

High Speed Rail (Crewe – Manchester)

Background information and data

Land quality

BID LQ-002-0MA04

MA04: Broomedge to Glazebrook

Land quality baseline data

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High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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1 Introduction

- 1.1.1 This report presents land quality baseline data highlighting areas of contamination originating from historical and current land use, and mineral and geoconservation resources in the study area.
- 1.1.2 Baseline data has been collected for the Proposed Scheme in relation to the Broomedge to Glazebrook area. The baseline data in this report has been used to inform the land quality assessment which is set out in the Environmental Statement (see Volume 5, Land quality report, Appendix: LQ-001-0MA04)¹.
- 1.1.3 Sites (for example MA04-43) referred to throughout this report are contained in the Volume 5 Map Book (see Environment Statement, Volume 5 Land quality Map Book, Maps LQ-01-312b to LQ-01-314a²).
- 1.1.4 The Environmental Impact Assessment Scope and Methodology Report (SMR) (see Environment Statement, Volume 5, Appendix CT-001-00001³) should be referred to for details of the land quality assessment methodology.

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Land quality report*, Volume 5, Appendix LQ-001-0MA04. Available online at:

<https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

² High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Volume 5 Land quality Map Book*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

³ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Environmental Impact Assessment Scope and Methodology Report*, Volume 5, Appendix CT-001-00001. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

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2 Receptor information

- 2.1.1 This section provides further receptor information for sites that have been evaluated in stages C and D and assessed for the Broomedge to Glazebrook area (see Environmental Statement, Volume 5, Appendix LQ-001-0MA04¹).
- 2.1.2 For each site or group of sites, further information on each site receptor can be found in Table 1 to Table 11.
- 2.1.3 For clarity, 'on-site' in this report means 'within the land required for the construction of the Proposed Scheme' and 'off-site' refers to land beyond this boundary, but within the study area. The sites and groups of sites for assessment in this area include:
- on-site:
 - historical landfills;
 - former Ministry of Defence (MoD) land; and
 - former and current railway land.
 - off-site:
 - farms;
 - sewage works;
 - cemetery;
 - current and former smithies;
 - historical landfills;
 - former tank;
 - former MoD land; and
 - former railway land.

Table 1: Receptors – historical landfills grouped for assessment (on-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Former refuse pit (MA04-43)	Residential (adjacent site users*) Commercial (adjacent site users*)	Secondary A Aquifer – Alluvium/Glacio-fluvial sheet deposits Secondary B Aquifer - Tarporley Siltstone Formation	Manchester Ship Canal (WFD Moderate) (adjacent) Glaze Brook (Water Framework Directive (WFD) Poor) (120m east)	None	Residential and Commercial buildings (adjacent*)	None

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Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Historical Hollins Green landfill (MA04-45)	Residential and Commercial (adjacent site users*)	Secondary A Aquifer - Alluvium/Glaciofluvial Secondary B Aquifer - Tarporley Siltstone Formation	Manchester Ship Canal (WFD Moderate) (adjacent) Glaze Brook (WFD Poor) (5m east)	None	Residential and Commercial buildings (adjacent*)	None
Historical Warburton Farm landfill (MA04-66)	Residential (adjacent site users*)	Secondary A Aquifer - Glaciofluvial sheet deposits Secondary A Aquifer - Alluvium Secondary B Aquifer - Bollin Mudstone Member	Manchester Ship Canal (WFD Moderate) (10m north)	None	Residential (adjacent)	None

* adjacent site receptors located outside the land required for the construction of the Proposed Scheme (off-site) remain and are therefore included in the construction stage assessment. This applies to human and property receptors only.

Table 2: Receptors – former MoD land grouped for assessment (on-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Former rifle range (MA04-51)	Commercial (existing site users privately run rifle range)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	Pond (93m west)	None	Range buildings	None
Former barracks (MA04-55)	Residential (existing site users and adjacent*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation SPZ 3	Pond (177m west)	None	Unspecified building	None
Former MoD land	None	Principal Aquifer Wilmslow	Interconnected drains (on-	None	None	None

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Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
and rifle range (MA04-71)		Sandstone Formation	site) and Glaze Brook (WFD Poor) (184m west)			

* adjacent site receptors located outside the land required for the construction of the Proposed Scheme (off-site) remain and are therefore included in the construction stage assessment. This applies to human and property receptors only.

