

Langtree PP and Panattoni

Six 56 Warrington

Environmental Statement

Part 2 – Waste Technical Paper I I

Revision I 28 January 2019



Revision Record

Revision Reference	Date of Revision	Nature of Revision	Author	Checked By
1	28/01/2019	First draft	Clare Russell David Gabb	Clare Russell
2	04/02/2019		Clare Russell	
3	25/02/2019	Third draft	Clare Russell	

Report Author	Clare Russell/David Gabb
Report Date	4 February 2019
Project No.	OXF10765
Document Ref.	Waste Technical Paper 11
Revision	2

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Appendix 11.1 Outline Site Waste Management Plan

Appendix 11.2 Outline Operational Waste Management Strategy

I. Introduction

- I.1. This Technical Paper has been prepared by RPS Planning and Environment on behalf of Langtree PP and Panattoni. It considers the likely significant effects of the Proposed Development Six 56 Warrington in terms of waste generation and management during the construction and occupation phases of the development. The waste streams generated during these phases will comprise different types and volumes of waste that will require appropriate management measures. The Paper has been prepared using desk-based information and the available design information as provided in the Project Description contained in the Environmental Statement (ES) Part One Report.

2. Documents Consulted

Legislation/Strategies

Revised Waste Framework Directive 2008 (200/98/EC)

2.1. The key driver for waste management legislation in the UK is the revised Waste Framework Directive (2008/98/EC). It goes beyond the aims of the original Directive to protect human health and the environment, and considers the efficiency of resource use and the impacts of continued resource exploitation. The waste hierarchy remains the key element of the Directive and it comprises a five priority order which determines how waste should be treated:

- Waste prevention;
- Preparing for re-use;
- Recycling;
- Energy recovery; and
- Disposal.

2.2. Any changes to planning, policy and permitting regimes within Member States must be underpinned by the waste hierarchy principle. This will ensure the delivery of the appropriate waste services to enable waste to be managed in accordance with the hierarchy. Other key requirements of the Directive are:

- A requirement for local authorities to separately collect household (and trade) glass, metal, plastic and paper waste by 2015, where it is technically, environmentally and economically feasible. Legislation in the UK ('Waste (England and Wales) (Amendment) Regulations 2012') confirms that commingled collections are permitted providing that the waste can undergo recovery operations in accordance with the Directive.
- Member States are encouraged to implement the separate collection of biowaste and to develop anaerobic digestion and composting facilities, however technology types have not been stipulated and targets have not been set.

- 2.3. Member States are required to develop and implement waste prevention programmes. This introduces the concept of ‘whole life-cycle’ for products and materials and reducing the environmental impacts of waste generation and waste management. Measures to reduce waste may include extending the life of products, or reducing the content of hazardous materials.
- 2.4. Certain types of waste have been excluded from the revised Waste Framework Directive (rWFD). The excluded waste most relevant to Six 56 Warrington is uncontaminated soil and other naturally occurring material excavated in the course of construction activities, however the material must be used for construction purposes in its natural state on the site from which it was excavated.

Waste (England and Wales) Regulations 2011 (as amended)

- 2.5. The Waste (England and Wales) (Amendment) Regulations 2011 transpose the revised Waste Framework Directive 2008/98/EC into UK legislation. Under the regulations, businesses (as a producer of waste) are required to take the waste hierarchy into account when managing their waste. The regulations put a greater emphasis on waste prevention. Businesses are required to take all reasonable measures to minimise waste, and then consider preparing waste for re-use and opportunities for recycling or energy recovery. Disposal of waste should be considered as the last option.
- 2.6. Waste transfer notes must include a declaration that the waste producer has applied the waste hierarchy principle and the waste described using the Standard Industry Classification (SIC) Codes. Businesses that transport their own waste are required to register with the Environment Agency as a low-tier waste carrier.

Our Waste, Our Resources: A Strategy for England

- 2.7. The Government published its ‘Our Waste, Our Resources: A Strategy for England’ in December 2018 (Defra, 2018). The Strategy sets out the Government’s priorities for preserving material resources, minimising waste, promoting resource efficiency and moving towards a circular economy. The objectives of the strategy that are most relevant to Six 56 Warrington are:
- Sustainable production: invoking the ‘polluter pays’ principle; extended producer responsibility for packaging and other waste streams; set minimum requirements

through ecodesign to encourage resource efficient design; stimulate demand for recycled plastic packaging; and

- Resource recovery and waste management: improving urban recycling rates, address barriers to the use of secondary materials.

2.8. By the end of 2025, the Government will have reviewed and consulted on measures such as extended producer responsibility and product standards for five priority waste streams including certain materials in the construction and demolition sector. The full list of products and materials are yet to be defined and will be subject to further review and consultation.

2.9. The Government also proposes to develop plans to increase resource efficiency and minimise waste in the construction sector. It will work with the Green Construction Board building on their guidance for increasing resource efficiency and reducing waste, by establishing a definition of the zero avoidable waste in the sector and develop a route map by 2020 setting out how and when this can be achieved.

National Planning Policy

National Planning Policy Framework

2.10. The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2018) sets out the Government’s planning policies for England and how these should be applied. Waste minimisation is one of the elements within the environmental objectives for achieving sustainable development.

National Planning Policy for Waste

2.11. The National Planning Policy for Waste (DCLG, 2014) sets out the Government’s objectives for achieving sustainable and efficient resource use and management. Planning is acknowledged to be a key element of achieving this objective by:

- Driving waste management up the waste hierarchy to ensure to improve resource efficiency;
- Establishing frameworks to engage communities and business to take more responsibility for their own waste;
- Helping to secure the re-use, recovery or disposal of waste without endangering human health and without harming the environment; and

- Ensuring the provision of appropriate waste storage and segregation facilities in the design and layout of new development to facilitate high quality collections.
- 2.12. The NPPW sets out detailed waste planning policies (e.g. identifying the need for waste management facilities and identifying suitable sites and areas) and should be read in conjunction with the National Planning Policy Framework and the Waste Management Plan for England. The NPPW requires all local planning authorities to have regard to its policies when discharging their responsibilities with regard to waste management
- 2.13. In terms of Six 56 Warrington, the NPPW states that the local planning authority “*should, to the extent appropriate to their responsibilities, ensure that:*
- *New, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development...;*
 - *The handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal”.*

Waste Management Plan for England

- 2.14. The Waste Management Plan for England (Defra, 2013) provides an overview of the current waste management situation in England and fulfils the revised Waste Framework Directive Article 28 mandatory requirements. It sets out the types and volumes of waste generated in England and how the waste is managed, including progress towards meeting targets and obligations.

Local Policy

- 2.15. Warrington Borough Council is the waste planning authority for the local area and as such is required to prepare a Local Plan that meets the requirements of the NPPW. The Local Plan must identify the existing and future needs of the area for the management of waste streams and explain how potential waste sites will be identified and assessed.
- 2.16. Warrington Borough Council is undertaking a review of the Local Plan that will take into account the need for Warrington to accommodate a significant increase in new homes and jobs over the next 20 years as part of the Councils ‘New City’ aspirations.

2.17. As part of this review, Warrington Borough Council commissioned Urban Vision to prepare a Waste Study and Policy Review in May 2017 (Warrington Borough Council, 2017a) which sets out the Council's approach to identifying waste sites and areas, and the methodology and guidance used in this process. The only extant policy of the Warrington Development Plan relating to waste is Policy MP8 'Waste' of the Local Plan Core Strategy (adopted July 2014), which states that:

"The Council will promote sustainable waste management in accordance with the waste hierarchy. This means that the Council will seek to manage waste at as high a level of the waste hierarchy as possible. In order to achieve this the Council will;

- bring forward a Waste Local Plan which will identify and if necessary safeguard sites/areas appropriate to meet the waste management needs of the borough in accordance with the borough's spatial aspirations; and*
- seek to achieve a continuing reduction in the amount of waste materials imported into the borough by working with adjacent authorities to help them achieve their own self sufficiency; 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.*

2.18. The Waste Study and Policy Review (Warrington Borough Council, 2017a) recommended that the Local Plan should include the following objective to ensure its objectives are in accordance with the NPPW:

"In working towards the prevention of waste, Warrington will seek to achieve a reduction in the amount of waste produced in the borough and treat waste at as high a level in the waste hierarchy as practicable by providing appropriate and sustainable sites and/or areas for the management of waste".

3. Consultations

3.1. Table 11.1 below sets out the consultation that has been undertaken in preparation of the Technical Paper (including feedback received in Warrington Borough Council’s ES Scoping Opinion dated 6 April 2018) and how the comments have been incorporated.

Theme / Issue	Date	Consultee	Method	Summary of Discussion	Outcome / Output
Advice related to EIA Scoping Requirements – General Principles	02 March 2018	Natural England	Letter attached to email	Natural England recommend that that “quantities and types of waste produced during the construction and operation phases” should be included in the ES.	The predicted quantities and types of waste produced during the construction and operation of Six 56 Warrington are outlined in section 7.
Litter	27 March 2018	Appleton Parish Council	Letter attached to email	The parish council raised concerns that Six 56 Warrington may worsen the amount of litter around the Appleton Thorn trading estate.	Six 56 Warrington’s operational waste management is assessed in section 7.
Litter	29 March 2018	Local resident	Online comment on scoping report	Concern was raised about the existing level of rubbish in the area. It was also suggested that more regular rubbish collection be implemented.	Six 56 Warrington’s operational waste management is assessed in section 7.
Litter	27 March 2018	Local resident	Online comment on scoping report	Concern was raised that Six 56 Warrington may worsen the amount of litter in the local area.	Six 56 Warrington’s operational waste management is assessed in section 7.
Progress of the Waste Local Plan	29 January 2019	Warrington Borough Council	Telephone call	The draft Waste Local Plan is due to be published in March 2019. It will follow the conclusions of the Waste Arisings and Capacity Requirements report (May 2017) and the outline of the waste strategy set out in the Preferred Development Options document (July 2017). WBC is proposing to build a waste transfer station but has not secured a site. (its original site had fallen through). The Council is not proposing any further waste facilities within the Local Plan period and will seek to protect its existing sites.	The assessment takes into account the existing waste management facilities and WBC’s outline waste strategy.

Table 11.1: Summary of Consultations and Discussions

4. Methodology and Approach

- 4.1. The assessment methodology has been developed with regard to national, regional and local waste planning policy and guidance.
- 4.2. There is no published assessment guidance or criteria for assessing waste impacts or assigning a level of significance to the predicted effects. The methodology is therefore, based on relevant policy and previous experience of undertaking similar assessments.

Receptors

- 4.3. For the waste assessment, the key receptor is the existing and proposed waste management infrastructure, its location and its associated capacity to accept the waste types and volumes likely to be generated by the proposed Six 56 Warrington development. The other receptor is waste policy/targets set at an international, national, regional (industry) and borough/district level and the how the waste management procedures for the construction and operation of Six 56 Warrington will conform.

