

High Speed Rail (Crewe – Manchester)

Background information and data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

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Department for Transport

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 former 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 Risley to Bamfurlong 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-001-0MA05)¹.
- 1.1.3 Sites (for example MA05-05) referred to throughout this report are contained in the Volume 5 Map Book (see Environment Statement, Volume 5 Land quality Map Book, Map Series LQ-01-314b to LQ-01-318-C1²).
- 1.1.4 The Environmental Impact Assessment Scope and Methodology Report (SMR) (see Environment Statement, Volume 5, Appendix CT-001-00001) should be referred to for details of the land quality assessment methodology³.

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Land quality report*, Volume 5, Appendix LQ-001-0MA05. 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>.

2 Receptor information

- 2.1.1 This section provides further receptor information for sites that have been evaluated in stages C and D of the land quality assessment and assessed for the Risley to Bamfurlong area (see Environmental Statement, Volume 5, Appendix LQ-001-0MA05¹).
- 2.1.2 For each site or group of sites, further information on each site receptor can be found in Table 1 to Table 19.
- 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 and current farms;
 - former and current railway land and rail goods yard / depots;
 - works;
 - former Ministry of Defence (MoD) land;
 - former sewage filter beds;
 - former tanks;
 - business park; and
 - mine shafts.
 - off-site:
 - historical landfills;
 - former and current railway land;
 - former collieries;
 - current and former works;
 - former animal processing site;
 - former sewage filter beds;
 - former scrap yard and current garage workshop;
 - farms;
 - former and current tanks; and
 - business park.

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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
Restored Risley Landfill (MA05-05)	Site workers, visitors and walkers	Secondary (Undifferentiated) Aquifer - glacial till Principal Aquifer – Helsby Sandstone Formation SPZ 3	Ponds (on-site and adjacent*, north)	Local Wildlife Sites (LWS) - Silver Lane Ponds (adjacent*, north) LWS - Gorse Covert Mounds (150m south) LWS – Pestfurlong Moss (130m south-east)	Waste Treatment Centre	None
Historical Lowton Sidings landfill (MA05-73)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer - glacial till Principal Aquifer – Chester Formation SPZ 2/3, Potable groundwater abstraction (380m south-east)	Small Brook (Water Framework Directive WFD Moderate) (adjacent*, east)	None	None	None
Historical Lily Lane landfill (MA05-106)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer - glacial till, Secondary A Aquifer - alluvium (straddling canal) Secondary A Aquifer –Pennine Middle Coal Measures Principal Aquifer – Collyhurst Sandstone Formation	Leeds and Liverpool Canal (bisects site) ponds and Hey Brook (WFD Moderate) (on-site) Springs (three, all on-site)	Site of Special Scientific Interest (SSSI) and Site of Biological Importance (SBI)- Abram Flashes (on-site, western side of canal only)	None	None

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

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Table 2: Receptors – former and current farms 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
Current Yew Tree Farm (MA05-14)	Residential (existing site users)	Principal – Wilmslow Sandstone Formation SPZ 3	Ponds (130m south)	None	Yew Tree Farm buildings	None
Former Rowe Farm (MA05-16)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond (70m north)	None	None	None
Current Glaziers Lane Farm (MA05-24)	Residential (existing site users)	Principal Aquifer – Wilmslow Sandstone Formation Commercial groundwater abstraction (90m west) SPZ 3	Ponds (25m west)	None	Glaziers Lane Farm buildings	None
Former Phillips Farm (MA05-25)	Commercial (existing site users)	Principal Aquifer – Wilmslow Sandstone Formation Commercial groundwater abstraction (20m west) SPZ 3	Ponds (10m south)	None	Commercial building	None
Current Carr Farm (MA05-47)	Residential (existing site users)	Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction (190m north-east)	Pond (on-site) Glaze Brook (WFD Poor) (adjacent* north)	None	Carr Farm Buildings	None
Current Birchalls Farm (MA05-41)	Residential (existing site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation	Ponds (50m west)	None	Birchalls Farm buildings	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
		SPZ 3				
Former Baily Hall Farm (MA05-60)	Residential (existing site users) Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2– Potable groundwater abstraction (490m east)	Pond (230m north-east)	None	Residential buildings	None
Current White's Farm (MA05-40)	Residential (existing site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond (110m north-west)	None	White's farm buildings	None

