel Filling Station are Visible
- Areas where LiDAR DSM data coverage is incomplete and bare earth (OS Terrain5 data) was used

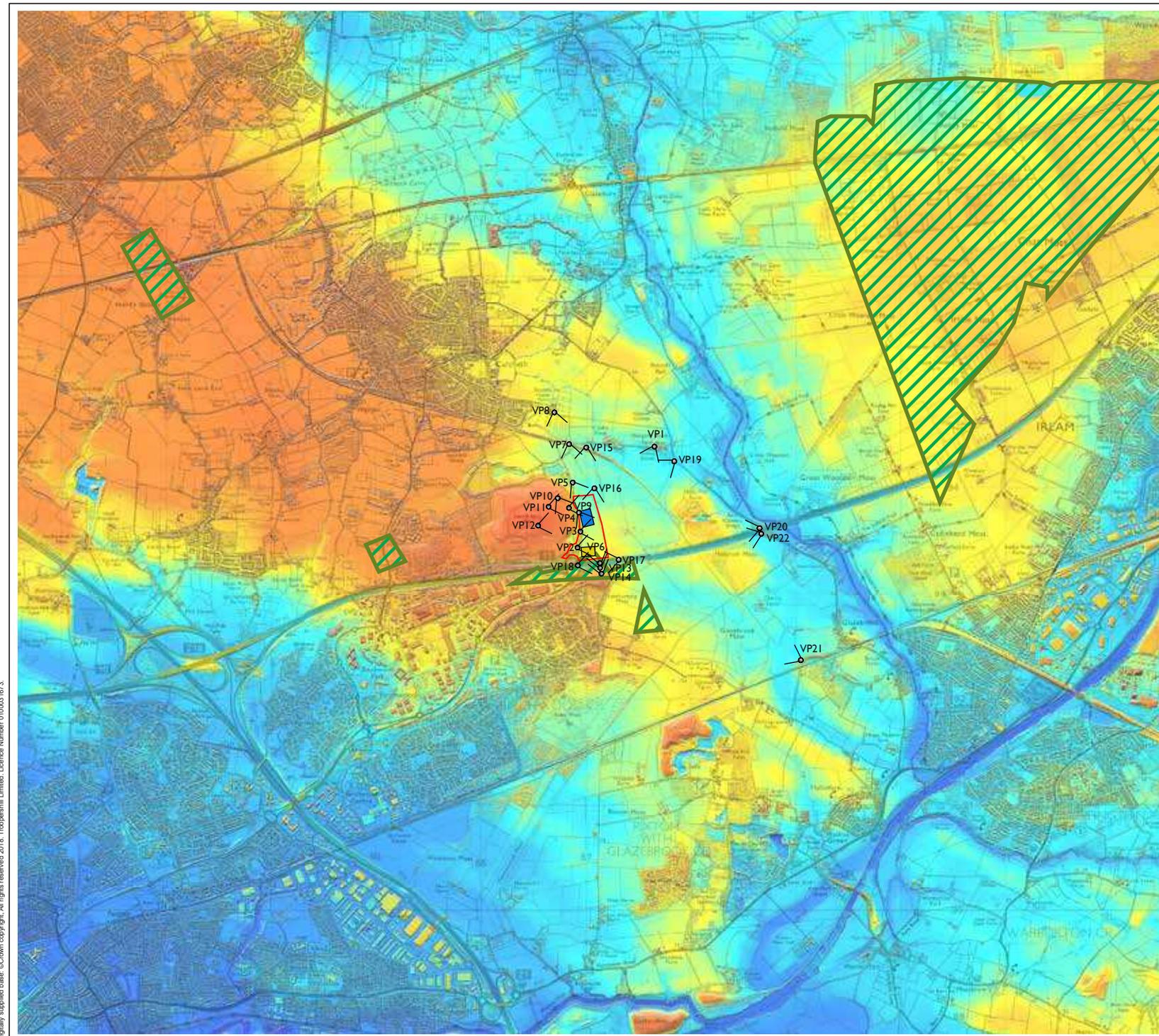
**Source:**  
 The Zone of Theoretical Visibility (ZTV) illustrates the extent to which the development (modelled at maximum building height 6.5m for the Fuel Filling Station and 15m for the Hotel & Facilities, with +5m tolerance to allow for scheme evolution and datum level adjustments) is potentially visible from the surrounding area (1.6m high receptor).  
 The plan has been prepared using GIS computer software (MapInfo) and (Environment Agency) 2m resolution DSM LiDAR data and as such does take into account built form and vegetation present within the landscape. Field verification is required to refine the accuracy of the ZTV.



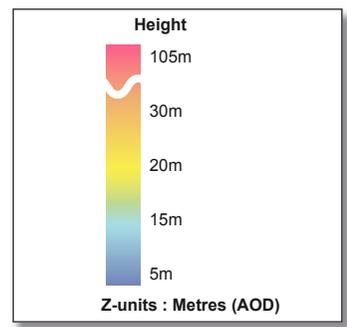
0 1km

Project Details	Risley Motorway Services
Title	ZTV Analysis - Parameter Heights + Contingency
Scale	as shown
Drawing Ref	THL/02
Date	December 2018
Checked	AP

**Figure 2 - ZTV Analysis - Parameter Heights - Contingency**



-  Hotel & Facilities
-  Fuel Filling Station



 Areas where LIDAR DSM data coverage is incomplete and bare earth (OS Terrain5 data) was used

**Source:**  
The plan has been prepared using GIS computer software (MapInfo) and (Environment Agency) 2m resolution DSM LIDAR data and as such does take into account built form and vegetation present within the landscape.



Project Details	Risley Motorway Services
Title	Topography Analysis
Scale	as shown
Drawing Ref	THL/01
Date	December 2018
Checked	AP

**Figure 3 - Topography Analysis**

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## RESIDENTIAL RECEPTORS

RI (properties with front, rear or side elevations facing site, within 1.5km) - **representative viewpoint VPI**



VPI View southwest from location adjacent to Hanging Birch Farm, indicating

## **RECREATION RECEPTORS (Footpaths, Parks etc)**

R2 (Public Rights of Way within Application Boundary) - representative viewpoints **VP2,VP3 and VP4**



VP2



VP3



VP4

R3 (Public Rights of Way within 100m of Application Boundary) - **representative viewpoints VP5 AND VP6**



VP5 Looking southeast from footpath towards northern site boundary

PLEASE NOTE THAT THIS RECEPTOR VIEWPOINT WAS ADDED FOLLOWING SITE SURVEY  
AND WILL BE DISCUSSED WITH THE WBC PLANNING OFFICER

VP6 Looking north towards site from Silver Lane/PROW to south of M62 and immediately north of Pestfurlong Hill

**R4 (Public Rights of Way within 500m of Application Boundary ) - representative viewpoint VP7**



VP7 Looking south from the PROW towards the northern site boundary

**R5 (Public Rights of Way within 2km of Application Boundary ) - representative viewpoints VPI and VP8**



VPI View southwest from PROW adjacent to Hanging Birch Farm



VP8 View south from PROW east of Culcheth, indicating the screening effect of the disused railway

R6 (Landfill Site Access Track or Grass Area within 500m of Application Boundary) - representative viewpoints VP9,VP10,VP11 andVP12



VP9 View east from landfill site access track over site



VP10 Looking southeast from landfill site access track over site



VP11 View east from landfill site over site



VP12 Looking east from landfill site over site

**R7 (Non-designated track within 500m of Application Boundary) - representative viewpoint VPI3 and VPI4**



VPI3 Looking north from elevated point on Pestfurlong Hill, adjacent to interpretation board, through intervening trees and over site



VPI4 Looking north forwards site from track on northern footpath approach to Pestfurlong Hill

**R8 (Elevated disused railway line within 1km of Application Boundary) - representative viewpoint VPI5**



VPI5 Looking south over site from elevated disused railway line

## PLACES OF WORK RECEPTORS

R9 (Places of Work Receptors) - **representative viewpoint VPI6**



VPI6 Looking south from field at the northeast site corner along the eastern site edge

## TRANSPORT RECEPTORS

**R10 (M62 Motorway and slip roads within 100m of Application Site boundary) - representative viewpoints VPI7**



VPI7 Looking west along M62 Motorway towards southern site boundary (photograph taken August 2018 - Source: Google Maps)

**R12 (A-roads within 500km of Application Site boundary) - representative viewpoints VPI8**



VPI8 Looking east along M62 Motorway from J11 motorway bridge (pedestrian footpath)

**R13 (B-roads within 1km of Application Site boundary) - representative viewpoints VPI9**



VPI9 Looking south over site from side of B5212 Holcroft Lane

R14 (B-roads within 2km of Application Site boundary) - representative viewpoints VP20 and VP21



VP20 Looking west along M62 Motorway from B5212 Holcroft Lane motorway bridge towards site



VP21 View northwest towards site from railway bridge southwest of Glazebrook

R15 (Holcroft Moss SSSI) - representative viewpoints VP22



VP22 Indicating dense woodland to northern edge of Holcroft Moss, effectively prohibiting views towards the site

# **ES Scoping Appendix II – Preliminary Ecological Appraisal**

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ENERGY AND CLIMATE CHANGE  
ENVIRONMENT AND SUSTAINABILITY  
INFRASTRUCTURE AND UTILITIES  
LAND AND PROPERTY  
MINING AND MINERAL PROCESSING  
MINERAL ESTATES  
WASTE RESOURCE MANAGEMENT



**EXTRA MSA GROUP**

**MOTORWAY SERVICES, WARRINGTON**

**PRELIMINARY ECOLOGICAL APPRAISAL**

**DECEMBER 2018**

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**EXTRA MSA GROUP**

**MOTORWAY SERVICES, WARRINGTON**

**PRELIMINARY ECOLOGICAL APPRAISAL**

**DECEMBER 2018**

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## APPENDICES

Appendix 1 Legislation and Policy Summary

Appendix 2 Habitat Suitability Survey

<b>DRAWINGS</b>	<b>TITLE</b>	<b>SCALE</b>
SH11739/001	Extended Phase 1 Habitat Survey Results	1:2,500
SH11739/002	Waterbody Location Plan	1:5,000
SH11739/016	Location of Statutory and Non-Statutory Conservation Sites	1:40,000

## **EXECUTIVE SUMMARY**

Wardell Armstrong LLP (WA) was commissioned by Extra MSA Group to undertake a Preliminary Ecological Appraisal (PEA) of land north of M62 Junction 11. The land is the site of a proposed new Motorway Services Area.

The development will require the removal of mainly arable land with limited ecological value, a small area of scrub and unmanaged grassland and a ditch may also be directly impacted depending on final site design.

Survey recommendations have been provided given the likely/potential presence of breeding, nesting and wintering birds, badger, water vole, great crested newts, reptiles, and foraging/roosting bats, alongside ecological enhancement measures. Mitigation and enhancement measures are not proposed in this report but provisional opportunities are considered in the associated Scoping chapter.

## **1 INTRODUCTION**

### **1.1 Terms of Reference**

1.1.1 Wardell Armstrong LLP (WA) was commissioned by Extra MSA Group to undertake a Preliminary Ecological Appraisal (PEA) of a proposed Motorway Services Area development (hereafter referred to as the 'development'), located on the northern side of the M62 at Junction 11, central Ordnance Survey (OS) grid reference: SJ 67053 93630.

1.1.2 This report has been produced with reference to current guidelines for Preliminary Ecological Appraisal (Chartered Institute of Ecology and Environmental Management (CIEEM 2017)) and British Standard BS 42020:2013 (BSI 2013) which involves the evaluation of the potential presence of ecological receptors and adverse effects thereon, based on Extended Phase I (Joint Nature Conservation Committee (JNCC 2010)) survey data and background desk study.

1.1.3 The following ecological features have been considered:

- Statutory and non-statutory designated conservation areas;
- Local Biodiversity Action Plan (LBAP) habitats;
- Areas of Ancient Woodland;
- Legally protected species;
- Species listed within section 41 (s.41) of the NERC Act; and
- Invasive species.

1.1.4 Mitigation and enhancement measures are not proposed in this report but provisional opportunities are considered in the associated Scoping chapter.

1.1.5 Specific habitat features are mapped on Drawing No. SH11739/001. Waterbody locations are mapped on Drawing No. SH11739/002 with appropriate reference numbers provided and Drawing No. SH11739/016 showing the Location of Statutory and Non-Statutory Conservation Sites.

### **1.2 Site Context**

1.2.1 The proposed development is to be located immediately adjacent to Junction 11 of the M62. The survey area (Site) covers the application area plus adjacent habitats where these are relevant to the assessment of potential adverse effects.

- 1.2.2 The wider landscape comprises arable farmland/pasture to the east, south east and north, a capped landfill directly west of the site and Birchwood Business and Technology Park to the south west.
- 1.2.3 Holcroft Moss Site of Special Scientific Interest is located approximately 1,080m east and Manchester Mosses Special Area of Conservation, Risley Moss Site of Special Scientific Interest and Risley Moss Local Nature Reserve are located approximately 1.4km south of the site.

## **2 METHODOLOGY**

### **2.1 Desk Study**

2.1.1 The desktop study was informed by review of existing available information provided by RECORD (Local Records Centre) and from available internet-based resources for a 2km search radius. OS and satellite mapping was also used to gain contextual habitat information. In addition, a 5km search radius was used for Special Protected Area's (SPA's), Special Areas of Conservation (SAC's) and Ramsar sites due to their ecological sensitivity. The search was also extended to 5Km for statutory sites which are notified for their bat interest. OS and satellite mapping was also used to gain contextual habitat information.

2.1.2 Specific information was sought for:

- Statutory designated sites;
- Locally designated sites;
- Ancient woodland;
- Protected and/or notable species;
- NERCs.41 Priority Habitats and Species; and
- Local Biodiversity Action Plan (LBAP) priority habitats and species.