Designation	Receptors
International	Waste Framework Directive Targets
National	Our Waste, Our Resources policies
Regional	Industry targets
County	None
Borough / District	Waste management facilities of importance to Warrington Borough. Recommended policies for the Local Plan.
Local/Neighbourhood	None

Table 11.2: Receptors

Environmental Impacts

- 4.4. The environmental impacts of Six 56 Warrington in terms of waste relate to the types and volumes of waste to be generated during construction and operation together with the existing and proposed waste management facilities in the surrounding area. Impacts are likely to be adverse as the construction and operational phases will generate waste streams which currently do not exist.

Magnitude	Environmental Impact
Substantial	Waste generated is hazardous and requires specialized treatment outside the borough. Waste from the proposed development is >15% of waste generated in the borough. There is an immediate shortfall in the capacity of existing waste management facilities for the types of waste likely to be generated. No Waste Management Plan.
High	Waste generated is hazardous and requires incineration or landfilling. Waste is transported outside of region for treatment or disposal. No commitment to recycle waste within Waste Management Plans. Waste from the proposed development is >10% of waste generated in the borough. A shortfall in the capacity of existing waste management facilities is predicted early in the Waste Local Plan period and no new sites have been allocated.
Moderate	Waste is hazardous but can be recovered with pre-treatment. Waste can be managed within the region using methods lower down the waste hierarchy. Waste from proposed development is >5% of waste generated in the borough. A shortfall in the capacity of existing waste management facilities is predicted later in the Waste local Plan period and several potential sites have been allocated.
Minor	Waste is non-hazardous or inert and can be recycled or composted within the borough. Waste Management Plans for construction and operational waste complies with national and regional targets and policy to divert waste from landfill. Waste from the proposed development is >1% of waste generated in the region. No shortfall in capacity of existing and proposed waste management facilities.
Negligible	Waste generated is inert and can be re-used on the site. Evidence that waste has been minimised in the design of the Proposed development. Waste from the proposed development is less than 1% of waste generated in the borough.
Neutral	The construction and operational phases of the proposed development implement a zero waste to landfill policy.

Table 11.3: Environmental Impacts

Significance of Effects

- 4.5. The significance of effect is determined using the significance matrix in Section 6 of the Environmental Statement Part One Report. This identifies the receptor level across the top of the matrix and the magnitude of environmental impact down the side and where they meet within the matrix identifies the significance of the effect.

Impact Prediction Confidence

- 4.6. 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 11.4: Confidence levels

5. Baseline Information

Overview

- 5.1. The baseline conditions for waste are established from the volumes of waste currently generated within the local area and the existing (and proposed) waste management infrastructure. The baseline information is taken from publicly available sources including:
- Warrington Borough Council Local Plan 'Preferred Development Option Regulation 18 Consultation', July 2017;
 - Warrington Borough Council 'Waste Study and Policy Review', May 2017;
 - Warrington Borough Council 'Waste Arisings and Capacity Requirements Report 2017';
 - Defra and Government Statistical Service 'UK Statistics on Waste', December 2016; and
 - Environment Agency Waste Data Interrogator 2015;
- 5.2. The site is located predominantly in the administrative area of Warrington Borough Council and is located between the major conurbations of Merseyside and Greater Manchester. A small section to the south east of the site is in the Cheshire East authority boundary. For the purpose of this report, it has been assumed that waste from the site will be managed in accordance with Warrington Borough Council waste policies and strategy.
- 5.3. Warrington Borough Council shares boundaries with Halton, Cheshire West and Chester, Cheshire east, and the four metropolitan boroughs of St Helens, Wigan, Salford and Trafford.

Waste Streams

- 5.4. Waste generated within the borough of Warrington comprise the following types of waste:
- Local Authority Collected Waste (LACW);
 - Commercial and Industrial (C&I) Waste;
 - Construction, Demolition and Excavation (CD&E) Waste;
 - Hazardous Waste;
 - Agricultural Waste;
 - Low Level (Non-Nuclear) Radioactive (LLR) Waste; and
 - Waste Water/Sewage Sludge.

5.5. The scope of this Paper focuses on the types of waste likely to be generated during the construction and operation of the Six 56 Warrington development. These are Construction, Demolition and Excavation Waste, Commercial & Industrial Waste, and Hazardous Waste. Whilst the other waste streams are important considerations in the waste planning policy of Warrington Borough Council, they would be managed at different facilities to the waste generated by Six 56 Warrington.

5.6. The following tables provide data on the quantity of waste generated in the area for the years 2015 to 2037 according to different waste streams. The data is derived from the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b). Table 11.5 below sets out the baseline and projected total annual volume of waste generated within the borough of Warrington.

Waste Type	Quantity 2015	Quantity 2020	Quantity 2025	Quantity 2030	Quantity 2037
Commercial & Industrial	165,234	163,880	162,541	162,015	161,457
Construction, Demolition & Excavation	241,682	244,892	246,374	247,352	248,453
Hazardous	10,865	11,181	11,519	11,859	12,394

Table 11.5: Projected waste arisings by waste stream (tonnes per annum) – based on Oxford Economics growth projections.

5.7. Construction, Demolition and Excavation (CD&E) waste represents the largest waste stream. The projections by Oxford Economics show CD&E arisings are predicted to increase from the baseline of approximately 242,000 tonnes per annum in 2015 to approximately 248,000 tonnes per annum in 2037.

Management of Waste

5.8. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) identified the quantity of wastes deposited in 2015 in Warrington, however only 227,867 tonnes of the total below arose within the Local Plan area.

Management Method	Construction and Demolition Waste	Excavation Waste	Total
CA Site	337		337
Haz Waste Transfer/Treatment	56,449	52,023	108,471
Inert Landfill	16,495	130,255	146,750

Management Method	Construction and Demolition Waste	Excavation Waste	Total
Non Hazardous Landfill	5,657	82,367	88,024
Non Hazardous Transfer	4,447	3,451	7,898
Non Hazardous Transfer/Treatment	4,679	5,041	9,720
Deposit of waste to land (recovery)		166,113	166,113
Restricted Landfill		22,042	22,042
TOTALS	88,063	461,293	549,356

Table 11.6: CD&E waste deposits by management method in Warrington in 2015 (tonnes)

5.9. Of the CD&E waste generated in Warrington only 6% of arisings were exported in 2015.

Waste Sites

5.10. A search of Environment Agency records has identified a number of waste management facilities within a 20 km radius of the Site. These facilities are shown Figure 11.1 and summarised in Table 11.7 below.

Reference	Name of Facility	Operator	Type of Facility	Licensed Tonnage	Distance from Site (km)
1	Whitehead Landfill Site	Viridor Waste Exeter Ltd	Co-Disposal Landfill Site	83333	15.3
2	Lord St Helens Quarry Landfill	Cory Environmental (Central) Ltd	Co-Disposal Landfill Site	674672	15.2
3	Frank O' Gara & Sons Ltd	Frank O' Gara & Sons Ltd	Inert & excavation Waste TS + treatment	74999	10.2
4	Manchester Skips	Bates Malcolm	Transfer Station taking Non-Biodegradable Wastes	3801	9.4
5	Philip Bannon Haulage Ltd	Philip Bannon Haulage Ltd	Inert & excavation Waste TS + treatment	74999	14.8
6	St Helens Electrical Recycling Facility	Viridor Waste Management Ltd	Material Recycling Treatment Facility	79000	15.4
7	Rubber Recycling Ltd	Rubber Recycling Ltd	Material Recycling Treatment Facility	24999	16.5
8	European Metal Recycling Ltd	European Metal Recycling Ltd	Metal Recycling Site (mixed MRS's)	300000	17.2
9	A. Vlies Northwich Metals Limited	A Vlies Northwich Metals Limited	Metal Recycling Site (mixed MRS's)	4999	8.4
10	Mercury Recovery, Trafford Park	Mercury Recycling Limited	Metal Recycling Site (mixed MRS's)	25000	17.0
11	A & B Containers Ltd	A & B Containers Limited	Material Recycling Treatment Facility	4999	18.3
12	Southworth Quarry Landfill P P C	Gaskell Brothers (W M & C) Ltd	Inert LF	500000	9.5
13	Woolston Deposit Ground	Churchill Enviro Ltd	Deposit of waste to land as a recovery operation	985000	3.8
14	Holford Brinefield Landfill Site	Ineos Enterprises Limited	Landfill taking Non-Biodegradeable Wastes	220000	11.3
15	S Norton & Co Limited	S Norton & Co Limited	Metal Recycling Site (mixed MRS's)	300000	17.5
16	M & N Containers Ltd	M & N Containers Ltd	Material Recycling Treatment Facility	5000	17.8
17	Risley Iv Landfill Site	U K Waste Management Ltd	Co-Disposal Landfill Site	935000	8.4
18	Packaging Reuse & Disposal Services Ltd	Packaging Reuse & Disposal Services Ltd	Material Recycling Treatment Facility	7499	17.7
19	Arpley Landfill Site	3 C Waste Ltd	Co-Disposal Landfill Site	117647	6.2

20	Roydon Granulation Limited	Roydon Granulation Limited	Material Recycling Treatment Facility	2083.33	15.4
21	Rivington View Farm	Threlfall William	Metal Recycling Site (mixed MRS's)	1400	18.5
22	R G & Sons	Eid Abed	Metal Recycling Site (mixed MRS's)	416.66	13.9
23	M & N Containers Ltd	M & N Containers Ltd	Material Recycling Treatment Facility	1680	17.8
24	J Bryan Ltd	J Bryan Ltd	Metal Recycling Site (mixed MRS's)	5000	15.8
25	Abbotsfield Metals Ltd	Abbotsfield Metals Ltd	Metal Recycling Site (mixed MRS's)	416.667	13.9
26	W R Roberts And Sons	W R Roberts & Sons	Metal Recycling Site (mixed MRS's)	74999	8.9
27	F X Dunn	Dunn X F	Metal Recycling Site (mixed MRS's)	5000	3.7
28	M & J Burns Ltd	M & J Burns Ltd	Metal Recycling Site (mixed MRS's)	25000	14.9
29	Karalius Brothers Waste Limited	Karalius Brothers Waste Limited	Metal Recycling Site (mixed MRS's)	74999	12.4
30	Fir Tree Farm Landfill Site	Collier Industrial Waste Ltd	Co-Disposal Landfill Site	15000	6.8
31	Moss Hall Farm Landfill Site	Collier Industrial Waste Ltd	Co-Disposal Landfill Site	6250	6.8
32	The Sheppard Group Ltd	The Sheppard Group Ltd	Material Recycling Treatment Facility	75000	14.0
33	Frodsham Marsh Lagoon	Inovyn Chlorvinyls Limited	Landfill taking other wastes	24950	13.7
34	Ecocycle Waste	J L Sorting Ltd	Material Recycling Treatment Facility	150000	11.5
35	Irlam - Material Resource Centre	Biffa Waste Services Ltd	Material Recycling Treatment Facility	90000	9.7
36	Lyme And Wood Pits Landfill	Enovert North Limited	Deposit of waste to land as a recovery operation	100000	14.4
37	T & K Gallagher Ltd	T & K Gallagher Ltd	Inert & Excavation WTS with treatment	250000	18.7
38	Nash Road Bio- Soil Production Facility	Bradley Park Waste Management Limited	Material Recycling Treatment Facility	399000	16.9
39	Port Warrington Facility	P P O' Connor Ltd	Deposit of waste to land as a recovery operation	99999	6.0
40	Centrol Recycling Group Ltd	Centrol Recycling Group Ltd	75kte Materials Recycling Facility	74999	15.9
41	Bold Heath Quarry	D Morgan Plc	Use of waste in a deposit for recovery op	59999	12.0

