

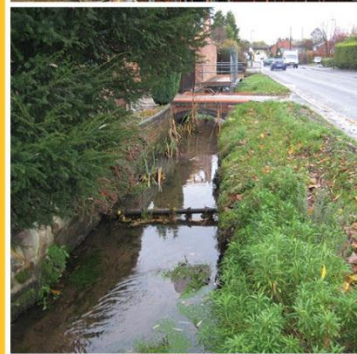


**PROPOSED COMMERCIAL DEVELOPMENT
HUDDERSFIELD ROAD, MELTHAM
HOLMFIRTH, KIRKLEES**

GEO-ENVIRONMENTAL DESK STUDY

OCTOBER 2018

REPORT REF: 24194/10-18/6348



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EXECUTIVE SUMMARY

Site Address	Huddersfield Road, Meltham, Holmfirth, Kirklees, HD9 4BU	
Proposed Development	The proposed development comprises a new industrial unit, warehouse and offices with associated hardstanding for access and parking.	
Site Description and Setting	The site is located to the east of Huddersfield Road, north-east of Meltham and comprises Spinksmire Mill, which is currently in use as a textile and printing works, along with agricultural grazing fields. Tanks, chemical storage and gas bottles were present noted during the site walkover within the area of the Spinksmire Mill buildings.	
Published Geology, Hydrogeology and Hydrology	Ground conditions are likely to comprise topsoil or Made Ground locally overlying superficial Alluvium (Secondary A aquifer) overlying either sandstone of the Huddersfield White Rock or mudstones and siltstones of the Rosendale Formation (both Secondary A aquifers). These two bedrock formations are broadly divided by the presence of a fault line which runs beneath the site in a general north to south orientation. An inferred coal seam is also mapped to the east of the fault line within the Rosendale Formation. The nearest surface water feature is located on-site and comprises the Meltham Dike which flows through the site, partially within a culvert. A former mill pond is present within the southern section of the site.	
Site History	The southern areas of the site comprised a woollen and mungo mill which were historically redeveloped included the culverting of Meltham Dike (prior to 1913). The mill pond is now a fishing lake and the agricultural areas of the site have typically remained largely undeveloped.	
Environmental Appraisal	CSM	Potential sources of contamination have been identified on and off-site, including previous agricultural use, textile works and dye works, potentially infilled ground and associated Made Ground, presence of above ground fuel storage tanks and below ground interceptor drains, gas governor, electrical substation, waste storage skips, unbundled chemical storage, asbestos roof sheeting and cladding, and Made Ground associated with adjacent railway line.
	Ground gas and radon	Potential sources of ground gases and volatile vapours have been identified which include infilled ground, made Ground and organic deposits associated with the Alluvium. The groundsure report indicates that no radon protective measures are required.
	Risk Assessment	Potential sources of contamination have been identified on-site including fuel/oil storage tanks, chemical storage, industrial uses and infilled ground, these are considered to represent a moderate risk to human health and controlled water receptors.
Geotechnical Setting	Foundations	A traditional trench/strip foundation solution is likely to be suitable for the proposed development, with foundations which would deepening to penetrate Made Ground, topsoil or organic deposits and within the zone of influence of trees. The foundations may require the incorporation of heave protection. Where founding strata is variable, reinforcement will need to be incorporated into foundations.
	Slope Stability and Retaining features	Due to the topographic variability and historic development, there are a number of slopes and retaining structures located on-site that may require assessment prior to development of the site.
	Drainage	Soakaway drainage may be possible; however, this should be confirmed through infiltration testing. A high groundwater table may be present which will impact on the use of soakaways for the proposed development. In addition, soakaways should be used with caution in sloping areas as water can increase the risk of slope failure.
	Earthworks	Due to the variable site topography, it is assumed that earthworks will be required in order to enable construction of a suitable development platform.
Recommendations	A ground investigation is recommended to quantify the contamination risk and collect ground information to support detailed geotechnical design.	
This summary should be read in conjunction with the full report and reflects an assessment of the site based on information received by M-EC at the time of production.		

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1.0 INTRODUCTION

- 1.1 This Geo-environmental Desk Study has been prepared by Mewies Engineering Consultants Ltd (M-EC) for a site at Huddersfield Road in Meltham, Holmfirth, Kirklees. M-EC has produced this report for the benefit of SDC Enterprises Limited.
- 1.2 The proposed development to the north of Spinkmire Mill, comprises a new industrial unit, warehouse and offices with associated hardstanding for access and parking. A viability sketch plan is included in Appendix A.
- 1.3 No third-party liability or duty of care is extended. Third parties using information contained in this report do so at their own risk.

Objectives

- 1.4 This report has been completed to present pertinent information regarding the environmental risks and liabilities associated with the site. It has been completed to fulfil the requirements of a preliminary risk assessment in accordance with BS10175: 2011 'Investigation of Potentially Contaminated Sites Code of Practice' and CLR11 'Model Procedures for the Management of Contaminated Land'. The objectives of the report are:
- To assess historical activities at the site with respect to their potential impact on the site environment;
 - To characterise the environmental setting of the site, identify migration pathways and vulnerable receptors for contamination, focusing on potential soil and groundwater liabilities;
 - To assess historical and current surrounding land use in relation to known or potential off-site contamination issues that may impact the subject property;
 - To develop a preliminary Conceptual Site Model (CSM); and
 - To assess potential environmental liabilities associated with the site.
- 1.5 This report has been commissioned in order to support submission of a planning application for the site development.

Scope of Works

- 1.6 The scope of works for this assessment includes:
- Site visit to inspect the current condition of the site at ground surface (photographs presented in Appendix B);

- Review of the following information:
 - Groundsure Report referenced GS5502711 and GS5502712, dated 4th October 2018 (Appendix C);
 - Historical Ordnance Survey Mapping referenced GS5502713, dated 4th October 2018 (Appendix D);
 - British Geological Survey mapping 1:50 000 Scale (Glossop, Sheet 86, Bedrock and Superficial Deposits, published 2012, accessed 9th October 2018);
 - Zetica – regional unexploded bomb risk maps (www.zetica.com, accessed 8th September 2018); and
 - Consultants Coal Mining Report by The Coal Authority, referenced 51001954793001, dated 4th October 2018 (Appendix E).
- Provide a summary of key geo-environmental risks that may require further ground assessment in order to control the identified risks; and
- Produce a Geo-environmental Desk Study (this report) providing qualitative contamination risk assessment and potential constraints to the proposed development.

2.0 SITE AND SETTING

Site Location

- 2.1 The site is located to the west of Huddersfield Road in Meltham, Holmfirth, Kirklees and is centred on National Grid coordinates (410826,411260). The approximate location of the site is shown in Drawing 1.

Site Walkover

- 2.2 A site walkover of external areas was completed by a representative of M-EC on 27th September 2018. Photographs from the walkover and a photograph location plan are included in Appendix B.
- 2.3 A site layout plan with pertinent features shown has been included as Drawing 2 and is summarised below.

Site Description

- 2.4 The site comprises the buildings associated with the former Spinksmire Mill currently in use as a textile and printing works within the central and southern sections of the site, a former mill pond which is now a fishing lake to the south and predominantly agricultural land to the north, east and west of the buildings. Meltham Dike flows onto the site beneath a bridge on Station Road to the south, through a weir to the south of the pond and into a culvert beneath Spinksmire Mill. It then flows through the rest of the site in a general north to north-east direction.
- 2.5 To the north of the mill and east of Meltham Dike is an overgrown area (former allotment) which was observed to contain waste materials and an area that contained plants tentatively identified as Japanese Knotweed (Photograph 40). The north-eastern corner of the site is occupied by a number of residential buildings, an allotment and a secondary access route from Huddersfield Road. The secondary access point allows access to a bridge over Meltham Dike and a track which cuts across the northern section of the site. The north-western section of the site comprises an undulating grazing field, with an old stone wall to the east and wooden post mounted electricity cables which run north/south across the grazing field and fishing pond to the west. The northern, southern and western boundaries of the site and the northern and southern extents of the Spinksmire Mill buildings are lined with semi-mature and mature trees and hedges.

Spinksmire Mill

- 2.6 Spinksmire Mill comprises various buildings and outhouses associated with a textile and printing works which are accessed to the north-west of Huddersfield Road. A number of these buildings are clad with suspected cement bound asbestos sheeting and are accessed by hard surfaced roadways (predominantly bituminous surfacing and cobble stones), with a parking area in the centre of the 'mill' and to the north-east adjacent to an overgrown former allotments area. The car park to the north-east also comprises an area used for the storage of gas bottles and some old concrete tanks containing water (possibly associated with the former mill) adjacent to the Meltham Dike.
- 2.7 At the southern extent of the mill is a brick structure approximately 1.50m in height and 2-3m in length, anecdotal evidence indicates this structure is a brick encased fuel tank (Photograph 60) which formerly had a fuel pump. A waste skip storage area, an above ground plastic heating oil tank (Photograph 63), an interceptor drain (Photograph 64) and a gas governor (Photograph 62). Further north, at the point which Meltham Dike exits the culvert is an area used for waste skip storage and a raised fuel tank, approximately 2m in height and 3m in length (Photograph 56), comprising an unknown substance. Directly to the east of the mill is a small earth retaining structure (approximately 1.5 – 2.0m in height) that retains a 45 degree bank to the east.
- 2.8 The western building comprises the original mill which includes a chimney adjacent to a public footpath and the fishing pond. To the north-east of this building is an area of storage for unbunded oil and gas containers (Photograph 58) , with some oil staining observed on the surface hardstanding. Within the centre of Spinksmire Mill is an unbunded area of storage for various chemicals (Photographs 47, 48 and 49) associated with textiles. The western edge of Spinksmire Mill is defined by an 3-4m high retaining wall (formerly a building) constructed of stone, which retains the site area containing the grazing field to the west.

Site Surroundings

- 2.9 The surrounding area is mixture of industrial, residential and agricultural land use. The land to the north of the site comprises predominantly agricultural land with a large industrial estate to the east of the site and a mixture of residential, communal and industrial land uses to the south including an adjacent electricity substation. The western boundary of the site is defined by a dismantled railway line, with a bridge which runs above a track that cuts across the site. A high pressure gas main marker was identified adjacent to the main site access, but the route of the gas main was not identified, although it may be associated with the on-site gas governor.

3.0 REVIEW OF HISTORICAL MAPPING

General

- 3.1 The site history has been assessed by reviewing 1: 2,500 and 1: 10,000 scale historical Ordnance Survey maps provided by Groundsure (Appendix D) and current and historic aerial imagery provided by Google Earth. A summary of the history of the site and surroundings is provided in Table 1.

Table 1: Historical Summary of the Site and Surroundings

Map Dates Shown and Scale/Source	Location	Pertinent Features
1854 – 1:10,560	On-Site	The site is shown to comprise Spinks Mire Mill (Woollen) within the southern section of the site and an unnamed brook flowing in a northern direction through the eastern half of the site.
	Off-site	The north of the site is defined by an unnamed brook, with a road along the eastern boundary and agricultural land adjacent to the southern and western boundaries. Bent Ley (silk) Mill is shown approximately 20m to the north-east of the site, with Lower Mill approximately 220m north-east. Between approximately 300m and 500m north-east and east of the site two coal pits and a sandstone quarry are present. Approximately 250m south-east, Greasy Slack Wood is shown and contains two further coal pits. Approximately 200m south of the site, St. James Church and a school are present, along with a cotton mill approximately 250m south. To the west of the site during this time is predominantly agricultural land, with The Lathe and a waterfall located approximately 100m and 150m north-west respectively. High Brow is shown approximately 250m north with associated well heads and Lower Edge 350m north with an associated sandstone quarry.
1891 – 1:10,560 1892 - 1:2,500	On-site	To the south-west of Spinks Mire Mill is a mill pond and a weir and two sluices along the unnamed brook, which flows east beneath a footbridge and bridge in a north-eastern direction. The southern extent of the site is shown to be defined by the top of an embankment, the toe of which was adjacent to the pond and brook. A footpath associated with the footbridge runs adjacent to the mill and along the western boundary of the site. The remainder of the site at comprises agricultural fields and various trees. A track is shown to cut across the northern extent of the site in an east-west orientation and a low-lying marsh area adjacent to the brook at the northern boundary of the site.
	Off-site	The western edge of the site has been developed with a railway line embankment and cutting. The coal pits at Greasy Slack Wood are no longer shown. The cotton mill approximately 250m south of the site had become part of the wider Meltham Mills and its associated ponds. A large railway siding is shown approximately 500m west of the site.
1904 – 1:10,560	On-site	The northern extent of the mill has been redeveloped with larger

1906 – 1:2,500		building units and the western edge of the marsh area is shown to be defined by a scarp. An earthworks feature is present in the north eastern area of the site, to the west of the stream.
	Off-site	The railway line to the west of the site is shown to be the Meltham Branch of the Lancashire & Yorkshire Railway. Thick Hollins Dike is indicated to flow within 120m of the north-eastern site boundary (at its closest point) and flows through Bent Ley Mill. A spring and an old quarry are mapped approximately 220m and 350m north respectively. To the north of Meltham Mills, approximately 250m south of the site, a gasometer is mapped. Low Coyt Mineral Works is shown approximately 280m south-west adjacent to Meltham Dike. Approximately 350m north-east, a sewage works is shown and a gasometer is located approximately 400m to the north-east. Oldham spring is shown approximately 400m east. A quarry is located approximately 450m east of the site.
1913 – 1:2,500	On-site	A further phase of development has taken place at the mill, with the brook now flowing in partial culvert beneath a roadway. The mill, which is shown to have a chimney along its south-western edge is shown to produce mungo rather than wool. The mapping indicates that the south-western extent of the site is now developed with various outhouses associated with filter tanks.
1933 – 1:10,560	On-site	An allotment garden is shown adjacent to the western brook bank.
	Off-site	Meltham brickworks is extended to within approximately 400m to the south-west of the site.
1964 – 1:2,500	On-site	The brook was shown as Meltham Dike and the mill had been developed west toward Huddersfield Road and named Shoddy Mill. The filter drains along the south-western edge of the site have been replaced by 'sinks'.
1969 – 1:10,560	Off-site	The Low Coyt Mineral is no longer mapped.
1984 – 1:10,000 1987 – 1:2,500	Off-site	The sewage works has been extended to the north-east, with a large works approximately 200m east, Bent Ley farm approximately 200m north-east and another works building approximately 30m to 50m south-east. Development has occurred 50m to 100m south of the site and the brick works approximately 400m south-east has become a works. An electrical substation is shown approximately 12m south of the site boundary.
1993 – 1:2,500 1993 (Google Earth Imagery)	On-site	Overhead (electricity) lines are shown to cross the western fields of the site and two open tanks are shown to the north-east of the mill, west of Meltham Dike.
2002 – 1:10,000 2005 (Google	On-site	An area of hardsurfacing is shown adjacent to the track and the northern site boundary.