### **2.2 Extended Phase I Habitat Survey**

2.2.1 Wardell Armstrong LLP carried out an Extended Phase I Habitat Survey of the site on 31<sup>st</sup> October 2018. The survey followed the 'Extended Phase I Habitat Survey' methodology (Institute of Environmental Assessment (IEA), 1995 and JNCC 2010). Each of the main habitats were classified according to the relevant criteria including vegetation composition expressed according to the DAFOR<sup>1</sup> system.

2.2.2 In addition to the mapping and description of habitats, incidental observations of protected and/or notable species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also recorded for mapping and data collection purposes.

2.2.3 Specific habitat features are mapped on Drawing No. SH11739/001.

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<sup>1</sup> D – Dominant, A – Abundant, F – Frequent, O – Occasional, R – Rare.

## 2.3 Habitat Suitability Index Assessment for Great Crested Newt

2.3.1 In addition to the Extended Phase I Habitat Survey a great crested newt (GCN) *Triturus cristatus* Habitat Suitability Index (HSI) assessment was undertaken of accessible ponds within, and up to ~500m from, the site boundary.

2.3.2 This HSI assessment was conducted in accordance with good practice guidelines (Langton, Beckett and Foster 2001). This HSI scoring system assesses a waterbodies' suitability as an aquatic habitat for GCN following ARG UK (2010) methodology which is based on Oldham *et al* (2000).

2.3.3 The HSI is a simple model to provide an informed view of the value of a waterbody to support breeding populations of GCN, which involves assessing waterbodies based on ten habitat parameters that are known to influence breeding populations of GCN. A score between 0 and 1 is assigned to each parameter, based on field observations. The tenth root of the product of these parameters is then calculated, giving a figure for habitat suitability.

2.3.4 The parameters to which a quantitative figure is assigned are:

- Location;
- Pond area;
- Pond drying;
- Water quality;
- Shade;
- Wildfowl presence;
- Fish presence;
- No. of ponds within 1km;
- Quality of terrestrial habitat; and
- Presence of macrophytes.

2.3.5 The calculated HSI score is used to define the suitability of the pond on a categorical scale, as shown in Table 1 below. It should be noted, however, that the system is not sufficiently robust to reliably infer presence/absence of great crested newt.

Table 1: Great Crested Newt HSI Scoring System	
HSI Score	Pond Suitability for GCN
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

2.3.6 Typically, ponds which return an HSI score of 0.5 (below average) or higher are considered be suitable for GCN and therefore require further surveys to determine GCN population class size.

2.3.7 GCN are also known to use ditches and culverts as commuting corridors, therefore any connective linear waterbodies within 500m of the study area boundary were also visually assessed for their suitability to support GCN.

## **2.4 Caveat & Assessment Limitations**

2.4.1 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in October and therefore represents a valid sample of ecological evidence present on that date/season. The report is not designed, nor is it required to present a complete inventory of flora/fauna.

2.4.2 The absence of desk study records is not relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area and as such the experience of the ecologist concerned together with a range of additional factors, in particular the presence/absence of potentially supporting habitat; is used to infer likely presence/absence of ecological receptors.

## **2.5 Nomenclature**

2.5.1 Vascular plant names follow '*New Flora of the British Isles*' (Stace 2010) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI, 2013). All other flora and fauna names following the National Biodiversity Network (NBN) Atlas (NBN, 2017). The common and scientific name of species/taxa is provided (if available) when first mentioned in the text, with only the vernacular name referred to thereafter.

## **2.6 Quality Assurance & Environmental Management**

2.6.1 The surveys, assessments and the report have been checked and verified by a member of CIEEM, whom is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

### 3 RESULTS AND EVALUATION

#### 3.1 Desk Study

##### Statutory and Non-Statutory Designated Sites

- 3.1.1 The desk study results for designated sites within a 2km search radius are evaluated in Table 2, below. Sites are also mapped on Drawing No. SH11739/016.
- 3.1.2 Sites which are considered potentially sensitive to the development proposals by virtue of their supported species or habitat assemblages, the distance/ecological connectivity to the application site and the nature of the perceived impacts, are highlighted in bold text and are discussed in detail in the final sections of the report.
- 3.1.3 Sites for which potential adverse effects are not anticipated are excluded from further assessment.

<b>Table 2: Designated Sites Evaluation</b>		
<b>Conservation Site Name, Status<sup>2</sup>and distance from development site</b>	<b>Reason for Designation</b>	<b>Potential Adverse Effects?</b>
<b>Manchester Mosses (SAC) and Astley &amp; Bedford Mosses (SSSI)</b>  <b>3,881m north east</b>	<b>Presence of degraded raised bog which is capable of natural restoration.</b>	<b>Effects to off site peatlands due to hydrological connectivity with subsurface peat on site and impacts thorough N deposition resulting from changes to traffic volumes/location. Further investigation required and likelihood of effect dependant on site/construction design.</b>
<b>Manchester Mosses (SAC) Risley Moss (SSSI), LNR.</b>  <b>1,410m south</b>	<b>The breeding bird assemblage of this unit remains in favourable condition and the site is critical to the hydrological integrity of the adjacent lowland raised bog habitat, supporting areas W4a lagg fen woodland. Habitats of mossland, mixed woodland and grass meadow supporting notable species. Three distinctly different ponds lie within</b>	<b>As above. Limited ecological connectivity, due to presence of M62 so impacts to SSSI supported bird assemblages are likely negligible.</b>

<sup>2</sup> SPA – Specially Protected Area, SAC – Special Area for Conservation, SSSI – Site of Special Scientific Interest, NNR – National Nature Reserve, LNR – Local Nature Reserve, CWS – County Wildlife Site.

<b>Table 2: Designated Sites Evaluation</b>		
<b>Conservation Site Name, Status<sup>2</sup>and distance from development site</b>	<b>Reason for Designation</b>	<b>Potential Adverse Effects?</b>
	<b>the woodland, supporting an important and diverse range of aquatic life.</b>	
Rixton Clay Pits (SAC), Rixton Clay Pits (SSSI) and LNR  3,250m south	Former clay pits with a rich mosaic of wet grassland, woodland and open water, scattered ponds and associated swamp habitats.  Of national importance for its calcareous grassland communities and of international importance because the site supports the county's largest known breeding population of great crested newts.	No potential adverse effects due to separation distance and lack of connectivity.
<b>Holcroft Moss (SSSI)</b>  890m west	<b>The moss occupies several small depressions in the Upper Terrace of the Mersey Valley and is an isolated remnant of the once extensive area of mossland formerly associated with this valley.</b>	<b>Effects to off site habitats from N deposition resulting from changes to traffic volumes/location. Further investigation required and likelihood of effect dependant on site/construction design.As above.</b>
Woolston Eyes (SSSI)  4,565m south	Woolston Eyes SSSI is a nationally important site for its breeding bird assemblage of lowland open waters and their margins, and for wintering wildfowl.	No potential adverse effects due to separation distance and lack of connectivity.
Gorse Covert Mounds (LWS)  87m south	A mosaic of mixed woodland, meadows and ponds, located between Risley and the M62, connected to Risley Moss SSSI/LWS via a green corridor.	No potential adverse effects due to lack of connectivity (presence of M62).
<b>Pestfurlong Moss (LWS)</b>  230m south	<b>A lowland raised bog habitat with scrub and woodland. Pestfurlong Moss connects the larger Risley and Holdcroft mosses.</b>	<b>Effects to off site peatlands due to hydrological connectivity with subsurface peat on site and impacts thorough N deposition resulting from changes to traffic volumes/location. Further investigation required and likelihood of effect dependant on site/construction design.</b>
<b>Silver Lane Risley (LWS)</b>	<b>Public bridleway with open pools and a mosaic of hedgerow, scrub and grassland habitats.</b>	<b>Potential adverse effects to associated species due to close</b>

<b>Table 2: Designated Sites Evaluation</b>		
<b>Conservation Site Name, Status<sup>2</sup> and distance from development site</b>	<b>Reason for Designation</b>	<b>Potential Adverse Effects?</b>
<b>618m west</b>		<b>proximity to the site and has ecological connectivity.</b>

3.1.4 The search area is extended to allow for the inclusion of Impact Risk Zones (IRZ) for SSSIs. IRZs define areas around designated nature conservation sites which could be impacted by development schemes. The zones vary depending on the particular sensitivities of the features for which the SSSI is notified and indicate the types of development proposal which could potentially have adverse impacts. Due to the presence of SSSI's mentioned in Table 2, the application site falls within several IRZ bands.

### **3.2 Extended Phase I Habitat Survey**

#### **Habitats**

3.2.1 All habitats within the study area are described in Table 3 below, together with an indication of their suitability to support NERC s41<sup>3</sup> 'priority' and Cheshire region Local BAP<sup>4</sup> habitats. The table also provides an evaluation of the sensitivity of the habitats relative to the proposed development.

3.2.2 Habitats which are could be subject to adverse effects are indicated with bold text and are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment.

3.2.3 The location and extent of habitats is shown on Drawing No. SH11739/001, Extended Phase I Habitat Survey Results.

<sup>3</sup> Habitats listed under section 41 of the Natural Environment and Rural Communities (NERC) Act as habitats of Principal Importance

<sup>4</sup><https://www.cheshirewildlifetrust.org.uk/sites/default/files/2018-06/BAP%20list%20-%20updated%20April%202011.pdf>

Table 3: Habitat Description and Evaluation		NERC s.41	LBAP	Adverse Effects?
<b>Phase I Habitats</b>				
<p><u>Arable Land</u>                      Arable farmland dominates the survey area. This habitat is actively disturbed by agricultural operations and at the time of survey appeared to have been seeded with autumn sown cereals. Arable margins are scant, but where present, are dominated by cock's-foot <i>Dactylis glomerata</i>, Yorkshire-fog <i>Holcus lanatus</i>, creeping bent <i>Agrostis stolonifera</i> with occasional cleavers <i>Gallium aparine</i>, rosebay willowherb <i>Chamerion angustifolium</i>, bramble <i>Rubus fruticosus</i> and nettle <i>Urtica dioica</i>.</p>		*	*	This habitat is of little intrinsic ecological value.
<p><u>Neutral Grassland, Tall Ruderal and scrub</u>                      A mosaic of habitats is present along the southern and western boundaries of the site. Unmanaged neutral grassland being the dominant type with variable areas of continuous/scattered scrub and tall ruderals also present.                      Species present include great willowherb <i>Epilobium hirsutum</i> (D), broadleaved dock <i>Rumex obtusifolius</i> (D), creeping thistle <i>Cirsium arvense</i> (D), common reed <i>Phragmites australis</i> (A), perennial rye grass <i>Lolium perenne</i> (A), cock's foot (A), bramble (F), common nettle (F), vetch spp. (O), alder <i>Alnus glutinosa</i> (O), elder <i>Sambucus nigra</i> (R), common ragwort <i>Senecio jacobaea</i> (R) and pedunculate oak <i>Quercus robur</i> (R).</p>		*	*	The habitat is of negligible intrinsic ecological value.

Table 3: Habitat Description and Evaluation				
Phase I Habitats		NERC s.41	LBAP	Adverse Effects?
<p><u>Marshy Grassland</u></p> <p>There is a small area of wet/marshy grassland within the larger area of tall ruderal habitat located along the western boundary. The species composition includes common reed (D), cocksfoot (F), perennial rye grass (O), great willowherb (O) and marsh thistle <i>Cirsium pallustre</i>. (R).</p>		x	x	<p>This habitat is of negligible intrinsic ecological value.</p>

Table 3: Habitat Description and Evaluation		NERC s.41	LBAP	Adverse Effects?
<b>Phase I Habitats</b>				
<p><u>Broadleaved scattered trees</u></p> <p>Bordering the eastern boundary of the site is a discontinuous line of silver birch <i>Betula pendula</i> (D) trees. Species also present in the tree line are elder (F) and grey willow <i>Salix cinerea</i> (R). The ground flora is comprised of common nettle (D), fern sp. (A), mosses (A), bramble (F), cock's-foot (F) and perennial rye grass (F).</p> <p>Individual silver birch trees are also present along the northern boundary of the site.</p>		x	✓	This habitat will be retained.

Table 3: Habitat Description and Evaluation		NERC s.41	LBAP	Adverse Effects?
Phase I Habitats				
<p><u>Dry Ditch</u></p> <p>Running along the eastern boundary under the birch treeline is a dry ditch. The banks were partly bare, with eroding and exposed peat along the majority of the banks. Species present include Himalayan balsam <i>Impatiens glandulifera</i> (A), mosses (F), bramble (O), fern sp. (O), mosses and common nettle (O).</p>		x	x	This habitat will be retained.

<b>Table 3: Habitat Description and Evaluation</b>				
<b>Phase I Habitats</b>		<b>NERC s.41</b>	<b>LBAP</b>	<b>Adverse Effects?</b>
<p><u>Mesotrophic Running Water</u></p> <p>Along the western boundary is a wet ditch with running water from the southern boundary to beyond the northern boundary. At the time of the survey, water levels were low with the ditch approx. 1m wide. The banks are vegetated with perennial rye grass (A), cock's-foot (A), common reed (A), great willowherb (A), common nettle (F), and vetch spp. (R).</p>		<p>✘</p>	<p>✘</p>	<p>This habitat may be impacted as a result of modifications to the drainage design, however it is of limited ecological value.</p>

## Species

3.2.4 Sightings and/or evidence of protected and/or invasive species from the field survey are described below.

### Birds

3.2.5 All birds recorded during the survey are summarised in Table 4, below together with a preliminary assessment of potential adverse effects arising from the development.

3.2.6 All nesting birds are discussed in the final section given the general legislative provisions relating to the protection of active nests.