42	Town Farm Quarry	P Casey Enviro Limited	Deposit of waste to land as a recovery operation	99999	13.7
43	Wigan Depot	Wigan Tippers Ltd	Inert & Excavation WTS with treatment	249999	18.8
44	Waste Recycling Depot	W Maher & Sons Ltd	Treatment of waste to produce soil <75,000 tpy	74999	18.7
45	Former Vulcan Works Foundary	Buckingham Group Contracting Ltd	Deposit of waste to land as a recovery operation	99999	11.3
46	Morleys Quarry	Astley Sand & Aggregates Limited	Inert LF	150000	13.8
47	Land Adj To Millhouse Garage	Mill House Metals Limited	75kte Metal Recycling Site	74999.999	15.8
48	Land Off Sinderland Road	Huperade Limited	Treatment of waste to produce soil <75,000 tpy	74999	10.5
49	St Michaels Golf Course	Mersey Valley Golf And Country Club	Deposit of waste to land as a recovery operation	1188032	14.4
50	Cronton Quarry	Grundy And Co Excavations Limited	Inert LF	20000	18.3
51	Ottersbank Farm	Dig And Shift Limited	Deposit of waste to land as a recovery operation	50000	18.9
52	Platinum International Limited	Platinum International Limited	Metal Recycling Site <25000 tps	24999	17.2
53	Town Farm Quarry	P Casey Enviro Limited	Deposit of waste to land as a recovery operation	41565	13.6
54	Aggregates Yard	D G Cummins And Co Ltd	Inert & excavation Waste TS + treatment	75000	8.5
55	Cledford Lane Environmental Hub	A N S A Environmental Services Limited	Household, Commercial & Industrial Waste T Stn	199999.999	19.7
56	W P I Group	W P I Group Limited	Inert & excavation Waste TS + treatment	74999	17.6
57	Whitehead Hub Site	Whitehead Restoration Limited	Material Recycling Treatment Facility	400	7.5
58	Johnsons Lane Landfill Site	Broadthorn Construction Ltd	Treatment of waste to produce soil <75,000 tpy	74999	11.2
59	Philip Bannon Haulage	Philip Bannon Haulage Ltd	Treatment of waste to produce soil <75,000 tpy	75000	11.4
60	N M S Civil Engineering Limited	N M S Civil Engineering Limited	Inert & Excavation WTS with treatment	249999	17.0
61	Nick Brookes Recycling	Nick Brookes Recycling Ltd	Use of waste for timber / construction products	74999	12.4

Table 11.7: Waste management facilities within 20 km radius of the Site

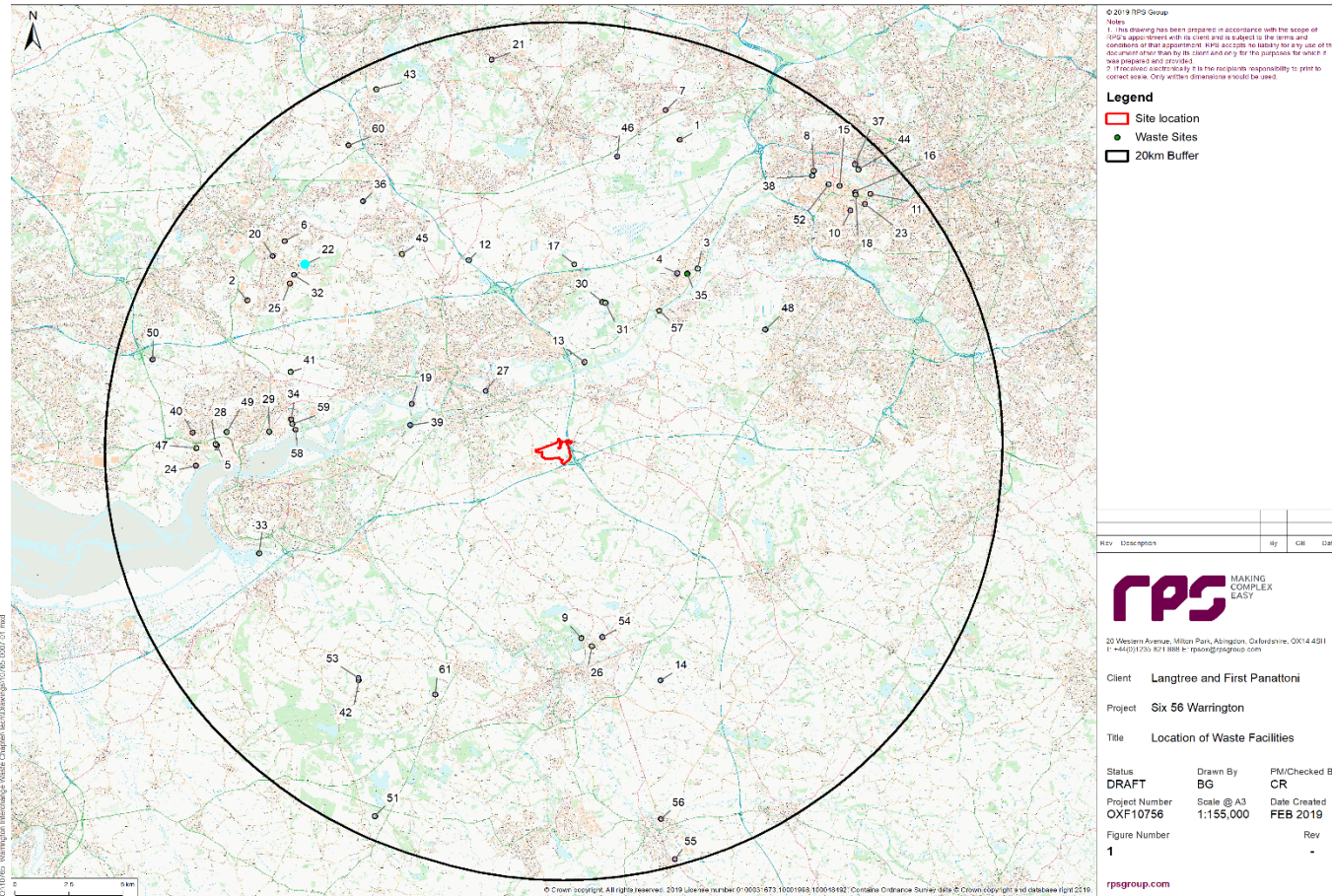


Figure 11.1: Location of waste facilities

Waste Capacity

Construction, Demolition and Excavation Waste

- 5.11. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) stated that it is not possible to identify the total existing capacity available to manage CD&E waste as a number of facilities will accept these waste streams alongside other waste streams. However, the capacity to exclusively manage CD&E waste at all types of facilities within Warrington in 2015 was 1,912,660 tonnes (including 100,000 tonnes at Port Warrington which the 2017 report assumed to be complete) and over 1 million tonnes of capacity at restricted landfill sites.
- 5.12. As with the existing capacity described above, it is not possible to identify the projected separate capacity gap for CD&E waste with a high degree of certainty. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) concludes that from 2032 there is a shortfall of 35,588 tonnes of inert landfill capacity per annum due to the closure of Southworth Quarry in 2031.
- 5.13. There is excess treatment capacity solely for the use of CD&E waste and therefore, there is no anticipated need for additional treatment capacity for CD&E waste.
- 5.14. At the time the data in the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) was collected, there were two sites accepting C&D waste as a recovery operation. These sites were:
- Woolston Deposit Ground; and
 - Port Warrington Facility.
- 5.15. The facility at Port Warrington is expected to have closed in 2016 and is unlikely to provide any additional capacity. The Woolston Deposit ground is due to close in 2031 following which there will be a shortfall in the provision of recovery of C&D waste of approximately 73,412 tonnes per annum from 2032.

Hazardous Waste

- 5.16. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017) explains that hazardous waste is a sub category of LACW, C&I and CD&E wastes; the

estimated totals of these waste types have been calculated to include the sub-category of hazardous waste. Hazardous waste generated in Warrington is primarily exported out of the area for management: in 2015, 60% of hazardous waste exported from Warrington was sent on for recovery with 8% sent to landfill.

- 5.17. In terms of hazardous waste management facilities, there is very limited capacity in Warrington, with the majority of the facilities comprising transfer stations or metal recycling sites. As a result, the majority of hazardous waste is exported for management outside of the Local Plan area where the majority of treatment, incineration and landfill facilities are located. This provision is anticipated to continue and remain available during the Local Plan period. Given the economies of scale required to establish a hazardous waste facility, the relatively small quantities of hazardous waste arisings in Warrington would make the provision of such a facility in Warrington unviable unless significant quantities were imported from outside the area.

Commercial and Industrial Waste

- 5.18. As with CD&E waste, there are very few waste management facilities that are only permitted to accept C&I waste, therefore it is difficult to accurately predict the total capacity for C&I waste in Warrington. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) confirms that there is currently only one recycling facility and three Household Recycling Sites in the Local Plan area that handle C&I waste. Some of the growth and increased recycling scenarios set out in Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) show there is a need for a local recycling facility to provide for Warrington's needs.
- 5.19. Existing landfills accepting non hazardous wastes are due to close during the Local Plan period and therefore, there is a capacity requirement for non hazardous landfill from 2018 under all the recycling and growth options considered in the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b).
- 5.20. There is also a capacity gap for the treatment of C&I waste. According to the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b), it is difficult to confirm at this stage the specific requirements of the treatment facility; the capacity gap could be met by the surplus treatment capacity available for CD&E waste. However, the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b)

recommends that the requirement for a small treatment facility including anaerobic digestion, and specialized treatment of biodegradable liquids and wastes should be considered.

Waste Targets

Waste Framework Directive Targets

5.21. The key driver for waste management legislation in the UK is the revised Waste Framework Directive (2008/98/EC), which replaces the previous Directive 2006/12/EC. The Directive was adopted in 2008 and sets a number of key requirements:

- Member States are required to develop waste prevention programmes, which introduce the concept of whole life-cycle of products and materials, and reducing the key environmental impacts of waste generation and management;
- Member States are required to set targets for preparing for re-use and recycling of waste to encourage the recovery of waste, and the use of recovered materials should be encouraged; and
- Waste should be separately collected if technically, environmentally and economically practicable before undergoing recovery.