Earth Imagery)		
2009 (Google Earth Imagery) 2010 – 1:10,000	On-site	The hardsurfaced area adjacent to the track has been developed into a storage area.
2014 – 1:10,000 2016 (Google Earth Imagery)	On-site	The storage area is no longer shown.
2018 (Google Earth Imagery)	On-site	The former storage area is shown to be rough overgrown land.

4.0 GEO-ENVIRONMENTAL SETTING

- 4.1 A summary of the geo-environmental site setting is provided in Table 2. Information has been collated from the information sources noted in Section 1.0.

Table 2: Geo-environmental Setting

Geology	Information published by the BGS indicates that the site is locally underlain by superficial deposits of Alluvium associated with and adjacent to the Meltham Dike. The underlying bedrock is defined by a partially inferred (south-east) and partial observed (north-west) normal fault line (downthrow to the east) that divides the site into west and east. Bedrock to the west of the fault comprises the Huddersfield White Rock (sandstone). To the east of the fault is the Rosendale Formation (mudstones and siltstones) which belongs to Millstone Grit Group. Within the Rosendale Formation a coal seam is shown to cross the site in a north to south-west orientation toward the fault line. The southern and easternmost edges of this half of the site are underlain by the Huddersfield White Rock (sandstone). <u>Made Ground/Artificial Ground</u> A thickness of Made Ground is likely to be present within the area of the buildings associated with the Spinksmire Mill. Made Ground is also anticipated to the west of Meltham Dike, where potential infilling was noted during the site walkover. A significant thickness of Made Ground is likely to be associated with the retaining walls located on-site, especially the 3-4m retaining wall to the west of Spinksmire Mill. The agricultural areas of the site are likely to comprise a thickness of topsoil (noted during the walkover) and subsoil. The Groundsure report indicates the presence of two areas of artificial ground on-site, the first in the northern area of the site adjacent to Meltham Dike, which was identified during the site walkover and contains the area of suspected Japanese Knotweed, the other is associated with infilled ground adjacent to the pond/lake within the southern area of the site. Two further areas of artificial ground are mapped adjacent to the western site boundary associated with an embankment and cutting of the historical railway line. There is a total of 19 other areas of artificial ground detailed within the Groundsure report within 500m of the site boundaries, these comprise Made Ground, worked and infilled ground. <u>Ground Stability Hazards</u> The Groundsure Report indicates a negligible to low risk of collapsible deposits, landslides, running sands and ground dissolution and a negligible to moderate risk natural ground subsidence and compressible ground.
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Hydrogeology	The Environmental Agency has classified the underlying superficial Alluvium as a Secondary A aquifer. The underlying bedrock which comprises Huddersfield White Rock underlain by Rossendale Formation both represent Secondary A aquifers. There is a single historical and single active groundwater abstraction licenses within 500m of the site. The historical license was located 75m to the north-east of the site belonging to Nichol & Pratt Limited, which was active from 1966, however no end date or volume limits are provided. The active license is located 192m to the south-east of the site and belongs to Camira Fabrics Ltd which refers to a borehole abstraction and has been active from February 2014, expires in 2027 and allows annual volumes and max daily volumes of 20000m³ and 400m³ respectively. The Groundsure report indicates that the site is not located within a groundwater source protection zone. According to Environment Agency information provided within the Groundsure report, the underlying soils have a high leaching potential, which can possible transmit a wide range of pollutants. The potential risk of clearwater flooding at the site is considered to be low.
Hydrology	The nearest surface water feature is the Meltham Dike which flows through the site from beneath an unnamed bridge at Station Road in the south-west and in a general north-east direction across the site. Within the southern section of the site, the dike flows east, adjacent to a large pond, through a weir before running via a culvert beneath Spinksmire Mill. The dike then flows in a northern direction adjacent to a wooded area beneath another bridge along the northern boundary and then flows off-site. Meltham Dike is considered to have a Biological Quality grade of 'B' (graded from A – Very Good to F – Bad). There are a total of two historic and one active surface water abstractions located on-site, all relating to Northern Dyers Limited. The abstractions area from Meltham Dike and the licenses permit an annual volume and max daily volume limited of 62293m³ and 325m³ respectively. The most recent license started in April 2015. There are a further two historical licenses located within 500m of the site, with the closest (22m west) relating to Quarmby & Sykes (Holdings) Ltd. The license was granted in 1966, but no end date or maximum volumes have been provided. There are two records of discharge consents within the site boundaries; the first refers to storm sewer overflow which was discharged to Meltham Dike between 1968 until its revocation in March 2018. This consent was replaced by a similar consent belonging to Meltham CSO, which also allows discharge of storm sewer overflow to Meltham Dike and has been effective from March 2018. There are a further six surface water discharge

	consents within 500m of the site which are located between 84m and 435m and range from cooling water discharges to treated effluent from water company and non-water company sources which discharge to Thick Hollins Dike and Tributary of the Meltham Dike. The Groundsure reports indicates that the southern and north-eastern sections of the site, adjacent to Meltham Dike are located within Flood Zone 2 and 3, and are within a medium to high flood risk area. The site is not located within an area that benefits from flood defences or flood storage. There are a total of one on-site and three off-site recorded pollution incidents within 500m of the site. The pollution incident on-site occurred on 25th February 2003 and relates to the release of sewage materials (process effluent) having a significant impact on water (Category 2). The other off-site incidents have had a minor impact on water and land and relate to oils, fuel and crude sewage.
Environmental Sensitivity	The Groundsure Report indicates that the site is not located within a Nitrate Vulnerable Zone and the directly to the north of the site is designated as Green Belt land by Kirklees District Authority. There are a total of four ancient woodland areas with 500m of the site, with the closest is a replanted ancient woodland located 182m south-east.
Ground gases	Potential sources of ground gases and volatile vapours have been identified on and adjacent to the site and include Made Ground associated with historical development and site use, underground utilities and potentially infilled land. The site is in an area where between 1 and 3% of properties are above the Action Level for radon. Although the Groundsure report indicates that no radon protective measures are necessary, the Health Protection Agency recommends the inclusion of basic radon protection within new dwellings.
Mining, mineral extraction and ground workings	The site is located in an area affected by mining and mineral extraction, therefore, a Coal Authority report has been obtained and pertinent points have been noted as follows: • There are no records of any past underground mining within the site boundaries; • There are no probable unrecorded shallow workings; • No spine roadways are recorded at shallow depth beneath the site; • No mine entries are recorded within 100m of the site boundary; • No faults, fissures or breaklines are recorded beneath the site; • No opencast mines or Coal Authority managed tips within 500m of the site boundary; • There are no recorded site investigations, remediated areas or damage claims within 50m of the site boundaries;

	• There are no recorded mine gas or mine water treatment schemes within 500m of the site boundaries; • The Coal Authority have no records of future underground mining or court orders; • There are no recorded coal mining licenses within 200m of the site boundary; and • No notices have been served stating that the site is at risk of subsidence. Although the Coal Authority have no records of any faults, fissures or breaklines beneath the site, the BGS highlight the presence of inferred fault lines and a coal seam beneath the site. Further correspondence with the Coal Authority has indicated that information of these two features was not actively omitted from their report, in fact they are not on the Coal Authority database. The Groundsure report indicates the presence of a single historical ground working located on-site and a total of seven different workings located off-site. The working on-site is associated with the fishing pond/lake within the southern portion of the site. The off-site workings include refuse heaps (9m south-west), cuttings, ponds and a sewage works. There are a total of seven recorded ground workings within 500m of the site boundary and include deep underground coal mining and surface extraction of sandstone in the form of pits and/or quarries. The nearest entries to the site are associated with Greasy Slack Wood Coal Pits located approximately 307m to 309m to the south east of the site. The Groundsure report indicates the presence of two different vein minerals beneath the site, with the potential for underground mining at such a localised level, where they need not be considered.
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5.0 REGULATORY INFORMATION

Consultation

- 5.1 The Environmental Health Officers (EHO) for Kirklees Council, (local planning authority) was contacted on 24th October 2018. At the time of writing, responses are currently pending and will be forwarded upon receipt.
- 5.2 The Planning Portal for Kirklees Council was reviewed on 24th October 2018 and indicated that no recent applications relating to the site have submitted.

Permitted Activities

- 5.3 A summary of pertinent information from the Groundsure report (Appendix D) relating to permits, consents, authorisations and landfilling is provided in Table 3 below.

Table 3: Summary of Regulatory Information

COMAH, NIHHS and Dangerous Substances	No Control of Major Accident Hazards (COMAH) or Notification of Installations Handling Hazardous Substances (NIHHS) are located within 500m of the site. A single dangerous substance license (List 1) that is no longer active is located within 500m of the site. The entry is approximately 435m north-east and refers to Meltham Stw and comprises the following authorised substances: Cadmium, hexachlorocyclohexane, dieldrin and total 'drins'. Two dangerous substance licenses (List 2), both no longer active, are located with 500m of the site. One refers to Quarmby & Sykes Ltd that was located on-site and authorising the use of chromium and the second was located 77m away and belonged to Nichol & Pratt Ltd also authorising the use of chromium.
Potentially Contaminative Uses	The Groundsure report indicates a number of historical industrial sites within the site and in the surrounding area. There is a total of seven entries on site which all relate to the presence of 'unspecified mills'. Industrial sites within the surrounding area include but is not limited to unspecified mills, refuse heaps, unspecified works, cuttings, unspecified tanks and railway sidings. The closest industrial site is located approximately 8-9m east (unspecified mill).
Current Industrial Uses	The current industrial land uses on site, according to the Groundsure report include: Thomson Research Associates (colours, chemicals and water softeners), Zest for Print (published goods) and an electrical substation. There is a total of 26 entries located in the surrounding area which typically comprise predominantly industrial land uses.

Historical Landfills	There are a total of five historical landfills located within 500m of the site. The closest is located 295m south-west, operated by G R Stein Refractories Ltd at Mean Lane, Meltham, which permitted industrial and commercial waste, however no dates or further details are provided within the Groundsure report.
Waste Treatment, Transfer or Disposal Facilities	The Groundsure report indicates a single record of a non-licensed waste site within 500m of the site which relates to a breakers yard located 238m east of the site from 1996. No further detail is provided. Furthermore, the Environment Agency has records of 12 licenses belonging to 5 facilities within 500m of the site boundaries. Located approximately 132m east at Meltham HWRC is Suez Recycling and Recovery and Sita Ltd which both process household waste of up to 25000 tonnes, with licenses issued in 2006. Located 254m south of the site at The Old School House are three licences belong to Motorworks and Mr Crispin James & Mr Ian Prady which process end of life vehicles (ELV) and were issued in 2008. Approximately 286m north-east was the former location of Sita Ltd, which processed household waste (<25000 tonnes) between 1996 and 2011 (surrendered). At 332m to the east of the site is Wells & Moorhouse Ltd located at Bent Ley Road, Meltham and is a Metal Recycling Site (vehicle dismantler) able to process <25000 tonnes with a typical annual tonnage of 10000 tonnes.
Substations	The Groundsure report indicates the presence of six electricity substations within 250m of the site. One is located on-site asking the southern boundary of the site and the nearest off-site substation is approximately 12m to the south of the site.
Tanks	There is a total of 76 entries within the Groundsure report relating to historical tanks. Two are indicated to have been on-site historically, the first being filter tanks (dated 1913) and the second as an unspecified tank (dated 1893). Historical tanks within the surrounding area comprise gasometers, filter and settling tanks and unspecified tanks, with the closest located approximately 68m east of the site.
Fuel Stations	There are no fuel sites located within 500m of the site.
Railways and Tunnels	The Groundsure report indicates the presence of a dismantled railway along the north-western boundary of the site and also highlights the presence of historic railway sidings approximately 122m to 129m to the south-west.
Water Industry Referrals	There is a total of five waste industry referral records within 500m of the site which are associated with two sites located approximately 62m east and 354m south. The eastern record relates to Nichol and Pratt Ltd at Bent Ley Mills and the southern entry relates to Quarmby and Sykes Ltd at Spinksmire Mill. No further information is provided for these entries.

