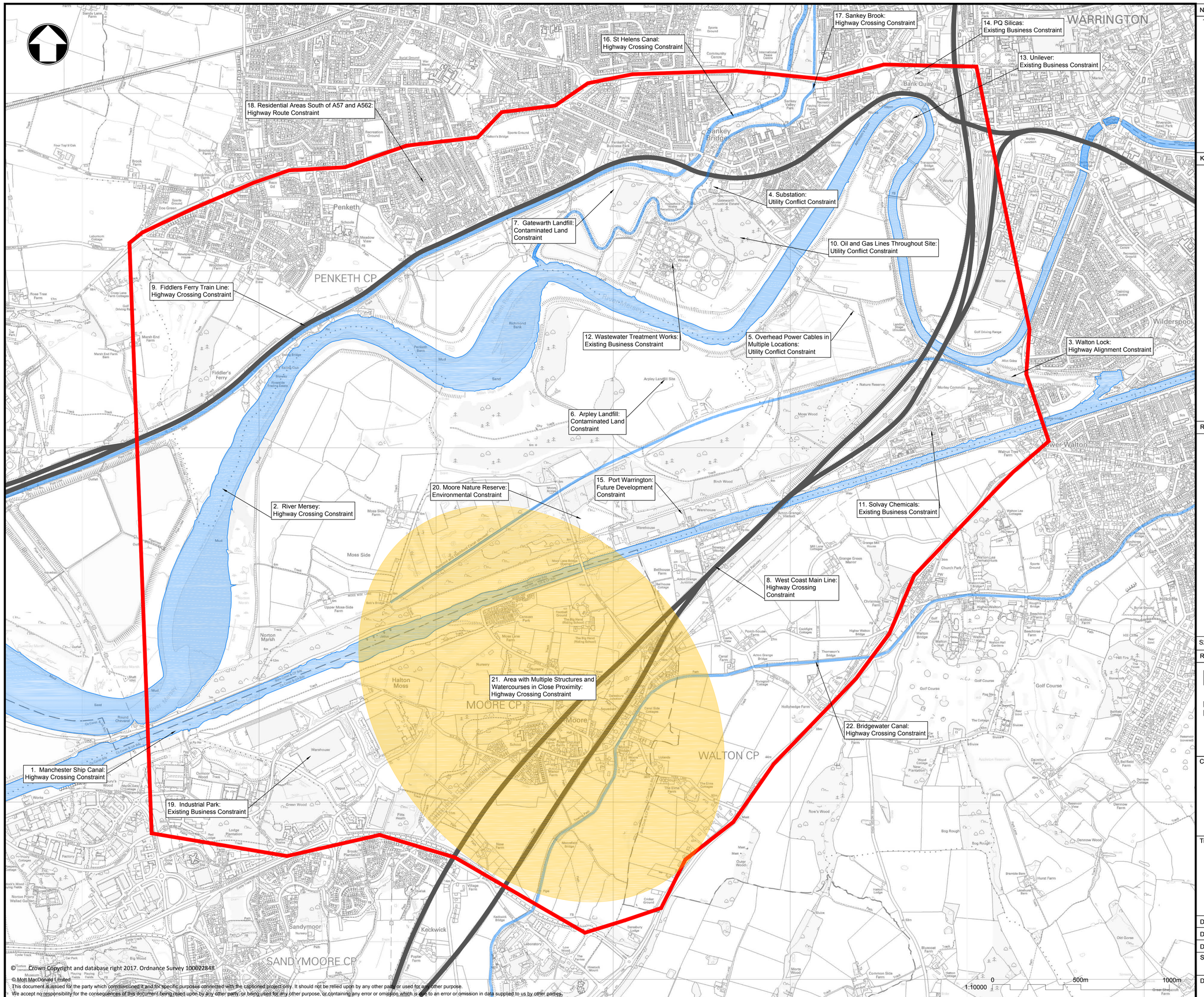

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Notes

1. This drawing identifies key constraints in the west of Warrington to aid highway route creation and development for Western Link.

Key to symbols

Constraints Boundary

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
S2.1	26.05.17	SH	For Information	SA	DD