5.22. Article 3 of the Directive also clarifies the definition of the waste hierarchy stages. These are as follows:

“Prevention” means measures taken before a substance, material or product has become waste, that reduce:

- the quantity of waste, including through re-use of products or the extension of the life span of products;
- the adverse impacts of the generated waste on the environment and human health; or
- the content of harmful substances in materials and products;

‘re-use’ means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived;

‘preparing for re-use’ means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other re-processing;

‘recycling’ means any operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials;

‘recovery’ means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.”

- 5.23. The revised Waste Framework Directive set a target for Member States to reuse, recycle or recover 70% of non-hazardous construction and demolition waste by 2020.
- 5.24. The Waste (England and Wales) Regulations 2011 transpose the revised Waste Framework Directive into national legislation including the target set in the above paragraph. Other targets set at a national level for construction and demolition wastes (i.e. England’s Waste Strategy (2007)) have been superseded as the target date has since passed.

Our Waste, Our Resources: A Strategy for England

- 5.25. The overall target set by the Government’s Our Waste, Our Resources strategy (Defra, 2018) is to eliminate all kinds of avoidable waste by 2050. The strategy also aims to eliminate food waste sent to landfill by 2030 and eliminating avoidable plastic waste by the end of 2042. Recycling targets for packaging will be raised across a number of materials and waste streams. A tax will be added to plastic packaging with less than 30% recycled content to provide an economic incentive for businesses to use recycled material. To facilitate resource recovery and waste management, the strategy also aims to increase recycling rates for businesses and address information barriers to the use of secondary materials as inputs.

Best Practice Targets

- 5.26. BREEAM was first launched in 1990 and is the most widely used environmental assessment method for buildings. BREEAM New Construction Manual (BRE, 2018) is a performance based assessment method and certification scheme for new buildings. Its primary aim is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost effective manner. This is achieved through measuring and evaluating the performance of a building against best practice using a number of criteria across a range of environmental issues. Performance is quantified using a credit system according to the measures implemented, which

is ultimately expressed as a single certified BREEAM rating.. Buildings at the Six 56 development will be designed to achieve a minimum BREEAM Very Good Rating.

5.27. Construction waste and operational waste are two of those issues. The benchmark for construction waste relates to the diversion of non-hazardous construction waste from landfill:

- Divert 70% non-demolition waste and 80% demolition waste by volume (or 80% and 90% respectively by tonnage) from landfill;

5.28. In terms of operational waste, the BREEAM Manual lists a number of criteria relating to the provision of dedicated storage facilities for operational-related recyclable waste streams to achieve good practice. These criteria are:

- There is a dedicated space(s) to cater for the segregation and storage of operational recyclable waste volumes generated by the assessed building, its occupant(s) and activities;
- The dedicated space(s) must be:
 - Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams;
 - Accessible to building occupants/facilities operators for the deposit of materials and collections by waste management contractors;
 - Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities.
- Where the consistent generation in volume of the appropriate operational waste stream is likely to exist, (e.g. large amounts of packaging waste), the following facilities are provided as part of its waste management strategy:
 - Static waste compactor(s) or baler(s) situated in a service area of dedicated waste management space.

6. Alternatives Considered

- 6.1. The alternatives considered with regard to waste are primarily design decisions. At the outline design stage, the key consideration has been the management of spoil material generated by bulk earthwork activities to level the site and to create development platforms for the buildings. In this case, the options were to remove excess spoil from the site and import fill materials as required or alternatively, to maximize the re-use of the spoil within the design of the site, for example incorporating the spoil into the design of landscaping and noise attenuation bunds. The option to retain the material on the site was selected and work to support this option has been undertaken. Conceptual designs of the bulk earthworks have been prepared which includes the development of a 'cut and fill' model that allows for 100% of suitable materials to be re-used on site. If unsuitable soils are encountered during preparatory works, the options of either off-site disposal or on-site treatment for re-use on site have been considered. Where technically and economically feasible, the material would be remediated and re-used on site. Further details may be found in ES Technical Paper – Ground and Contamination Paper 1, ES Part 2.
- 6.2. As the design of the buildings progresses, options of building materials and construction methodologies will be identified. These alternatives cannot be considered at this stage, however the approach of minimizing waste through design will continue to be applied.

7. Potential Environmental Effects

7.1. The assessment focuses on the impacts of waste generated from the construction and operation phases of Six 56 Warrington on the existing and proposed waste management infrastructure. These impacts relate to the availability of waste management facilities in the borough of Warrington, the siting of new waste management facilities and the capacity of these facilities to manage the additional waste volumes generated by the Six 56 Warrington development.

Construction Phase

7.2. The design of Six 56 Warrington is at outline stage and therefore, the design of the proposed buildings has not been finalized. The types of waste that would be generated from the construction of Six 56 Warrington is listed below, however this may be refined during detailed design:

- Soils (spoil from levelling of the site, earthworks for buildings, drainage and infrastructure, contaminated spoil, imported fill material);
- Glass;
- Concrete/cement;
- Tarmac;
- Bricks;
- Oils (lubricating oil);
- Metals (cables, wires, bars);
- Timber (softwood and board products such as plywood, chipboard);
- Packaging (paint pots, pallets, cardboard, cable drums, wrapping bands, polythene sheets);
- Plastics (pipes, frames, non-packaging);
- Green waste (grass, branches etc);

- Paints;
- Insulation (glass fibre, mineral wool or foamed plastic); and
- Plasterboard.

7.3. Given that the design information for the proposed building and infrastructure is still at outline stage, it is not possible to provide a detailed breakdown of waste quantities by type.

7.4. The assessment assumes that the farm buildings adjacent to Bradley Hall Farmhouse will be demolished and associated areas of hardstanding will be lifted and broken up. The majority of the Site is agricultural land and therefore, the majority of waste will be generated during the construction of the buildings and the access works at the A50 Cliff Lane roundabout and M6 J20.

Impact of waste generated on the capacity of existing/proposed waste management infrastructure

7.5. Spoil is likely to comprise the largest waste type (by quantity) to be generated during the construction phase as a result of site levelling and also during earthworks for buildings, drainage and infrastructure. Design work undertaken to date has identified that a cut and fill balance on the site would be achieved and that all spoil material would be retained on site (subject to contamination testing). Where contamination is encountered, remediation would be undertaken on the site where possible.

7.6. Spoil material would be used in the creation of buffers for noise and landscaping and the creation of development platforms for the buildings and therefore, would avoid potentially large quantities of spoil being removed for disposal off site. This would reduce the potential impact on the capacity of waste management infrastructure in the borough.

7.7. In terms of other wastes (i.e. excluding waste from excavation and groundworks) BRE benchmark data (2012) has been used to estimate the likely volume of wastes that would be generated from the construction of the buildings. The estimated volume of waste (excluding waste from excavation and groundworks) is 50,096 m³ based on the proposed total floor area of the buildings (i.e. 287,909 m²). This figure is only for the buildings and does not include waste generated from the construction of infrastructure and landscaping. The assessment assumes that in the absence of mitigation that this waste would be disposed to landfill.

- 7.8. According to the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b), the borough generated 241,682 tonnes of CD&E waste in 2015. Using generic conversion factors for typical mixed construction waste (provided by WRAP in its Waste Recording and Reporting Guidance) a factor of 0.87t/m³ was used to convert the estimated waste arisings (50,096 m³) into tonnes (43,583 tonnes). This figure is more than 10% of the region's annual CD&E waste arisings (based on 2015 figures); a potential shortfall in capacity for non-hazardous waste landfill from 2018 was identified in the Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b), however, there is capacity of inert landfill and recovery of inert C&D waste until 2031.
- 7.9. The impact is predicted to be high negative and the significance of the effect is considered to be **moderate adverse**, which is significant in EIA terms.

Treatability of the waste generated

- 7.10. The majority of waste materials generated during construction will be non-hazardous or inert. A review of waste management facilities in the area indicates there are a range of waste management facilities within 20 km. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) indicated that the majority of hazardous wastes generated in Warrington are currently exported for management outside the Local Plan and that this arrangement would continue in the future.
- 7.11. The impact is predicted to be minor negative and the significance of the effect is considered to be **minor** adverse, which is not significant in EIA terms.

Conformity with international and regional (industry) waste targets and policy

- 7.12. The proposed management of the spoil by retaining and reusing it on the site, will account for approximately 50 % the proportion of construction waste generated as a whole (by tonnage). This approach conforms with the international and borough/district policy for moving waste up the hierarchy. For the remaining construction wastes, the assessment assumes a worst case that none of the other construction wastes will be recycled or recovered (i.e. without mitigation) and the waste will be sent to landfill, therefore it falls short of meeting the Waste Framework Directive and industry targets.
- 7.13. The impact is predicted to be moderate negative for the international and regional (industry) targets and policy. For the international targets, the significance of the effect is considered to

be **substantial adverse**. For the regional (industry) targets, the significance of the effect is considered to be **moderate adverse**, which is significant in EIA terms.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Impact of waste generated on the capacity of existing/proposed waste management infrastructure	Borough/District	High Negative	Moderate Adverse	High
Treatability of the waste generated	Borough/District	Minor Negative (Non hazardous and inert) Moderate Negative (Hazardous waste)	Minor Adverse	High
Conformity with waste targets/policy	International	Moderate Negative	Substantial Adverse	High
Conformity with waste targets	Regional (industry)	Moderate Negative	High Adverse	High

Table 11.8: Significance of effect - construction phase

Operational Phase

7.14. The proposed buildings will be used for employment activities (use Class B8 and small scale BI(a) office use through the conversion of Bradley Hall Farm House). These uses would generate commercial and industrial (C&I) waste, however the type and quantities of waste cannot be accurately predicted as the end users have not yet been finalized. The typical wastes from B8 and BIa uses include:

- Paper;
- Cardboard;
- Packaging;
- Plastic;
- Metals;
- Food waste (e.g. canteen/kitchen waste);
- Fluorescent light tubes;

- Printer and toner cartridges;
- Pallets;
- Waste electronic and electrical equipment;
- Green waste from landscaping.

7.15. The above list of wastes is not exhaustive and may be refined during the detailed design stage.

Impact of waste generated on the capacity of existing/proposed waste management infrastructure

7.16. The assessment assumes that whilst the majority of the waste generated is recyclable, the waste is disposed of to landfill as the worst case.

7.17. Whilst the predicted volume of C&I waste cannot be predicted at this stage, the assessment focuses on the potential shortfall in capacity of non hazardous landfill within the borough. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) identifies a requirement for landfill capacity from 2018 as existing site close.

7.18. The impact on the borough waste management facilities is predicted to be high negative and the significance of effect is considered to be **moderate adverse**, which is significant in EIA terms.

Treatability of the waste generated

7.19. The majority of waste materials generated during operation are non-hazardous or inert and could be managed using measures high in the waste hierarchy. A review of waste management facilities in the area indicates there are a range of waste management facilities within 20 km.