IPC Authorisations	There is a single historic IPC authorisation with 500m of the site which is 259m east and relates to a refuse incinerator belonging to West Yorkshire Waste Ltd at Bent Ley Road, Meltham. The authorisation was approved in 1993 and has subsequently been revoked.
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6.0 PRELIMINARY GEOTECHNICAL APPRAISAL

Introduction

- 6.1 The information sources noted in Section 1.0 have been reviewed in order to provide a summary of potential ground constraints and opportunities presented in Table 4. The following comments and recommendations are based on the qualitative findings of this Geo-environmental Desk Study, and may not be representative of actual engineering properties of on-site soils (e.g. stability, mass structure etc.).

Table 4: Potential Ground Constraints and Opportunities

Made Ground	Localised areas of Made Ground of unknown depth and quality are anticipated in developed and previously developed areas of the site. Made Ground is not suitable as a founding stratum and therefore may require removal or localised deepening of foundations.
Topsoil	A topsoil strip of the undeveloped areas of the site will be required to enable development. Subject to appropriate assessment, the topsoil material may be suitable for reuse in landscaped areas.
Organic Deposits	Alluvium is potentially organic and compressible; any foundations or structures should be designed to penetrate these deposits.
Preliminary Foundation Solution	Based on the anticipated immediate presence of bedrock beneath the majority of the site, a traditional foundation solution may be possible. Where Alluvium is present an alternative foundation solution may be required, depending on the thickness of it. Where bedrock deposits are weathered to a clay foundation will need to be deepened to account for the influence of existing and proposed trees. The depth to competent strata should be confirmed through ground investigation. Where the founding strata is variable, reinforcement will be required to reduce the risk of differential settlement. Retaining features may need to be incorporated into the design of foundations due to the changes in level across the site.
Buried Obstructions	Buried obstructions such as historical footings or walls, buried services, tanks etc should be removed during enabling works and the voids backfilled with suitably engineered fill.
Trees	Mature and semi-mature trees and hedges are located both along the boundaries of the site and within the site extent. Where foundations are within cohesive strata and in close proximity to trees, foundations may require deepening. If foundations are likely to be greater than 2.5m bgl due to tree influence and alternative solution may be more cost effective, eg piled foundations.

Japanese Knotweed	Japanese Knotweed has been tentatively identified within a wooded area adjacent to Meltham Dike within the northern section of the site. It is recommended that the suspected Japanese Knotweed is verified and removed by a suitably qualified professional prior to undertaking intrusive works. A full ecology survey for the site is recommended prior to proceeding.
Pyritic Geology	Due to the potential for Made Ground of unknown composition there is a potential for aggressive ground conditions. It is recommended that chemical soil testing is carried out as part of the ground investigation to determine the concrete specification for the site.
Shrinking and Swelling Clays	The Groundsure report indicates that the site is considered to be at negligible to very low risk of shrinking and swelling clays.
Earthworks	Due to the variable site topography, it is assumed that earthworks will be required in order to enable construction of the proposed development on a flat platform. Significant differences in levels or variable ground conditions may require additional consideration such as cut and fill, introduction of slope stability measures or retaining features.
Slope Stability	Due to the variable topographic nature of the site, slopes are present within the site boundaries and may require assessment as part of the proposed development.
Retaining Walls	To the north of the fishing lake and west of Spinksmire Mill is an existing earth retaining wall that appears to be in a relatively poor condition. It is recommended that an assessment of this retaining feature is carried out prior to any enabling or construction works. Retaining walls/structures are likely to be required as part of the proposed development.
Drainage and Soakaways	Soakaway drainage may be possible within the Huddersfield White Rock (sandstone), however should be confirmed through infiltration testing as near surface deposits may be cohesive in nature. Furthermore, the positioning of any potential soakaway drainage should be considered due to the topographic nature of the site. Groundwater may be shallow beneath the site which will impact the use of soakaways for drainage. Soakaways should be used with caution in sloping areas as water can increase the risk of slope failure.
Mineral Safeguarding	According to the Kirklees Council Local Plan, the site is not located within a minerals safeguarding area.
UXO	The site is located in an area at potentially low risk of Unexploded

	Ordnance (UXO) according to the Zetica website, which is based on bombing records from WWII.
Enabling Works	To achieve a suitable development platform for the proposed development, the following will be required: • Diversion of overhead power cables and underground services such as high pressure gas main, if required; • Asbestos demolition survey of existing buildings; • Verification and removal of the suspected Japanese Knotweed, including an ecology report; • Investigation into the composition of the Made Ground materials located on-site to assist with removal; • Delineation/removal of any contaminated materials identified by a ground investigation; • Carry out an assessment of the stability of the existing slopes across the site; and • Carry out any proposed earthworks to develop a suitable development platform. An earthworks specification will be required.
Potential Ground Investigation Constraints	As a public footpath is located within the site boundaries and Spinksmire Mill is still active, any ground investigation works will need to be appropriately cordoned off to prevent unauthorised access to the investigation areas. All livestock should be removed prior to the commencement of any investigation works. Ground Investigation would generally be restricted to external areas with little or no vegetation and would not be possible in close proximity to the fishing pond. Any underground or above ground services may require surveying prior to a ground investigation and appropriate stand-off zones would need to be observed during any works. Meltham Dike, which runs in culvert beneath Spinksmire Mill will need to be considered during any sitewide ground investigations and an appropriate stand-off zone observed. The possible presence of Japanese Knotweed should be considered in the ground investigation design phase in order to avoid these areas and prevent further spread of the invasive species. An ecology report should be commissioned for the site to confirm the location of any invasive species.

7.0 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

- 7.1 This section assesses the significance of the environmental issues that have been identified on-site or in the surrounding area in previous sections of this report by developing a preliminary Conceptual Site Model (CSM).
- 7.2 The objective of the CSM is to identify potential contaminant sources, pathways and receptors relating to the site and surrounding area to evaluate the potential for a pollution event to occur using a risk classification tool. The level of risk is assessed by comparing the likelihood of a pollution event to occur, versus the consequence of a pollution occurrence. The consequence is essentially a measurement of the severity of a hazard (or source) and sensitivity of the receptor (controlled waters and human health).
- 7.3 The risk assessment methodology detailing the classes of significance is given in Section 10.0. The risks associated with each potential pollutant/contaminant linkage are evaluated in Table 5.

Table 5: Preliminary Conceptual Site Model

Source	Pathway	Receptor	Consequence	Likelihood	Risk	Comments
On-site: underlying alluvium, previous agricultural use, textile works and dye works, potentially infilled ground and associated Made Ground, presence of above ground fuel storage tanks and below ground interceptor drains, gas governor, electrical substation, waste storage skips, unbunded chemical storage, asbestos roof sheeting and cladding, and possible Made Ground on-site associated with adjacent railway line. Potential contaminants may include heavy metals, petroleum hydrocarbons, polycyclic aromatic hydrocarbons, volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides and herbicides, pH, sulphates, asbestos and ACMs (asbestos containing materials), polychlorinated biphenyls (PCBs), ground gases and volatile vapours.	Direct contact, ingestion and/or inhalation of contaminated soil particulates	Ground and construction workers	Md	Li	M	The recommendations of CIRIA Report 132: 'A Guide for Safe Working on Contaminated Sites' and CIRIA Report C741: 'Environmental Good Practice On Site' should be considered during ground works at the site to ensure the appropriate PPE is worn and correct procedures are adopted. Waste materials should be stored according to current regulations and best practice and removed under appropriate Duty of Care. Asbestos survey and removal should be undertaken by specialist contractors.
		Future site users	Md	Lw	M/L	Potential sources of contamination have been identified on-site and a ground investigation could quantify the risk to current and future site users and determine if remediation or mitigation measures are likely to be required.
		Foundations and water utility pipes	Md	Li	M	Soil testing for pH and sulphate as part of ground investigation would indicate the design class for concrete as part of any proposed development. Laboratory testing results from the ground investigation will be required by the water utility providers to confirm the most suitable pipe materials in the event of upgrade to the drainage network or redevelopment of the site.
Off-site: adjacent development and associated Made Ground, electricity substation, adjacent dismantled railway, adjacent agricultural and industrial activities, and infilled ground. Potential contaminants may include heavy metals, petroleum hydrocarbons, polycyclic aromatic hydrocarbons, volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides and herbicides, pH, sulphates, asbestos and ACMs (asbestos containing materials), polychlorinated biphenyls (PCBs), ground gases and volatile vapours.	Outdoor inhalation of contaminant vapours and ground gases via migration into excavations during demolition and construction phases	Ground and construction workers	Md	Lw	M/L	Where entry into confined spaces/excavations is required by construction workers, a combination of appropriate PPE and/or Respiratory Protective Equipment (RPE), monitoring equipment (such as explosive level meters) and safe entry procedures would be required to mitigate the potential risk of exposure to hazardous gases/vapours by workers.
	Indoor inhalation of contaminant vapours and ground gases	Future site users	Md	Lw	M/L	The gassing regime of the site should be assessed in line with current guidance as part of ground investigation to determine if gas protection measures are required as part of the proposed development. Radon protection measures are not considered likely for the site.
	Leaching of contaminants and vertical migration to the groundwater	On-site underlying superficial and bedrock Secondary A aquifers	Md	Lw	M/L	A ground investigation should be undertaken in order to confirm these findings including an assessment of groundwater and soil leachate analysis.
Potential contaminants may include heavy metals, petroleum hydrocarbons, polycyclic aromatic hydrocarbons, volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides and herbicides, pH, sulphates, asbestos and ACMs (asbestos containing materials), polychlorinated biphenyls (PCBs), ground gases and volatile vapours.	Migration of contaminants via surface runoff and migration of contaminants via groundwater base flow	On-site and off-site Meltham Dike and on-site fishing pond	Md	Li	M	A ground investigation should be undertaken in order to confirm these findings including an assessment of groundwater and soil leachate analysis. Protection measures such as dust suppression and temporary drainage should be used during construction in order to protect the wider sensitive area.
VH = Very High, H = High, M = Moderate, M/L = Moderate/Low, L = Low, VL = Very Low KEY: Sv = Severe, Md = Medium, Mi = Mild, Mr = Minor Hi = High, Li = Likely, Lw = Low Likelihood, Ul = Unlikely						

8.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 8.1 The site comprises Spinksmire Mill, which is currently in use as a textile and printing works, and agricultural grazing fields. Historically the southern area of the site comprised a woollen and mungo mill, with an associated mill pond to the south, which is now used as a fishing pond. The Meltham Dike flows through the site and runs in culvert beneath the Spinksmire Mill buildings.
- 8.2 Ground conditions are likely to comprise topsoil or Made Ground locally overlying superficial Alluvium (adjacent to the Meltham Dike) above either sandstone of the Huddersfield White Rock or mudstones and siltstones of the Rosendale Formation. These two bedrock formations are broadly divided by the presence of a fault line which runs beneath the site in a general north to south orientation. An inferred coal seam within the Rosendale Formation is shown to cross the site in a north to south-west orientation toward the fault line.
- 8.3 Various potential sources of contamination have been identified on-site including fuel/oil storage tanks, chemical storage, industrial activities, historic earthworks which present a typically moderate risk to human health and controlled water receptors. Off-site sources include the former railway line, on an embankment to the immediate north of the site.
- 8.4 Furthermore, potential sources of ground gas have been identified which include underlying alluvium, infilled ground and Made Ground associated with current and historical development of the site. These sources are considered to pose a low to moderate risk to human health receptors.
- 8.5 Based on the location of the proposed development and likely near surface founding strata, it is considered likely that a traditional foundation solution will be required.

Recommendations

- 8.6 It is recommended that a copy of this report is submitted to the Local Planning Authority to support the ongoing promotion of the site and any future planning applications. Review of this report will enable the contaminated land or environmental health officer to review the findings and give comment as consultee to the Local Planning Officer. Future ground investigation will likely be conditioned as part of a planning permission.

Ongoing use of the Site

- 8.7 The interceptor drains, fuel/oil tanks and waste storage areas should be regularly assessed and maintained in line with current best practice, guidance and legislation, including the following:
- Control of Pollution (Oil Storage) Regulations, 2001; and
 - Pollution Prevention Guidelines (PPGs) - have previously been issued by the Environment Agency, although now withdrawn and part of the National Planning Policy Framework. The PPGs are considered to be relevant to this assessment as they contain guidance on managing potential environmental issues and refer to legislation which may still be current.