Common name	Latin name	Status <sup>5</sup>	Supporting Habitat	Adverse Effects?
<b>Blackbird</b>	<i>Turdus merula</i>		Yes – woodland for nesting habitat with grassland and shrubs for foraging.	None – supporting habitat will be retained and is locally abundant.
<b>Chaffinch</b>	<i>Fringilla coelebs</i>		Yes – woodland for nesting habitat with grassland and shrubs for foraging.	None – supporting habitat will be retained and is locally abundant.
<b>Great tit</b>	<i>Parus major</i>		Yes – grassland and shrubs with nearby waterbodies.	None – supporting habitat will be retained and is locally abundant.
<b>Grey heron</b>	<i>Ardea cinerea</i>		Yes – grassland and shrub habitat for nesting and foraging	None – supporting habitat will be retained and is locally abundant.
<b>Kestrel</b>	<i>Falco tinnunculus</i>	AL	Yes – woodland nesting habitat and scrub, grassland foraging habitat	None – supporting habitat will be retained and is locally abundant.
<b>Stock dove</b>	<i>Columba oenas</i>		Yes - woodland for nesting habitat with grassland and shrubs for foraging.	None – supporting habitat will be retained and is locally abundant.
<b>Skylark</b>	<i>Alauda arvensis</i>	RL, s.41	Yes - grassland and shrub habitat for nesting and foraging	None – supporting habitat will be retained and is locally abundant.

<sup>5</sup> S1 – Schedule 1 Wildlife and Countryside Act, A1 – Annex 1 EU Birds Directive, RL - Birds of Conservation Concern ‘red list’, AL - Birds of Conservation Concern ‘amber list’, s.41- species listed under section 41 of the NERC Act as species of principal importance

<b>Table 4: Bird Species Recorded</b>				
<b>Common name</b>	<b>Latin name</b>	<b>Status<sup>5</sup></b>	<b>Supporting Habitat</b>	<b>Adverse Effects?</b>
<b>Wren</b>	<i>Troglodytes troglodytes</i>		Yes – woodland, scrub nesting habitat and grassland and farmland foraging habitat	None – supporting habitat will be retained and is locally abundant.

*Invasive Species*

3.2.7 Stands of Himalayan balsam *Impatiens glandulifera* were present along the eastern boundary of the site.

**3.3 Ecological Evaluation**

3.3.1 Protected and LBAP species are evaluated in order to identify potential adverse effects in Table 5 below, based on the desk study records, presence, extent and viability of supporting habitat, and ecological connectivity.

3.3.2 Species for which adverse effects are predicted are indicated in bold text and are discussed in more detail in the Discussion section. Species/taxa for which potential adverse effects are not anticipated are excluded from further assessment.

Table 5: Species Evaluation				
Receptor (Species/taxa)	Desk Study records?	Status <sup>6</sup>	Supporting Habitat Present?	Adverse Effects?
Bats <i>Chiroptera</i>	✓	EPS, WCA, s.41, LBAP	Tree line commuting habitat and tree line, scrub and wet grassland foraging habitat.	Adverse impacts are limited to minor disturbance to foraging bats and loss of commuting habitat, in the absence of mitigation. Impacts to roosting bats are unlikely although additional inspections will be required to establish presence of roost features within trees.
Badger <i>Meles meles</i>	✓	BA	Suitable sett creation habitat was located within the dry ditch and broadleaved scattered trees.	Species is likely to be absent due to high water table/wet soil conditions. However, possible sett creation habitat will be lost associated with the tree line along the eastern site boundary. Incidental harm and loss of habitat may result in the absence of mitigation.
Brown Hare <i>Lepus europaeus</i>	✓	s.41	Open expanses of farmland and scrub habitat.	Minor loss of arable farmland habitat to development platform and minor disturbance of surrounding land. Habitat losses are not anticipated to negatively impact local populations, given the wide availability of similar habitat

<sup>6</sup> EPS – European Protected Species, WCA – Wildlife and Countryside Act, A1 – Annex 1 (Birds Directive), BA – Protection of Badgers Act, s.41- species listed under section 41 of the NERC Act as species of principal importance

<b>Table 5: Species Evaluation</b>				
<b>Receptor (Species/taxa)</b>	<b>Desk Study records?</b>	<b>Status<sup>6</sup></b>	<b>Supporting Habitat Present?</b>	<b>Adverse Effects?</b>
European Hedgehog <i>Erinaceus europaeus</i>	No records.	s.41	Negligible suitable habitat restricted to tree line along eastern site boundary only.	As above.
Dormouse <i>Muscardinus avellanarius</i>	No records.	EPS, WCA, s.41	No suitable habitat.	N/a
Otter <i>Lutra lutra</i>	No records.	EPS, WCA, s.41	Running water habitat present on site is sub-optimal as it is shallow and unlikely to support prey species.	Presence is considered very unlikely given unsuitability of habitat and lack of historical records for area.
<b>Water Vole <i>Arvicola amphibia</i></b>	<b>Recorded at 59m west.</b>	<b>WCA, s.41</b>	<b>The running water habitat on site is sub-optimal for water vole given the shallow water and narrow profile.</b>	<b>Minor area of sub-optimal foraging and burrowing habitat may be lost or impacted in the absence of mitigation.</b>
Reptiles	✓	WCA, s.41	The neutral grassland and scrub habitats present on site are sub-optimal, given that they appear to be relatively recent in origin – however the ditch margins which are linked to ponds off site may support grass snake <i>Natrix natrix</i> .	Species are likely to be absent, other than grass snake which may utilise the ditch banks as commuting/dispersal habitat between ponds and areas of established grassland. Modification of ditches may result in incidental harm in the absence of mitigation.
Great Crested Newt <i>Triturus cristatus</i>	Closest record at 870m east.	EPS, WCA, s.41, LBAP	Moderate terrestrial habitat for foraging and hibernating associated with neutral grassland along western site boundary.	Minor loss of moderate terrestrial habitat potentially resulting incidental harm in the absence of mitigation.

<b>Table 5: Species Evaluation</b>				
<b>Receptor (Species/taxa)</b>	<b>Desk Study records?</b>	<b>Status<sup>6</sup></b>	<b>Supporting Habitat Present?</b>	<b>Adverse Effects?</b>
Common Toad <i>Bufo bufo</i>	✓	s.41	The scrub and running water habitats on site are sub-optimal.	Species is likely to be absent, minor losses of sub optimal terrestrial habitat would not significantly impact local populations.
White-clawed Crayfish <i>Austropotamobius pallipes</i>	No records.	EPS, WCA, s.41	No suitable habitat.	No adverse effects.
<b>Birds</b>	<b>Barn owl were recorded 351m from site. Amber listed species include kingfisher, kestrel, bullfinch and greenshank. Red listed species include marsh tit, corn bunting, mistle thrush and house sparrow.</b>	<b>s.41, WCA BoCC, LBAP</b>	<b>Foraging and breeding habitat is present across the site and surrounding landscape.</b>	<b>Nesting and foraging habitat will be lost or disturbed in the absence of mitigation. The open fields could support notable assemblages of waterbirds which may be displaced by the development.</b>
Protected/notable Plant Species	No records.	s.41, LBAP	The site is considered unsuitable to support protected plant species.	No adverse effects.
Protected/notable Invertebrate Species	No records.	s.41	As the site is dominated by arable land suitable habitats are restricted to the site margins.	Given that the majority of the development platform will be located within the intensively farmed, arable land area no adverse effects are anticipated.

## 4 DISCUSSION AND RECOMMENDATIONS

### 4.1 Sensitive Receptors

4.1.1 The following designated sites, habitats and species (receptors) have been evaluated as being potentially subject to adverse effects in the absence of mitigation:

- Statutory and non-statutory conservation sites;
- Protected species (Great Crested Newt, Bats, Badger, Water Vole, Reptiles);
- Barn Owl;
- Breeding and Wintering birds; and
- Nesting birds.

4.1.2 The nature of potential effects and any additional survey requirements are discussed below for each of the identified receptors in turn. Mitigation requirements are discussed in the separate Scoping report where appropriate to be further considered once the relevant surveys are completed.

*Statutory and Non-statutory conservation sites including Manchester Mosses (SAC) and Astley & Bedford Mosses (SSSI), Risley Moss (SSSI), LNR, Rixton Clay Pits (SSSI) and LNR, Holcroft Moss (SSSI), Pestfurlong Moss (LWS) and Silver Lane Risley (LWS)*

4.1.3 The development area lies wholly outwith all of the conservation sites considered within the 2km and 5km search radii. The closest statutory site is Holcroft Moss which is in excess of 1km from the application site to the west and separated from it by the M62. Holcroft Moss, Astley and Bedford Mosses, Risley Moss are components of the internationally designated Manchester Mosses SAC. The selection criteria are as follows:

*7120 Degraded raised bogs still capable of natural regeneration*

*Mossland formerly covered a very large part of low-lying Greater Manchester, Merseyside and southern Lancashire, and provided a severe obstacle to industrial and agricultural expansion. While most has been converted to agriculture or lost to development, several examples have survived as degraded raised bog, such as Risley Moss, Astley & Bedford Mosses and Holcroft Moss on the Mersey floodplain. Their surfaces are now elevated above surrounding land due to shrinkage of the surrounding tilled land, and all except Holcroft Moss have been cut for peat at some time in the past. While past*

*drainage has produced dominant purple moor grass *Molinia caerulea*, bracken *Pteridium aquilinum* and birch *Betula spp.* scrub or woodland, wetter pockets have enabled the peat-forming species to survive. Recent rehabilitation management on all three sites has caused these to spread.*

- 4.1.4 As the application site lies outside the SAC suite, there will be no direct loss of EU Annex 1 protected habitat however the potential for the removal and/or stabilisation of sub surface peat within the application site may result in localised hydrological changes. It is unlikely that such effects will have any impact on the integrity of the SAC suite or result in any compromise to their conservation objectives; however, the proposals will be considered in detail in this regard and a (shadow) Stage 1 Habitats Regulations 'screening assessment' will be undertaken. This document will also consider any adverse effects to the SSSI sites which are also associated with the peatland habitats.
- 4.1.5 Local Wildlife Site Pestfurlong Moss is within close proximity to the site but separated by the motorway, however the non-statutory site contains peatland habitats and is subject to the same impacts as mentioned above.
- 4.1.6 Given the locality and ecological connectivity of Silver Lane Risley (LWS) a likelihood of negative impact is predicted in the absence of mitigation. There is limited hydrological connectivity via a ditch along the western boundary of site. It is recommended that all due care be taken to ensure that any arisings from the development including pollutants are prevented from entering the watercourses in line with CIRIA guidelines for Environmental Good Practice on site (2015).
- 4.1.7 Due to physical separation and distance between the application site and other Local conservation sites, no adverse effects are predicted although this will be further considered through the development of the scheme design and the completion of protected species surveys.

#### *Bats*

- 4.1.8 The habitats adjacent to the survey area to the east and west have the potential to support foraging and commuting bats (tree lines, hedgerows, grassland, waterbodies). There is a paucity of viable roosting habitat, although this will be further investigated via a ground-based inspection of all trees to search for suitable roost features.
- 4.1.9 In terms of foraging and commuting habitats, the habitats within the survey area are considered to be of 'Low' habitat quality, given their predominantly arable nature;

however, the mosaic of adjacent habitats which lie adjacent necessitate a 'Moderate' Habitat quality valuation. Activity surveys in line with national standard guidelines (Collins 2015) have therefore been devised on that basis. Detailed survey results will be reported separately.

- 4.1.10 Any trees with bat roost features and/or commuting habitats may be subject to light spill during construction and post-development. Therefore, a sensitive lighting scheme will be devised to minimise potential adverse effects.

#### *Badger*

- 4.1.11 No badger setts have been recorded within the survey area (including a 50 m 'buffer' of adjacent land). Nonetheless, the survey area contains suitable habitats for foraging and sett creation (i.e. scrub and grassland), including the linear woodland along the eastern site boundary and plantation woodland, and may be utilised by badgers occupying setts located further afield. In terms of loss of potential foraging habitat, given the wide availability of habitat within the locality, a small reduction in grassland and woodland is not expected to result in the loss of favourable conservation status if indeed badgers are present within the wider area.
- 4.1.12 A detailed Badger Survey will be undertaken to inform the environmental statement and in addition, in order to ensure compliance with the relevant legislation, it is recommended that a check for the presence of mammal burrows with an entrance diameter exceeding 100 mm should be undertaken prior to the onset of works. In the event that such mammal burrows are recorded clearance operations should cease until advice has been sought from a suitably qualified ecologist.

#### *Water Vole*

- 4.1.13 The habitats on site provide sub-optimal habitat for foraging and burrowing, with no evidence seen during the Extended Phase I Habitat Survey. However, the species may periodically use the habitats on site due to the close location of desk study records. It is recommended that a water vole survey is undertaken in accordance with standard guidelines (Strachan & Moorhouse 2006) and mitigation is considered following any confirmation of presence.

#### *Reptiles*

- 4.1.14 The survey area has suitable grass snake habitat in the form of grassland associated with linear waterbodies. In addition, suitable basking habitat is present on the open shorter areas of grassland along the western site boundary.

4.1.15 Given the presence of suitable habitat, further detailed surveys will be considered. However, in the event that suitable habitats can be avoided, or effects adequately mitigated, presence will be assumed, and surveys may not be undertaken.

*Great Crested Newt*

4.1.16 Five ponds (as shown on Drawing No. SH11739/002) and two ditches are present within 500m of the site boundary. There are two further ponds outside of the 500m included due to close proximity and connectivity to two of the ponds within the boundary. Where access was available, the waterbodies were assessed for their suitability to support amphibians, using HSI assessment methods.

4.1.17 One pond was not subject to the survey due to access restrictions (WB5). WB 4 and 6 were assessed as being of 'Good' suitability and WB 1,2 and 3 were assessed as 'Poor'. WB7 is considered to be 'Average'.