7.20. The impact is predicted to be minor negative and the significance of the effect is considered to be **minor adverse**, which is not significant in EIA terms.

Conformity with national and borough/district waste policy and targets

7.21. In the absence of mitigation, it is assumed that none of the operational waste will be recycled and therefore, will not conform with the policy set out in the Our Waste, Our Resources: A Strategy for England (2018) or the recommended policy of the Warrington Borough Council Waste Local Plan.

7.22. The magnitude of impact is predicted to be moderate adverse and the significance of the effect for national policy is of **high adverse** significance. For borough/district policy the significance of effect is **minor adverse** , which is not significant in EIA terms.

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level
Impact of waste generated on the capacity of existing/proposed waste management infrastructure	Borough/District	High Negative	Moderate Adverse	High
Treatability of the waste generated	Borough/District	Minor Negative (Non hazardous and inert) Moderate Negative (Hazardous waste)	Minor Adverse	High
Conformity with waste policy	National	Moderate Negative	High Adverse	High
Conformity with waste policy	Borough/District	Moderate Negative	Minor Adverse	High

Table11. 9: Significance of effect - operation phase

8. Proposed Mitigation

- 8.1. Waste Management Plans would be prepared for the construction and operational phases which would set out the strategy and management measures that would be implemented to reduce the environmental impacts of waste. The Plans would follow the waste hierarchy and the proximity principle and would set targets for diverting key waste streams from landfill.

Construction Phase

- 8.2. An Outline Site Waste Management Plan (SWMP) has been prepared which sets out a management strategy for construction waste. Measures have been identified for each option within the waste hierarchy (i.e. prevention, re-use, recycle, recover and disposal). These measures include using pre-fabricated materials for on site assembly, just in time deliveries, re-use of spoil on site and the use of recycled content materials. The aim would be to use options from the top of the waste hierarchy to manage each waste stream. The targets set by the revised Waste Framework Directive and BREEAM would be applied.
- 8.3. The Plan is based on outline design information; an updated SWMP would be prepared during the detailed design stage based on the principles set out in the Outline SWMP. The Plan is a working document to be used during the construction process to record movements of waste from the site and to demonstrate that duty of care obligations are being met.
- 8.4. For details of the plan, see Appendix 11.1.

Operational Phase

- 8.5. An Outline Operational Waste Management Strategy (OWMS) has been prepared which sets out the procedures that would be implemented to manage the environmental impacts of operational waste. The strategy has been written in accordance with duty of care obligations and the waste hierarchy principle. Targets to divert operational waste have not been included at this stage, however the overall objective would be to divert as much operational waste from landfill as possible. Design recommendations for the recycling and storage facilities have been included.
- 8.6. For details of the plan see Appendix 11.2.

- 8.7. The Outline OWMS is based on outline design information; an updated OWMS would be prepared for the Site during detailed design (based on the principles set out in the Outline OWMS) to highlight the measures that have been included in the design to facilitate sustainable waste management. Operators of the units will be required to follow the measures in the Site OWMS and will be encouraged to prepare OWMS for their individual units.

9. Potential Residual Effects

Potential Residual Effects – Construction Phase

- 9.1. Residual effects take into account the proposed mitigation as set out in section 8.
- 9.2. Mitigation during the construction phase is principally provided by the SWMP (Technical Appendix 11.1). Its objective is to manage the environmental impacts of waste during the construction phase by avoiding waste and diverting waste from landfill. The SWMP sets out a framework for minimizing waste from Six 56 Warrington and for managing waste according to the highest option within the waste hierarchy where possible.
- 9.3. The overall impact of the proposal in terms of waste issues during the construction phase is highlighted in the table below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
Impact of waste generated on the capacity of existing/proposed waste management infrastructure	Borough/District	High Negative	Moderate Adverse	High	SWMP	Minor Adverse
Treatability of the waste generated	Borough/District	Minor Negative (Non hazardous or inert) Moderate Negative (hazardous)	Minor Adverse	High	SWMP	Minor Adverse
Conformity with waste targets/policy	International	Moderate Negative	Substantial Adverse	High	SWMP	Negligible
Conformity with waste targets	Regional (industry)	Moderate Negative	High Adverse	High	SWMP	Negligible

Table 11.10: Residual significance of effect - construction phase

- 9.4. With the implementation of the SWMP the predicted effects of construction waste generated by the Proposed Development on existing and proposed waste management infrastructure and conformity with waste policy will be minor adverse to negligible which is not significant in EIA terms.

Potential Residual Effects – Operational Phase

- 9.5. Mitigation during the operation phase is principally provided by the Operational Waste Management Strategy OWMS (Technical Appendix 11.2). Its objective is to manage the environmental impacts of waste during the operation phase. The OWMS identifies opportunities to minimise, re-use and recycle waste. Its implementation will lead to less waste being generated and more waste being diverted from landfill.
- 9.6. The overall impact of the proposal in terms of waste issues during the operational phase is highlighted in the table below:

Nature of Impact	Receptor	Environmental Impact	Significance of Effect	Confidence Level	Mitigation	Residual Significance of Effect
Impact of waste generated on the capacity of existing/ proposed waste management infrastructure	Borough/ District	High Negative	Moderate Adverse	High	OWMS	Minor Adverse
Treatability of the waste generated	Borough/ District	Minor Negative (Non hazardous or inert) Moderate Negative (hazardous)	Minor Adverse	High	OWMS	Minor Adverse
Conformity with waste policy	National	Moderate Negative	High Adverse	High	OWMS	Negligible
Conformity with waste policy	Borough/ District	Moderate Negative	Moderate Adverse	High	OWMS	Negligible

Table 11.11: Residual significance of effect - operation phase

- 9.7. With the implementation of the OWMS the predicted effects of operational waste generated by the Proposed Development on existing and proposed waste management infrastructure and conformity with waste policy will be minor adverse to negligible which is not significant in EIA terms.

10. Additive Impacts (Cumulative Impacts and their Effects)

10.1. For the purposes of this ES we define the additive cumulative effects as:

‘Those that result from additive impacts (cumulative) caused by other existing and/or approved projects together with the project itself

10.2. The developments that are likely to have a cumulative impact when considered with Six 56 Warrington have been scoped with the Local Authority and Key Consultees during the preparation of this ES (a full list is included within the ES Part One Report). The following table includes the agreed list of cumulative developments that have been assessed in respect of Waste. These are also shown geographically on the plan included at **Appendix II** of the ES Part One Report.

No.	Cumulative Development	Details	Status	Justification for Inclusion in Cumulative Assessment
4	Land off Barleycastle Lane, Appleton, Warrington Liberty Properties	50,000m ² logistics development	Refused Planning Permissions by WMBC 14-11-2018	Potential relationship during operation as similar waste streams may be generated therefore require similar waste management facilities. .
6	Blue Machinery Ltd, Barleycastle Trading Estate, Lyncastle Road, Warrington, WA4 4SY LPA Ref: 2016/28994	Full Planning Application for new industrial warehouse building for storage (replacing smaller storage building), single storey extension to existing building for further storage and two storey extension for additional office space, associated parking provision and landscaping. (1,699m ² new build, 180m ² and 265m ² extensions)	Planning permission granted by WMBC 17-02-2017 (3 years to implement planning permission)	Potential relationship during construction and operation as similar waste streams may be generated therefore require similar waste management facilities.

No.	Cumulative Development	Details	Status	Justification for Inclusion in Cumulative Assessment
7	Land off Lyncastle Way, Barleycastle Lane, Appleton, Warrington, WA4 4SN LPA Ref:2015/25255 Morley Estates	Full Planning Application for industrial / warehouse development (Sui Generis) to facilitate a plant hire business with elements of vehicle / plant repair, servicing, maintenance and plant storage / distribution / parking and associated offices / welfare facilities, vehicular access via existing service road, acoustic bunding and fencing and other means of enclosure, soft landscaping, 36 car park spaces, fuel pumps (and associated underground tanks), vehicle / plant wash bay and sub-station (Resubmission of 2014/24618) (4,545sqm industrial warehouse building)	Planning permission granted by WMBC 16-10-2015	Potential relationship during construction and operation as similar waste streams may be generated therefore require similar waste management facilities.

Table 11.12: Cumulative development

10.3. The other developments were not considered in the cumulative assessment as the construction timeframes did not overlap or they were unlikely to generate the same types of waste as the Proposed Development.

Short Term

10.4. The generation of construction and demolition waste by Six 56 Warrington would be temporary in nature and as such, the existing waste management infrastructure would be able to accommodate the construction of new developments as they arise. A cumulative effect on this waste stream may arise if a number of developments come forward at the same time, thereby putting pressure on existing infrastructure. However, Table 11.8 has identified that the construction phase of Six 56 Warrington would have a minor adverse effect on the existing waste management infrastructure and therefore, the cumulative effects of Six 56 Warrington in combination with other concurrent developments would still not be significant.

Medium and Long Term

- 10.5. Measures would be implemented during the operation of Six 56 Warrington to maximize the diversion of waste from landfill in accordance with the recommended policy in the Waste Local Plan and national waste policy. Where possible, waste would be managed through the Borough's treatment and recycling facilities. The Waste Arisings and Capacity Requirements Report (Warrington Borough Council, 2017b) predicts that with the exception of non hazardous and inert landfill, the existing and proposed facilities provide adequate capacity for at least the remaining period of the Local Plan period. It is assumed that other developments would adopt a similar approach to managing their operational waste. This will lead to a reduction in the reliance on landfill.

11. Conclusion

- 11.1. The construction and operation of the Six 56 Warrington development would generate various types of waste. The levelling of the site requires cut and fill, and together with the earthworks for the construction of development platforms, bunds and drainage infrastructure, there is the potential to generate large volumes of spoil. The design of the Six 56 Warrington development has achieved a cut and fill balance and the spoil would remain on the site.
- 11.2. The management of the other waste streams generated during construction and operation would be achieved through a Site Waste Management Plan and an Operational Waste Management Strategy. Outline documents have been appended to this Technical Paper, which set out the measures and procedures that would be implemented as well as setting targets to divert waste from landfill.
- 11.3. With the implementation of the SWMP and Operational Waste Management Strategy, the overall effect of Six 56 Warrington is considered to be minor adverse, which is not significant in EIA terms.

12. Reference List

BRE (2018) BREEAM New Construction Manual

Defra (2018) Our Waste, Our Resources: A Strategy for England

Defra (2013) Waste Management Plan for England

Department for Communities and Local Government (2014) National Planning Policy for Waste

Ministry of Housing, Communities and Local Government (2018) National Planning Policy Framework

Warrington Borough Council (2017a) Waste Study and Policy Review

Warrington Borough Council (2017b) Waste Arisings and Capacity Requirements

Warrington Borough Council (2014) Local Plan Core Strategy

APPENDIX 11.1: OUTLINE SITE WASTE MANAGEMENT PLAN

Six 56 Warrington



OXF10765
Warrington Interchange
Waste Chapter
Version 1
30 January 2019

REPORT

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
1	Client review	Clare Russell			

Approval for issue

[Name]	[Signature]	Date.