Table 3: Receptors – former and current railway land grouped for assessment (on-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Disused railway (MA04-17)	None	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	River Bollin (WFD Moderate) (on-site)	None	None	None
Former mineral railway (MA04-42)	Residential (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	Manchester Ship Canal (WFD Moderate) (15m south-east)	None	None	None
Current Liverpool to Manchester Line (via Warrington Central) (MA04-57)	Residential (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation SPZ 3	Drains (on-site)	None	None	None
Former LNER (MA04-61)	Residential (adjacent site users*)	Secondary A Aquifer -	Drains (on-site)	None ⁴	None	None

⁴ The former LNER route crosses both Broomedge to Glazebrook (MA04) and Risley to Bamfurlong (MA05) community areas. Therefore, it has been split into two separate sites (MA04-61 and MA05-37) to ensure the

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Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
		Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation SPZ 3				

* adjacent site receptors located outside the land required for the construction of the Proposed Scheme (off-site) remain and are therefore included in the construction stage assessment. This applies to human and property receptors only.

Table 4: Receptors – farms grouped for assessment (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Current Moss Brow Farm (MA04-21)	Residential (existing and adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits or Shirdley Hill Sand Formation Secondary B Aquifer - Bollin Mudstone Member	Ponds (10m north)	None	Farm buildings including residential dwellings	None
Current Villa Farm (MA04-24)	Residential (existing and adjacent site users*)	Secondary A Aquifer - Shirdley Hill Sand Formation Secondary B Aquifer - Bollin Mudstone Member	Ponds and Drains (10m various distances)	None	Farm buildings including residential	None
Current Paddocklane Farm (MA04-30)	Residential (existing and adjacent site users*)	Secondary A Aquifer - Shirdley Hill Sand Formation Secondary B Aquifer - Bollin Mudstone Member	None	None	Farm buildings including residential	None

impacts on relevant receptors are assessed. Whilst Holcroft Moss (SSSI) is located in the Risley to Bamfurlong (MA05) community area and also within 10m of MA04-61, the risk presented by the LNER to Holcroft Moss is assessed only in the *Environmental Statement, Volume 2: Community Area report MA05 Risley to Bamfurlong*, Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

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Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Current Leebrook (Lea brook) Farm (MA04-52)	Residential (existing and adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Principal Aquifer - Helsby Sandstone Formation	None	None	Farm buildings including residential	None

* adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.

Table 5: Receptors – sewage works grouped for assessment (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Sewage works (MA04-37)	Commercial / industrial (existing site users)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Bollin Mudstone Member	Manchester Ship Canal (WFD Moderate) (30m east)	None	Buildings associated with the water works	None
Sewage works (MA04-40)	Industrial (existing site users)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	Red Brook (WFD Poor) (30m south)	Coroners Wood Ancient Woodland (adjacent)	Buildings associated with the sewage works	None

Table 6: Receptors – cemetery (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Cemetery (MA04-47)	Residential (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	Pond (10m east)	None	None	None

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** adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.*

Table 7: Receptors – current and former smithies grouped for assessment (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Current smithy (MA04-46)	Industrial (existing site users) Residential (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Formation	Pond (50m east)	None	Smithy building	None
Former smithy (MA04-44)	Residential (existing and adjacent site users*)	Secondary (undifferentiated) Aquifer – glacial till Secondary B Aquifer - Tarporley Siltstone Formation	None	None	Residential properties	None

** adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.*

Table 8: Receptors – historical landfills grouped for assessment (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Lanstar historical landfill (also known as land adjacent to tar distillers) (MA04-48)	Residential (adjacent site users*)	Secondary A Aquifer – Alluvium & Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone Principal Aquifer - Helsby Sandstone Formation	Glaze Brook (WFD Poor) (on-site) Manchester Ship Canal (WFD Moderate) (10m south)	None	None	None
Historical Lock Lane Landfill (MA04-67)	None	Secondary A – Alluvium Principal Aquifer - Helsby Sandstone Formation	Manchester Ship Canal (WFD Moderate) (adjacent north)	None	None	None

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Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Historical Lock Lane Landfill (MA04-68)	Residential (adjacent site users)	Secondary A – Alluvium Principal Aquifer - Helsby Sandstone Formation	Manchester Ship Canal (WFD Moderate) (adjacent north)	None	Residential properties (adjacent)	None

* adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.