Future Refurbishment or Redevelopment of the Site

- 8.8 Ground investigation would confirm the risks posed to human health and controlled waters receptors from potential sources of contamination and to determine the geotechnical conditions, including an investigation into the presence of a near surface coal seam, for civil engineering and infrastructure works for proposed future on-site development.
- 8.9 A specialist refurbishment and demolition asbestos survey of the buildings should be undertaken to determine the presence of asbestos containing materials and the necessity for removal and off-site disposal in line with the Control of Asbestos Regulations, 2012.
- 8.10 An ecology survey should be carried out to confirm the presence of invasive species at the site.

9.0 REFERENCES

9.1 This report has been prepared, where possible, with regard to the following sources of reference and guidance, supplemented with experience of similar sites.

1. British Standards Institute, (BSI), BS 8485:2015, Code of Practice for the characterization and remediation from ground gas in affected developments
2. British Standards Institute, (BSI), BS 8576:2013, Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)
3. British Standards Institute, (BSI), BS 10175:2011+A2:2017, Investigation of Contaminated Sites – Code of Practice
4. British Standards Institute, (BSI), BS5930:2015) Code of practice for ground investigations
5. British Standards Institute, (BSI), BS EN 1997-1:2004 Incorporating corrigendum February 2009, Eurocode 7 – Geotechnical Design – Part 1: General rules
6. British Standards Institute, (BSI), BS EN 1997-2:2007 Incorporating corrigendum June 2010, Eurocode 7 – Geotechnical Design – Part 2: Ground Investigation and testing
7. Building Research Establishment Special Digest 1 Third Edition. Concrete in Aggressive Ground (2005)
8. Building Research Establishment (BRE) BR211, Radon; Guidance on Protective Measures for New Buildings (2015)
9. Construction Industry Research and Information Association (CIRIA), Report 132, A Guide to Safe working on Contaminated Sites (1996)
10. Construction Industry Research and Information Association (CIRIA). 2001, C522 Contaminated land risk assessment, A guide to good practice
11. Construction Industry Research and Information Association (CIRIA). 2007, Report C665, Assessing Risk Posed by on Hazardous Ground Gases to Buildings
12. Department for Communities and Local Government (DCLG), 2012, National Planning Policy Framework
13. Department for Environment Food and Rural Affairs (DEFRA), 2012, Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance
14. Environment Agency report CLR11 'Model Procedures for the Management of Land Contamination'
15. Environment Agency 2008, Updated technical background to the CLEA model Science Report – SC050021/SR3

16. Environment Agency, 2006, Remedial Targets Methodology, Hydrogeological Risk Assessment for Land Contamination
17. Health and Safety Executive (HSE) 'Protection of workers and the general public during the Development of Contaminated Land (1991)
18. NHBC Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008
19. Environment Alliance, 2006, 'Pollution Prevention Guidelines- Use and design of oil separators in surface water drainage systems: PPG3'
20. Environment Alliance, 2011, 'Above ground oil storage tanks: PPG2'
21. The Control of Pollution (Oil Storage) (England) Regulations, 2001

10.0 APPROACH TO RISK ASSESSMENT

Land Use

This report establishes the former and current land uses that may have caused contamination or given rise to environmental concerns on the site. An inspection has been undertaken where possible to provide further details of the site and neighbouring activities and to observe environmental conditions.

Historical Maps

Information about the history of the site has been obtained primarily through an inspection of historical Ordnance Survey maps, which can be important in assessing potential liabilities. Historical maps can show past potentially contaminative uses at a site that would not necessarily be obvious during a site inspection, for example storage tanks or previous usage such as a gas works or quarry.

Public Record Information

Information concerning environmental regulations relating to the site has been obtained from a public register which has been accessed from a commercial database (e.g. Landmark Information Group or Groundsure). This is the quickest means of gathering publicly available information. The data is supplied from within a 1km radius of a given National Grid reference of a site. The database contains information from the Environment Agency (EA) and other statutory authorities responsible for monitoring environmental protection measures within the area of a site under existing legislation.

Supplementary information has also been obtained directly from the environmental regulators, where possible in order to gauge the environmental characteristics of the site in more detail and to establish whether there have been any breaches of environmental regulations or pollution incidents associated with the site.

Environmental Legislation

The principal environmental legislation in England consists of the Environmental Protection Act 1990 (EPA 90), the Water Resources Act 1991 and the Environment Act 1995 (EA 95). These Acts prescribe protection measures for all the environmental media (land, water and air) and are regulated by the EA and the Local Authority. Part 1 of the EPA 1990 sets out the statutory framework for Integrated Pollution Control (IPC) and Air Pollution Control (APC).

Environmental Setting

This report assesses the environmental sensitivity of the site location to contamination/pollution. The sensitivity of the environmental setting aids in assessment of environmental liability and is evaluated using British Geological Survey (BGS) information and data from the EA on groundwater and surface water. Data on abstractions have been obtained from the purchased database information. The vulnerability of surface waters and groundwater is based on sensitivity to pollution, distance from abstractions, type and nature of groundwater and type of overlying strata. The EA have classified aquifers into three types - Principal Aquifers, Secondary Aquifers and Unproductive Strata - depending upon the hydrogeological sensitivity, permeability and whether they support large abstractions for drinking water supplies.

Principal Aquifers (high permeability)

These are highly permeable formations usually with a known or probable presence of significant fracturing. They may be highly productive and able to support large abstractions for public supply and other purposes.

Secondary Aquifers (variable permeability)

These can be fractured or potentially fractured rocks which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although these aquifers will seldom produce large quantities of water for abstraction, they are important both for local supplies and in supplying base flow to rivers. Secondary Aquifers are sub-classified into Secondary A Aquifers, Secondary B Aquifers and Undifferentiated Secondary Aquifers. Principal Aquifers may occur beneath Secondary Aquifers.

Unproductive Strata (low permeability)

Formations which are generally regarded as having negligible significance for water supply or river base flow form a third group. However, groundwater flow through such rocks, although imperceptible, does take place and needs to be considered in assessing the risk associated with persistent pollutants. Some Unproductive Strata can yield water in sufficient quantities for domestic use. Principal or Secondary Aquifers may occur beneath Unproductive Strata.

Environmental Risk Assessment

This report assesses the potential for the site to give rise to environmental risks and whether or not the risks are acceptable or if further assessment and/or remedial action is required.

The qualitative risk assessment firstly considers the source of contamination (and extent, concentration and availability of contaminants) and potential contaminants associated with the source(s) (or hazards).

The effect of a hazard on an identified receptor is largely governed by the sensitivity of a receptor. Receptors may typically include people, buildings, animals, plants and local resources (such as groundwater, surface waters, mines etc). A change in the receptor should be considered if the end use of the site changes.

The presence of contamination (as a potential hazard), exposure pathway and the quantity of contamination that reaches the receptor that may determine the risk and effect on a receptor (such as the integrity of a barrier between a contamination source and receptor).

The risk classifications for both likelihood and consequence are based on methodology presented in Contaminated Land Risk Assessment, A Guide to Good Practice (CIRIA C552, 2001). The guidance states that the designation of risk is based upon a consideration of both:

The magnitude of the potential consequence (severity) of risk occurring, which takes into account both the potential severity of the hazard and the sensitivity of the receptor; and

The likelihood of an event occurring (probability), which takes into account the both the presence of the hazard and receptor and the integrity of the pathway.

- The magnitude of consequence (severity) and likelihood (probability) is defined in the CIRIA guidance, together with examples. The two classifications are then

compared (as shown on Table A to obtain an estimation of risk for each pollutant linkage, ranging from very high risk to very low risk.

- A description of the risks and likely actions required is presented in Table B. The benefit of estimating the risk in this way is that it can be revised after each investigation phase as the conceptual model and corresponding contaminant linkages are refined.

Table A: Comparison of consequence against probability

		Consequence			
		Severe	Medium	Mild	Minor
Likelihood	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Table B: Description of the classified risks and likely action required

Level of Risk	Description of Classification
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, or there is evidence that severe harm to a designated receptor is currently happening. If this risk is realised, it is likely to result in significant environmental and financial liability to current and/or future site owners/occupiers. Urgent investigation (if not already undertaken) and remediation is likely to be required.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard. If risk is realised, it is likely to present a sizeable environmental and financial liability to current and/or future site owners/occupiers. Urgent investigation is required and remediation work may be necessary in the short term and likely over the longer term.
Moderate Risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the potential environmental liability. Some remedial works may be required over the longer term.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild. Limited investigation may be recommended to clarify the risk, dependent on the sensitivity of the receptor and view point of those of interest. Any remedial works are likely to be fairly limited.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is likely to be mild or minor.

The acceptability of risk will always depend upon the view point of those of interest, whether it is an occupier of a site, a regulator or stakeholder. As a result, it could be that action will be required to deal with a level of risk even if it is classified as very low.

11.0 NOTES ON LIMITATIONS

General

Mewies Engineering Consultants Ltd (M-EC) has completed the attached report for the use of the Client detailed on the front cover and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed.

Third parties should not use or rely upon the contents of the report unless written approval has been gained from M-EC; (due to legal requirements, a charge may be levied against such approval).

M-EC accepts no responsibility or liability for:

- a) the consequences of this documentation being used for any purpose or project other than that for which it was commissioned, and
- b) this document to any third party with whom approval for use has not been agreed.

Phase I Environmental Risk Assessments, Desk Studies and Site Audits

The work completed and utilised to provide this report comprises a study of available documentation. The opinions and results presented in this report have been arrived at by utilising the finite amount of data available at the time of writing and are relevant only to the purpose for which the report was commissioned. The data which has been reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative information pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, M-EC reserves the right to review this information and, if warranted, to modify the opinions presented in the report accordingly.

It should be noted that the risks which are identified in this report are perceived risks based on the available information at the time of writing and that the actual risks associated can only be assessed following a physical investigation of the site.

Phase II Intrusive Investigations

The intrusive investigation has been completed to provide information concerning the type and degree of contamination present along with ground and groundwater conditions which facilitates a reasonable risk assessment to be completed. The stated objectives of the ground investigation have been limited to assessing the proven risks which are associated with potential human targets, building materials, the environment (including adjacent land), and to surface and groundwater.

The amount of exploratory work, chemical testing and monitoring completed has potentially been restricted by the short timescale available, and the locations of exploratory holes undertaken have potentially been restricted to areas unoccupied by buildings(s) and buried services. A more comprehensive post demolition / decommission investigation may be required if the site is to be redeveloped. For these reasons any costs included in relation to site remediation must be considered as tentative only at this time.

The exploratory holes investigate only a small volume of the ground in relation to the size of the site and therefore, can only provide a “snap shot” or general indication of ground conditions located on the site. The fact that the site has been investigated does

not preclude the existence of localised “hotspots” of contamination where concentrations may be significantly higher than those actually encountered.

The risk assessment and opinions provided in this report take into account currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Intrusive Geo-environmental Investigations

The intrusive investigation of the site has been completed to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of any associated risks together with engineering and development implications.

The exploratory holes investigate only a small volume of the ground in relation to the size of the site and therefore, can only provide a “snap shot” or general indication of ground conditions located on the site. The opinions provided and recommendations given in this report are based only on the ground conditions apparent at the site of the exploratory holes. It should be noted that there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments concerning groundwater conditions are based on observations made at the time of completion of site work, it should be noted that groundwater levels will vary owing to seasonal, tidal and weather-related effects.

The scope of the investigation completed was selected on the basis of the specific development being proposed by the Client and is likely to be inappropriate to another form of development or scheme.