4.1.18 The terrestrial habitat on site which will be lost to the development is mainly unsuitable for great crested newt, being regularly tilled arable land. There are stands of unmanaged neutral grassland associated with the western boundary of the site which are a viable habitat. The loss of such habitats would potentially result in incidental harm to individual newts as well as a (likely minor) impact to local populations in the absence of mitigation.

4.1.19 It is therefore recommended that great crested newt presence/absence surveys are undertaken. It is considered that the M62 motorway acts as a sufficient barrier to land and ponds to the south of the site, thus only ponds located north of the motorway will require surveys. This includes the seven ponds identified on Drawing No. SH11739/002.

4.1.20 eDNA surveys for great crested newt entail water sampling of each pond for analysis to determine the presence of genetic material deposited by great crested newts. A sampling kit will be required for each pond, and samples will be taken in accordance with Natural England guidance. The samples are then sent for analysis to a Natural England approved laboratory. Should the results confirm absence of great crested newts prior to completion of the conventional surveys, then no further surveys would be required. Should the results confirm presence then it will be necessary to undertake detailed population assessment surveys via a further 6 survey visits.

### *Barn Owl*

4.1.21 The site does not support suitable breeding habitat for barn owl. However, the scrub habitat on site, field margins and bordering scrub habitat are considered to be viable foraging habitat for hunting barn owl. The arable land on and surrounding the site is not considered optimum habitat due to the likely low numbers of small mammals it supports. It is recommended a barn owl desk study is carried out to ascertain the importance of the site for barn owl, via consultation with the Barn Owl Conservation Trust.

### *Wintering Birds*

4.1.22 The open arable habitats on site and within the wider landscape are potentially attractive to waterbirds which aggregate into flocks during winter. Birds such as Lapwing *Vanellus vanellus*, Golden plover *Pluvialis apricaria* and certain grey geese *Anser* spp could potentially utilise the fields on site as part of a wider network of wintering habitat for daytime roosting and foraging. Wintering bird surveys are therefore being undertaken and will be reported separately.

### *Nesting Birds*

4.1.23 Due to the potential presence of nesting bird species within the scattered trees and scrub habitat it is recommended that initial development works are undertaken outside of the usual bird breeding season (i.e. between September-February). If such timescales cannot be accommodated and works are required during the nesting bird season (March-August inclusive), it is recommended that a check for the presence of active nests and nesting birds is undertaken by a suitably qualified ecologist prior to the commencement of works. Any active nests should be identified and protected subject to the relevant legal provisions until the nesting attempt is complete.

## 5 REFERENCES

- 5.1.1 ARG UK. (2010). ARG UK Advice note 5: Great Crested Newt Habitat Suitability Index. Retrieved from <https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file>
- 5.1.2 Botanical Society of the British Isles. (2013). *Online atlas of the British and Irish Flora* [http://www.brc.ac.uk/plantatlas/index.php?q=title\\_page](http://www.brc.ac.uk/plantatlas/index.php?q=title_page)
- 5.1.3 British Standards Institute. (2013). Biodiversity – Code of Practice for Planning and Development.
- 5.1.4 CIRIA. (2015). *Environmental Good Practice on Site Guide*.
- 5.1.5 Institute of Environmental Assessment. (1995). *Guidelines for Baseline Ecological Assessment*.
- 5.1.6 Chartered Institute of Ecological and Environmental Management. (2017). *Guidelines for Preliminary Ecological Appraisal*.
- 5.1.7 Joint Nature Conservation Committee. (2010). *Handbook for Phase 1 habitat survey: A technique for environmental audit*, English Field Unit, Nature Conservancy Council.
- 5.1.8 Langton, T., Beckett, C. and Foster, J. (2001). *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.
- 5.1.9 National Biodiversity Network. (2017). NBN Atlas <http://data.nbn.org.uk/>
- 5.1.10 Oldham R., Keeble J., Swan M. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.
- 5.1.11 Stace. C. A. (2010). *New Flora of the British Isles*. Cambridge University Press.
- 5.1.12 Strachan, R. & Moorhouse, T. (2006). *Water vole conservation handbook* 2nd edition. Wildlife Conservation Research Unit, Oxford, 132pp.

## APPENDICES

## Appendix 1 – Legislation and Policy Summary

### *Legislation for Habitats/Sites*

Designated Site/Habitat	Status
Ramsar Sites	Ramsar Sites are wetlands of international importance designated following The Ramsar Convention. RAMSAR sites have the same level of protection as SSSIs under the Wildlife and Countryside Act 1981 (as amended).
SPA (Special Protection Areas)	SPAs are classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC), the Birds Directive. They are they seek to protect the habitats of rare and vulnerable birds, listed in Annex I of the Birds Directive, and for regularly occurring migratory species. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 implement the Birds Directive in the UK.
SAC (Special Areas for Conservation)	SACs are strictly protected areas which represent typical European Union of habitats and (non-bird) species listed in Annexes I and II of the EC Habitats Directive. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 implement the Habitats Directive in the UK.
SSSI (Sites of Special Scientific Interest)	SSSIs protect the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981 (as amended). Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
NNR (National Nature Reserves)	NNRs are examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). Legal protection of NNRs is provided under The Wildlife and Countryside Act 1981 (as amended).
Hedgerows	All hedgerows are protected by the Hedgerows Regulations 1997, under which it is an offence to remove or destroy certain

Designated Site/Habitat	Status
	hedgerows without planning consent or permission from the Local Planning Authority. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.
LNR (Local Nature Reserves)	Designated by the National Parks and Access to the Countryside Act 1949, LNRs may be declared for nature conservation by local authorities after consultation with the relevant statutory nature conservation agency. Legal protection of LNRs is provided under The Wildlife and Countryside Act 1981 (as amended).

### Legislation for Species

Species	Legal Status
<i>European Legislation</i>	
Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage	Under the Conservation of Habitats and Species Regulations 2017 (and as amended), it is illegal to deliberately pick, collect, uproot or destroy any such species.
Bats, Dormouse, Otter, Wild Cat, Great Crested Newt, Natterjack Toad, Sand Lizard, Smooth Snake, Large Blue Butterfly	<p>These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (and as amended), which makes it illegal to:</p> <ul style="list-style-type: none"> <li>• Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs;</li> <li>• Deliberately disturb<sup>7</sup> such an animal; and</li> <li>• Damage or destroy a breeding site or resting place of such an animal.</li> </ul> <p>European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely:</p> <ul style="list-style-type: none"> <li>• The development is for reasons of overriding public interest;</li> </ul>

<sup>7</sup> Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
	<ul style="list-style-type: none"> <li>• There is no satisfactory alternative; and</li> <li>• The favourable conservation status of the species concerned will be maintained and/or enhanced.</li> </ul> <p>Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to ‘have regard to the requirements of the EC Habitats Directive’ i.e. LPA’s must consider the above 3 ‘tests’ when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.</p>
<i>Domestic (UK) Legislations</i>	
Bats, Dormouse, Great Crested Newt, Heath Fritillary, High Brown Fritillary, Large Blue, Marsh Fritillary, Natterjack Toad, Pine Martin, Otter, Red Squirrel, Sand Lizard, Smooth Snake, Swallowtail, Water Vole, Wildcat	These animals receive full protection under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to certain exceptions) to: <ul style="list-style-type: none"> <li>• Intentionally kill, injure or take any such animal;</li> <li>• Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and</li> <li>• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.</li> </ul>
Adder, Common Lizard, Grass Snake, Slow Worm, White-clawed Crayfish	These animals receive partial protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which provide protection against intentional killing or injury of any such animal.
Nesting Birds	All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to exceptions) to: <ul style="list-style-type: none"> <li>• Intentionally kill, injure or take any wild bird;</li> <li>• Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.</li> </ul>
WCA Schedule 1 listed Birds	Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (and as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to: <ul style="list-style-type: none"> <li>• Intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.</li> </ul>
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger, or attempt to do so and to intentionally or recklessly interfere with a Badger sett. This includes: <ul style="list-style-type: none"> <li>• damaging or destroying an active sett;</li> <li>• obstructing access to a sett; and</li> </ul>

Species	Legal Status
	<ul style="list-style-type: none"> <li>disturbing a Badger while it is occupying a sett.</li> </ul> <p>Licences can be granted to permit sett closure and/or disturbance between July and November inclusive (i.e. outside the sow pregnancy/birth period).</p>
Wild Mammals	<p>The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.</p>
<i>Invasive Species</i>	
WCA Schedule 9 listed animals (Part 1) and plants (part 2)	<p>Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife &amp; Countryside Act prohibits the release of any animal species that are:</p> <p style="text-align: center;"><i>“not ordinarily resident in and is not a regular visitor to Great Britain in a wild state”</i></p>

### Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to ‘have regard’ to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government’s planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF states:

*'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;*
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- opportunities to incorporate biodiversity in and around developments should be encouraged;*
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- the following wildlife sites should be given the same protection as habitats sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'*

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible,

contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

## Appendix 2 – Habitat Suitability Survey

HSI Assessment Results					
Waterbody Reference	Grid Reference	Photograph		HSI Score	HSI Classification
WB1	SJ 65980 94037			0.49	Poor

HSI Assessment Results					
Waterbody Reference	Grid Reference	Photograph		HSI Score	HSI Classification
<b>WB2</b>	SJ 66248 94152			0.49	<b>Poor</b>
<b>WB3</b>	SJ 66696 94174	Image not available		0.48	<b>Poor</b>
<b>WB4</b>	SJ 66793 94066	Image not available		0.76	<b>Good</b>
<b>WB5</b>	SJ 67337 94339	N/A – Access Restricted		N/A	<b>N/A</b>

HSI Assessment Results					
Waterbody Reference	Grid Reference	Photograph		HSI Score	HSI Classification
<b>WB6</b>	SJ 66893 93531			0.72	<b>Good</b>

HSI Assessment Results				
Waterbody Reference	Grid Reference	Photograph	HSI Score	HSI Classification
WB7	SJ 67252 93599		0.63	Average

## **DRAWINGS**



**KEY**

- Survey Area Boundary
- Broadleaved woodland - semi-natural
- Neutral grassland
- Marsh/marshy grassland
- A Cultivated/disturbed land - arable
- !!! Broadleaved Parkland/scattered trees
- Intact hedge - species-poor
- Dry ditch
- Target Notes

**Notes:**

Boundaries are indicative. Aerial imagery shown for context purposes only.

Classifications in accordance with Handbook for Phase 1 Habitat Survey - A technique for Environmental Audit (JNCC 2010).

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT  
**EXTRA MSA GROUP**

PROJECT  
**MOTORWAY SERVICES, WARRINGTON**

DRAWING TITLE  
**EXTENDED PHASE 1 HABITAT SURVEY RESULTS**

DRG No.	SH11739/001	REV	A
DRG SIZE	A3	SCALE	1:2,500
		DATE	December 2018
DRAWN BY	SW	CHECKED BY	TP
		APPROVED BY	TP

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<input type="checkbox"/> BIRMINGHAM	<input type="checkbox"/> GLASGOW
<input type="checkbox"/> BOLTON	<input type="checkbox"/> LONDON
<input type="checkbox"/> CARDIFF	<input type="checkbox"/> MANCHESTER
<input type="checkbox"/> CARLISLE	<input type="checkbox"/> SHEFFIELD
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> STOKE ON TRENT





**KEY**

- Survey Area Boundary
- Waterbodies
- Running water

**Notes:**

Boundaries are indicative.

Aerial imagery shown for context purposes only.

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT	EXTRA MSA GROUP
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PROJECT	MOTORWAY SERVICES, WARRINGTON
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DRAWING TITLE	WATERBODY LOCATION PLAN
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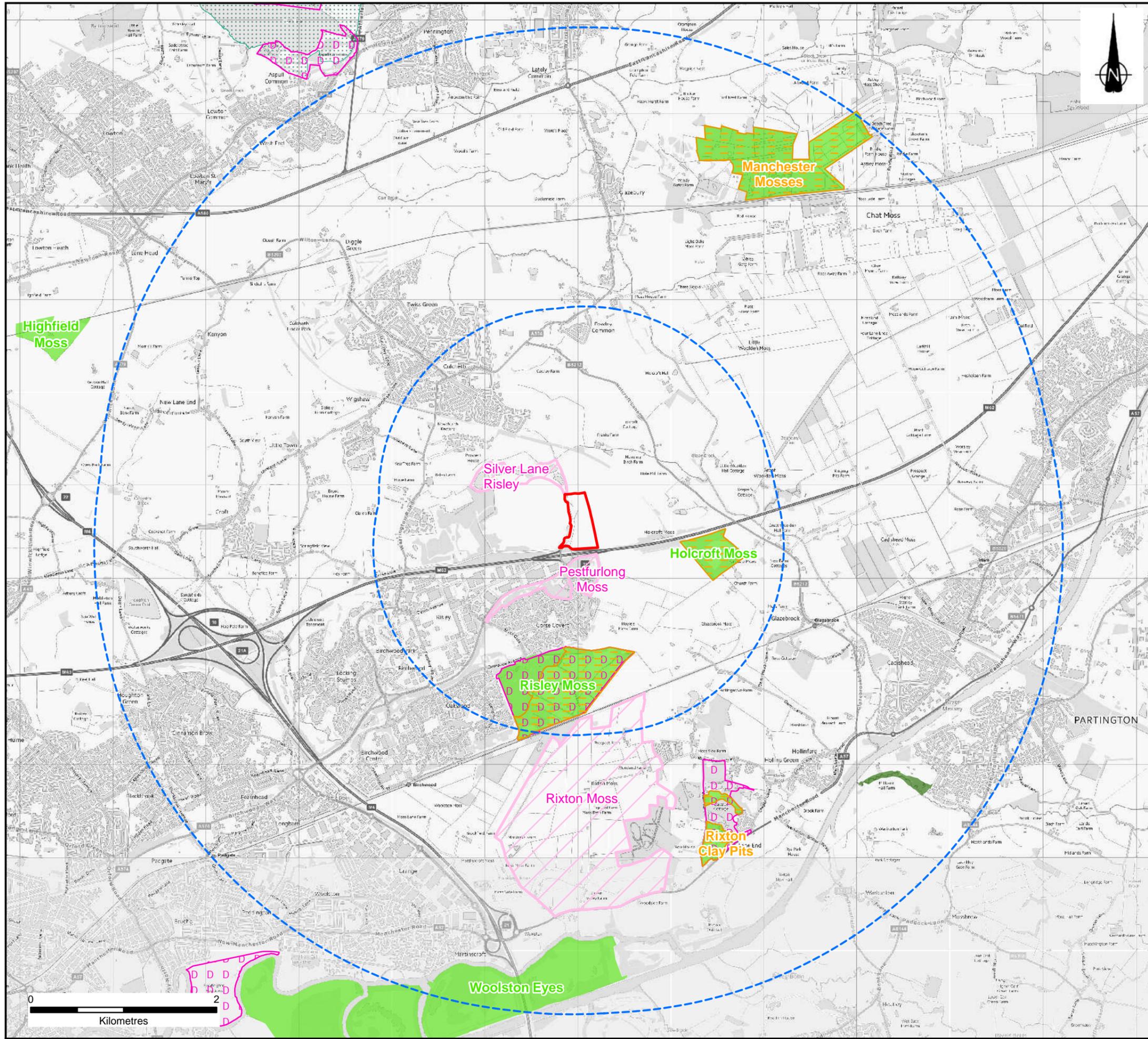
DRG No.	SH11739/002	REV	A
DRG SIZE	A3	SCALE	1:5,000
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<input type="checkbox"/> CARLISLE	<input type="checkbox"/> SHEFFIELD
<input type="checkbox"/> EDINBURGH	<input type="checkbox"/> STOKE ON TRENT