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Warrington Borough Council
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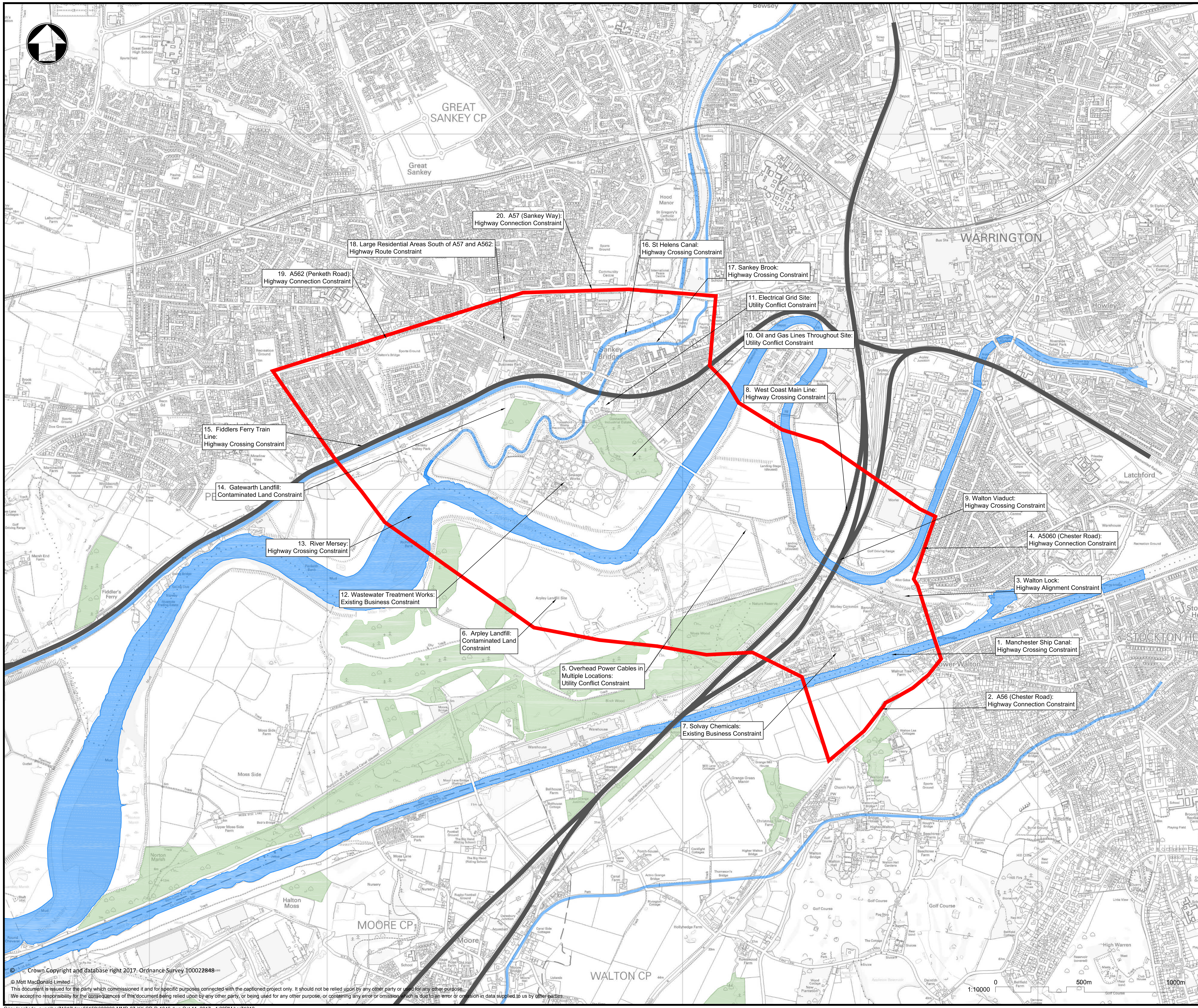
Warrington
WA1 2NH

Title
Constraints Location Plan

Designed	S Horsfall	SH	Eng check		---
Drawn		---	Coordination		---
Dwg check		---	Approved		---

Scale at A1	Status	Rev	Security
1:10000	PRE	S2.1	STD

Drawing Number
382900-MMD-07-XX-CD-D-1005



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Notes

1. This drawing identifies key constraints within the study area for Western Link to aid route assessment.

Key to symbols

Study Area Boundary

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
S2.1	10/17	SH	For Information	SA	DD

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Title
Stage 2 - Constraints Location Plan

Designed		---	Eng check		---
Drawn	S Horsfall	SH	Coordination		---
Dwg check	S Alexander	SA	Approved	D Drury	DD

Scale at A1	Status	Rev	Security
1:10000	S	2.1	STD

Drawing Number
382900-MMD-07-XX-CD-D-1046

Nominal Internal Diameter of largest pipe in manhole (mm)	Minimum nominal internal dimension of manhole (mm)
Up to 375	1200
Greater than 375	1500

Notes

This drawing must be read in conjunction with Western Link - Outline Drainage Strategy - Consultation Options (WL-MMD-07-XX-RP-D-0004)

Pumping Station subject to Highway Authority agreement.

Pumping Station discharge may be limited by E.A.

Filter drains 1m deep provided at base of cuttings and embankments.

Pipes bedded on Class S surround

Kerb drainage to be provided on all structures

All pipelines to be laid with minimum 1.2m cover within highways and verges.

Storage & Outfalls
For pricing assume modular tank, actual form will depend on river levels and use of oversized pipes may be necessary.

All hydrobrake manholes to be 1800Ø

All outfalls are to be 225Ø

Pumps
All pumped systems shall contain three pumps operating in Duty / Standing Mode / Spare with telemetry.