The risk assessment and opinions provided in this report take in to consideration currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

DRAWINGS

M-EC
The Old Chapel
Station Road
Hugglescote
Leicestershire
LE67 2GB

M-EC

SITE LOCATION PLAN

Project: **Huddersfield Road, Meltham, Holmfirth, Kirklees**

File Ref: **24194**

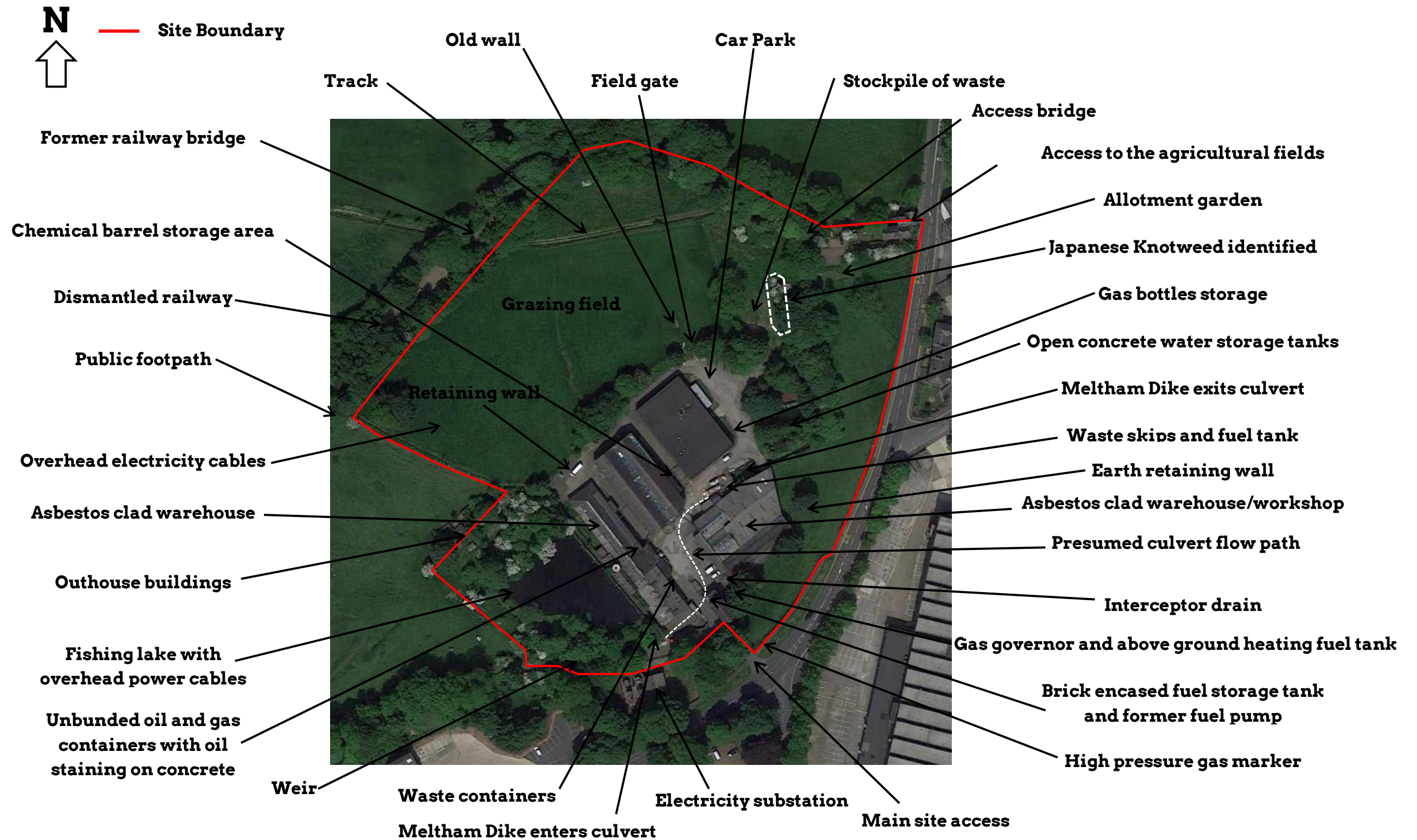
O.S. Grid Ref (X,Y): **410826, 411260 (centre of site)**

Nearest Postcode: **HD9 4BU**

Image source: Google Maps



Ref. 24194
Huddersfield Road, Meltham, Holmfirth,
Kirklees
Site Features Plan
September 2018
Photos taken by CC
Plan drawn by CC
Not to scale



APPENDIX A

NOTES

ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND THE REQUIREMENTS OF THE LOCAL AUTHORITY.

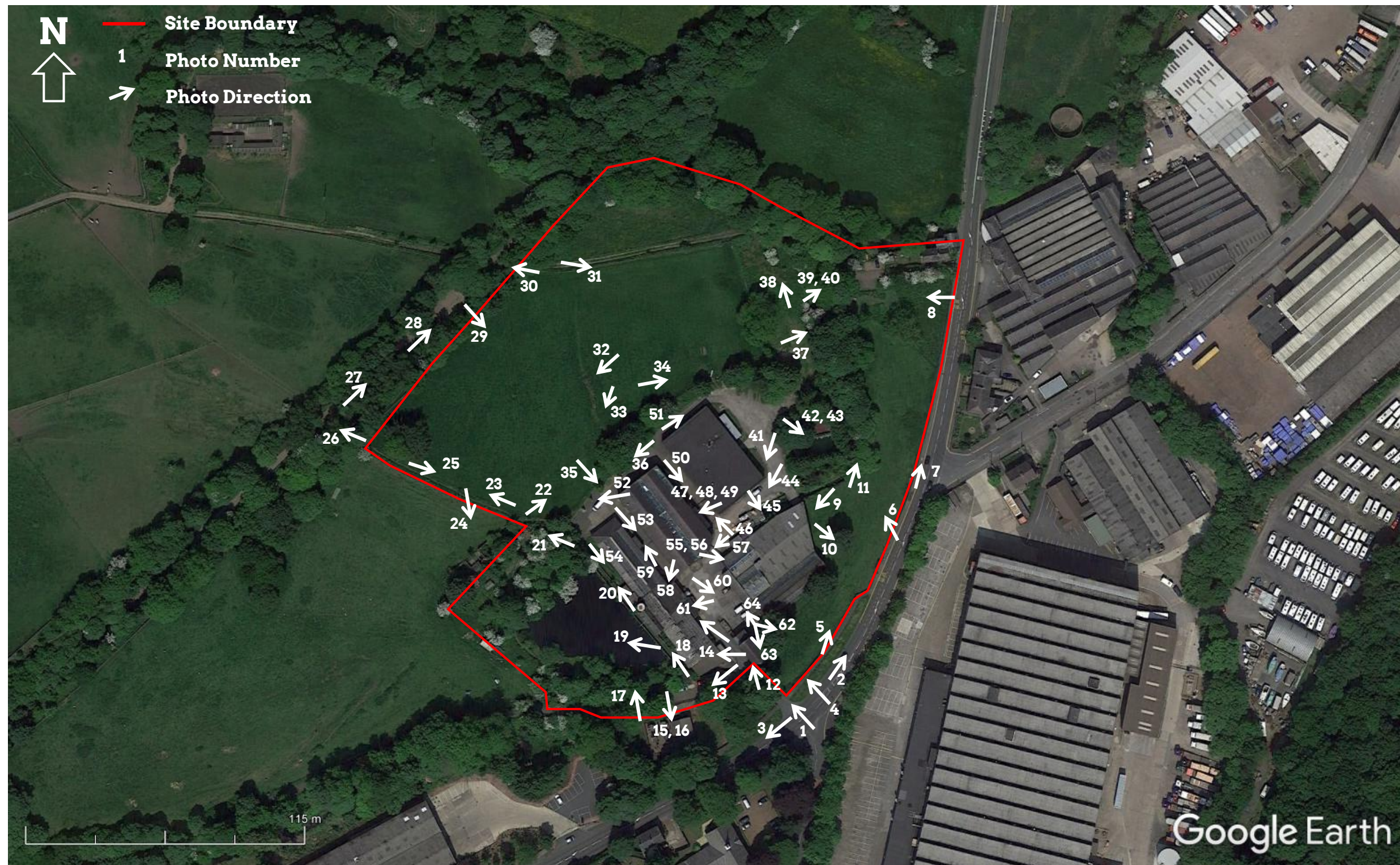


NOTE:
THIS SKETCH VIABILITY LAYOUT IS SUBJECT TO AN ACCURATE MEASURED AND LEVELED SITE / BUILDING SURVEY (INCLUDING TREE POSITIONS, CANOPIES, ETC.); CONFIRMATION OF SITE BOUNDARIES, EASEMENTS, RESTRICTIVE COVENANTS, ETC.; CONSULTATION WITH THE LOCAL AUTHORITY, DESIGN TEAM, PUBLIC UTILITIES, ETC.

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APPENDIX B

Ref. 24194
Huddersfield Road, Meltham, Holmfirth,
Kirklees
Photograph Location Plan
September 2018
Photos taken by CC
Plan drawn by CC
Not to scale





Photograph 1 – Site entrance from Huddersfield Road



Photograph 2 – View north along the site boundary with Huddersfield Road



Photograph 3 – View south along Station Road



Photograph 4 – High pressure gas marker adjacent to site entrance



Photograph 5 – Grazing land adjacent to Huddersfield Road



Photograph 6 – View of wooded area adjacent to Meltham Dike



Photograph 7 – Above ground power cable entering the site



Photograph 8 – Small allotment garden to north of grazing field



Photograph 9 – Brick built warehouse/workshop with possible asbestos roofing



Photograph 10 – Retained earth behind small wall structure



Photograph 11 – Bend of Meltham Dike



Photograph 12 – Northern Dyers building near site entrance



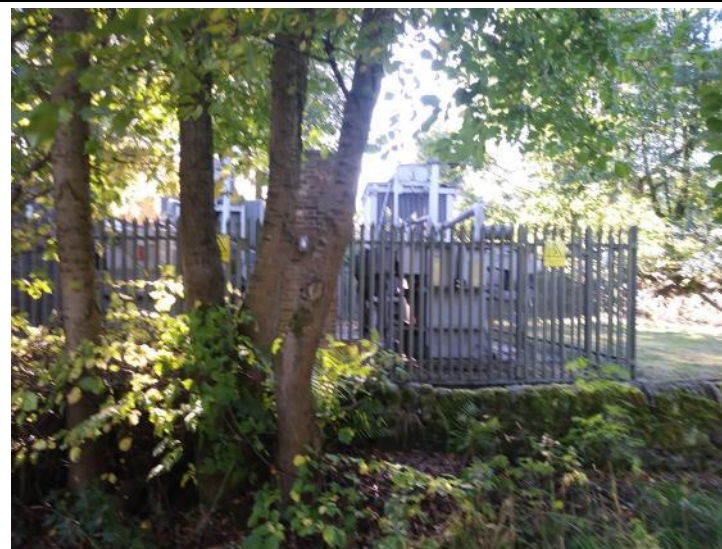
Photograph 13 – View west along southern boundary of the site



Photograph 14 – Brick built warehouse/factory with possible asbestos roofing



Photograph 15 – Substation located to the south of the site boundary



Photograph 16 – Substation located to the south of the site boundary



Photograph 17 – Weir of the Meltham Dike at the south of the site



Photograph 18 – Wall lined public footpath



Photograph 19 – Fishing Lake within the south of the site



Photograph 20 – Public footpath adjacent to warehouse



Photograph 21 – Steps of public footpath leading to higher ground at west of site



Photograph 22 – Grazing field topographically higher than Spinksmire Mill



Photograph 23 – View north from public footpath of western site boundary



Photograph 24 – View south toward outhouse buildings



Photograph 25 – View south-east toward Spinksmire Mill along public footpath



Photograph 26 – Steps down to former railway cutting along western site boundary



Photograph 27 – View north-east along the former railway line (note bridge over track)



Photograph 28 – Former railway line



Photograph 29 – View south-east of grazing field from north-western site boundary



Photograph 30 – Track passageway beneath former railway line



Photograph 31 – View along walled track within the northern section of the site



Photograph 32 – Former wall with grazing field north of Spinksmire Mill



Photograph 33 – Former wall with grazing field north of Spinksmire Mill



Photograph 34 – View north-east towards car park to east of Spinksmire Mill



Photograph 35 – View of Spinksmire Mill warehouses from raised grazing field



Photograph 36 – View along north-western edge of Spinksmire Mill



Photograph 37 – Waste materials dumped within wooded area within north of site



Photograph 38 – Overgrown vegetation within northern section of the site



Photograph 39 – Bridge enabling vehicular access to track from Huddersfield Road



Photograph 40 – Possible Japanese Knotweed within north-east of wooded area



Photograph 41 – Unbunded gas bottle storage area at north-eastern edge of Mill



Photograph 42 – Open concrete water storage tanks within south of wooded area



Photograph 43 – Open concrete water storage tanks within south of wooded area



Photograph 44 – Waste skips with miscellaneous materials adjacent to culvert exit



Photograph 45 – Raised waste storage area above Meltham Dike culvert (exit)



Photograph 46 – Unbunded chemical storage area in Spinksmire Mill



Photograph 47 – Labelling on chemical barrel



Photograph 48 – Unbunded storage of chemicals

	
Photograph 49 – Labelling on chemical barrel	Photograph 50 – View between warehouses in Spinksmire Mill
	
Photograph 51 – Road along north-western edge of Spinksmire Mill	Photograph 52 –Wall retaining higher ground at western corner of Spinksmire Mill



Photograph 53 – View south-east toward site entrance from retaining wall



Photograph 54 – View south-east of grassed area between warehouse and footpath



Photograph 55 – Asbestos sheet roofing on warehouse closest to Huddersfield Road



Photograph 56 – Fuel storage tank above Meltham Dike culvert



Photograph 57 – Above ground gas and electricity conduits between warehouses



Photograph 58 – Unbundled lubricant barrel and surface oil staining



Photograph 59 – View north-west toward retaining wall



Photograph 60 – View of car parking area to north of Northern Dyers building



Photograph 61 – Storage tank adjacent to car park



Photograph 62 – Gas governor to north of Northern Dyers building



Photograph 63 – Heating fuel tank north of Northern Dyers building



Photograph 64 – Interceptor drain north of Northern Dyers building

APPENDIX C



Mewies Engineering Consultants Ltd
The Old Chapel, STATION ROAD,
HUGGLESCOTE, LE67 2GB