* adjacent site receptors located outside the land required for the construction of the Proposed Scheme (off-site) 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 and rail goods yard / depots 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 London North Eastern Railway (LNER) Wigan Junction Branch (MA05-13)	None	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Multiple ponds (nearest 40m west)	LWS - Silver Lane Ponds (on-site)	None	None
Former LNER Wigan Junction Branch - Southern Spur (MA05-37)	None	Principal Aquifer – Helsby Sandstone Formation SPZ 3	Pond (120m west) Spring (20m south-west)	SSSI and Special Area of Conservation (SAC) - Holcroft Moss / Manchester Mosses	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
				(adjacent* east) LWS - Woods by Holcroft Moss (on-site)		
Current Liverpool to Manchester line via Warrington Central (MA05-39)	Railway workers, Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond (10m south)	None	Railway line	None
Former goods shed (MA05-59)	Commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2, Potable groundwater abstraction (330m east)	Glaze Brook (WFD Poor) (180m south-east)	None	None	None
Former Basin railway (MA05-97)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 3	Windy Bank Brook (WFD Moderate) (30m north)	None	None	None
Current London and North Western Railway Railway/ North Union line (MA05-103)	Railway workers, Residential and commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer – Pennine Middle Coal Measures (northern end) Principal Aquifer – Chester Formation	Coffin Lane Brook (WFD Moderate) and Nan Holes Brook (WFD Moderate) (on-site) Leeds and Liverpool Canal (200m east) Spring (on-site and 160m west)	SSSI and SBI - Abram Flashes (220m east) SBI -Edge Green (140m west)	None	None
Current LNER Wigan Junction Branch -	Railway workers, residential and	Secondary (Undifferentiated) Aquifer- glacial till	Multiple brooks and ponds, nearest is	LWS- Eleven Acre Common	Disused railway lines	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
Southern Spur (MA05-114)	commercial (adjacent* site users)	Principal Aquifer – Chester Formation SPZ. 2 Potable groundwater abstractions (300m and 600m east)	Small Brook (WFD Moderate) (30m west) Spring (80m east)	(20m south-east)		

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

Table 4: Receptors – Works (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
Engineering workshops (MA05-54)	Industrial (existing site users) residential and commercial (adjacent* site user)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2. Potable groundwater abstraction (360m east)	Glaze Brook (WFD Poor). (150m south-east), ponds	LWS – Silver Lane Ponds	Industrial building	None

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

Table 5: Receptors – former MoD land (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 MoD barracks (MA05-70)	Walkers (existing site users), residential (existing and adjacent* site users), School building (adjacent site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2 in south-east end SPZ 3 in remainder of site Potable groundwater well (495m south-east)	Pond (10m north-east)	None	Residential (existing and adjacent*) and school building (adjacent*)	None

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

Table 6: Receptors – former sewage filter beds (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
Sewage filter beds (MA05-48)	Commercial (existing site users) and commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer – glacial till Principal Aquifer – Chester Formation SPZ 2. Potable groundwater abstraction (380 north-east)	Pond (120m south-east) Glaze Brook (WFD Poor) (120m east)	None	None	None

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

Table 7: Receptors – former tanks 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 tank (MA05-51)	Commercial (existing and (adjacent* site users), industrial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ II. Potable groundwater abstraction (430m east)	Glaze Brook (WFD Poor) (190m east)	None	None	None
Former tank (MA05-67)	None	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 3 and SPZ 2 80m east. Potable groundwater abstraction (600m south-east)	None	None	None	None

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

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Table 8: Receptors – business park (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
Lowton Business Park (MA05-50)	Commercial (existing site users) commercial and school building (adjacent* site users*)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2. Potable groundwater abstraction (240m east)	Glaze Brook (WFD Poor) (190m east)	None	Commercial and School building (adjacent*)	None

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

Table 9: Receptors – mine shafts 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
Mine shaft (MA05-122)	Residential (adjacent* site users*)	Secondary (Undifferentiated) Aquifer- glacial till Secondary B Aquifer – Manchester Marls Formation	Ponds (50m north-east Nan Holes Brook (WFD Moderate) (160m south)	None	Farm building (adjacent*)	None
Mine shaft (MA05-123)	Residential (adjacent* site users*)	Secondary (Undifferentiated) Aquifer- glacial till Secondary B Aquifer – Manchester Marls Formation	Ponds (50m north-east Nan Holes Brook (WFD Moderate) (130m south)	None	None	None