**KEY**

- Site Boundary
- 2km and 5km Distance Buffer
- Special Areas of Conservation
- Local Nature Reserves
- Country Parks
- Sites of Special Scientific Interest
- Ancient Woodland
- Local Wildlife Sites

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Local Sites obtained from the Local Authority under the government open data agreement © Crown Copyright. All rights reserved December 2018.

REVISION	DETAILS	DATE	DRAWN	CHKD	APPD

CLIENT	EXTRA MSA GROUP
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PROJECT	MOTORWAY SERVICES, WARRINGTON
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DRAWING TITLE	LOCATION OF STATUTORY AND NON-STATUTORY CONSERVATION SITES
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DRG No.	SH11739/016	REV	A
DRG SIZE	A3	SCALE	1:40,000
DRAWN BY	SW	DATE	December 2018
CHECKED BY	TP	APPROVED BY	MB

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## ES Part I Appendix I8



**WARRINGTON**  
Borough Council

Jenny Ray  
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Spawforths  
East Ardsley  
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West Yorkshire  
WF3 2AB

Professor Steven Broomhead  
Chief Executive

3rd Floor New Town House  
Buttermarket Street  
Warrington  
WA1 2NH

devcontrol@warrington.gov.uk

01925 442819

21st December 2018

Dear Jenny Ray

## **Town & Country Planning (Environmental Impact Assessment) Regulations 2017**

### **Scoping Opinion**

**Application No:** 2018/34149  
**Location:** LAND ADJACENT TO JUNCTION 11, OF THE M62  
MOTORWAY  
**Proposal:** EIA Scoping Opinion - Proposed erection of a  
Motorway Service Area including facilities  
building, up to 100 bedroom Hotel, Visitor Centre,  
Service Yard, Fuel Filling Station, Electric Charging  
Station, parking facilities for each category of  
vehicle,,access and internal circulation roads  
structured and natural landscaping with outside  
amenity space/picnic space and dog walking zone,  
pedestrian and cycle links, surface water drainage  
areas, ecological mitigation, pumping  
station,substation,retaining structures, and  
associated infrastructure and earthworks  
**Case Officer:** Martha Hughes - 01925 442803

I am writing to confirm that the above request for an EIA Scoping Opinion was received by the Council on 20-Dec-2018.

The Council will aim to issue our Scoping Opinion within a 35 day period prescribed by the Government.



If you need to discuss the above with the planning case officer please leave a voice mail message and the planning case officer will endeavour to return the telephone call within 24 hours. Alternatively you can email [devcontrol@warrington.gov.uk](mailto:devcontrol@warrington.gov.uk) referring to the reference number above and site address and marked for the attention of the planning application case officer. It will assist the Council if, in all communications, you could quote the reference number.

Yours Sincerely



Development Manager  
Development Management

## ES Part I Appendix I9

IN THE MATTER OF:

**WARRINGTON MOTORWAY SERVICE AREA  
JUNCTION 11 OF THE M62**

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**OPINION**

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**Introduction**

1. Extra Motorway Service Area Group (“Extra”) is in the process of preparing an outline planning application proposing the erection of a “New Concept” Motorway Service Area (“MSA”) within the north eastern quadrant of Junction 11 of the M62 Motorway situated approximately 5.6km (3.5 miles) to the north of Warrington Town Centre. The proposal is for an off-line MSA on a site extending to approximately 16ha of land, and will comprise of facilities building, hotel, fuel filling station, parking facilities, landscaping and amenity area. The proposals will be fully compliant with the minimum requirements for an MSA as set out in Table B1 of Annex B to Department of Transport Circular 02/2013. Drivers will have indirect access to the M62, which runs along the southern boundary of the proposed site and connects through to the M6 and M60, and onwards to the M58 and M67. The MSA will be known as Warrington Services.
2. The site currently comprises agricultural land in arable use, and is designated as Green Belt in the adopted development plan for the area.
3. We are asked to advise on:

- a. how the question of whether or not there is a “need” for an MSA should be resolved;
- b. the relevance of off-line versus on-line MSA provision;
- c. whether, if there is a need, this need is capable of constituting the very special circumstances (“VSC”) needed to justify what Extra accepts would constitute inappropriate development in the Green Belt.

### **Need**

4. The method for establishing a need for an MSA is set out in DfT Circular 02/2013. This Circular and the National Planning Policy Framework (February 2019) (“the Framework”) are the only documents to which reference is necessary to establish what the test is for demonstrating need.
5. The starting point is paragraph 104(e) footnote 42 of the Framework. This provides that “The primary function of roadside services should be to support the safety and welfare of the road user.” It is clear from this that the purpose of an MSA is to ensure the safety of drivers on the strategic road network (“SRN”). This point is reinforced in Annex B of the Circular, which states at paragraph B4

*“Motorway service areas and other roadside facilities perform an important road safety function by providing opportunities for the travelling public to stop and take a break in the course of their journey. Government advice is that motorists should stop and take a break of at least 15 minutes every 2 hours. Drivers of many commercial and public service vehicles are subject to a regime of statutory breaks and other working time restrictions and these facilities assist in compliance with such requirements.”*

6. The Circular then goes on to explain (at B5) how decisions regarding the location of MSAs on the SRN have been informed by the need to ensure this safety objective is realized by giving drivers the opportunity to stop and take a break every two hours:

*“The network of service areas on the strategic road network has been developed on the premise that opportunities to stop are provided at intervals of approximately half an hour. However the timing is not prescriptive as at peak hours, on congested parts of the network, travel between service areas may take longer.”*

7. The requirement, or “need”, to ensure driver safety through the provision of an MSA at intervals of approximately half an hour leads directly to the recommendation of the Highways Agency that there should be an opportunity for drivers to stop and rest at a MSA every 28 miles (at B6):

*“The Highways Agency therefore recommends that the maximum distance between motorway service areas should be no more than 28 miles. The distance between services can be shorter, but to protect the safety and operation of the network, the access/egress arrangements of facilities must comply with the requirements of the Design Manual for Roads and Bridges including its provisions in respect of junction separation” (emphasis added).*

8. It follows from the above that if the Government’s objective of ensuring the safety and welfare of road users is to be realised, there is a “need” to provide an MSA on those stretches of the SRN where there is a gap of 28 miles. In other words, a “need” for an MSA is established wherever any particular stretch of the SRN has a gap of more than 28 miles (i.e where drivers are currently driving for more than 28 miles before they have the opportunity to stop at a MSA).
9. There are currently four MSAs located on the SRN in and around the Warrington area: on the M6 there are Charnock Richard Services and Lymm Services, and on the M62 there are Birch Services and Burtonwood Services.

However, having regard to terminus points of the M58 and M67 and the ability of drivers to leave one motorway and join another through the various junctions around this area, it is quite clear that some drivers will be driving for more than 28 miles (and significantly longer than 30 minutes) on the SRN before they encounter a MSA. There are four such “gaps”:

- a. A driver taking the route from the M58 Terminus to Birch Services on the M62 will drive 40 miles (M58/M6/M62/M60/M62);
- b. A driver taking the route from Charnock Richard Services on the M6 to Birch Services on the M62 will drive 35 miles (M6/M62/M60/M62);
- c. A driver taking the route from the M58 Terminus to the M67 Terminus will drive 52 miles without encountering a MSA (M58/M6/M62/M60/M67);
- d. A driver leaving Charnock Richard Services on the M6 and driving to the M67 Terminus will drive 47 miles with no opportunity to stop at a MSA (M6/M62/M60/M67).

10. It can be seen from the above that the existence of Burtonwood Services and Lymm Services do not address the identified gaps, for the simple reason that some drivers will take a journey whereby despite the existence of these two MSAs they will drive for more than 28 miles (and significantly longer than 30 minutes) before they encounter a MSA. How many such drivers there will be is irrelevant for the purposes of applying the Government’s policy on need - as paragraph B8 of the Circular makes explicit, once such a gap is shown to exist, it is not necessary to have regard to other considerations in determining whether a need exists (i.e. the existence of the gap is in and of itself conclusive evidence of need for planning purposes):

*“The distances set out above are considered appropriate for to (sic) all parts of the strategic road network and to be in the interests of and for the benefit of all road*

*users regardless of traffic flows or choice. In determining applications for new or improved sites, local planning authorities should not need to consider the merits of the spacing of sites beyond conformity with the maximum and minimum spacing criteria established for safety reasons. Nor should they seek to prevent competition between operators; rather they should determine applications on their specific planning merits.”*

11. The 2013 Circular was a deliberate departure from previous policy in that the Government decided to make clear that once a gap of more than 28 miles has been identified, the need for an MSA will be established (i.e the absence of an MSA in such a situation frustrates the Government’s objective of supporting the safety and welfare of the road user). The local planning authority in such a situation should not concern itself with the merits of spacing beyond asking itself whether (a) the proposed MSA will help ensure that the maximum distance of 28 miles is not breached, and (b) that the new facility will not breach the requirements set out in the Design Manual for Roads and Bridges. For the purposes of applying the policy on “need” as set out in the Circular, it is not permissible to take a graduated approach to need by reference to the number of drivers using a particular stretch of the strategic road network or any other considerations such as route choice or the nature of the journeys. The existence of the requisite gap is conclusive evidence of need, and in the particular circumstances of this case it removes any necessity to debate how many drivers will choose a particular route (for example M6 South – M62 East, in preference to any other route).

### **On-line versus Off-line**

12. Annex B of the Circular at B13 to B15 provides that where competing MSA sites are under consideration, the Highways Agency has a preference for on-line locations over off-line locations. It must however be noted that, firstly, this is a “preference” only (i.e it is not a mandatory requirement that an on-line location must always be selected over an off-line location); and secondly the preference is subject to the very important caveat “on the assumption

that all other factors are equal”.

13. All other factors are rarely equal in life, and the sphere of planning is no exception. So, for example, the Circular itself at B15 acknowledges that an on-line facility may simply not be possible because of safety, operational or environmental constraints. We would go further and add that such a facility may be available, but the safety, operational or environmental disbenefits of such a location may outweigh the advantages that flow from being on-line as opposed to off-line, such that the latter location is considered preferable once regard is had to all matters that are relevant to what is ultimately a planning decision.
14. If there is a choice to be made between on-line and off-line facilities, the planning authority must have regard to all material considerations relevant to that choice, and that will include not only the Highways Agency “preference” (understood subject to the express caveats provided in the Circular itself), but also all of the benefits that a particular off-line location may provide when compared with a particular on-line location. So, for example, on the specific facts of a given case, the off-line location may provide broader sustainability benefits when compared with the only on-line location that is in contention.

### **Green Belt**

15. In order to establish VSC it is necessary to demonstrate that the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations (NPPF, para. 144). The question of whether VSC exist for any given proposal is decided on a case by case basis, and whether a matter or combination of matters constitute VSC sufficient to outweigh the harm by reason of inappropriateness and any other harm is quintessentially a matter of planning judgment for the decision-maker.

16. “Need” generally, and the specific need for an MSA to meet the strategic need for road side facilities in accordance with Government policy, has long been accepted as a matter that can either by itself or in combination with other matters outweigh the harm to the Green Belt by reason of inappropriateness and any other harm. Many existing MSAs are situated in the Green Belt, and were justified by reference to “need”.
17. Whether a particular proposal for an MSA meets the test of VSC has to be decided by reference to a range of factors, which will include need, whether the proposal causes “other harm”, the extent of such “other harm” and the availability or otherwise of alternative sites where the need can be met without causing such harm or causing less harm.

### **Conclusion**

18. We have addressed the matters raised in our Instructions. If additional matters arise we would be pleased to assist further.