Groundsure Reference: GS-5502711

Your Reference: 7731N

Report Date 4 Oct 2018

Report Delivery Method: Email - pdf

Enviro Insight

Address: HUDDERSFIELD ROAD, MELTHAM, HOLMFIRTH, HD9 4BU

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: HUDDERSFIELD ROAD, MELTHAM, HOLMFIRTH, HD9 4BU

Date: 4 Oct 2018

Reference: GS-5502711

Client: Mewies Engineering Consultants Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 26-Mar-2012

Grid Reference: 410826,411260

Site Size: 3.87ha

Report Reference: GS-5502711

Client Reference: 7731N

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	7	9	54	65
1.2 Additional Information – Historical Tank Database	2	0	19	56
1.3 Additional Information – Historical Energy Features Database	0	2	19	13
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	3	1	24	48
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	1
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	1
2.1.5 Records of List 2 Dangerous Substances Inventory sites	1	0	1	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	2	0	7	15
2.1.9 Records of Water Industry Referrals	0	0	3	2
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	1	0	2	1
2.3.2 National Incidents Recording System, List 1	1	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	5	1	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	2	1
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	1	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	3	9	0	6

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	3	2	19	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology			0-500m			
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site			Identified			
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site			Identified			
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	2	0	2	12
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	3	1	1	0	4	4
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	2
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	#250GWV #	#500GWV #	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	Yes	No	Yes	No	Yes	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	26	12	40	50	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	High					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Low					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	1	3	2	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	4

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	5
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	1	0	0	1	4

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Moderate
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Moderate
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	Identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

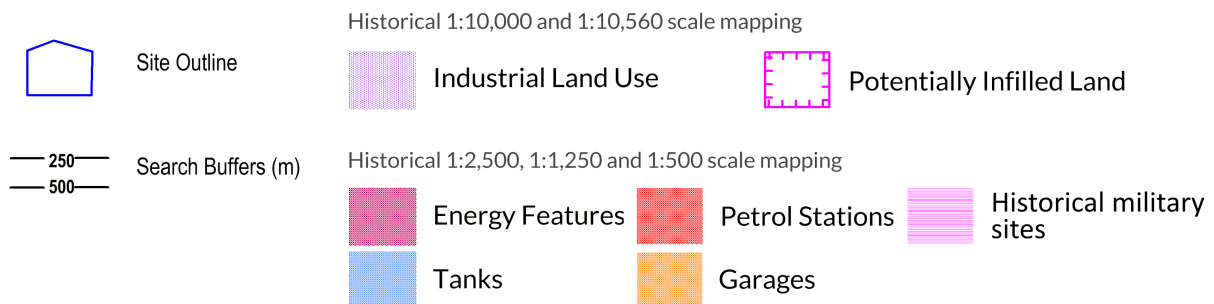
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 135

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Unspecified Mills	1948
2B	0	On Site	Unspecified Mills	1904
3A	0	On Site	Unspecified Mills	1951
4B	0	On Site	Unspecified Mill	1969
5B	0	On Site	Unspecified Mill	1984
6A	0	On Site	Unspecified Mills	1933
7AW	0	On Site	Unspecified Mill	1891
8C	8	E	Unspecified Mill	1891
9D	8	E	Unspecified Mill	1951
10C	9	E	Unspecified Mill	1904
11D	9	E	Unspecified Mill	1948
12AX	9	SW	Refuse Heap	1904
13	11	NW	Railway Building	1951
14D	11	E	Unspecified Mill	1933
15	26	SE	Unspecified Works	1984
16	31	E	Unspecified Mill	1984
17E	67	SW	Cuttings	1951
18D	67	E	Unspecified Tank	1891
19E	69	SW	Cuttings	1933
20E	72	SW	Cuttings	1984
21E	74	SW	Cuttings	1904
22E	74	SW	Cuttings	1948
23E	78	SW	Cuttings	1891
24	86	E	Unspecified Works	1984
25	86	NE	Unspecified Tank	1951
26F	122	SW	Railway Sidings	1951
27F	129	SW	Railway Sidings	1933
28H	151	S	Unspecified Mills	1984
29	151	N	Unspecified Mill	1951
30G	154	NE	Unspecified Mill	1948
31G	154	NE	Unspecified Mill	1904
32H	155	S	Unspecified Mills	1933
33G	155	NE	Unspecified Mill	1891
34I	160	S	Unspecified Mills	1969

35G	166	NE	Unspecified Mill	1933
36I	167	S	Unspecified Mills	1948
37H	168	S	Unspecified Mills	1951
38AZ	174	S	Mill Ponds	1904
39I	174	S	Unspecified Mills	1904
40	182	S	Unspecified Mills	1891
41G	183	NE	Unspecified Mill	1969
42J	198	S	Unspecified Tank	1948
43J	199	S	Unspecified Tank	1891
44J	200	S	Unspecified Tank	1951
45	201	SW	Mineral Works	1904
46J	201	S	Gasometer	1904
47J	201	S	Unspecified Tank	1933
48K	218	SE	Refuse Heap	1951
49K	219	SE	Refuse Heap	1948
50L	219	NE	Sewage Works	1948
51L	219	NE	Sewage Works	1904
52K	221	SE	Refuse Heap	1933
53K	221	SE	Refuse Heap	1933
54L	222	NE	Sewage Works	1933
55L	222	NE	Sewage Works	1933
56L	223	NE	Sewage Works	1951
57M	223	NE	Sewage Works	1969
58M	223	NE	Sewage Works	1984
59O	229	NE	Unspecified Tanks	1984
60P	237	SW	Refuse Heap	1969
61N	238	SE	Unspecified Tank	1948
62N	238	SE	Unspecified Tank	1951
63N	239	SE	Unspecified Tank	1933
64	239	SW	Unspecified Works	1984
65O	241	NE	Unspecified Tanks	1904
66O	241	NE	Unspecified Tanks	1948
67O	242	NE	Unspecified Tanks	1933
68P	245	W	Sand Pit	1933
69O	247	NE	Unspecified Tanks	1951
70BA	248	W	Refuse Heap	1951
71BB	264	SW	Mill Pond	1904
72	264	SE	Unspecified Works	1969
73Q	277	NE	Unspecified Tanks	1969
74Q	277	NE	Unspecified Tanks	1984
75AK	284	SE	Unspecified Ground Workings	1951
76	284	SW	Unspecified Tank	1984
77L	293	NE	Unspecified Tanks	1984
78F	310	SW	Railway Sidings	1969
79V	317	SW	Railway Sidings	1891

80BD	321	SW	Mill Pond	1904
81R	323	N	Unspecified Quarry	1951
82R	324	N	Refuse Heap	1933
83R	324	N	Refuse Heap	1933
84T	333	S	Unspecified Mills	1948
85Y	336	SW	Brick Works	1969
86R	337	N	Unspecified Old Quarry	1904
87R	337	N	Unspecified Old Quarry	1948
88S	337	NE	Unspecified Tanks	1969
89S	337	NE	Unspecified Tanks	1984
90T	339	S	Unspecified Mills	1904
91U	354	E	Unspecified Quarry	1948
92U	355	E	Refuse Heap	1904
93U	358	SE	Unspecified Quarry	1951
94U	358	SE	Unspecified Quarry	1984
95U	358	E	Unspecified Quarry	1933
96BE	362	E	Unspecified Quarry	1969
97W	371	E	Unspecified Heap	1951
98U	374	E	Unspecified Quarry	1904
99	374	SW	Railway Sidings	1948
100V	381	SW	Unspecified Works	1969
101V	381	SW	Railway Sidings	1904
102W	383	E	Unspecified Tank	1948
103W	383	E	Gasometer	1904
104W	384	E	Unspecified Tank	1933
105X	385	SW	Brick Works	1933
106X	385	SW	Brick Works	1933
107Y	386	SW	Brick Works	1951
108W	387	E	Unspecified Tank	1969
109W	387	E	Unspecified Tank	1951
110W	387	E	Unspecified Tank	1984
111X	387	SW	Brick Works	1948
112Z	387	SW	Refuse Heap	1933
113Z	387	SW	Refuse Heap	1933
114Z	389	SW	Refuse Heap	1951
115X	393	SW	Unspecified Tanks	1948
116AC	393	SW	Unspecified Tanks	1951
117X	394	SW	Unspecified Tanks	1933
118AA	403	NE	Unspecified Heap	1969
119AA	403	NE	Unspecified Heap	1984
120	421	S	Timber Yard	1948
121AB	422	S	Timber Yard	1933
122AB	430	S	Timber Yard	1904
123AC	435	SW	Brick Works	1904
124	443	NE	Unspecified Tanks	1984
125X	454	SW	Unspecified Tank	1951

126AA	464	E	Refuse Heap	1948
127AD	467	E	Refuse Heap	1933
128AD	467	E	Refuse Heap	1933
129AD	467	E	Refuse Heap	1951
130BF	470	NW	Unspecified Holes	1891
131X	477	SW	Unspecified Tanks	1951
132AE	493	E	Refuse Heap	1904
133AE	493	E	Unspecified Quarry	1948
134BH	496	E	Unspecified Quarry	1969
135BJ	499	NW	Unspecified Holes	1951

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

77

ID	Distance (m)	Direction	Use	Date
136	0	On Site	Filter Tanks	1913
137A	0	On Site	Unspecified Tank	1893
138C	68	E	Gasometer	1893
139AF	82	S	Unspecified Tank	1913
140AF	82	S	Unspecified Tank	1906
141D	84	E	Unspecified Tank	1983
142AG	106	E	Tanks	1993
143AG	106	E	Tanks	1996
144	112	NE	Filter Tanks	1913
145AG	115	SE	Tanks	1996
146AG	115	SE	Tanks	1993
147AG	115	SE	Tanks	1983
148AG	119	E	Tanks	1983
149AG	123	SE	Tanks	1893
150J	200	S	Gasometer	1906
151J	200	S	Gasometer	1987
152AH	207	SE	Tanks	1988
153AH	207	SE	Tanks	1913
154AH	214	SE	Filter Tank	1906
155L	241	NE	Tanks	1913
156L	243	NE	Tanks	1964
157L	251	NE	Settling Tanks	1964
158	252	NE	Settling Tanks	1975
159AI	265	S	Unspecified Tank	1987
160AI	265	S	Unspecified Tank	1988

161AI	276	S	Unspecified Tank	1991
162AI	276	S	Unspecified Tank	1984
163AJ	276	S	Unspecified Tank	1997
164	279	W	Unspecified Tank	1995
165AJ	279	S	Unspecified Tank	1987
166AJ	279	S	Unspecified Tank	1988
167AK	290	SE	Tanks	1993
168AK	290	SE	Tanks	1996
169L	298	NE	Tanks	1975
170L	298	NE	Tanks	1991
171L	298	NE	Tanks	1987
172AK	300	SE	Tanks	1988
173AK	300	SE	Tanks	1964
174AL	300	S	Unspecified Tank	1975
175AL	300	S	Unspecified Tank	1995
176AL	301	S	Unspecified Tank	1997
177AL	301	S	Unspecified Tank	1983
178AK	302	SE	Tanks	1975
179AK	302	SE	Tanks	1990
180M	308	NE	Tanks	1993
181AM	315	SE	Unspecified Tank	1996
182AM	315	SE	Unspecified Tank	1983
183AN	316	NE	Tanks	1987
184AN	316	NE	Tanks	1988
185AN	326	NE	Tanks	1983
186S	338	NE	Tanks	1987
187AO	344	S	Unspecified Tank	1988
188AO	344	S	Unspecified Tank	1991
189S	345	NE	Tanks	1964
190AP	346	S	Unspecified Tank	1975
191AP	346	S	Unspecified Tank	1997
192AP	347	S	Unspecified Tank	1995
193AO	347	S	Unspecified Tank	1991
194AO	347	S	Unspecified Tank	1995
195AP	348	S	Unspecified Tank	1987
196AP	348	S	Unspecified Tank	1988
197AO	348	S	Unspecified Tank	1975
198AO	349	S	Unspecified Tank	1987
199AP	364	S	Unspecified Tank	1906
200AP	364	S	Unspecified Tank	1993
201AQ	368	SW	Unspecified Tank	1964
202AQ	370	SW	Unspecified Tank	1987
203W	383	E	Gasometer	1988
204W	386	E	Unspecified Tank	1975
205W	386	E	Unspecified Tank	1913
206W	388	E	Unspecified Tank	1906

207T	400	S	Unspecified Tank	1964
208T	400	S	Unspecified Tank	
209T	401	S	Unspecified Tank	
210AC	433	SW	Tanks	
211AC	445	SW	Tanks	
212	491	S	Unspecified Tank	

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

34

ID	Distance (m)	Direction	Use	Date
213AR	13	S	Electricity Substation	1996
214AR	14	S	Electricity Substation	1984
215AS	68	SW	Electricity Substation	1995
216AS	68	SW	Electricity Substation	1997
217C	68	E	Gasometer	1893
218AF	78	SW	Electricity Substation	1991
219AT	80	S	Electricity Substation	1975
220AT	80	S	Electricity Substation	1991
221AT	81	S	Electricity Substation	1995
222AT	81	S	Electricity Substation	1997
223AT	83	S	Electricity Substation	1988
224AT	83	S	Electricity Substation	1987
225AT	89	S	Electricity Substation	1991
226AT	89	S	Electricity Substation	1997
227AT	89	S	Electricity Substation	1995
228D	94	E	Electricity Substation	1996
229D	94	E	Electricity Substation	1993
230D	94	E	Electricity Substation	1983
231	103	E	Electricity Substation	1893
232J	200	S	Gasometer	1906
233J	200	S	Gasometer	1906
234W	383	E	Gasometer	1975
235AU	399	S	Electricity Substation	1988
236AU	416	S	Electricity Substation	1987
237AU	416	S	Electricity Substation	1991
238AU	419	S	Electricity Substation	1997
239AU	421	S	Electricity Substation	1995
240AU	421	S	Electricity Substation	1991
241AV	466	SW	Electricity Substation	1975

242AV	466	SW	Electricity Substation	1997
243AV	469	SW	Electricity Substation	1995
244AV	469	SW	Electricity Substation	1987
245AV	471	SW	Electricity Substation	1988
246AV	471	SW	Electricity Substation	

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 0

Database searched and no data found.