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Prepared by:

RPS Consulting Services Ltd

Clare Russell
Principal Consultant

20 Western Avenue, Milton Park
Abingdon, Oxfordshire OX14 4SH

T 01235 821888

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Appendix A: Initial Site Waste Management Plan

Appendix B: Waste Estimates Data Sheet

Appendix C: Waste Management Data Sheet

1 INTRODUCTION

Background

- 1.1 This Outline Site Waste Management Plan (SWMP) has been prepared on behalf of Langtree and First Panattoni to support their outline planning application to develop agricultural land at Bradley Hall Farm, Warrington (hereafter referred to as the Site) into a strategic employment site (Six 56 Warrington).
- 1.2 The purpose of the Outline SWMP is to provide information on the types and quantities of waste that would be generated during the construction of Six 56 Warrington. Waste generated during the

Site Location and Description

- 1.3 The Site is located approximately 6 km to the south east of Warrington within the district of Warrington Borough Council.
- 1.4 The north of the Site is bounded by the B5356 Grappenhall Lane and the A50 Cliff Lane; the east and south east are bounded by slip roads to the M6 and M56 motorways. To the west of the Site is Appleton Thorn Trading Estate, Barleycastle Trading Estate and Stretton Green Distribution Park are located to the west, with farm land to the south.
- 1.5 The Site includes a Scheduled Monument (Bradley Hall moated site) and Bradley Brook runs east west to the southern boundary
- 1.6 The Site extends to approximately 97 hectares and is predominantly agricultural land with several farm buildings.

Proposed Development

- 1.7 The application comprises the construction of up to 287,909 m² (gross internal) of logistics and manufacturing space plus a change of use of Bradley Hall Farmhouse to B1 (a) office use. The application also includes the provision of associated servicing and infrastructure including:
 - car parking;
 - vehicle and pedestrian circulation;
 - alteration of access road in the Site (and works to the M6 J20 dumbbell roundabouts and realignment of the existing A50 junction);
 - diversion of Public Rights of Way;
 - noise mitigation;
 - earthworks to create development platforms and bunds;
 - landscaping including buffers; and
 - creation of drainage features, electrical substation, pumping station and ecological works.

Structure and Scope of the Report

- 1.8 The Outline SWMP considers the type and volume of wastes that may be generated from the development at Bradley Hall Farm and how the waste will be managed. In particular, the SWMP sets out
- The types of waste that will be generated
 - Measures to manage waste in accordance with the waste hierarchy;
 - The methods used to measure the quantity of waste generated by the project; and
 - Responsibilities for waste management.
- 1.9 The application to redevelop the site is currently at outline stage with all matters reserved except for means of access. Consequently, detailed design information such as layout of the buildings are not available and materials to be used are not available. However, the measures and commitments set out in this plan will be implemented through the design process and during construction.

2 REGULATORY FRAMEWORK

Definition of Waste

- 2.1 For the purpose of this document the definition of “waste” is taken from Article 3 (1) of the revised European Waste Framework Directive (rwfd) (2008/98/EC), which states that waste is ‘any substance or object which the holder discards or intends or is required to discard’.
- 2.2 *“Discard” includes the recovery and recycling of a subject or object as well as its disposal. The decision on whether something is discarded must take into account of all the circumstances (for example, the nature of the material, how it was produced and how it will be used) and have regard to the aims of the Waste Framework Directive, which is ‘the protection of human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste’.*
- 2.3 The document also takes into account CL:AIRE’s Definition of Waste: Development Industry Code of Practice (CoP) (CL:AIRE, 2011). The CoP sets out good practice for the development industry to use when:
- *‘Assessing on a site specific basis whether excavated materials are classified as waste or not: and*
 - *Determining on a site specific basis when treated excavated waste can cease to be waste for a particular use.’*
- 2.4 For the purpose of CL:AIRE’s CoP “excavated materials” include:
- Soil, both topsoil and subsoil, parent material and underlying geology;
 - Ground based infrastructure that is capable of reuse within earthworks projects (e.g. road base, concrete floors);
 - Made ground; and
 - Stockpiled excavated materials that include the above.

Legislation and Guidance

- 2.5 The legislative framework is summarised below. Key legislation is explained in more detail in Waste Technical Paper 11 together with relevant planning policies.
- Environmental Permitting (England and Wales) Regulations 2016 (as amended);
 - Waste (England and Wales) Regulations 2011 (as amended);
 - Revised Waste Framework Directive (2008/98/EC);
 - Waste Management (England and Wales) Regulations 2006;
 - Hazardous Waste (England Wales) Regulations 2005 (as amended);
 - Environment Act 1995;
 - Environmental Protection Act 1990; and
 - Landfill Directive (1993/31/EC).

Key Obligations

Duty of Care

- 2.6 A key requirement of section 34 of the Environmental Protection Act 1990 is that the waste producer is responsible for ensuring that their waste is collected by an appropriately licensed waste carrier and managed at a suitably licensed facility. These requirements are set out in the 'Waste Duty of Care Code of Practice'. To meet these requirements, waste materials arising from the construction of Hornsea Three will only be transported by waste carriers and hazardous waste carriers holding a valid registration with the Environment Agency. Each consignment of waste removed from the Site will be accompanied by a waste transfer note (or hazardous waste consignment note as appropriate), which correctly describes the waste using the European Waste Catalogue (EWC) code, identifies the waste carrier and where the waste will be transported to. Requirements for transferring waste and registered waste carriers are set out in Part 8 and 9 of the Waste (England and Wales) Regulations 2011. The waste will only be transferred to facilities that have the benefit of a registered waste exemption, or an environmental permit. Periodic audits will be undertaken of these facilities.

Pre-treatment

- 2.7 Since 2007 all non-hazardous waste has to be treated before being disposed to landfill. The purpose of this requirement is to reduce the impact of waste that has to be landfilled and to increase the amount of waste that is recycled. Under the EU Landfill Directive "treatment" will be deemed to be carried out when waste has been through the following three point test. Treatment must:
- Be a physical, thermal, chemical or biological process – which can include sorting;
 - Change the characteristics of the waste;
 - And do so in order to;
 - Reduce its volume (interpreted as "weight" by the enforcement agencies in England); or
 - Reduce its hazardous nature; or
 - Facilitate its handling; or
 - Enhance recovery.
- 2.8 All three points must be satisfied and the requirement applies to each separate waste stream generated on that site (with waste stream defined by the EWC code that is provided on the transfer note).

3 IDENTIFICATION OF WASTE ARISING

Waste Types

- 3.1 At a strategic level, the waste streams generated from the demolition of agricultural buildings on the Site and the construction of Six 56 Warrington can be classified as:
- **INERT:** wastes that will not cause adverse effects to the environment when disposed of, or do not decompose and they have no potentially hazardous content when placed in a landfill. Examples of inert wastes are rocks, concrete, mortar, glass, uncontaminated soils and aggregates;
 - **NON-HAZARDOUS:** wastes that will decompose when buried resulting in the production of methane and carbon dioxide. Examples of non-hazardous waste include timber, paper and cardboard; and
 - **HAZARDOUS:** wastes that are harmful to human health or the environment (for example, pollution of watercourses) if they are incorrectly contained, treated or disposed of. Hazardous wastes may have one or more of the following properties: explosive, corrosive, flammable, highly flammable, infectious, oxidising or sensitising.
- 3.2 Table 3.1 contains the general List of Waste Categories (also known as waste classification codes) for construction wastes. The waste codes for each waste type will be provided on each waste transfer note that will accompany every movement of waste from the Site.

Table 3.1: List of Waste Categories for Construction Wastes

17 Construction and demolition wastes (including excavated soil from contaminated sites – it should be noted that waste types generated will not be restricted to this list)
17 01 Concrete, bricks, tiles and ceramics
17 01 01 Concrete
17 01 02 Bricks
17 01 03 Tiles and ceramics
17 01 06* Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances
17 01 07 Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02 Wood, glass and plastic
17 02 01 Wood
17 02 02 Glass
17 02 03 Plastic
17 02 04* Glass, plastic and wood containing or contaminated with dangerous substances
17 03 Bituminous mixtures, coal tar and tarred products
17 03 01* Bituminous mixtures containing coal tar
17 03 02 Bituminous mixtures other than those mentioned in 17 03 01
17 03 03* Coal tar and tarred products
17 04 Metals (including their alloys)
17 04 01 Copper, bronze, brass

17 Construction and demolition wastes (including excavated soil from contaminated sites – it should be noted that waste types generated will not be restricted to this list)

17 04 02 Aluminium
17 04 03 Lead
17 04 04 Zinc
17 04 05 Iron and steel
17 04 06 Tin
17 04 07 Mixed metals
17 04 09* Metal waste contaminated with dangerous substances
17 04 10* Cables containing oil, coal tar and other dangerous substances
17 04 11 Cables other than those mentioned in 17 04 10
17 05 Soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03* Soil and stones containing dangerous substances
17 05 04 Soil and stones other than those mentioned in 17 05 03
17 05 05* Dredging spoil containing dangerous substances
17 05 06 Dredging spoil other than those mentioned in 17 05 05
17 05 07* Track ballast containing dangerous substances
17 05 08 Track ballast other than those mentioned in 17 05 07
17 06 Insulation materials and asbestos-containing construction materials
17 06 01* Insulation materials containing asbestos
17 06 03* Other insulation materials consisting of or containing dangerous substances
17 06 04 Insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05* Construction materials containing asbestos
17 08 Gypsum – based construction material
17 08 01* Gypsum-based construction materials contaminated with dangerous substances
17 08 02 Gypsum-based construction materials other than those mentioned in 17 08 01
17 09 Other construction and demolition wastes
17 09 01* Construction and demolition wastes containing mercury
17 09 02* Construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)
17 09 03* Other construction and demolition wastes (including mixed wastes) containing dangerous substances
17 09 04 Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

Waste Volumes

- 3.3 Information relating to the precise volumes of waste materials that are likely to be generated is not currently available.

SWMP Plan and Data Sheets

- 3.4 The initial estimate of construction waste types generated by Six 56 Warrington is identified in Appendix A. The SWMP is a useful planning tool to record the types of waste and estimate the

volumes that will be generated from all stages of the work programme. Targets can then be set for different material types based on the predictions of the Plan. At the time of writing, a detailed construction programme had not been prepared and therefore, the list of waste types is not exhaustive. The SWMP should be updated as detailed design information becomes available.