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

Table 10: Receptors – historical landfills (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
Historical landfill (MA05-03)	Public Use Buildings, (existing and	Secondary (Undifferentiated) Aquifer- glacial till	Pond (on site and adjacent*)	LWS -Silver Lane Ponds – (adjacent* north-east)	Prison buildings (HM Remand	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
	adjacent*), commercial (existing site users) residential (adjacent*) and commercial (adjacent* site users), walkers (existing site users)	Principal Aquifer – Helsby Sandstone Formation SPZ 3			Centre) and Waste Treatment Centre	
Historical landfill – Land to Rear of 120 Lily Lane (MA05-111)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer– glacial till Secondary A Aquifer - Pennine Middle Coal Measures	Multiple ponds (nearest 170m north) Coffin Lane Brook (WFD Moderate) (330m 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 11: Receptors former and current 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
Former Liverpool to St Helens line (MA05-91)	Commercial and residential (existing and adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 3	Pond (115m north)	LWS – Silver Lane Ponds (adjacent* north)	Commercial and residential buildings	None
Former Long Lane Sidings (MA05-102)	None	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Collyhurst Sandstone Formation Secondary A Aquifer - Pennine Middle Coal	Spring (80m north-east) Pond (80m south-east)	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
		Measure Formations				
Current LNER Wigan Junction Branch - Southern Spur (MA05-113)	Residential and commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 3 Potable groundwater abstraction (530m south west), Unlicensed groundwater abstraction (240m south west)	Multiple ponds (nearest 110m east)	SSSI and SAC- Holcroft Moss (Holcroft Moss SSSI is part of the Manchester Mosses SAC) (140m south-east) LWS – Silver Lane Ponds (on-site), Eleven Acre Common (20m north-east), Woods by Holcroft Moss (30m south-east)	None	None
Former LNER Wigan Junction Branch - Southern Spur (MA05-115)	Residential (existing and adjacent* site users)	Secondary Undifferentiated – glacial till Principal Aquifer – Chester Formation SPZ 3	Multiple ponds (nearest 50m north)	None	Residential buildings	None
Former LNER Wigan Junction Branch - Southern Spur (MA05-116)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2- Potable groundwater abstraction (80m west)	Multiple ponds and Brooks, nearest is Small Brook (WFD Moderate) (on-site)	Local Nature Reserve (LNR) - Pennington Flash (100m east)	None	None
Former Basin railway (MA05-117)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer - Manchester Marls Formation, Principal Aquifer Kinnerton Sandstone Formation	Windy Bank Brook (on-site)	None	Residential (off-site)	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
		SPZ 3				

* 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 12: Receptors – former collieries 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
Former Mains Colliery (extended pits) (MA05-104)	None	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer – Pennine Middle Coal Measures Principal Aquifer Collyhurst Sandstone Formation	Coffin Lane Brook (WFD Moderate) (180m north) Springs (30m east, 180m north-west and 200m south)	SSSI and SBI - Abram Flashes (270m east)	None	None
Former Edge Green Colliery (MA05-99)	Residential and commercial (existing site users)	Secondary (Undifferentiated) Aquifer– glacial till Secondary A Aquifer – Pennine Middle Coal Measures Principal Aquifer - Collyhurst Sandstone Formation	Nan Holes Brook (WFD Moderate) (20m north) Spring (5m north)	SBI – Edge Green (on-site)	Residential and commercial buildings	None
Former Mains Colliery/mines (MA05-105)	None	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer – Pennine Middle Coal Measures Principal Aquifer - Collyhurst Sandstone Formation	Coffin Lane Brook (WFD Moderate) (40m north) Springs (110m west and 220m south)	SSSI and SBI- Abram Flashes (300m east)	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
Former Bamfurlong Colliery (MA05-108)	None	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer – Pennine Middle Coal Measures	Leeds and Liverpool Canal (adjacent* north)	SSSI and LNR - Bryn Marsh and Ince Moss Wigan Flashes (30m north) SSSI and SBI - Abram Flashes – 220m east	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 13: Receptors – works (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
Works (MA05-64)	Industrial / commercial (existing site users) residential (adjacent* site users*)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2 Groundwater abstraction (270m south-east)	Ponds (100m east and north-west)	None	Industrial / commercial buildings	None
Taylor Business Park and, former works (MA05-22)	Commercial (existing site users) Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Ponds (150m west)	LWS – Silver Lane Ponds (170m south)	Taylor Business Park	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 14: Receptors –former animal processing site (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 soap and glue works and current depot (MA05-46)	Residential (existing site users)	Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction (280m north-east)	Glaze Brook (WFD Poor) (10m north east)	None	Residential buildings	None

This site has been classed as an animal processing site as glue and soap were historically made from animal products.

Table 15: Receptors – former sewage filter beds (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 filter beds (MA05-49)	Commercial (existing site users) and residential (adjacent* site users)	Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction 210m (north-east)	Pond (on-site) Glaze Brook (WFD Poor) (adjacent* north)	None	Unspecified farm buildings	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 16: Receptors – former scrap yard and current garage workshop 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
Former scrap yard (MA05-63)	Residential and commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction (160m south-east)	Pond (adjacent*, east)	None	None	None