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 76

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
247AW	0	On Site	Pond	1891
248AW	0	On Site	Pond	1984

249AW	0	On Site	Pond	1969
250AX	9	SW	Refuse Heap	1904
251E	67	SW	Cuttings	1951
252E	69	SW	Cuttings	1933
253E	72	SW	Cuttings	1984
254E	74	SW	Cuttings	1904
255E	74	SW	Cuttings	1948
256E	78	SW	Cuttings	1891
257AY	166	S	Pond	1948
258AY	169	S	Pond	1933
259AZ	172	S	Ponds	1891
260AZ	174	S	Mill Ponds	1904
261K	218	SE	Refuse Heap	1951
262K	219	SE	Refuse Heap	1948
263L	219	NE	Sewage Works	1948
264L	219	NE	Sewage Works	1904
265K	221	SE	Refuse Heap	1933
266K	221	SE	Refuse Heap	1933
267L	222	NE	Sewage Works	1933
268L	222	NE	Sewage Works	1933
269L	223	NE	Sewage Works	1951
270M	223	NE	Sewage Works	1969
271M	223	NE	Sewage Works	1984
272P	237	SW	Refuse Heap	1969
273P	245	W	Sand Pit	1933
274BA	248	W	Refuse Heap	1951
275BB	264	SW	Mill Pond	1904
276BC	277	S	Fish Pond	1933
277BC	277	S	Fish Pond	1951
278BC	281	S	Pond	1891
279BC	283	S	Pond	1984
280BC	283	S	Pond	1969
281AK	284	SE	Unspecified Ground Workings	1951
282BC	284	S	Fish Pond	1904
283BC	284	S	Fish Pond	1948
284BD	321	SW	Mill Pond	1904
285R	323	N	Unspecified Quarry	1951
286R	324	N	Refuse Heap	1933
287R	324	N	Refuse Heap	1933
288Y	336	SW	Brick Works	1969
289R	337	N	Unspecified Old Quarry	1948
290R	337	N	Unspecified Old Quarry	1904
291U	354	E	Unspecified Quarry	1948
292U	355	E	Refuse Heap	1904
293U	358	SE	Unspecified Quarry	1984

294U	358	SE	Unspecified Quarry	1951
295U	358	E	Unspecified Quarry	1933
296BE	362	E	Unspecified Quarry	1969
297W	371	E	Unspecified Heap	1951
298U	374	E	Unspecified Quarry	1904
299X	385	SW	Brick Works	1933
300X	385	SW	Brick Works	1933
301Y	386	SW	Brick Works	1951
302X	387	SW	Brick Works	1948
303Z	387	SW	Refuse Heap	1933
304Z	387	SW	Refuse Heap	1933
305Z	389	SW	Refuse Heap	1951
306AA	403	NE	Unspecified Heap	1984
307AA	403	NE	Unspecified Heap	1969
308X	435	SW	Brick Works	1904
309AA	464	E	Refuse Heap	1948
310AD	467	E	Refuse Heap	1933
311AD	467	E	Refuse Heap	1933
312AD	467	E	Refuse Heap	1951
313BF	470	NW	Unspecified Holes	1891
314BG	485	S	Pond	1951
315BG	485	S	Pond	1933
316BG	488	S	Pond	1904
317AE	493	E	Refuse Heap	1904
318AE	493	E	Unspecified Quarry	1948
319BI	495	S	Pond	1951
320BH	496	E	Unspecified Quarry	1969
321BI	496	S	Pond	1933
322BJ	499	NW	Unspecified Holes	1951

2. Environmental Permits, Incidents and Registers Map



- | | | |
|-------------------------------|---|--|
| Site Outline | Recorded Pollution Incident | RAS 3 & 4 Authorisations |
| Dangerous Substances (List 1) | Dangerous Substances (List 2) | Part A(1) Authorised Processes and Historic IPC Authorisations |
| Water Industry Referrals | Licenced Discharge Consents | Part A(2) and Part B Authorised Processes |
| Red List Discharge Consents | Sites Determined as Contaminated Land | COMAH / NIHHS Sites |
| | Hazardous Substance Consents and Enforcements | |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

1

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
40H	259	E	411200 411300	Operator: West Yorkshire Waste Ltd Address: Refuse Incinerator, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD7 3AP Process: Incineration Permit Number: AG8454 Original Permit Number: IPCAIRAPP Date Approved: 27-5-1993 Effective Date: 27-5-1993 Status: Revoked

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

1

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
6E	435	NE	411200	Name: Meltham Stw Authorised Substances: Cadmium,

ID	Distance (m)	Direction	NGR	Details
			411600	Status: Not Active Receiving Water: Calder, Colne, River Ryburn Hexachlorocyclohexane, Dieldrin, Total "drins"

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

2

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
7	0	On Site	410880 411170	Name: Quarmby & Sykes Ltd, Huddersfield Status: Not Active Receiving Water: Unknown Authorised Substances: Chromium
8	77	E	411020 411270	Name: Nichol & Pratt Ltd., Huddersfield Status: Not Active Receiving Water: Unknown Authorised Substances: Chromium

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

1

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
34	365	S	410980 410712	Address: Adam Fire Surrounds Ltd, Unit J Meltham Mills Industrial Estate, Knowle Lane, Meltham, HD9 4DS Process: Timber Manufacture; Timber Manufacture Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

24

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
9A	0	On Site	410920 411160	Address: UNDEFINED SITE, SEE OUTLET NGR OR COMMENTS, FOR MORE INFO ABOUT THE SITE, (DO NOT CHANGE THESE DETAILS), , NK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 2378 Permit Version: 1 Receiving Water: MELTHAM DIKE Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 15/05/1968 Effective Date: 15-May-1968 Revocation Date: 30/03/2018
10A	0	On Site	410905 411160	Address: MELTHAM CSO, HUDDERSFIELD ROAD BENTLEY ROAD, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD9 4AW Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 2378 Permit Version: 2 Receiving Water: MELTHAM DIKE Status: VARIED UNDER EPR 2010 Issue date: 12/03/2018 Effective Date: 31-Mar-2018 Revocation Date:
11B	84	E	411030 411240	Address: BENTLEY MILLS, MELTHAM, HUDDERSFIELD Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 3366 Permit Version: 1 Receiving Water: THICK HOLLINS DIKE Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 11/05/1979 Effective Date: 11-May-1979 Revocation Date: 09/07/2003
12B	85	E	411030 411230	Address: BENTLEY MILLS, MELTHAM, HUDDERSFIELD Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 3365 Permit Version: 1 Receiving Water: THICK HOLLINS DIKE Status: CONSENT REVOKED - DISCHARGE CEASED (WRA 91, SCHED 10 & 6) Issue date: 11/05/1979 Effective Date: 11-May-1979 Revocation Date: 24/06/1994
13C	114	N	410930 411360	Address: 245 & 247 HUDDERSFIELD ROAD, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD9 4BU Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA7711 Permit Version: 1 Receiving Water: TRIB OF MELTHAM DIKE Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 29/03/2001 Effective Date: 29-Mar-2001 Revocation Date:
14C	114	N	410930 411360	Address: 245 & 247 HUDDERSFIELD ROAD, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD9 4BU Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WRA7711 Permit Version: 1 Receiving Water: TRIB OF MELTHAM DIKE Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 29/03/2001 Effective Date: 29-Mar-2001 Revocation Date:
15D	163	SE	411050 411030	Address: FRED LAWTON AND SONS, MELTHAM MILLS, MELTHAM Effluent Type: TRADE DISCHARGES - BOILER BLOWDOWN EFFLUENT Permit Number: 2848 Permit Version: 2 Receiving Water: THICK HOLLINS DIKE Status: REVOKED - UNSPECIFIED Issue date: 02/04/1993 Effective Date: 02-Apr-1993 Revocation Date: 13/01/2015
16D	163	SE	411050 411030	Address: FRED LAWTON AND SONS, MELTHAM MILLS, MELTHAM Effluent Type: TRADE DISCHARGES - Receiving Water: THICK HOLLINS DIKE Status: TRANSFERRED FROM R(PP)A 1951-1961

ID	Distance (m)	Direction	NGR	Details	
				BOILER BLOWDOWN EFFLUENT Permit Number: 2848 Permit Version: 1	Issue date: 08/06/1972 Effective Date: 08-Jun-1972 Revocation Date: 01/04/1993
17	215	NE	411096 411401	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 9	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 18/03/2015 Effective Date: 18-Mar-2015 Revocation Date:
18	261	S	410900 410800	Address: BROWN TRACTORS LTD., DAVID NEW EXTE, NSION BUILDING 'R' BLOCK BOILER, HOUSE, MELTHAM Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: 3432 Permit Version: 1	Receiving Water: THICK HOLLINS DIKE Status: REVOKED - UNSPECIFIED Issue date: 25/02/1980 Effective Date: 25-Feb-1980 Revocation Date: 16/05/1994
19E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 5	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 17/11/2005 Effective Date: 01-Jan-2006 Revocation Date: 30/03/2008
20E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 6	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 17/11/2005 Effective Date: 31-Mar-2008 Revocation Date: 31/03/2009
21E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 7	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2008 Effective Date: 01-Apr-2009 Revocation Date: 23/03/2010
22E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 8	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 24/03/2010 Effective Date: 24-Mar-2010 Revocation Date: 17/03/2015
23E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 4	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 17/11/2005 Effective Date: 17-Nov-2005 Revocation Date: 31/12/2005
24E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 3	Receiving Water: MAG BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 06/05/1998 Effective Date: 06-May-1998 Revocation Date: 16/11/2005
25E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY	Receiving Water: MAG BROOK Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 02/07/1992 Effective Date: 01-Jan-1994

ID	Distance (m)	Direction	NGR	Details	
26E	435	NE	411200 411600	Permit Number: WRA6680 Permit Version: 2	Revocation Date: 05/05/1998
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WRA6680 Permit Version: 1	Receiving Water: MAG BROOK Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 02/07/1992 Effective Date: 01-Jan-1993 Revocation Date: 31/12/1993
27E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 4	Receiving Water: HALL DIKE Status: REVOKED - UNSPECIFIED Issue date: 29/07/1988 Effective Date: 29-Jul-1988 Revocation Date: 31/12/1992
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 3	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 25/11/1985 Effective Date: 25-Nov-1985 Revocation Date: 28/07/1988
28E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 3	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 25/11/1985 Effective Date: 25-Nov-1985 Revocation Date: 28/07/1988
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 2293 Permit Version: 2	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 10/11/1985 Effective Date: 10-Nov-1985 Revocation Date: 24/11/1985
29E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 2	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 10/11/1985 Effective Date: 10-Nov-1985 Revocation Date: 24/11/1985
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 2	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 10/11/1985 Effective Date: 10-Nov-1985 Revocation Date: 24/11/1985
30E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 2	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 10/11/1985 Effective Date: 10-Nov-1985 Revocation Date: 24/11/1985
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 2	Receiving Water: HALL DIKE Status: TRANSFERRED FROM COPA 1974 Issue date: 10/11/1985 Effective Date: 10-Nov-1985 Revocation Date: 24/11/1985
31E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 1	Receiving Water: HALL DIKE Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/01/1982 Effective Date: 01-Jan-1982 Revocation Date: 09/11/1985
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 1	Receiving Water: HALL DIKE Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/01/1982 Effective Date: 01-Jan-1982 Revocation Date: 09/11/1985
32E	435	NE	411200 411600	Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 1	Receiving Water: HALL DIKE Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/01/1982 Effective Date: 01-Jan-1982 Revocation Date: 09/11/1985
				Address: MELTHAM STW, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: 2293 Permit Version: 1	Receiving Water: HALL DIKE Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/01/1982 Effective Date: 01-Jan-1982 Revocation Date: 09/11/1985