- 3.5 The figures from the SWMP will be entered into a Waste Estimates Data Sheet, an example of which is shown in Appendix B. This identifies how the waste types will be managed during the project (i.e. re-used on site, recycled off site etc).
- 3.6 Wastes from sites 1 and 2 will be recorded on the same SWMP Plan and Data Sheets. Once construction is underway, the Principal Contractor will complete the Waste Management Data Sheet (see Appendix C). These Sheets will be updated every time waste is removed from the site and will record:
- the types and quantities of waste produced;
 - the types and quantities of waste that have been re-used/recycled/recovered/landfilled or otherwise disposed of on or off site;
 - the identity of the person removing the waste,
 - the registration number of the waste carrier,
 - a copy or reference to the written description of the waste, and
 - details of the site where the waste is taken to and whether it holds a permit or is exempt.
- 3.7 These details will form part of a review of this SWMP to be undertaken every six months (as a minimum) by the Principal Contractor and the developer. Where necessary a further plan will be produced to accommodate any changes in order to reflect the progress of the project and of meeting the SWMP targets.

4 ACTION AND PROCEDURES TO BE TAKEN TO REDUCE, REUSE AND RECYCLE WASTE

Waste Hierarchy

4.1 Construction waste generated by the development will be managed according to the principles of the waste hierarchy, which is a key guide to sustainable waste management and is a legal requirement of the revised EU Waste Framework Directive and the Waste (England and Wales) Regulations 2011. The waste hierarchy ranks waste management options according to the least impact on the environment (see below):

- Prevention/minimisation;
- Re-use;
- Recycle;
- Other recovery;
- Disposal.

Prevention

4.2 The Waste Study and Policy Review's (Warrington Borough Council, 2017) recommended objective for the forthcoming Waste Local Plan is to achieve a reduction in the amount of waste produced in the borough of Warrington.

4.3 With this in mind, opportunities to minimise waste will be considered in the design stage and in the construction stage. The general design measures that will be implemented are:

- Using pre-fabricated materials for on-site assembly;
- Design buildings/structures to standard dimensions of blocks or frames to avoid off-cuts; and
- Ordering pre-cut internal materials and fittings to reduce the need for site cutting.

4.4 Further measures to minimise waste will be taken as the detailed design develops.

4.5 Waste can be minimised by improving wastage rates when ordering materials. Waste allowances are generally included within material orders to take into account for design waste and construction process waste. These waste allowances are often generic and not project specific and therefore, run the risk of being inaccurate. This can lead to a surplus of materials, which usually enter the waste stream. A system will be put in place to enable the accurate estimates of material requirements at the start of the project. Clear estimates and targets of waste that will be generated will be agreed at the detailed design stage.

4.6 A Buyer will be appointed by the Principal Contractor who will be responsible for purchasing the necessary materials. Procedures should be in place to ensure that only approved suppliers are used. The Buyer will discuss the purchasing requirements with the Principal Contractor to identify priorities and review the quotations received. Materials will be checked against the material specifications as part of a quality control system. Opportunities to reduce packaging or

take-back schemes for packaging and unused materials will be discussed with the suppliers. Where possible hazardous materials will be substituted for less hazardous alternatives.

- 4.7 Waste minimisation measures will be implemented by the Principal Contractor during construction in order to achieve the waste allowance targets. These measures include:
- A logistics system which allows 'just in time' deliveries to minimise the amount of time materials are stored on site and co-ordinate with other trades. Only materials needed for the stage of construction work ahead will be stockpiled on the site.
 - Providing suitable, safe and secure storage for materials or trades where 'just in time' deliveries cannot be set up. Storage will be provided in a designated area of the site to avoid damage from construction traffic and weather.
 - Consider mechanical systems and machinery for moving materials to reduce damage.
 - Programming and monitoring construction activities to avoid overlap of incompatible trades working in the same area and reduce the risk of damage and rework.

Preparing for Re-Use

- 4.8 Excavated spoil generated by cut and fill (required for site levelling) and the earthworks required to create development platforms and bunds, will be reused on the site.
- 4.9 Off-cuts generated during the construction process will be reused where possible, for example, timber off-cuts may be used for radiator pads, temporary formwork or electrical distribution backing boards. Other opportunities to re-use materials will be investigated during the detailed design process.

Recycling

- 4.10 The aim of the SWMP is to improve resource efficiency of Six 56 Warrington by adopting a proactive approach to recycling waste and the use of recycled content materials.
- 4.11 The revised Waste Framework Directive (2008/98/EC) which came into force in December 2008, set a target for EU Member States to reuse and/or recycle 70% of their construction and demolition waste by 2020. BREEAM also sets a good practice target to divert a minimum of 70% (by volume) of non-hazardous non-demolition wastes from landfill. These targets will be applied to the total waste generated by the project
- 4.12 A waste management contractor(s) will be selected to maximise the amount of wastes recycled. Recycling targets will be set: Quick Win materials will be prioritised, whilst opportunities to recycle other types of waste will also be investigated. This will be determined by the availability of appropriate waste recycling facilities in the vicinity. The decision to process onsite or offsite will be based on the financial viability of each option, which will depend on the overall volume of materials to be processed.
- 4.13 Where possible, recycling of materials will be undertaken on site, for example, damaged bricks/blocks will be crushed on site and used as hardcore.
- 4.14 During the procurement process, the Principal Contractor will consider the use of recycled materials (for example, recycled aggregates) where possible subject to developer approval,

cost and availability. Preference will be given to the use of local building materials, particularly those which are recyclable and have a high thermal mass. Timber will be from Forest Stewardship Council (FSC) approved sources where possible.

- 4.15 Opportunities for synergies with other development projects will be considered where project timeframes overlap in order to divert potential resources from landfill.

Disposal

- 4.16 Disposal of waste will be used as a last resort where re-use, recycling and recovery are not possible.
- 4.17 Non-hazardous wastes destined to be landfilled will be pre-treated prior to disposal in accordance with the Landfill (England and Wales) Regulations 2002. 'Treatment' can comprise physical, thermal, chemical or biological processes providing that the characteristics of the waste is changed in order to reduce its volume or hazardous nature or to facilitate its handling or recovery.
- 4.18 This waste (including any fly tipped wastes) will be collected by the waste management contractor and disposed of at permitted site suitable for the type of waste, and the appropriate records maintained. Burning of surplus material or material arising from the site will not be permitted.

Storage and Handling of Waste

- 4.19 An appropriate storage area will be established on the site to allow for segregation of wastes from the site. As a minimum separate skips will be provided for:
- timber waste;
 - metal waste;
 - plastic waste;
 - rubble; and
 - general waste.
- 4.20 Each skip/container will be clearly marked to indicate the intended contents and will be suitable for storage of the specified contents. All skips will be covered to prevent the escape of any waste. If liquid waste is being stored, an appropriate bund and drip pans will be in place to prevent the escape of spilled liquid beyond the storage area. It is acknowledged, however, that there may be space constraints and therefore it may not be possible to segregate the full suite of materials suitable for recycling. In these cases, separation of other waste types may be done off-site by an appropriately licensed waste contractor.
- 4.21 Storage areas will be located away from potential contaminant pathways such as soakaways and drains, excavations and trenches.
- 4.22 Any hazardous waste identified will be stored safely, in a designated area away from non-hazardous and inert wastes, and labelled accordingly. Subject to the type and quantity of hazardous material generated, the Environment Agency will be notified that it is a site producing hazardous waste and the appropriate requirements will be met.

- 4.23 Containers will be made available on site at strategic locations for the disposal of waste materials (including domestic and trade waste, rubbish, off-cuts, surplus concrete). The containers will be emptied on a regular basis and the waste disposed of at an appropriate disposal facility.
- 4.24 The dumping of rubbish and material waste etc, will not be tolerated on any part of the site outside of designated waste storage areas. All material wastes will be removed from the site and disposed of at an approved Waste Disposal depot.

Invasive Species

- 4.25 If Japanese Knotweed (or other invasive species) is discovered on the site it will be managed in accordance with Natural England and Defra guidance (www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants) and the Environment Agency's code of practice (Environment Agency, 2007 Managing Japanese Knotweed on Development Sites: The Knotweed Code of Practice).

5 TRANSPORTATION AND MANAGEMENT OF WASTE

Waste Carriers

- 5.1 In accordance with the Duty of Care Code of Practice (HMSO 2016) and the Environmental Protection Act (1990), waste materials arising from the construction of Six 56 Warrington will only be transported by waste carriers and hazardous waste carriers registered with the Environment Agency. Each consignment of waste removed from the site will be accompanied by a Waste Transfer Note (WTN) which will provide a description of the waste and identify the waste carrier and where the waste will be transported to.
- 5.2 All wastes removed from the site will be transported to an appropriately licensed waste management facility.

Waste Management Facilities

- 5.3 One of the principles of the SWMP is to recover/recycle as much waste generated from construction as possible. However, in reality the availability and location of waste management facilities will dictate if materials can be recycled. Ideally, one waste management contractor would be used to collect and recycle all of the different waste types generated in order to reduce costly waste management documentation. However, this is not always possible but the aim will be to limit the number of contractors involved.
- 5.4 Prior to the commencement of site development, the Principal Contractor will identify a suitable waste management contractor(s) and also investigate opportunities to recycle other materials.
- 5.5 Recycling facilities in the vicinity of the Site are set out in the Technical Paper 11 – Waste.
- 5.6 Only appropriately qualified and licensed waste management facilities will be used as a requirement of this SWMP.
- 5.7 During the construction programme the availability of recycling/reprocessing and disposal sites may change. It is the responsibility of the Principal Contractor to evaluate the waste management marketplace and identify suitable options.

6 IMPLEMENTATION OF THE SWMP

Roles and Responsibilities

6.1 Although the construction team has not been appointed at the time of writing this plan, the key roles and associated responsibilities with regard to this SWMP are outlined below. The Construction (Design and Management) Regulations 2015 also identify the legal duties, responsibilities and obligations of all the major roles within the construction team.

Undertaker

6.2 The Undertaker will be responsible for the following:

- Appointing onshore principal contractors for the purpose of the SWMP Regulations;
- Ensuring that this SWMP is implemented effectively;
- Giving necessary direction to contractors (for example, setting contractual obligations); and
- Reviewing, revising and refining this SWMP (where necessary) in conjunction with the principal contractor.

Principal Contractor

6.3 The principal contractor is generally appointed by the Undertaker and has the overall responsibility for:

- Updating and delivering this SWMP on behalf of the Undertaker;
- Ensuring all procedures in this SWMP are followed;
- Ensuring all contractors are suitably qualified and experienced in implementing the measures within this SWMP. These measures will be contained within the terms of contracts to ensure understanding and accountability;
- Ensuring that all legal and contractual requirements relating to this SWMP are met by ensuring adequate plans/procedures, licences and certificates are in place, and that they can be achieved;
- As a requirement of the SWMP the principal contractor will regularly (not less than every six months) review this SWMP to ensure that it accurately reflects the progress of the project and update where necessary;
- Establish procedures for the regular review and recording of the quality of the works as part of its Quality Management System;
- Maintain records relevant to this SWMP; and
- Within three months of work being completed, the principal contractor must confirm that this SWMP has been monitored (and updated) on a regular basis throughout the project; compare the actual waste quantities against the estimated quantities of each waste type;

and provide an explanation of any deviation from this plan. This information will be provided within a Close Out report.

Contractors/Sub Contractors

- 6.4 Contractors and sub-contractors will be responsible for carrying out the waste management tasks in this SWMP.