All rising mains to be 150Ø

Key to symbols

- Carrier pipes and Manholes
- Attenuation
- Flood Protection
- PS — Pumping Station
- 150Ø Rising Main
- Extents of Kerb Drainage
- H L — High/ Low points of the highway
- NSB 4 — Interceptor with nominal size

Reference drawings

Outfall to Whittle Brook
Storage = 100m³ (10x10x1)

Outfall to Whittle Brook
Storage 750m³ (75x10x1)

To Sewers in Sankey Way
Storage = 170m³ (17x10x1)

Outfall to Existing Canal
Storage = 400m³ (40x10x1)

Discharge attenuated flow to St. Helens canal.
Storage = 570m³ (57x10x1)

Outfall to Sankey Brook.
Storage = 190m3 (19x10x1)

Outfall to Sankey Brook.
High level overflow to be provided at 6.50m.
Storage = 500m3 (50x10x1)

Outfall to River Mersey.
Storage = 620m³ (62x10x1)

Pumping Station
delivering 135 l/s

GATESWORTH
SEWAGE TREATMENT
WORKS

Outfall to River Mersey
Storage 1100m³ (55x10x2)
High level overflow to be provided at 6.60m

Outfall to River Mersey
Storage 620 m³ (62x10x1)

Outfall to River Mersey
Storage 660 m³ (66x10x1)

Assumed drainage here does not require pumping. Road levels may need to be lifted by 0.5-0.75m here to ensure this. To be checked at a later design stage.

Outfall to River Mersey.
Storage = 150m³ (15x10x1)

Pumping Station
delivering 165 l/s

Outfall to River Mersey.
Storage = 340 m³ (34x10x1)

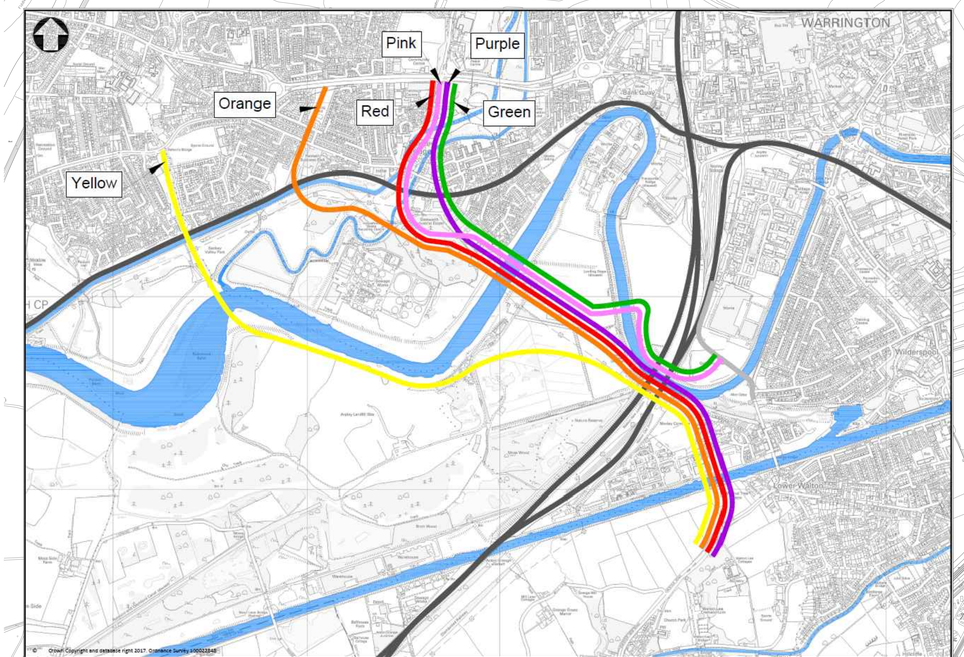
Flood protection walls required to 7.8m high.
(7.5m + 0.3m Freeboard)

Pumping Station
delivering 96 l/s

Outfall to River Mersey.
Storage = 600 m³ (60x10x1)

Outfall to Manchester Ship Canal
Storage 800m³ (40x10x2)

SANKEY WAY
PENKETH ROAD
WHITTLE BROOK
ST.HELENS CANAL
RAILWAY
SANKEY BROOK
RAVENAID ST
RIVER MERSEY
MANCHESTER SHIP CANAL
RAILWAY - LONDON - GLASGOW
RUNCORN ROAD
BRIDGEWATER CANAL
HOLLY RIDGE LANE
WALTON LEA COTTAGES
Extents of Highway to be Raised (1.5m)
Extents of Highway to be Raised (0.5-0.75m)



1:5000 0 250m 500m

Rev	Date	Drawn	Description	Ch'k'd	App'd
D1.1	18/10/17	GB	For Costing	SH	SA

Status Stamp
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Title
Western Link
Stage 2 - Proposed Drainage Plan

Sheet 1 of 1

Designed	Geoff Bolton	---	Eng check		---
Drawn		---	Coordination		---
Dwg check		---	Approved		---

MMD Project Number	Scale at A0	Security
382900	1:5000	STD
Suitability Description		Suit. Code
Drawing Number		Revision
382900-MMD-07-XX-CD-D-1024		D1.1

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