Table 9: Receptors – former tank (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Former tank (MA04-39)	Commercial (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Tarporley Siltstone	Manchester Ship Canal (WFD Moderate) (150m north) Red Brook (WFD Poor) (20m south)	None	None	None

* adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.

Table 10: Receptors – former MoD land (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Former Barracks East (MA04-54)	Residential (existing and adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Principal Aquifer - Helsby Sandstone Formation	Glaze Brook (WFD Poor) (150m east)	None	None	None

* adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.

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Table 11: Receptors – former railway land grouped for assessment (off-site)

Site title (site ID)	Sensitive land use (human receptor)	Aquifer designation	Surface watercourse	Geological and ecological designations	Property e.g. buildings and structures	Geoconservation sites
Disused railway lines (MA04-64)	Residential and Commercial (adjacent site users*)	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Bollin Mudstone Member	Ponds (20m south) River Bollin (WFD Moderate) (120m west)	None	Residential (off-site)	None
Disused railway lines (MA04-65)	None	Secondary A Aquifer - Glaciofluvial Sheet Deposits Secondary B Aquifer - Bollin Mudstone Member	Ponds (20m south) River Bollin (WFD Moderate) (adjacent)	None	None	None

* adjacent site receptors located within the land required for the construction of the Proposed Scheme (on-site) are assumed to have been removed at the construction stage and are therefore not considered in the construction stage assessment. This applies to human and property receptors only.

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3 Minerals data

- 3.1.1 There are mineral designations within the Broomedge to Glazebrook area. All relevant information associated with minerals, when considered as a resource, is presented in Environmental Statement, Volume 2, Land Quality, Community Areas report: Broomedge to Glazebrook (MA04), Section 10⁵.

⁵ High Speed Two Ltd (2022), High Speed Rail (Crewe - Manchester), *Environmental Statement, Volume 2, Community Area report: Broomedge to Glazebrook (MA04), Section 10 Land quality*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

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4 Geological Sites of Special Scientific Interest and local geological sites

- 4.1.1 No geological Sites of Special Scientific Interest (SSSI) or Local Geological Sites are present in the Broomedge to Glazebrook area.

5 Other sources of data and information

5.1.1 Other sources of baseline data and information that are deemed necessary include:

- local authority contaminated site data;
- landfill site data; and
- other regulatory data.

5.2 Local authorities contaminated site data

5.2.1 Warrington Borough Council (WBC) provided information regarding potentially contaminated sites within the study area which includes the Broomedge to Glazebrook (MA04) and Risley to Bamfurlong (MA05) areas. The Council identified 1,500 sites within the borough and 66 sites that intersect their search area. These sites typically comprise of landfill sites, former railway land (railway, engine shed, embankment and sidings), former military land, and former industrial land.

5.2.2 A number of potentially contaminated sites identified in the documents received from WBC occur within land required for construction of the Proposed Scheme (on-site) and within the study area. Sites identified in the documents received from WBC have been assessed in the same way as potentially contaminated sites identified from other sources. The number of sites that were identified after the screening process along with additional relevant details are included in the Environmental Statement Volume 5 Appendix LQ-001-0MA04 document.

5.2.3 The number of sites identified by WBC for the Broomedge to Glazebrook area is too large to include in a table representation.

5.2.4 Sites potentially considered as contaminated land by Trafford Metropolitan Borough Council (TMBC) have been listed in Table 12.

Table 12: Summary of contaminated site data from local authorities

Site location/grid reference	Relevant site ID	Description	Comment
Site located to the south of the Manchester Ship Canal (WFD Moderate) on Lock Lane	MA04-67	Landfill outlined by TMBC. No other data has been provided	Included in the detailed assessment.
Site located to the south of the Manchester Ship Canal (WFD Moderate) on Lock Lane	MA04-68	Landfill outlined by TMBC. No other data has been provided	Included in the detailed assessment.
Historical Warburton Farm Landfill	MA04- 66	Landfill outlined by TMBC. No other data has been provided. Site is on land required for the construction of the proposed scheme.	Included in the detailed assessment.