Training

- 6.5 A training regime will be implemented to ensure that all members of the construction team, including sub-contractor's personnel receive focused SWMP training to ensure their competence in carrying out their duties on the project.
- 6.6 Any SWMP training will be additional to the mandatory Health and Safety training.

Environmental Induction

- 6.7 The general site induction will be developed to introduce all site personnel to the environmental issues connected with the SWMP, the project, important environmental controls associated with the day to day operation of the project and effective delivery of the SWMP e.g. waste storage arrangements, appropriate waste segregation. A full register of induction attendance will be maintained onsite.

Toolbox Talks and Method Statement Briefings

- 6.8 Toolbox talks and method statement briefings will be given as the work proceeds and will cover the types of wastes produced at each key build stage and the SWMP controls related to specific activities undertaken during the works for example recycling of aggregates etc. A full register of toolbox talk and method statement briefing attendance will be maintained onsite.

Training Records

- 6.9 All training records will be maintained and filed onsite. The records will include the content of the courses (induction and toolbox training), record of attendance and schedule of review.

7 AUDIT, MONITOR AND REVIEW

Site Inspection

- 7.1 Regular inspections of the works will be undertaken by the Principal Contractor (or an appropriately trained nominated member of the site staff) to ensure the continued compliance of site operations with the provisions of this SWMP (e.g. segregation of waste types, waste storage requirements). Any non-conformities and actions arising from these inspections will be raised within routine Construction Team meetings.
- 7.2 Performance of the SWMP will be reported back to the Supervising Engineer. Performance will be assessed in terms of progress towards meeting the targets for re-use, recycling and disposal. The monitoring results will be reported.
- 7.3 If a non-conformance is discovered an Environmental Non Conformance Report Form (ENCR) will be completed and corrective actions will be devised. The recommended corrective actions will be recorded in the Corrective Actions Log together with progress for implementing these actions.
- 7.4 Corrective actions should be ranked commensurate to the risk. On occasions where legal compliance is an issue or environmental pollution is imminent then the corrective actions should be implemented as soon as possible.

Monitoring and Reporting

- 7.5 Appropriate Duty of Care paper work for the movements of waste will be retained on site. Volumes of waste (m³ or tonnes) and wastes types will be recorded for all wastes sent for reprocessing, recycling, or disposal. Records will also be kept of waste reused/recycled on the site.
- 7.6 The Principal Contractor will complete the Waste Management Data Sheet as the project progresses. Waste data may also be recorded using BRE's online SMARTWaste tool.
- 7.7 A separate SWMP Close Out report will be compiled by the Principal Contractor at the end of the construction process that summarises performance of the project against the targets set in the SWMP. The report will identify any deviations from the SWMP and discuss lessons learnt. This will be signed by the Principal Contractor and the developer.



APPENDICES

Appendix A

Initial Site Waste Management Plan

Appendix B

Waste Estimates Data Sheet

Appendix C

Waste Management Data Sheet

APPENDIX 11.2: OUTLINE OPERATIONAL WASTE MANAGEMENT STRATEGY

Six 56 Warrington



OXF9493
Parkside ES Waste Chapter
Version 1
30 January 2019

REPORT

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
1	Client Review	Clare Russell			29.01.2019

Approval for issue

[Name]	[Signature]	Date.

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Prepared by:

RPS Consulting Services Ltd

Name: Clare Russell
Title: Principal Consultant

20 Western Avenue, Milton Park
 Abingdon, Oxfordshire OX14 4SH

T 01235 821888

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1 INTRODUCTION

Purpose of the Strategy

- 1.1 This Outline Operational Waste Management Strategy (OWMS) has been prepared on behalf of Langtree PP and First Panattoni to support their outline planning application to develop agricultural land at Bradley Hall Farm (hereafter referred to as the Site) into a strategic employment site (Six 56 Warrington)
- 1.2 The purpose of the Outline OWMS is to identify the likely types of waste that will be generated from the proposed employment uses of the Site.

Proposed Re-development

- 1.3 The outline application comprises the construction of up to 92,900m² (gross internal) of employment floorspace (Use Class B8 with ancillary B1(a) offices) and associated servicing and infrastructure including car parking and vehicle and pedestrian circulation, noise mitigation, earthworks to create bunds and development platforms, landscaping including buffers, works to existing spoil heap (in east of site), creation of drainage features, substations and ecological works.

Legislation, Policy and Guidance

- 1.4 This report has been prepared in accordance with the following policy and guidance requirements:

Legislation and National Planning Policy

- Revised Waste Framework Directive (2008/98/EC);
- Waste (England and Wales) Regulations 2011 (as amended);
- Hazardous Waste (England and Wales) Regulations 2005 (as amended);
- Environment Act 1995;
- Environment Protection Act 1990;
- Landfill Directive (1993/31/EC);
- Our Waste, Our Resources: A Strategy for England (Defra, 2018);
- National Waste Planning Policy for Waste (NPPW) 2014; and
- Waste Management Plan for England (Defra, 2013)

Local Planning Policy and Guidance

- 1.5 Warrington Borough Council Waste Local Plan is currently under review and a draft plan is due to be published in March 2019. The Waste Study and Policy Review (Warrington Borough

Council, 2017) recommended that the Local Plan should include the following objective to ensure its objectives are in accordance with the NPPW:

“In working towards the prevention of waste, Warrington will seek to achieve a reduction in the amount of waste produced in the borough and treat waste at as high a level on the waste hierarchy as practicable by providing appropriate and sustainable sites and/or areas for the management of waste”.

Key Obligations

Duty of Care

- 1.6 A key requirement of section 34 of the Environmental Protection Act 1990 is that the waste producer is responsible for ensuring that their waste is collected by an appropriately licensed waste carrier and managed at a facility that holds an appropriate environmental permit. These requirements are set out in the ‘Waste Duty of Care Code of Practice’.
- 1.7 To meet these requirements, occupiers of the units at Six 56 Warrington and the facilities management of the Site will ensure that waste generated during the occupation of the units and management of the Site will only be transported by waste carriers and hazardous waste carriers registered with the Environment Agency. Each consignment of waste removed from the site will be accompanied by a Waste Transfer Note (WTN) which will provide a description of the waste and identify the waste carrier and where the waste will be transported to.
- 1.8 All wastes removed from the Site will be transported to an appropriately permitted waste management facility. Periodic audits of the waste carriers will be undertaken to ensure that these procedures are being followed.

Pre-treatment of Wastes

- 1.9 Since 2007 all non-hazardous waste has to be treated before being disposed to landfill. The purpose of this requirement is to reduce the impact of waste that has to be landfilled and to increase the amount of waste that is recycled. Under the EU Landfill Directive “treatment” will be deemed to be carried out when waste has been through the following three point test. Treatment must:
 - Be a physical, thermal, chemical or biological process – which can include sorting;
 - Change the characteristics of the waste;
 - And do so in order to;
 - Reduce its volume (interpreted as “weight” by the enforcement agencies in England); or
 - Reduce its hazardous nature; or
 - Facilitate its handling; or
 - Enhance recovery.

REPORT

- 1.10 All three points must be satisfied and the requirement applies to each separate waste stream generated on that site (with waste stream defined by the EWC code that is provided on the transfer note).

2 TYPES OF WASTE

- 2.1 At a strategic level the key waste streams arising from the operation of Six 56 Warrington can be classified as:
- INERT – wastes that will not cause adverse effects to the environment when disposed of, or do not decompose and they have no potentially hazardous content when placed in a landfill.
 - NON-HAZARDOUS – wastes that will decompose when buried resulting in the production of methane and carbon dioxide.
 - HAZARDOUS – wastes that are harmful to human health or the environment (for example, pollution of watercourses) if they are incorrectly contained, treated or disposed of.
- 2.2 The types of waste predicted to arise are set out below:
- Paper;
 - Cardboard;
 - Packaging;
 - Plastic;
 - Metals;
 - Food waste (e.g. canteen/kitchen waste);
 - Fluorescent light tubes;
 - Printer and toner cartridges;
 - Pallets;
 - Waste electronic and electrical equipment;
- 2.3 Green waste from maintenance of landscaping.

3 RECYCLING STRATEGY

Waste Hierarchy

- 3.1 Operational waste generated by the development will be managed according to the principles of the waste hierarchy, which is a key guide to sustainable waste management and is a legal requirement of the revised EU Waste Framework Directive and the Waste (England and Wales) Regulations 2011. The waste hierarchy ranks waste management options according to the least impact on the environment (see below):
- Prevention/minimisation;
 - Re-use;
 - Recycle;
 - Other recovery;
 - Disposal.
- 3.2 Disposal is the least preferred option and opportunities to apply the other options of the waste hierarchy should be explored first.
- 3.3 The strategy for the site focuses on prevention, reuse and recycling. Suggested measures that could be implemented are set out below. This list is not exhaustive and will be refined when detailed design information is available.

Prevention/minimisation

- Ensure the layout and operation of warehouses minimises the risk of damaging the goods;
- Ensure that goods leaving the warehouse are packaged using material that is fit for purpose (e.g. correct material and sizing) to minimise waste from damaged goods;
- Avoid overproduction/over-ordering as excess stock could remain unsold for longer periods of time (which could lead to having close to expiring stock);
- Give proper guidance to staff about the amount of weight and pressure packaging can take will ensure less damaged packaging and less waste;
- Issue information to customers in electronic form;
- Operate electronic check-in system for deliveries;
- Provide adequate storage for equipment and any materials to reduce damage;
- Where possible, substitute hazardous materials for less hazardous alternatives.

Re-use

- Select suppliers with take-back packaging;
- Re-use pallets;
- Purchase office furniture through reuse organisations;

- Return printer and toner cartridges for re-filling rather than replacement.

Recycle

- Use packaging with recycled content;
- Segregate and recycle packaging;
- Use compactor and shredder;
- Identify with the waste management contractor opportunities to maximise the types of materials that can be recycled (paper, glass and plastic as a minimum).
- Use split bins to encourage segregation of recyclables (e.g. plastics) from general waste;
- Place paper-recycling bin near photocopier/printer;
- Provide colour coded recycling bins in the warehouses and refreshment and office areas;
- Recycle light bulbs, batteries, mobile phones through specialist companies and charities;
- Where practicable, purchase materials with a recycled material content.

Waste Storage and Collection

- 3.4 The design of Six 56 Warrington will make provision for appropriate waste storage and recycling collection facilities. A dedicated storage area will be provided within the design of each unit to allow for the segregation and storage of recyclable waste. The storage area will be clearly labelled to assist with segregation of recyclable waste streams; accessible to building occupants and facilities to allow the deposit of materials and the collections by waste contractors; and be of appropriate size for the unit and the predicted volumes that will arise from daily activities.
- 3.5 The waste storage area will provide secure storage for waste and recyclables and will provide protection from windblown and vandalism. The waste and recyclables will be collected regularly at a frequency agreed with the waste management contractor.