**MARTIN KINGSTON QC**  
**SATNAM CHOONGH**  
Number 5 Chambers

14 May 2019

IN THE MATTER OF:

**WARRINGTON MOTORWAY SERVICE AREA  
JUNCTION 11 OF THE M62**

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**ADVICE NOTE**

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Counsel: Martin Kingston QC  
Satnam Choongh

YOUR REF: PO-TP-SPA-LT-P4151-0002-A

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## ES Part I Appendix 20



# David Rolinson

Title

**Chairman**

Job Description /Role

**Chartered Town Planner**

Qualifications

**BA (Hons), Dip PEL**

Professional Memberships

**MRTPI**

Role on this Project or Framework

**Strategic Director**

David is Chairman of Spawforths and is responsible for the strategic direction of the Company. Spawforths are the largest planning and masterplanning company in the Region and David leads the Planning Team on our largest and most complex development schemes. David is Chartered Town Planner and also has a further legal qualification in planning and environmental law. David has over 30 years planning experience working within both the public and private sectors. David provides professional advice to a wide range of developers, housebuilders, landowners, and commercial retailer clients including HIMOR, Langtree, Network Space, Harworth, Keyland, Miller, Taylor Wimpey and Barratt.

David provides strategic advice on all aspects of planning and development and regularly gives evidence at major Public Inquiries for planning appeals, Local Plan Inquiries and Compulsory Purchase Inquiries. David is regularly called upon to advise on residential, commercial and mixed use schemes and strategic viability matters. David is experienced in leading large multi-disciplinary consultant teams and he is a recognised expert in Environmental Assessment matters.

## Core Skills

- Experienced Project Director for major projects with excellent project management skills
- Extensive knowledge of national, regional and local planning policies
- Expert witness for Local Plan Examinations in Public
- Expert witness for Public Inquiries and Compulsory Purchase Order Inquiries
- Particular expertise in Housing, Logistics and Green Belt issues
- Strong spatial understanding and design literacy
- Strong presentational skills with extensive experience in senior decision maker engagement

## Current and Recent Major Projects

- 7000 home and 8m ft2 of employment development in Carrington, Greater Manchester
- 5,000 home and 3m ft2 of employment development in Warrington
- 2.5m ft2 of employment development in St Helens
- New St Helens Rugby League Stadium and large Format Tesco in St Helens
- Retail Park in Denton, Manchester
- 16,000 home new-town in the north of England
- 2,500 home, employment and mixed use development in Wakefield District
- 1,800 home urban extension to Washington New Town
- Employment and residential masterplan and urban extension to Crewe

## Benefits to Client

- Extensive experience in all Planning and related matters
- Strong Leadership skills
- Proven Commercial understanding
- Proactive approach to site identification and allocation
- Extensive network of key Decision makers
- Proven record of delivery



# Jenny Ray

Title

Associate

Job Description /Role

Chartered Town Planner

Qualifications

BSc (Hons), MA

Professional Memberships

MRTPI

Role on this Project or Framework

Planner, ES and Project Coordinator

Jenny is an Associate Chartered Town Planner at Spawforths. She joined Spawforths in 2005, following three years as a Development Control Officer at Leeds City Council. She provides professional advice to a wide range of public and private sector clients, including developers, landowners, local authorities and housebuilders, on a variety of planning and environmental matters. She also leads on EIA activities at Spawforths along with the Directors and successfully secured an IEMA quality Mark which she is now responsible for maintaining practice-wide.

Jenny's specialist skills and experience are as an environmental assessment co-ordinator and project manager for large scale and strategic projects including infrastructure, motorway service areas, mixed use urban extensions, renewable energy and logistics and distribution development. This involves the preparation and submission of environmental statements and planning applications, and progressing them through the process to determination. Jenny's other skills and experience are in site promotion and appeals and all other planning related advice and services.

## Core Skills

- Wide range of town planning experience in both the public and private sector.
- Experienced Environmental Impact Assessment Coordinator including the preparation of screening and scoping requests and full Environmental Statements and co-ordination of a full team of consultants
- Significant experience related to development control issues.
- Excellent project management skills, delivering a wide variety and scale of projects, on time and in budget
- Good commercial understanding and awareness
- Extensive knowledge and experience of stakeholder engagement and community consultation

## Current and Recent Major Projects

- Wakefield Council – Wakefield Eastern Relief Road
- Extra MSA Group – Leeds Skelton Lake Services
- Langtree – Parkside Colliery Employment Park – 1 million square feet of B8 Phase 1
- Langtree and First Panattoni - 3 million sq ft B2 and B8 Development
- Persimmon Homes – Hartlepool South West Urban Extension
- BOCM Pauls – Olympia Park 863 homes and commercial centre

## Benefits to Client

- Efficient and effective preparation and project management of Environmental Assessment documentation across wide range of development types
- Proven track record in unlocking development value through securing high value planning permissions with accompanying, market facing, robust environmental assessments



# Stephen Courcier

Title

Associate

Job Description /Role

Associate Town Planner

Qualifications

BA (Hons), MSc

Professional Memberships

RTPI

Role on this Project or Framework

Statutory Planner

Stephen is an Associate Chartered Town Planner at Spawforths with over 13 years' experience in both the public and private sectors. Stephen previously worked as an Associate at a national firm of property consultants for 8 years and more recently as a Senior Planning Associate at a national house builder. However he started his career in the public sector working in local authorities in North and West Yorkshire in both Development Control and Spatial Policy Teams respectively.

Stephen has gained in depth knowledge and experience working across a broad range of sectors including major residential, leisure, retail, intensive agriculture, and commercial developments. He is involved in all aspects of the planning process including the submission and negotiation of planning applications, EIA related work, appeal work, strategic land promotion and viability negotiations.

## Core Skills

- Significant Town Planning experience on Major Projects
- Extensive knowledge of national, regional and local planning policies
- Expert witness for Local Plan Examinations in Public
- Significant experience related to Development Management and Local Plan issues
- Excellent project management skills and experience in delivering projects on time and in budget
- Strong commercial awareness and understanding of development economics
- Experienced in stakeholder engagement and community consultation

## Current and Recent Major Projects

- Six56 Warrington – preparation of key planning documentation for the application of a major new logistics park to the south of Warrington.
- Northern Gateway, Bury –securing the draft allocation of a major strategic commercial (1,500,000 sq. m) and residential site (3,500 dwellings) in the Green Belt within the GMSF.
- Warrington Bus Depot – planning lead and securing planning permission for a new major bus depot to serve Warrington.

## Benefits to Client

- Experience in driving applications to a successful outcome
- Extensive experience in all Planning and related matters
- Efficient and effective preparation and project management of planning applications across wide range of development types
- Proven track record in unlocking development value through securing high value planning permissions.



# Avril Sanderson

Title

Associate

Job Description /Role

Senior Urbanist and Landscape Architect

Qualifications

BA (Hons), Dip LA, MAUED

Professional Memberships

MLI

Role on this Project or Framework

Landscape Architect, Masterplanner

Avril is a Senior Urbanist and Landscape Architect at Spawforths. She joined Spawforths in May 2006, having previously worked in private practice in Leeds, Dublin, Manchester, London and Ingolstadt in Germany, and in local authority for Kirklees Metropolitan Council in West Yorkshire. Since joining Spawforths, Avril has worked for both private and public sector clients on a number of large and medium scale urban and landscape design projects.

Avril has considerable experience as a project manager for landscape architectural projects, and has tutored in Landscape Architecture at University College Dublin and Leeds Metropolitan University.

## Core Skills

- Delivery of landscape consultancy services for all types of external and internal space, with emphasis on sustainability issues including new and existing housing areas, industrial areas and commercial/office developments. Public Realm schemes, including town and city squares and pedestrian projects, public parks, play areas and sports facilities. Space around schools, universities, hospitals and hotels. Private gardens and private estates.
- Landscape Strategies including Landscape and Visual
- Impact Assessment (LVIA)
- Project management skills
- In depth horticultural knowledge

## Current and Recent Major Projects

- Detailed landscape proposal for a range of housing developers and registered providers including Bridge Homes, Yorkshire Housing and Brierley Homes
- Landscape design and implementation for King's Medical Centre, Normanton
- Detailed landscape design proposals for former Prince of Wales Colliery
- Design Code for Prince of Wales Colliery
- Public Realm Strategy (Harworth Estates)
- Harworth Colliery Landscape Strategy

## Benefits to Client

- Depth and breadth of experience in her field
- Combined experience in Landscape and Urban Design
- Creative flair combined with commercial awareness
- Knowledge of both public and private sector roles



# Kate Goodwin

Title

## Planning Assistant

Job Description /Role

## Graduate Town Planner

Qualifications

BSc (Hons), MSc

Professional Memberships

RTPI Licentiate APC candidate

Role on this Project or Framework

Kate is an experienced Planning Assistant currently working towards chartered membership of the RTPI. With over 5 years' experience in planning consultancy in Central London, Kate now assists the Spawforths team on wide range of planning matters including preparing applications and supporting statements; writing letters of representation and inputting into planning appeals; and managing elements of projects.

Kate has experience with various issues including design, heritage, case law, Green Belt, and Permitted Development, and is capable of putting together a case and liaising with the Local Authority to overcome them. She has undertaken work for a range of clients including private individuals, private care homes, SME housebuilders, landowners/estates, and commercial/industrial organisations, working at all scales of development. These range from complex householder issues or appeals, small bespoke housing developments, and commercial changes of use, through to agricultural buildings and conversions, solar farms, large industrial units, and major mixed use developments and urban extensions.

### Core Skills

- Efficient and thorough research and analytical skills
- Persistent in finding answers and solutions in policy, case law and site history
- Exemplary written English and preparation of documents
- Management of smaller scale projects or elements of schemes
- Attuned to time- and cost- sensitivities

### Current and Recent Major Projects

- Doncaster Iport and FARRRS – provided planning support on applications for the Strategic Rail Freight Interchange, including construction of new junction on M18 and first section of the Great Yorkshire Way/FARRRS
- Radlett Strategic Rail Freight Interchange – provided planning support on High Court challenge
- London Bridge Station – provided planning support for station upgrade works
- Forest Heath Infrastructure Delivery Plan – Provided strategy input and prepared representations for client during Local Plan consultation and examination promoting highways infrastructure improvements on client's land, required to enable proposed housing targets

### Benefits to Client

- Providing support to the Team at all stages of the planning process by inputting into complex cases or managing smaller cases and delegated elements



## CURRICULUM VITAE

**Name:** Greg Jones  
**Office:** i-Transport LLP, Leeds  
**Position in Company:** Associate Partner  
**Qualification / Memberships:** BA (Hons) Geography, University of Liverpool (2000)  
MSc Transport, University of London (Imperial College and UCL) (2005)  
Diploma of Imperial College (2005)  
Member of the Chartered Institute of Highways and Transportation (2003)  
**Date of Birth:** 8 February 1979

### Areas of Expertise:

Greg has over 18 years' experience in transport development planning, impact assessments, accessibility studies, infrastructure feasibility studies and Environmental Impact Assessment. He is familiar with planning policy guidance and planning circulars and has been the lead transport consultant responsible for the successful completion of projects for private clients across a range of sectors, including major mixed-use regeneration, strategic residential, industrial and commercial. Greg frequently works as part of multi-disciplinary teams on major development projects and is responsible for client representation. He is experienced in concluding negotiations with Local Highway Authorities and Highways England. Greg has worked on a number of Appeal schemes and has appeared as an expert witness.

Greg is now an Associate Partner in the Leeds office, having previously led i-Transport's London office for five years since its inception. Prior to joining i-Transport in January 2010, Greg was an Associate at RPS' London office and before that worked at TPK Consulting in Newbury.

### Key Projects Include:

#### *Regeneration schemes:*

- *Wembley Regeneration, LB Brent – Quintain Estates & Development Plc*

Greg provided both strategic and detailed level transport planning advice to Quintain, as part of the regeneration of its 85 acre land holding surrounding the National Stadium at Wembley, for over five years before his move to Leeds. The role encompassed the preparation of:

- Reserved Matters Applications for the London Designer Outlet, which opened in 2013 (including the design of the associated 700-space 'Red' multi-storey car park and servicing yard) and the first two residential plots on the North West Village (the 475-unit 'Emerald Gardens' and 360-unit 'Alto' developments) which are currently under construction;
- Transport advice in respect of emerging proposals for a new Masterplan at Wembley encompassing 500,000sqm (5.4m sqft) of mixed-use development across 38 acres, including up to 4,000 new residential units, 90,000sqm (970,000sqft) of commercial floorspace plus hotels, restaurants and retail units and a purpose built facility for Stadium Event car and coach parking;
- Transport Assessment, Travel Plan, Delivery & Servicing Plan, Construction Logistics Plan and ES Chapter for the South West Lands development, which will bring forward up to 85,000sqm (915,000sqft) of mixed use floorspace, including up to 850 residential units;
- Negotiation with TfL Buses in respect of changes to the emerging bus network across the regeneration area;

- Transport advice in respect of meantime / temporary land uses including a new 1,300-seater theatre which will open in May 2016 and recurring Sunday markets;
- Developing a robust servicing strategy for the estate;
- Advice on car parking management;
- Advice on signing strategies including, fixed highway signage, Variable Message Signage installations and pedestrian wayfinding; and
- Advice on the siting of, and procedures required to facilitate the introduction of, appointed taxi ranks.

- *City Fields, Wakefield – Stretton Estates and Miller Homes*

City Fields is a major sustainable urban extension to Wakefield. Greg has assisted the developer achieve planning consent for 623 residential units and a new retail-led Local Centre adjacent to A638 Doncaster Road and is retained to advise on subsequent phases of development which will provide a further 401 new homes.

- *Albert Wharf, LB Hammersmith & Fulham – Ptarmigan Land & Cemex UK*

Lead transport consultant on proposals for the dual-use redevelopment of safeguarded wharves on the River Thames adjacent to Wandsworth Bridge. Working with Allies & Morrison architects and alongside Cemex UK, Greg developed vehicular, cycle and pedestrian access arrangements to facilitate the retention of a working concrete batching plant on the site, encased by new mixed-use development (233 residential units plus offices retail and ancillary floorspace). Responsible for the preparation of a Transport Assessment, supporting technical material and input into a comprehensive Environmental Statement. The scheme, the first of its kind in the UK, was granted planning consent in 2015.