Background Information and Data

Land quality

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MA05: Risley to Bamfurlong

Land quality baseline data

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 garage (MA05-66)	Commercial (existing site users) residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction (300m south-east)	Pond (100m north-west)	None	Commercial building	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 17: 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
Bates Farm (MA05-09)	Residential (existing site users), commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation	Pond (on-site)	None	Bates Farm buildings	None
Wigshaw Farm (MA05-27)	Commercial (existing site users) Residential (adjacent* site users)	Principal Aquifer – Wilmslow Sandstone Formation Groundwater (commercial) abstraction (140m south-west) SPZ 3	Ponds (90m east)	None	Wigshaw farm buildings	None
Clough Farm (MA05-43)	Residential (existing site users)	Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Ponds (on-site)	None	Clough Farm Buildings	None
Bamfurlong Hall Farm (MA05-107)	Residential (existing and adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Secondary A Aquifer - Pennine	Pond (90m east) Leeds and Liverpool canal (170m east)	Abram Flashes SSSI and SBI (60m east)	Bamfurlong Hill Farm Buildings	None

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

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
		Middle Coal Measures				

* 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 18: Receptors – former and current tanks 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
Former tanks associated with Taylor Business Park (MA05-17)	Commercial (existing site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond (250m south-east)	None	Commercial building	None
Former tank (MA05-18)	Commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond (250m south-east)	None	None	None
Current tank (MA05-20)	Commercial (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Wilmslow Sandstone Formation SPZ 3	Pond 310m west	None	Tanks	None
Current tank (MA05-56)	Residential (existing and adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 1 Groundwater abstraction (170m east)	Glaze Brook (WFD Poor) (75m south)	None	Residential building	None

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

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 tank (MA05-75)	Residential (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 3	Small Brook (WFD Moderate) (60m 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 19: Receptors – business park (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
Lowton Business Park (MA05-125)	Commercial (existing site users) commercial and school building (adjacent* site users)	Secondary (Undifferentiated) Aquifer- glacial till Principal Aquifer – Chester Formation SPZ 2 Potable groundwater abstraction (510m east)	Glaze Brook (WFD Poor) (270m east)	None	Commercial buildings school buildings (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.

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

3 Minerals data

- 3.1.1 There are mineral designations within the Risley to Bamfurlong area. All relevant information associated with minerals, when considered as a resource, is presented in Environmental Statement, Volume 2, Land Quality, Community Area report: Risley to Bamfurlong (MA05), Section 10⁴.

⁴ High Speed Two Ltd (2022), High Speed Rail (Crewe - Manchester), *Environmental Statement, Volume 2, Community Area report: Risley to Bamfurlong (MA05), Section 10 Land quality*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

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 (LGS) are present in the Risley to Bamfurlong 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 their study area which includes the Broomedge to Glazebrook (MA04) and Risley to Banfurlong (MA05) areas. The Council identified 1500 sites within the borough and 66 sites that intersect the search area. These sites typically comprise of infilled ponds, 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-001-0MA05 document.

5.2.3 Wigan Metropolitan Borough Council (WMBC) has identified contaminated sites within the borough (the number of sites was not specified) but none are within the study area.

5.2.4 WMBC provided information pertaining to two of the landfills within the study area; this information is included in Section 5.3.

5.3 Landfill site data

5.3.1 Available landfill data reports provided by WBC and WMBC for landfill sites within the study area are outlined in Table 20.

Table 20: Summary of landfill sites

Landfill permit number	Relevant site ID	Description	Comment
Warrington Borough Council			
Environment Agency historical landfill ref: EAHLD16680 (Warrington Road, Risley)	Warrington Road, Risley historical landfill (MA05-03) and also Silver Lane Risley historical landfill (MA05-02) which	The Warrington Road, Risley historical landfill is located north of Risley adjacent to the land required for the construction of the Proposed Scheme. The landfill received waste between 1982 and 1992; waste types comprised inert, industrial commercial, special and liquids sludge. Gas control measures are reportedly in place.	Included in the detailed assessment.

Background Information and Data

Land quality
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 MA05: Risley to Bamfurlong
 Land quality baseline data

Landfill permit number	Relevant site ID	Description	Comment
historical landfill) and EAHLD15518 (Silver Lane, Risley historical landfill)	is situated entirely within MA05-03.	Silver Lane Risley historical landfill (MA05-02) is located entirely within the footprint of Warrington Road Risley historical landfill (MA05-03). Available records indicate that waste was received between 1975 and 1984; waste types also included inert, industrial commercial, special and liquids sludge.	
Environment Agency Historical landfill ref: EPR/BV7877IR	Risley Landfill site) (MA05-05)	This landfill is partially located within land required for the construction of the Proposed Scheme, north of Risley. The landfill licence has been revoked and the EA confirmed the site is now closed. Available records indicate that industrial, commercial, household (possibly including hazardous waste) was accepted at the landfill between 1994 and 2011. All cells / phases within the landfill reportedly have clay and plastic liners. The landfill was restored in 2015. 'Older' areas are clay capped with restoration soils and 'newer areas' are plastic capped with restoration soils. The landfill is still in the de-gassing phase and there is ongoing leachate and gas collection.	Included in the detailed assessment.
Wigan Metropolitan Borough Council			
Environment Agency historical landfill ref: EAHLD15526	Historical Lily Lane landfill (MA05-106)	The landfill is located on the land required for the construction of the Proposed Scheme around Abram, south and north of the Leeds and Liverpool Canal. Environment Agency records indicate that inert, industrial, commercial and household waste was accepted at the landfill between 31 December 1979 and 7 July 1983, when the licence was surrendered.	Included in the detailed assessment.
Environment Agency historical landfill ref: EAHLD16524	Historical Lowton Sidings landfill (MA05-73)	The landfill is located on land required for the construction and operation of the Proposed Scheme. 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	Historical landfill -Land to Rear of 120 Lily Lane (MA05-111)	Partially located in the study area but outside of land required for construction of the Proposed Scheme. WBMC provided a shape file for the landfill and state that the composition of landfilled material is unknown but is possibly linked to land restoration. The waste management licence for the restoration works (ref EAWML/54335) required quarterly gas monitoring. No further information has been made available.	Included in the detailed assessment.
N/A	Historical Holcroft Hall Quarry Landfill (MA05-126)	Partially located in the study area but outside of land required for the construction of the Proposed Scheme. Site is listed as dormant. No further information has been made available.	Not identified as a potential contamination site.