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5.3 Landfill site data

5.3.1 Available landfill data reports are outlined in Table 13.

Table 13: Summary of landfill sites

Landfill permit Number	Relevant Site ID	Description	Comment
N/A – Not known	MA04-43 – Former refuse pit	The Environment Agency does not hold information pertaining to the licensing of the landfill or the waste types accepted.	Included in the detailed assessment.
N/A – Not known	MA04-45 - Historical Hollins Green landfill	Environment Agency records indicate that industrial waste was accepted at the landfill between 1st November 1989 and 31st July 1991. There is no information available pertaining to the type or amount of material used or permitted.	Included in the detailed assessment.
N/A – Not known	MA04-66 – Historical Warburton Farm landfill	The Environment Agency does not hold information pertaining to the licensing of the landfill or the waste types accepted.	Included in the detailed assessment.
N/A – Not known	MA04-48 – Lanstar historical landfill (also known as land adjacent to tar distillers)	The Environment Agency does not hold records detailing the licensing or waste accepted but has anecdotal information to suggest a wide range of very hazardous materials and substances were deposited.	Included in the detailed assessment.
N/A – Not known	MA04-67 and 68 – Historical Lock Lane landfills	The Environment Agency does not hold information pertaining to the licensing of the landfill or the waste types accepted.	Included in the detailed assessment.

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5.4 Other regulatory data

5.4.1 Regulatory data reviewed include pollution incidents (major, significant and minor categories), radioactive and hazardous substances consents, environmental permits (integrated pollution control and integrated pollution prevention and control licences) and ecological sites. Details are provided in Table 14 below.

Table 14: Summary of other regulatory data

Data	Description
Pollution incidents to controlled waters	There were nine minor incidents to controlled waters reported within the study area between 1991 and 2016. Only two of the incidents were classed as significant. Most relate to petroleum hydrocarbon release to surface waters from an agricultural setting.
Discharge consents	Environment Agency data indicate that there are four discharge consents to surface water and one discharge consent to groundwater within the study area. The majority of these relate to sewage or trade discharges.
Ecological receptors	Two LWS, two Sites of Biological Interest (SBI), a Traditional Orchard Inventory site and an Ancient Woodland site are located within the study area. Three of these ecological sites are on land required for the operation of the Proposed Scheme: Fox Covert and Meadows (SBI), Coroners Wood (Ancient Woodland site) and Glazebrook Moss (LWS).

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6 Site visit records

6.1.1 Records of site visits are included in the following Section. Site specific visits were completed at:

- MA04-43 Former refuse pit;
- MA04-45 Historical Hollins Green landfill; and
- MA04-48 Lanstar historical landfill (also known as land adjacent to Tar Distillers).

Table 15: Geo-environmental site inspection pro forma for MA04-43, MA04-45 and MA04-48

PROJECT	Site Walkover MA04-43,45,48		
Lot number:	1	Land Access Number(s):	L5932
Site Name:	Former refuse pit, Historical Hollins Green landfill; and Lanstar historical landfill (also known as land adjacent to tar distillers)		
Surveyor name:	AM, CO	NGR (centre of land parcel):	370021 391137
Weather:	Dry and over-cast	Date:	10/09/18
OVERVIEW SITE DESCRIPTION			
<p>Rural conjoined sites with no defined border on the ground. All listed as historical landfills. Overgrown grassland, dense vegetation. All three sites were visited at the same time and are reported together in one site visit record.</p> <p>No current activity, with limited access to the public. Some footpaths and trails were present on the sites. The sites are located next to A57 Manchester Road with several locked access points. Immature trees present on much of the sites within the grassland in all MA04-43, 45, 48, except for a patch of woodland with some mature trees surrounding and growing out of a large depression towards the river (Glaze Brook) section in the north-east boundary of MA04-48. Within this depression there was evidence of fly-tipped or fill material consisting of metal wires and concrete blocks partially covered by soil.</p> <p>A large amount of Himalayan Balsam was identified along the banks of the Glaze Brook river in MA04-48 and within the 'dell' feature, along with evidence of otters using the banks. Bridge spanning the river carrying the A57 Manchester Road in the north of MA04-48 seemed to be in good condition with no visible cracks in the stone work, however, this cannot be ruled out due to limited access.</p> <p>One large outflow pipe was identified flowing into the Glaze Brook River in MA04-48 with what appeared to be foul water (strong sewage odour) flowing from it. The river also contained lots of discarded rubbish that was being trapped downstream.</p>			
TOPOGRAPHY			
<p>No hardstanding was present on the sites. Sites was a flat platform sloping towards the river with one visible 'dell' depression present in MA04-48 close to the river. Made ground was visible in trackways that crossed the sites and in the depression that is adjacent to the river. Banks of the river were steep (45 degrees) with no plateau. Bedrock present at the edges in places of erosion.</p>			
SOIL QUALITY			
<p>Made ground was identified in localised areas on the sites and consisted of brick and large sections of concrete with metal inclusions. Made ground was sporadic and looked to be only located in small isolated patches, with the largest amount being found in the 'dell' feature. The rest of the sites was covered in dark brown sandy slightly clayey topsoil with small amounts of gravel. Some sandstone bedrock was at or close to the surface immediately adjacent to the river down the sides of the steep bank in MA04-48 where the river has eroded the top soil. Small area of fly-tipped/rubbish at a locked entrance gate in MA04-48.</p> <p>No olfactory evidence of contamination present within the soil.</p>			