- *Marshall Street Baths, City of Westminster – Media Office Limited*

An urban regeneration project to redevelop Grade II Listed public swimming baths and replace part of a multi-storey car park with mixed tenure residential accommodation and high quality commercial workspace. Responsible for the preparation of a Transport Statement and site-wide Travel Plan as well as auditing the feasibility of reconfiguring a Westminster City Council waste refuse depot. Planning permission granted in 2008 with the baths re-opening to the public in 2010.

### **Residential schemes:**

- *Northampton West Sustainable Urban Extension – Bloor Homes South Midlands*

Greg has advised Bloor Homes for over three years on its proposals for a new Sustainable Urban Extension to the west of Northampton. The proposals comprise a phased development comprising 1,750 new homes, a new Primary School and a Local Centre. Greg has negotiated the transport impacts associated with the proposed development including a package of off-site highways mitigation and enhancements to public transport services. The planning application is expected to be determined in Summer 2019 with both the Local Highway Authority and Highways England having confirmed that they have no objections.

- *Kingston Village, Newcastle-upon-Tyne – Banks Group*

Preparation of a comprehensive TA, Framework Travel Plan and Environmental Statement chapter to support the proposed development of 900 new homes, a new primary school and local centre on the north-west edge of Newcastle-upon-Tyne. Work has involved detailed interrogation of Newcastle City Council's NewTM traffic model. A planning application was submitted in late April 2019.

- *Swinnow Park, Wetherby – Taylor Wimpey UK Limited*

Transport and highways advice in respect of proposals for a masterplanned development of 800 new homes and a primary school on land to the east of A1(M). Agreement of comprehensive Transport Assessment and Residential Framework Travel Plan with Leeds City Council and Highways England. The planning application is expected to be determined later in 2019.

- *Greenhill Way, Haywards Heath, West Sussex – Taylor Wimpey Plc*

Greg acted as an expert witness for Taylor Wimpey in respect of proposals for a 62 unit residential scheme on the edge of Haywards Heath. The development was granted in Outline at Appeal in 2014 and has since been approved in detail following the submission of a Reserved Matters Application in 2015. i-Transport has since been instructed to prepare submission materials in respect of a second phase of development for a further 119 units.

- *Denham Film Laboratories, Buckinghamshire – Deluxe Laboratories Limited*

Transport advice relating to the relocation of Deluxe to a new purpose built facility at Pinewood Studios and the enabling redevelopment of their existing laboratories to residential development. The project saw the conversion of the Grade II Listed main laboratory building on the site, designed by Walter Gropius, to 49 residential apartments with a total of 224 new homes across the site.

- *Banyan Wharf ('The Cube'), Wenlock Road, Shoreditch LB Hackney – Regal Homes London*

Preparation of a Transport Statement and Travel Plan for a residential led mixed-use scheme comprising 40-units and 21,000sqft of employment floorspace in Hackney's creative quarter. The scheme, which gained consent in 2012 and has subsequently won a number of prestigious design awards.

#### **Commercial schemes:**

- *Land south of A46 Alcester Road, Stratford-upon-Avon – IM Properties Plc*

Greg is currently advising IM Properties in respect of proposals for a new 'gateway' business park to the west of Stratford-upon-Avon that will create in excess of 2,000 new jobs. The business park will be accessed by a new roundabout junction on the Strategic Road Network. Greg is currently leading final negotiations with Highways England and Warwickshire County Council regarding triggers for off-site mitigation measures.

- *Capitol Park, Tingley, Leeds – Sterling Capitol*

Greg has provided strategic transport planning and highways advice in respect of the promotion of land to the immediate north east of M68 J28 for c.1m sqft of mixed employment use floorspace through the Leeds Local Plan. The site now benefits from a draft allocation in the emerging Local Plan and Greg is retained to advise Sterling Capitol to take forward a planning application.

- *Walbrook Square, City of London – Stanhope Plc and Legal & General*

Input into the preliminary design of vehicular access and underground servicing arrangements for a prestigious 1.4m sqft commercial and retail development in the heart of the City of London, which is now being built out as 'Bloomberg Place'. Working alongside Foster + Partners architects, Greg successfully negotiated with the Corporation of London and the Metropolitan Police to achieve improved vehicular access arrangements and other scheme changes via a S.96 Non Material Changes Application.

### **Retail schemes:**

- *Neatscourt, Isle of Sheppey – LxB Retail Properties Plc*

Preparation of a Transport Assessment, Travel Plan and ES Chapter in support of proposals for the comprehensive regeneration of a 20-acre site at Neatscourt, anchored by a 55,000sqft Wm Morrison's foodstore, which opened in May 2013. Greg also advised on revised proposals for the second phase of development which brought forward over 68,000sqft of non-food retail floorspace together with 7,500sqft of A3 retail in 2014.

- *Barnfield Park, Chichester – Brookhouse Group*

Transport Assessment and Travel Plan for 67,000sqft of A1 retail floorspace on the north-east side of Chichester. Greg's role involved successfully negotiating away concerns raised by the Highways Agency in respect of traffic conditions on the A27 and development of a comprehensive signing strategy for the site.

- *Letchworth Gateway, Avenue One, Letchworth – Aberdeen Asset Management*

Advice relating to a major retail-led regeneration scheme in Letchworth Garden City, which also provides new hotel accommodation for the city. The scheme received planning consent in early 2017.

### **Healthcare schemes:**

- *Sunderland Royal Hospital – City Hospital Sunderland NHS Foundation Trust*

Transport planning advice relating to a new £33m 138-bed ward extension at Sunderland Royal Hospital. Key aspects included advising the Trust on car parking management and re-vamping an existing Travel Plan.

- *Various NHS LIFT schemes – Ashley House Plc and Community Solutions for Primary Care*

Transport Project Manager for the delivery of new Community Hospitals in Havant, Fareham and Greenwich financed under the LIFT initiative. Played a key role in the community engagement programmes and was responsible for the preparation of Transport Assessments, Travel Plans and Car Park Management Strategies and negotiating S.106 obligations.

### **Hotel schemes:**

- *Kensington Close Hotel, Royal Borough of Kensington & Chelsea – Cola Holdings Limited*

Responsible for the preparation of a comprehensive Coach Management Plan required to discharge a planning condition relating to the consented 172-bedroom extension at the prestigious Kensington Close Hotel. The Plan was approved by RBKC in 2009. Preparation of transport evidence to support a successful litigation case heard by the High Court in 2010.

- *Tyram Lakes Hotel & Spa, Doncaster – Rothgen Construction Limited*

Development of a new 4-star 104-bedroom hotel with on-site restaurant, integrated Spa and flexible conferencing and event space for up to 200 delegates. The development will site cohesively with an already permitted eco-lodge retreat. Greg negotiated revised access arrangements and the traffic impacts of the development with Doncaster Council which granted planning consent in December 2018.

### **Industrial schemes:**

- *Super Materials Recycling Facility, LB Brent – Careys Environmental Services Limited*

Preparation of a Transport Assessment and Travel Plan in support of a proposals for a new Super Materials Recycling Facility to serve west London on land abutting the Wembley Opportunity Area. Scheme granted planning consent in Autumn 2010.

- *Various site appraisals – Cemex UK*

Preparation of various preliminary site feasibility assessments for Cemex UK, one of the country's leading aggregates firms.

- *Coal Road, Whinmoor, Leeds – Commercial Development Projects*

Advice relating to the development of c.130,000sqft of General Industrial and Warehousing on the Inner Ring Road in Leeds. Planning consent was granted in 2015 and the second phase opened in 2017.

- *Land at Havertop Lane, Normanton – Commercial Development Projects*

Greg is retained by CDP to advise on emerging proposals for c.475,000sqft of General Industrial and Warehousing floorspace in Normanton, Wakefield.

### **Transportation schemes:**

- *Leeds Skelton Lake Services – Extra MSA Group*

Greg advised Extra MSA Group on proposals for a new Motorway Service Area at Junction 45 of the M1 which achieved planning consent in December 2016 and which is due to open in late 2019. The work involved the preparation of a detailed Transport Assessment and Travel Plan and extensive negotiation with both Highways England and Leeds City Council.

- *TAG Farnborough Airport, Surrey – TAG Aviation*

Responsible for the coordination of surface access transport Environmental Impact Assessment relating to a S.73 application to increase the number of permitted annual aircraft movements at the private airport to 50,000 per annum. Development of a site-wide Travel Plan and input into the airport's wider sustainability agenda.

- *Port of Dover – Dover Harbour Board*

Responsible for the development of mitigation strategies to cope with unprecedented traffic growth at the world's busiest roll-on roll-off port as part of a review of Operation Stack on the M20.

### **Presentations**

- Presentation to the 4<sup>th</sup> Annual Transport Practitioners Meeting, 'Sustainable Communities: The Influence of Urban Form on Travel Demand' (July 2006).



## CURRICULUM VITAE

**Name:** Steven Eggleston

**Office:** i-Transport LLP, Manchester

**Position in Company:** Partner

**Qualification / Memberships:** BSc (Hons) BEng (Hons) Civil Engineering  
Member of Chartered Institution of Highways and Transportation  
Member of the Chartered Institute of Logistics and Transport

I have over 30 years' experience of transport planning of major development and infrastructure projects including appearing as an expert witness at planning inquiries and EIPs.

Project Partner leading the technical aspects of projects including the following recent schemes:-

- Hulton Park, Bolton: championship golf resort and c.1,000 dwellings (Peel).
- Leeds Skelton Lake Services: motorway service area (Extra MSA Group).
- Dewsbury Riverside: c.4,000 dwellings and complementary uses (Miller Homes).
- Buckton Fields, Northampton: c.1,000 residential units (Ensign Group/Bloor Homes).
- ROF Featherstone, Staffs: c.1.7m sqft redevelopment of former munitions factory (Peveril / St Francis Group).
- Capitol Park, Leeds: c.1m sqft employment park (Sterling Capitol).
- GMSF sites in Bolton: c.3,500 dwellings and c.1m sqft employment uses (Peel).
- Warrington Local Plan: several sites comprising over 5,000 dwellings and extended Port facility (Peel).

Inquiry experience includes the following:-

- Land at Great North Road, Wideopen (Bellway).
- Land at Broughton near Chester (Development Securities).
- Land at Nottingham Road, Belper (Peveril Securities).
- Kirklees Local Plan EIP (Miller Homes).
- South Featherstone Local Plan EIP (Peveril / St Francis Group).
- Lee Hall, Chequerbent (Trustees of Park Road Land).
- Various residential sites in Bradford (Taylor Wimpey).



### Andy Dunhill

Andy has over 30 years experience in the ground engineering, opencast mining and contaminated land industry. His expertise is in the investigation of contaminated sites, the development of appropriate remedial strategies for the sites, the management of contaminated land projects and the suitability of treatment methods to the contaminants and risks involved for a particular development. He has acted as an expert witness at planning enquiry where the need for remediation and the methodology involved were being challenged for a housing development.

In addition to the contaminated land work Andy carries out geotechnical assessment of sites for all forms of development. This includes assessment of ground investigation, foundation design, ground improvement methods and slope stability. It also includes Mines & Quarries Inspections as a “competent person” under the regulations.

Andy works closely with a wide range of property and infrastructure developers, and mineral and waste operators, and understands their aims and requirements. He also has a long experience of working with developers to help inform the planning, EIS and design process, and with other consultants and lawyers to deliver work which is designed to best achieve the desired results.



### Jo Shaw

Joanne has eighteen years’ experience in environmental and engineering consultancy. She is a Chartered Geologist and Fellow of the Geological Society of London.

Joanne is part of the Land and Property team and been responsible for the management of a number of projects across the UK. Projects have included Phase I Environmental Assessments, Phase II Intrusive Investigations, Risk Assessment and Remediation. The sites she has been involved with exhibit a diverse range of potential development constraints including geological, geotechnical, contamination and mining.

Over the past 5 years, Joanne has been responsible for the management and co-ordination of several multidisciplinary projects where Environmental Statements and Impact Assessment are required in support of planning applications.



### Tim Palmer

Tim Palmer is an Ecologist with over 15 years experience in conservation and ecological consultancy sectors. He has extensive experience in Ecological Impact Assessment, project management and ecological survey. His project experience encompasses major infrastructure schemes, private commercial and residential developments, on-shore wind energy, minerals extraction and Local Authority Conservation schemes. Key areas of technical expertise include medium and large infrastructure projects, including onshore wind energy, bird, bat and reptiles survey and assessment and habitat management/creation. Tim has also advised major development projects on Ancient Woodland issues. Tim has also successfully prepared various development licences for bats, great crested newts and badgers.



### Rebecca Faulkner

Rebecca specialises in air quality, dust and odour issues. She has over 7 years of experience of undertaking and managing air quality assessments for a wide range of sites, including small residential developments, large mixed-use strategic sites, mineral sites, quarries and waste operations. She has also managed and been involved in air quality and dust monitoring schemes for a variety of sites, including during remediation works at brownfield sites and establishing background conditions prior to the operation of surface mine schemes.

The majority of this work is carried out in support of planning and permit applications, and therefore she has extensive experience of dealing with environmental health officers and planning officers, to ensure that the assessment work being carried out meets the expected standard.



### Richard Calvert

Richard is a member of the noise and vibration team, based in Leigh, Greater Manchester. He gained experience in a number of aspects of acoustics within job roles at previous companies.

Richard has a particular interest and expertise in building acoustics, working on several large scale projects, including a special educational needs school in Manchester, and a surgery and GP in Gravesend. He works closely with the developer and architect to determine building specifications to meet with the needs of the client, or guidance documents.