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

5.4 Other regulatory data

5.4.1 Regulatory data reviewed includes 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 receptors. Details are provided in Table 21 below.

Table 21: Summary of regulatory data

Data	Description
Control of Major Accident Hazards (COMAH) sites	None
Pollution incidents to controlled waters	There are 60 recorded incidents to controlled waters in the study area that occurred between 1992 and 1999. The majority are minor incidents. There are two classed as significant; these relate to the loss of waste related pollutants to Holcroft Brook (the Glaze catchment) in 1994.
Discharge consents	Environment Agency data indicates that there are 44 discharge consents to surface waters within the study area. Half of these relate to the discharge of public sewage, the remainder are mostly for discharge of treated effluent and trade discharge.
Environmental permits	None
Ecological receptors	There are three SSSIs in the study area including one within, or partially within, the land required for the construction of the Proposed Scheme (Holcroft Moss; which is also part of the Manchester Mosses SAC).
Local Wildlife Sites	There are five LWS in the study area, including three within, or partially within, the land required for the construction of the Proposed Scheme; Gorse Covert Mounds, Silver Lane Ponds and Eleven Acre Common with Woods by Holcroft Moss and Pestfurlong Moss outside the land required for construction.
Site of Biological Importance	There are seven SBI within the study area. One SBI, Ponds near Lightshaw Lane, is partially within land required for the construction of the Proposed Scheme.
Local Nature Reserves	Wigan Flashes (part of this LNR is within Bryn Marsh and Ince Moss SSSI), is adjacent to land required for construction of the Proposed Scheme.
Special Area of Conservation	Manchester Mosses (Holcroft Moss SSSI is part of the Manchester Mosses SAC)

Background Information and Data

Land quality
 BID LQ-002-0MA05
 MA05: Risley to Bamfurlong
 Land quality baseline data

6 Site visit records

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

- MA05-05 Risley Landfill;
- MA05-25 Former Phillips Farm;
- MA05-70 MoD land, former barracks;
- MA05-106 Historical Lily Lane landfill; and
- MA05-108 Former Bamfurlong Colliery.

Table 22: Geo-environmental site inspection pro forma for MA05-05

PROJECT		Site Walkover (MA05-05 Risley Landfill)	
Land Access Numbers:		L5110, L5179, L5106, L5092, L5160, L5148, L5090, L5175, L5080, L5182, L5177	
Site Name:	Risley Landfill (non-operational)		
Surveyor name:	AM, CO	NGR (centre of land parcel):	366451 393653
Weather:	Overcast	Date:	11/09/18
OVERVIEW SITE DESCRIPTION			
<p>The site is located on land that has previously been designated as landfill and is operated by Biffa plc. The site is licensed to receive waste but is non-operational. There is gas collection infrastructure and landfill gas collection plant materials. Land cover consists of semi-improved grassland with scattered immature and sapling trees with gravel pathways crossing the site.</p> <p>The site is closed to the public. However, discussions with site staff indicated that the public, including dog walkers frequently use the site.</p> <p>There is a compound located to the south-east of the site containing a range of storage tanks and other infrastructure and a lattice of gas monitoring wells scattered over the site.</p> <p>Ponds are located in the north of the site.</p>			
TOPOGRAPHY			
<p>The site has a steady but pronounced slope in all directions from the high point at the centre of the site, most notably sloping down towards the north and the south. Made ground is present in all locations due to former use as a landfill site. No evidence of subsidence or depressions is present on-site.</p>			
SOIL QUALITY			
<p>Made ground consists of a thin and poor quality dark brown topsoil material with brick, concrete and plastic inclusions. No olfactory evidence of contamination identified.</p>			
MINING EVIDENCE			
<p>No evidence of mining activity on-site. Site is listed as a historical landfill.</p>			
WATER QUALITY			
<p>Ponds to the north are understood to be for landfill drainage and are also part of Silver Lane Ponds LWS. The ponds are large and stagnant with a large amount of sediment present. Water is turbid but there is no visual evidence of contamination or poor water quality. No outlet pipes or other drainage found. Vegetation is present and growing on the edges of water, but no submerged vegetation seen. Waterfowl present on the water and at the pond side.</p>			
SITE DRAINAGE			
<p>The site seems well drained with only some local water logging on the pathways crossing the site. Surface water drainage is to the north of the site towards the ponds.</p>			