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PROJECT	Site Walkover MA04-43,45,48
MINING EVIDENCE	
No evidence of mining activity on the sites. Sites are listed as a historical landfills.	
WATER QUALITY	
<p>Glaze Brook to the east of the sites with one obvious outflow pipe which appeared to contain foul water. Strong odour of sewage coming from the pipe. Water appeared clear with limited amounts of suspended sediment or other contamination present. Lack of water vegetation present at the time of survey.</p> <p>A large patch of rubbish was identified within the river caught up in fallen vegetation creating an obstruction. Rubbish included fridge and other household waste along with natural organic material.</p>	
SITE DRAINAGE	
Some evidence of waterlogging in vehicle tracks and footways over the sites; no other areas of water build-up on the surface of the sites.	
VEGETATION COVER	
<p>A mix of open, semi-improved grassland and scrub land featuring immature trees over most of the sites. Dense woodland present in and surrounding the 'dell' area containing at least four species of tree including some mature willows and along the banks of the river. Some vegetation present at lower levels but sparsely spread mostly containing Hawthorne and Cherry Laurel.</p> <p>No signs of stress or open areas of bare earth. Some of the immature trees had died.</p>	
ECOLOGICAL ISSUES (OUTLINE)	
<p>Himalayan Balsam identified on the banks of the Glaze Brook and within the 'dell' and surrounding the edge, the largest patch being where the dell meets the river. Could be present because of the area being prone to flooding, however no flooding was identified at the time of survey. Evidence of otter (footprints and spraint/dung) was seen on the banks of the river and on the wall containing the outflow pipe. Japanese Knotweed identified on the banks of the Manchester Ship Canal.</p> <p>No badger or bat evidence identified at time of survey but cannot be ruled out due to the location of the sites and the old stone bridge, which was difficult to survey for bat roosting features.</p>	
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)	
<p>A large stone, single arch bridge with stone buttresses supporting the main road spanned the river was present in the north of the sites. Seemed to be in good condition but survey was limited due to access to the river side.</p> <p>No other buildings present on-site.</p>	
ANCILLARY INFRASTRUCTURE (if applicable)	
One outlet pipe running under the sites was seen carrying foul water with a sewage-type odour.	
SITE OPERATION (PAST AND PRESENT)	
<p>Past: The sites identified are historical landfill sites with an unknown start and end date and unknown waste types.</p> <p>Present: Sites are closed to the public, but access is not completely shut off. Evidence of trackways used by both vehicles and humans found across the sites. Land use is now open ground with no use seen.</p>	
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION	
Some fly-tipping consisting of household rubbish was seen in the north by a locked entrance gate but only in small amounts. No sheen on the water but foul water with sewage odour seen flowing into the river from a large outlet pipe flowing from under the sites.	

Background Information and Data

Land quality

BID LQ-002-0MA04

MA04: Broomedge to Glazebrook

Land quality baseline data

PROJECT	
Site Walkover MA04-43,45,48	
SURROUNDING LAND USE	
NORTH	Residential
EAST	Commercial – Recycling centre
WEST	Residential and school
SOUTH	Manchester Ship Canal
GENERAL	Some sensitive receptors close by. Sites are more open than the surrounding land use with no buildings or other infrastructure identified.
MISCELLANEOUS COMMENTS/NOTES	
None	

Background Information and Data

Land quality

BID LQ-002-0MA04

MA04: Broomedge to Glazebrook

Land quality baseline data

7 References

Department for Environment, Food and Rural Affairs and Environment Agency (2002), *Potential Contaminants for the Assessment of Land*. R&D Publication CLR8.

High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

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