Richard project manages the acoustics inputs to large scale developments, ranging from medium and large residential led schemes, energy from waste sites, transportation and mining. He works with the EHOs, developers, land owners, and local residents to find the best, and most pragmatic solution tailored for each site.



### Lauren Ballarini

Lauren is a hydrogeologist working within the Stoke Waste, Mining and Water Division. She is a chartered geologist with over 12 years' experience in hydrogeology in the contaminated land, waste and mining sectors. Her duties include designing hydrogeological site investigations, undertaking hydrogeological site investigations including aquifer pumping tests, hydrogeological risk assessments and providing data for engineering design and to assist with environmental impact assessments. Her mining projects include water supply investigations for mining operations located in tropical and semi arid climates, hydrogeological analysis for open pit and underground design work, hydrogeological modelling for impact studies and water supply assessments, as well as water balance studies for the design of heap leach pads and tailings storage facilities. With the UK environment, she has recently been involved in the delivery of a significant number of HRA Reviews for landfill sites across the southern region to allow these sites to be progressed towards definitive closure. She has been involved in a large number of Environmental Impact Assessments for developments across the UK with a particular focus on quarrying and mining.



### Luke Prazsky

Luke leads the Regulatory Support Team at Wardell Armstrong's Stoke office. With over 18 years' experience in waste management, as both a waste regulator with the Environment Agency and in consultancy he now provides Expert Witness support to the private and public sector, in addition to leading Wardell Armstrong's Environmental Permitting work. Luke is a Chartered Waste Manager and also sits on CIWM's Waste Regulation Special Interest Group and CIWEM's Waste Technical Panel.

Luke is a highly competent project manager, coordinating the work of large multi-disciplinary teams covering a wide range of subjects including technology, design, engineering, sustainability and environmental performance, planning, permitting and project delivery.

Through his environmental permitting experience Luke is intimately familiar with the regulatory requirements and technical standards for the complete range of waste management facilities, from small waste transfer stations to the largest energy recovery facilities. In previous roles with the Environment Agency, Luke progressed to the role of Permitting Team Leader in the national Strategic Permitting Group and was directly responsible for authorising new and existing waste treatment and disposal facilities to operate under the PPC Regulations.

With his expertise and experience, Luke can provide Expert Witness support on regulatory and environmental risk issues. He is skilled in the production of reports, dealing with questions and having discussions with other experts within a reasonable time, and at a cost proportionate to the matters at hand. He also has experience in permit compliance, environmental monitoring and has a good understanding of waste law.



### Helen Simpson

Helen has over 13 years' experience in environmental management, having worked in the Environment Department at Alcan's Lynemouth aluminium smelter before joining Wardell Armstrong in 2005.

Currently Helen manages Wardell Armstrong's soils and agriculture team; providing soils (including peat) and agricultural advice to a range of clients from individual landowners to multi-national companies. Typical work includes, but is not restricted to, the provision of:

- Soil survey, Agricultural Land Classification and Land Classification for Agriculture / Forestry (land quality) reporting, and assessment in relation to planning requirements, including EIA;
- Advice on the routing of linear infrastructure and layout of other development to minimise agricultural impacts;
- Mitigation and soils /peat management planning for a range of developments including large scale residential developments, linear infrastructure projects and quarrying operations;
- Detailed restoration planning for areas of peat and agricultural soils which have been subject to disturbance or degradation; and
- Providing ecological benefit statements in support of the reuse of outputs from waste treatment as restoration material; and calculation of maximum permissible material volumes, for Waste Permitting applications.

As well as other novel assignments, such as Sports Pitch Investigation to Sport England criteria.

She also has a detailed knowledge of a wide range of technical disciplines and business sectors; and has worked extensively on the production and co-ordination of EIA for a range of schemes including surface coal and quarrying; renewable energy (solar and wind); infrastructure schemes; mid to large scale housing developments; and mixed use schemes. She has also undertaken Biodiversity Impact Assessment and Management Planning for a proposed Gold Mine in Kazakhstan, ensuring compliance with IFC Performance Standard 6 and EBRD PR6; and continues to develop her skills in ESIA.

Helen has particular skills in on-site environmental management and project management; and has also worked extensively on restoration and aftercare plans for current and former surface coal mining sites and areas of quarrying; and on the production of detailed Species and Habitat Management Plans.

Helen spent three years on long-term secondment to National Grid (Gas Transmission) as Environmental Advisor on a series of trans-Pennine 1220mm diameter high pressure gas pipelines during both the design and construction phases. During that time, she provided input into the environmental aspects of route selection and oversaw the production of Environmental Statements, as well as having input into the tender process. During construction she was responsible for the daily environmental management along the pipeline spread, including watercourses and dewatering activities, inspection of plant and ensuring that mitigation materials were maintained; providing advice to management team on protected species, invasive species and environmentally sensitive areas; pollution prevention; waste management; proposed mitigation techniques; and ensuring that all licenses, consents, waste documentation etc. were in order. Helen also worked on the production of Method Statements, Pollution Prevention Plans and Environmental Management Plans for these projects; and conducted internal audits and audits of specialist subcontractors.



### Dr Eleanor Reed

Eleanor has over 10 years' experience in soil and peat science research. Specifically, she has experience researching peatlands and the impacts of afforestation and self-seeding on peats, as part of her PhD which was co-sponsored by Forest Research, together with practical peat restoration experience utilising a number of best practice measures.

Eleanor provides peat, soils and agricultural advice to a wide range of clients from individual landowners to multi-national companies and specialises in the delivery of large-scale infrastructure projects and is the named soils specialist to CSJV on HS2 Area South. Eleanor is skilled in all aspects of project management, including financial management. Eleanor sits on the National Council of the BSSS and is a member of the BSSS Professional Practice Committee (PPC).



### Paul Evans

Paul has helped project manage, design and deliver some 300MW of solar PV projects, over 100MW of wind energy and a number of other technologies including Deep Geothermal. Highlights have included managing the EIA for and consenting a large windfarm repower within the Cornwall AONB and consenting the UK's first multi-megawatt ground mounted solar farm.

His responsibilities include business development, project management and technical support for the energy and climate change group within WA. He leads a global energy team within WA that has a strong focus on providing engineering and technical support to renewable energy projects in the mining and minerals sector. He has also worked on both site finding and resource assessments as well as developing a number of technical applications for GIS in visual impact analysis. He also has experience in MCP analysis, micro-siting, wake loss analysis and noise studies for wind development.

He also has an depth knowledge of business and finance issues related to renewable energy projects and has been involved in the financial modelling of a wide variety of projects ranging from tidal stream through to complex integrated private wire energy projects spanning a wide range of generators and consumers.



### Julian Symmons

Julian Symmons is a Chartered Civil Engineer with over 25 years experience in civil engineering design on a variety of industrial, commercial and residential type projects. He leads the civils team in Newcastle upon Tyne and has provided inter-office support on a wide range of projects across the UK. Julian's experience has encompassed projects from concept/feasibility design through to detail design. He has extensive experience of contract document preparation, tender procurement and contract administration. His experience has included extensive river edge renewal and remedial works on both the River Tyne and Wear in the North East using sheet piling, mass retaining walls and river revetment.

Julian has extensive project experiences in road, drainage and service infrastructure design to support the masterplanning, detail design and construction stages. He has undertaken flood risk assessments and flood alleviation designs and has a full understanding of Surface Water Management techniques including use of Sustainable Urban Drainage systems (SUDS) such as detention ponds, basins, soakaways and permeable pavement.

Julian is fully aware of current design and specification standards and has undertaken consultation with third parties such as the Environment Agency, Local Authority and Service Authorities to deliver successful project solutions.



### John Scullion

John has over 17 years' experience in the utilities industry. He has managed and advised on utility projects covering electricity, gas, potable water and telecommunications networks. John has worked for utility providers and consultants which has equipped him with a valuable insight, assisting him with his negotiations and discussions across all utility sectors. John excels at 'adding value' to land portfolios. He works proactively and collaboratively with clients, colleagues and external stakeholders to identify risks and opportunities minimise project costs and realise objectives. John is an excellent verbal and written communicator and possesses a relaxed natural and confident ability to communicate well with others. The wealth and diversity of land development experience has equipped him with the confidence, knowledge and understanding to communicate well with clients and stakeholders. These skills together with his ability to learn quickly and adapt to different situations has enabled him to react positively, analyse problems as they arise and provide credible solutions whilst under pressure.

# CURRICULUM VITAE

## SYNOPSIS

Over 34 years experience with a wide range of landscape and environmental projects. Masterplanning and environmental assessment of large and complex schemes is an area of particular expertise.

Masterplanning and associated landscape and visual impact assessment comprises a significant area of work. Gary has presented evidence at over 70 S278 appeals as an expert witness. Projects include residential development, employment, mixed use, highway, and energy schemes. In recent years much of the planning appeal work has been associated with residential development. Successful recent schemes include 500 new dwellings at the Wheatley Campus, Oxford Brooks University. The site was in the Green Belt and Gary provided evidence on landscape and Green Belt Openness. The scheme gained SoS approval. Also provided the character and appearance evidence at the 2021 appeal at Colney Heath, where consent for 100 dwellings was granted on a Green Belt greenfield site.

Other residential schemes where Gary has been expert witness include include Long Melford Suffolk (150 units), Cliffe Woods Kent (225 units), Horncastle (300 units), Kirbymoorside North Yorkshire (225 units), Knaresborough (170 Units) Tutshill Gloucestershire (95 units) Boreham Essex (155 Units) and Sissinghurst Kent (65 Units).

Gary has advised on minerals schemes including surface coal and provided expert witness advice for the Bradley surface mine site in County Durham.

## Gary Holliday

BA (Hons), MPhil, CMLI



### position

- Director

### professional

- Chartered member of the Landscape Institute

### education

- BA (Hons), Landscape Design, University of Newcastle
- MPhil Landscape Design, University of Newcastle

### expertise

- Expert witness
- Landscape Assessment
- Masterplanning
- Environmental Impact Assessment

## **Gary Holliday**

BA (Hons), MPhil, CMLI

Landscape and visual impact assessment for energy is another area of expertise including wind and solar. Expert witness for several renewable energy schemes.

Responsible for co-ordinating the environmental statement for a major urban integrated transport scheme in Derby, co-ordinating the work of specialist consultants. Other highways schemes include Oakham Bypass, and Rothwell and Desborough Bypass in Northamptonshire. Been expert witness at these highway Inquiries.

When providing expert evidence, Gary has worked with Christopher Lockhart Mummery QC, Paul Tucker QC, Chris Young QC, Tim Corner QC, Giles Cannock QC, Peter Goatley QC, Richard Kimblin QC, and many juniors including Zack Simons, Thea Osmund Smith, James Corbett Burcher, Sarah Reid and John Barrett.

Masterplanning projects include the Estate Review for Loughborough University, guiding the new development on the campus. The project included the science park on land adjacent to the main campus.

Responsible for the landscape design of 'Conkers' the Forest Visitor attraction at the heart of the National Forest. The scheme includes a wide range of educational and leisure facilities, set within an arboretum of new woodlands, established on a former colliery site. Conkers won the Civic Trust Special Award for Partnership working

Carried out the environmental assessment for the major brownfield re-development at Glasshoughton, including commercial residential retail and leisure uses. The scheme involved significant environmental works to clean up the heavily polluted site. The re-development scheme included a 50m high 'snowdome', so visual impact was a sensitive issue.

Landscape character assessment projects include the Charnwood Forest Landscape Character assessment, which

## **Gary Holliday**

BA (Hons), MPhil, CMLI

was a finalist in the Landscape Institute Awards 2019, in the Landscape Planning category.

Produced the SPD on the 'Location and Design for Major Waste Management Proposals' in Cambridgeshire and Peterborough. The SPD provides easy to follow guidance for developers and public authorities. The SPD has been awarded a Landscape Institute Award.

Lead the landscape and ecological aspects of the development of Phase 2 of Blythe Valley Business Park in Birmingham. This premium employment site is setting high environmental and design standards.

Green Infrastructure Provision, including the detailed design and implementation of amenity spaces, play facilities and sports pitches has been completed for a number of large residential development schemes. These include Hatchwarren in Basingstoke (2000 units) and Cawston in Rugby (1000 units).

Provided the concept design for the Little Darters Adventure play facility at the Whisby Nature Reserve in Lincolnshire. This scheme was the winner of a "Street Design" Award.

Past winner of the Landscape Institute Travel Award, enabling study of the environmental effects of tourism in Turkey. Professional Practice Examiner for the Landscape Institute.

## ES Part I Appendix 2 I

## Warrington Motorway Service Area

### J11, M62

#### ES Addendum

#### Text Deleted from Original ES Part I Report

Section Number / Paragraph Number / Table number / Figure Number	Text Deleted from Original ES	Reason
Front Cover	B 22 August 2019	Updated report reference and report date
2.150	This	Re-emphasis
2.157	Has now been	Re-emphasis
2.207	Quarter 4 2021 Or so Q4 2022	Update to Phasing
Various (section 5)	19 Various NPPF paragraph and text references	Updated to reflect the updated planning policy document
6.9	of HS2, due to the limited information that is available, the cumulative assessment is limited and as such high level and qualitative. This is detailed within Section 9: Cumulative Assessment.	Updated details in respect of HS2
9.11	However, it should be noted that the Proposed Development would be constructed and operational at a similar time to the current identified advanced works for HS2, which are programmed	

Section Number / Paragraph Number / Table number / Figure Number	Text Deleted from Original ES	Reason
	ahead of HS2 construction works.	
9.13	Also many	
Table 9.1 – reference to HS2	Reference to HS2	Replacement with details in 9.2
9.57	is difficult to assess at this stage as HS2 are yet to undertake a quantitative assessment and as such there are no traffic data available	Updated details in respect of HS2
9.60	autumn/winter 2022	
9.77	At the time of writing no confirmation of mitigation/compensation proposals is available and therefore no detailed assessment can be undertaken	