Background Information and Data

Land quality
BID LQ-002-0MA05
MA05: Risley to Bamfurlong
Land quality baseline data

PROJECT	
Site Walkover (MA05-05 Risley Landfill)	
VEGETATION COVER	
The site is completely covered by vegetation except for the gravel pathways. The site mostly comprises semi-improved and improved grassland, Saplings and immature trees are present along the edges of the site with some plant communities observed on the banks of the pond.	
ECOLOGICAL ISSUES (OUTLINE)	
No invasive species were identified; however, the site walkover was not considered to comprise an invasive species survey.	
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)	
No permanent buildings present on-site. The only structures are portacabins within the site compound to the south-east of the site which also contains gas storage tanks and other equipment. On the southern edge of the site there is also a waste transfer station with some piping and storage tank areas observed. All appeared to be in good condition.	
ANCILLARY INFRASTRUCTURE (if applicable)	
Underground pipework present and other pipework also seen entering the waste transfer station and site compounds, likely associated with the gas monitoring system.	
SITE OPERATION (PAST AND PRESENT)	
Past: The site is identified as Risley landfill. Present: Site owned by Biffa plc. and is closed to the public, but access was not completely closed off. Paths used by dog walkers as well as site workers identified on-site.	
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION	
Slight gas odour is present in the air associated with the gas monitoring wells and the gas collection equipment. Odours of organic matter/break down of rubbish. No visual evidence of contamination seen apart from within the made ground.	
SURROUNDING LAND USE	
NORTH	Ponds
EAST	Fields and main road (B5252)
WEST	Biffa plc. site and grassland areas
SOUTH	Main road (M62)
GENERAL	N/A
MISCELLANEOUS COMMENTS/NOTES	
None	

Background Information and Data

Land quality
 BID LQ-002-0MA05
 MA05: Risley to Bamfurlong
 Land quality baseline data

Table 23: Geo-environmental site inspection pro forma for MA05-25

PROJECT		Site Walkover (MA05-25 Former Phillips Farm)	
Land Access Number(s):		L21000	
Site Name:	Former Phillips Farm		
Surveyor name:	AM / CO	NGR (centre of land parcel):	364734 394731
Weather:	Sunny	Date:	12/09/18
OVERVIEW SITE DESCRIPTION			
<p>The site is known as Philips Farm and is a residential property on a former farm site. The house was modern (constructed within the last 10 years) and the grounds were also in a good condition. The garden was well maintained with no evidence of underground tanks or other potential contamination sources observed. No visual or olfactory evidence of contamination was noted.</p>			
TOPOGRAPHY			
<p>Flat with grass covering the back garden of the property. Artificial grass and a gravel driveway in the front of the property.</p>			
SOIL QUALITY			
<p>Residential garden is in good condition and vegetables were growing in the vegetable patch. No odours or signs of contamination observed.</p>			
MINING EVIDENCE			
<p>No evidence of mining was identified or recorded on-site.</p>			
WATER QUALITY			
<p>No water features were present on-site.</p>			
SITE DRAINAGE			
<p>No visual evidence of drainage problems was identified on-site.</p>			
VEGETATION COVER			
<p>Approximately 50% of the site is covered by turf associated with a residential lawn and a small area of artificial grass garden is bounded by a hedgerow with some mature trees observed. Garden is cropped with vegetables or planted boarders. No evidence of plant distress was observed.</p>			
ECOLOGICAL ISSUES (OUTLINE)			
<p>Invasive species were not observed; however, an invasive species survey was not undertaken during the site walkover.</p>			
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)			
<p>Large residential modern building of brick construction with modern roof tiling. Some outbuildings built for use as kennels, also in good condition. No inspection hatches/ covers found.</p>			
ANCILLARY INFRASTRUCTURE (if applicable)			
<p>No evidence of chemical storage or other contaminant sources on-site was observed.</p>			
SITE OPERATION (PAST AND PRESENT)			
<p>Past: The site was identified as a working farm. Present: Site was a modern residential property, closed to the wider public. No evidence of past activities on the site as the whole area had been landscaped and re-worked during the construction of the modern house. Small chicken coop in the rear of the property.</p>			
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION			
None			

Background Information and Data

Land quality
 BID LQ-002-0MA05
 MA05: Risley to Bamfurlong
 Land quality baseline data

PROJECT	Site Walkover (MA05-25 Former Phillips Farm)
SURROUNDING LAND USE	
NORTH	Fields
EAST	Industrial/commercial
WEST	Road
SOUTH	Road
GENERAL	Only receptors present will be the residents of the modern house. Small vegetable patch in the garden.
MISCELLANEOUS COMMENTS/NOTES	
None	

Table 24: Geo-environmental site inspection pro forma for MA05-70

PROJECT	Site Walkover (MA05-70 Former MoD land)		
Land Access Number(s)	L6237, L21072, L10039		
Site Name:	Former MoD land		
Surveyor name:	AM/ CO	NGR (centre of land parcel):	362983 397824
Weather:	Overcast	Date:	11/09/18
OVERVIEW SITE DESCRIPTION			
<p>The site is identified as Lowton Common but former land use was as a military barracks. Land use was dominated by amenity grassland at the time of the survey with a small portacabin presumably being used as changing rooms/welfare. Storage tank underneath the cabin in a poor condition with no cap covering the access hole, possibly once contained fuels. No olfactory evidence of contamination identified.</p> <p>Several raised manhole covers are present on-site close to the east and west boundaries.</p> <p>Area previously identified as civic hall appears to no longer be present on-site, with new houses currently being built in the location of where it was previously identified.</p>			
TOPOGRAPHY			
Flat ground with no hardstanding used as amenity grassland. Manhole covers along the east and west perimeters. Slight drop down to the north at the boundary to an area of scrubland off-site.			
SOIL QUALITY			
No visual or olfactory evidence of contamination identified on-site. Small amounts of litter around the site but in isolated patches. Improved grassland and regularly cut and maintained.			
MINING EVIDENCE			
No evidence was noted			
WATER QUALITY			
Water absent			
SITE DRAINAGE			
Some evidence of water logging in the south-east of the site near the portacabin area. No other evidence of poor drainage found.			
VEGETATION COVER			
Cover is 100% recreational grassland. Evidence of cutting and seeding found onsite in the areas used as a football pitch. Semi-mature and some mature trees surrounding the boundary of the site with some slight discoloration of the vegetation surrounding the manhole covers.			
ECOLOGICAL ISSUES (OUTLINE)			

Background Information and Data

Land quality
 BID LQ-002-0MA05
 MA05: Risley to Bamfurlong
 Land quality baseline data

PROJECT	Site Walkover (MA05-70 Former MoD land)
Japanese knotweed was identified on a 20m stretch in the northern boundary of the site. An invasive species survey was not undertaken during the site walkover.	
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)	
Portacabin only remaining building onsite is in a poor condition. What looked like a fuel storage tank under the cabin is open and in a poor condition. However, no evidence of contamination coming from the tank was seen.	
ANCILLARY INFRASTRUCTURE (if applicable)	
Manhole covers could potentially be associated with tanks or other pipe work related to the former barracks that occupied the site. Access to the man covers was not possible. Tank under the portacabin could have been used to store fuel, however no evidence of the fuel was observed.	
SITE OPERATION (PAST AND PRESENT)	
Past: The site is identified as a former MoD barracks Present: Site is now open to the public and used as an recreational space. Evidence of dog walker and other site users. No permanent structures present but manhole covers could be associated with the previous land use.	
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION	
None	
SURROUNDING LAND USE	
NORTH	Scrubland
EAST	Residential
WEST	Scrubland/ field
SOUTH	Residential/ In use construction site.
GENERAL	Receptors include public using the amenities on the site and the housing in the surrounding area. Workers working on the construction site in the south are also potentially affected but are not anticipated to be in the long-term.
MISCELLANEOUS COMMENTS/NOTES	
None	

Table 25: Geo-environmental site inspection pro forma for MA05-106

PROJECT	Site Walkover (MA05-106 Historical Lily Lane landfill)		
Land Access Number(s)	L5240, L21158, L21128, L21100, L21121		
Site Name:	Historical Lily Lane landfill		
Surveyor name:	AM/ CO	NGR (centre of land parcel):	360348 401666
Weather:	Overcast	Date:	12/09/18
OVERVIEW SITE DESCRIPTION			
Rural land is used as pasture for horses. Limited access to site as all access gate were blocked or locked and owner could not be contacted. From observation point outside the site, no visual evidence of contamination was observed and although some evidence of vegetative distress was observed. no signs of vegetation distress were noted.			
TOPOGRAPHY			
Flat ground with a slight slope towards the river. Riverbanks are relatively steep. Site continues to rise slightly to the north and east in a gentle incline. No evidence of made ground observed and no subsidence observed.			
SOIL QUALITY			
From the restricted access / observation points vegetative distress was observed. No strong odours were noted			

Background Information and Data

Land quality
 BID LQ-002-0MA05
 MA05: Risley to Bamfurlong
 Land quality baseline data

PROJECT		Site Walkover (MA05-106 Historical Lily Lane landfill)	
MINING EVIDENCE			
No evidence observed.			
WATER QUALITY			
No evidence of oil/sheen observed. Lots of vegetation in water but appears to be largely himalayan balsam. Water flow was relatively rapid, and some litter was trapped in vegetation. Some foaming observed by the weir structure to the south of site. No evidence of sewage identified, and no out-flow pipes noted.			
SITE DRAINAGE			
Not possible to observe due to access problems.			
VEGETATION COVER			
100% grassland. Heavy grazing identified across the site. Semi-mature and some mature trees surrounding the boundary of the site. Some hedgerows cross the site.			
ECOLOGICAL ISSUES (OUTLINE)			
Japanese knotweed identified on the northern boundary of the site and Himalayan Balsam seen along the watercourse. However, an invasive species was not undertaken during the site walkover.			
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)			
Some small stable buildings. No access to identify evidence of potential contamination.			
ANCILLIARY INFRASTRUCTURE (if applicable)			
None			
SITE OPERATION (PAST AND PRESENT)			
Past: The site is identified as Historical Lily Lane landfill Present: Site is now closed to the public and is used as pastureland for horses with stable buildings.			
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION			
Some fly-tipping activity on the northern border of the site. An active car garage was located on the northern boundary -any potential land / groundwater contamination could theoretically impact the site.			
SURROUNDING LAND USE			
NORTH	Road		
EAST	Residential		
WEST	River		
SOUTH	Fields		
GENERAL	N/A		
MISCELLANEOUS COMMENTS/NOTES			
None			

Table 26: Geo-environmental site inspection pro forma for MA05-108

PROJECT		Site Walkover (MA05-108 Former Bamfurlong Colliery)	
Land Access Number(s)			L6077 and L5957
Site Name:	Former Bamfurlong Colliery		
Surveyor name:	AM/ CO	NGR (centre of land parcel):	359646 402066
Weather:	Overcast	Date:	12/09/18
OVERVIEW SITE DESCRIPTION			

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

PROJECT	
Site Walkover (MA05-108 Former Bamfurlong Colliery)	
<p>The site consists of rural grassland used for grazing but is not currently grazed. There is an area of woodland to the north of the site with mature trees. There is a large pond in the south of the site and a water filled drainage ditch. Pond has an organic odour associated with sediment. The drainage ditch discharges into the pond.</p> <p>The site was a former colliery. Made ground consisting of a path made from broken bricks and concrete runs along the west of the site.</p> <p>A drain cover is present in the middle of the pasture field. This feature is potentially a well, as water buckets were observed nearby.</p>	
TOPOGRAPHY	
Flat ground made of semi-improved grassland. Manhole present potentially a water tank or well. Evidence of made ground in the access path to the site on the west boundary.	
SOIL QUALITY	
Soil was dark brown clayey sand with frequent rootlets and locally inclusions of plastic and brick. Vegetation cover was thick. No visual or olfactory evidence of contamination observed.	
MINING EVIDENCE	
None identified	
WATER QUALITY	
The pond to the south of site is very turbid and a large amount of sediment was noted. However, it has a large amount of emergent vegetation and was 20% covered in duck weed. Small number of Waterfowl observed. No rubbish or litter and no sheen/oil identified. Slight organic odour noted when sediments disturbed.	
SITE DRAINAGE	
Drainage pipe from drainage ditch discharging into the pond. Pastureland was waterlogged in places but there was heavy rain the night before the site visit.	
VEGETATION COVER	
Cover is 100% semi-improved grassland. Semi-mature and some mature trees along the site boundary particularly in the north of the site.	
ECOLOGICAL ISSUES (OUTLINE)	
No invasive species were identified; however, the site visit did not include an invasive species survey.	
BUILDINGS AND LARGE INFRASTRUCTURE (if applicable)	
None	
ANCILLARY INFRASTRUCTURE (if applicable)	
None	
SITE OPERATION (PAST AND PRESENT)	
Past: The site is identified as Bamfurlong Colliery. Present: Site is now closed to the public and is used as pastureland.	
VISUAL OR ANECDOTAL EVIDENCE OF CONTAMINATION	
None	
SURROUNDING LAND USE	
NORTH	Wood
EAST	Field/residential
WEST	Arable land
SOUTH	Residential
GENERAL	N/A
MISCELLANEOUS COMMENTS/NOTES	

Background Information and Data

Land quality

BID LQ-002-0MA05

MA05: Risley to Bamfurlong

Land quality baseline data

PROJECT	Site Walkover (MA05-108 Former Bamfurlong Colliery)
None	

Background Information and Data

Land quality
BID LQ-002-0MA05
MA05: Risley to Bamfurlong
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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