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

5

The following Water Industry Referral records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Address	Permission reference	Local Authority	First Date Received	Last Date Received	Status
41F	62	E	NICHOL AND PRATT LTD, BENT LEY MILLS, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD7 3AP	AO9501	KIRKLEES METROPOLITAN BOROUGH COUNCIL	01-Jun-2001	01-Jan-2018	RECEIVED
42F	62	E	NICHOL AND PRATT LTD, BENT LEY MILLS, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD7 3AP	AF3201	KIRKLEES METROPOLITAN BOROUGH COUNCIL	01-Jun-2001	01-Jan-2018	RECEIVED
43F	62	E	NICHOL AND PRATT LTD, BENT LEY MILLS, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD7 3AP	AX5196	KIRKLEES METROPOLITAN BOROUGH COUNCIL	01-Jul-2010	01-Jan-2018	RECEIVED
44G	354	S	QUARMBY AND SYKES LTD, SPINKSMIRE MILL, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD7 3AN	AF3198	KIRKLEES METROPOLITAN BOROUGH COUNCIL	01-Jun-2001	01-Jan-2018	RECEIVED
45G	354	S	QUARMBY AND SYKES LTD, SPINKSMIRE MILL, MELTHAM, HUDDERSFIELD, WEST YORKSHIRE, HD7 3AN	AT9564	KIRKLEES METROPOLITAN BOROUGH COUNCIL	01-Jul-2010	01-Jan-2018	RECEIVED

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

4

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	0	On Site	410899 411181	Incident Date: 25-Feb-2003 Incident Identification: 139321 Pollutant: Sewage Materials Pollutant Description: Process Effluent Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	61	NW	410761 411332	Incident Date: 12-Aug-2003 Incident Identification: 181407 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3	216	E	411151 411316	Incident Date: 05-Jan-2002 Incident Identification: 50618 Pollutant: Oils and Fuel Pollutant Description: Diesel Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	493	S	410689 410570	Incident Date: 09-Nov-2002 Incident Identification: 119824 Pollutant: Sewage Materials Pollutant Description: Crude Sewage Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

1

The following NIRS List 1 records are represented as points on the Environmental Permits, Incidents and Registers Map:

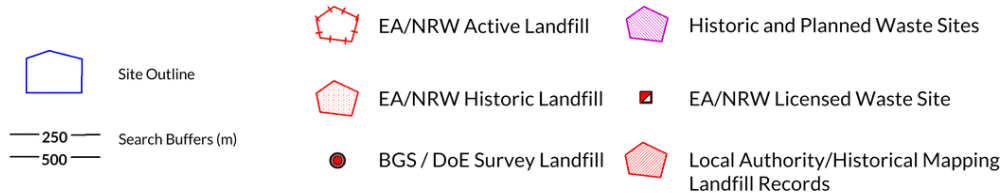
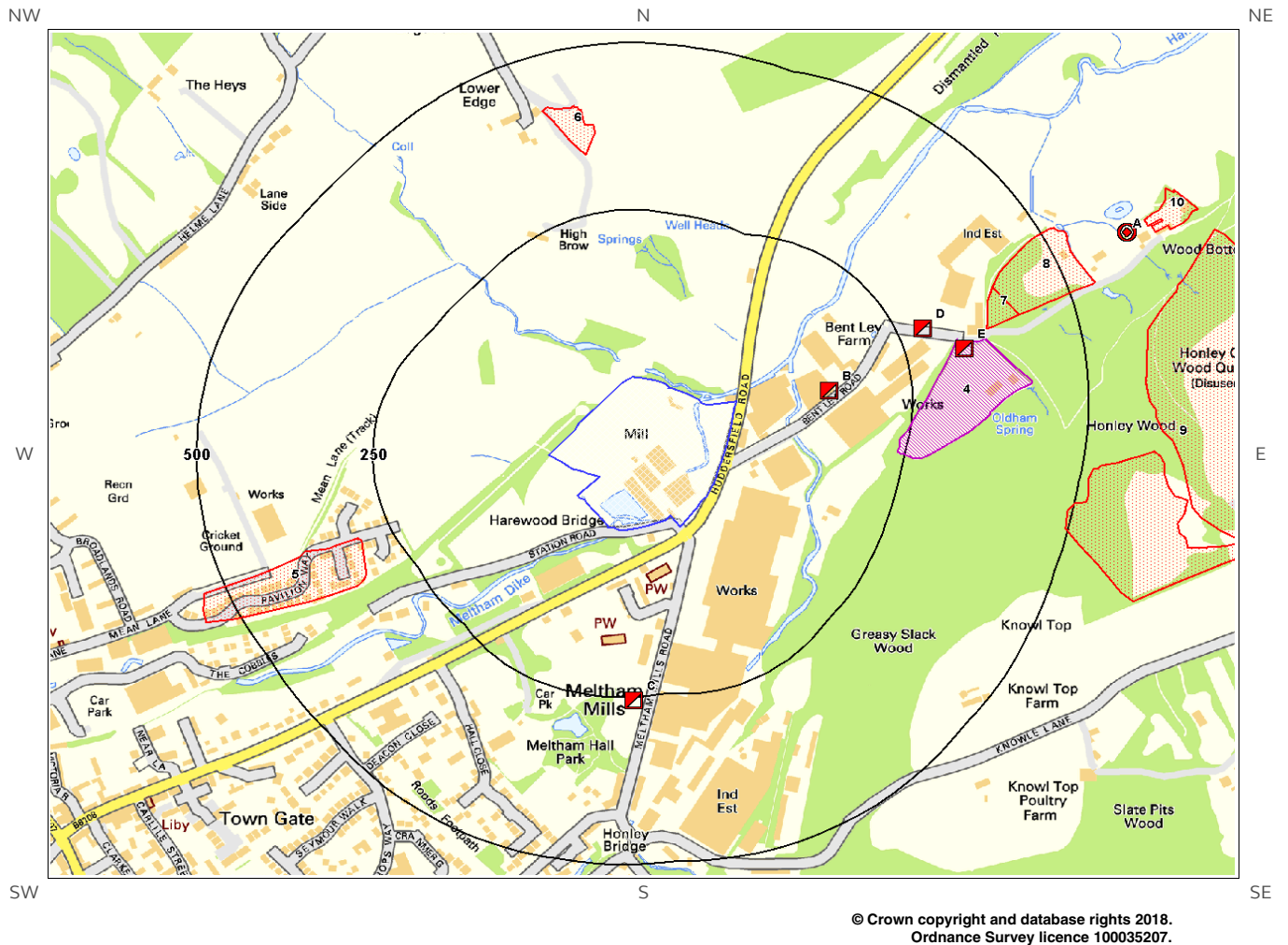
ID	Distance (m)	Direction	NGR	Details
5	0	On Site		Incident Date: 19-Aug-1999 Incident Identification: 5274.0 Catchments Name: CALDER AND TRIBS Water Description: RIVER STRETCH (FRESHWATER) Water Course: MELTHAM DIKE Incident Substantiated: Yes Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: Significant Impact Land Impact: No Impact Air Impact: No Impact Action Taken: Not Available

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

7

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
5	295	SW		Site Address: On land at the end of Mean Lane, Meltham Waste Licence: - Site Reference: 116 Waste Type: Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: Mean Lane, Meltham, Huddersfield Operator: G R Stein Refractories Limited Licence Holder: G R Stein Refractories Limited First Recorded: - Last Recorded: -
6	338	N		Site Address: Disused Quarry, Harrison Lane, Crosland Edge, Meltham Waste Licence: Yes Site Reference: 4700/0416 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Jun-1984 Licence Surrendered: 07-Jan-1994 Licence Holder Address: 34 Crosland Edge, Meltham, Huddersfield Operator: - Licence Holder: Mr L Haigh First Recorded: 31-Dec-1984 Last Recorded: 31-Dec-1991
7	372	E		Site Address: Meltham Mills Holder Station, Near Bentley Road, Meltham Waste Licence: Yes Site Reference: 4700/0258 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 11-Feb-1981 Licence Surrendered: 30-Apr-1983 Licence Holder Address: New York Road, Leeds Operator: - Licence Holder: North East Gas First Recorded: 01-Jan-1982 Last Recorded: 31-Oct-1982
8	401	NE		Site Address: Woodbottom Tip, Meltham, Huddersfield, West Yorkshire Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Meltham Urban District Council Licence Holder: - First Recorded: 01-Jan-1948

ID	Distance (m)	Direction	NGR	Details
				Environmental Permitting Regulations (Waste) Reference: - Last Recorded: 31-Dec-1979
9	493	E		Site Address: Honley Wood Quarry, Knowle Lane, Meltham, Huddersfield, West Yorkshire Waste Licence: Yes Site Reference: 4700/WY099, 50 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 27-Sep-1977 Licence Surrendered: 30-Apr-1994 Licence Holder Address: - Operator: West Yorkshire Metropolitan County Council Licence Holder: Johnsons Wellfield Quarry First Recorded: 31-Dec-1900 Last Recorded: 31-Dec-1992
10	639	NE		Site Address: Woodbottom Farm, Bent-Ley Road, Meltham, Huddersfield Waste Licence: Yes Site Reference: 4700/0343 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 15-Nov-1982 Licence Surrendered: 02-Aug-1988 Licence Holder Address: Woodbottom Farm, Bent-Ley Farm, Meltham, Huddersfield Operator: - Licence Holder: G Szoradi First Recorded: 30-Nov-1982 Last Recorded: 31-Jul-1988
Not shown	1432	S		Site Address: Royd Tip, Royd Road, Meltham, Huddersfield, West Yorkshire Waste Licence: - Site Reference: - Waste Type: Inert, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Meltham Urban District Council Licence Holder: - First Recorded: - Last Recorded: 31-Dec-1976

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

3

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1A	609	NE	411500.0 411500.0	Address: Honley Wood Quarry, Knowle Lne, Meltham, Hudd'fiel BGS Number: 2295.0 Risk: No risk to aquifer Waste Type: N/A
2A	609	NE	411500.0 411500.0	Address: Woodbottom Tip, Meltham, Huddersfield BGS Number: 2298.0 Risk: No risk to aquifer Waste Type: N/A
Not shown	1470	SW	410200.0 409700.0	Address: Royd Tip, Royd Road, Meltham, Huddersfield BGS Number: 2299.0 Risk: No risk to aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
4	238	E	411269 411250	Type of Site: Breakers Yard Site Address: N/A	Planning Application Reference: N/A Date: 1996	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

18

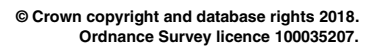
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
12B	132	E	411077 411264	Site Address: Meltham H W R C, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD9 4AP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT033 EPR reference: EA/EPR/WP3692ZU/V004 Operator: Suez Recycling And Recovery Kirklees Ltd Waste Management licence No: 65436 Annual Tonnage: 25000.0	Issue Date: 27/03/2006 Effective Date: - Modified: 27/09/2017 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Meltham H W R C Correspondence Address: -	
13B	132	E	411077 411264	Site Address: Meltham Hwrc, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD9 4AP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT033 EPR reference: EA/EPR/WP3692ZU/A001 Operator: Sita (kirklees) Ltd Waste Management licence No: 65436 Annual Tonnage: 25000.0	Issue Date: 27/03/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Meltham Hwrc Correspondence Address: -	
14B	132	E	411077 411264	Site Address: Meltham H W R C, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD9 4AP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT033 EPR reference: EA/EPR/WP3692ZU/V002 Operator: Sita (Kirklees) Ltd Waste Management licence No: 65436 Annual Tonnage: 25000.0	Issue Date: 27/03/2006 Effective Date: - Modified: 03/02/2015 Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Modified Site Name: Meltham H W R C Correspondence Address: -	

ID	Distance (m)	Direction	NGR	Details
15C	254	S	410800 410800	Site Address: The Old School House, Meltham Mills Road, Meltham, Holmfirth, West Yorkshire, HD9 4AT Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOT009 EPR reference: MP3798EC/A001 Operator: Motorworks Llp Waste Management licence No: 100286 Annual Tonnage: 0.0 Issue Date: 07/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Motorworks Correspondence Address: -
16C	254	S	410800 410800	Site Address: The Old School House, Meltham Mills Road, Meltham, Holmfirth, West Yorkshire, HD9 4AT Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOT025 EPR reference: EA/EPR/DB3432AR/T001 Operator: Motorworks (U K) Ltd Waste Management licence No: 100286 Annual Tonnage: 4999.0 Issue Date: 07/03/2008 Effective Date: 15/11/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: The Old School House Correspondence Address: -
17C	254	S	410800 410800	Site Address: The Old School House, Meltham Mills Road, Meltham, Holmfirth, West Yorkshire, HD9 4AT Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOT009 EPR reference: EA/EPR/MP3798EC/A001 Operator: Mr Crispin James & Mr Ian Prady Waste Management licence No: 100286 Annual Tonnage: 4999.0 Issue Date: 07/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Motorworks Llp Correspondence Address: -
18D	286	NE	411210 411357	Site Address: Meltham H W R C, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD9 4AP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR012 EPR reference: CP3995ZY/A001 Operator: Sita (Kirklees) Limited Waste Management licence No: 61064 Annual Tonnage: 7499.0 Issue Date: 01/04/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Meltham H W R C Correspondence Address: -
19D	286	NE	411210 411357	Site Address: Meltham H W S, Bent Ley Road, Meltham, West Yorkshire, HD9 4AB Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR012 EPR reference: CP3995ZY/A001 Operator: Sita (kirklees) Limited Waste Management licence No: 61064 Annual Tonnage: 7499.0 Issue Date: 01/04/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Meltham H W S Correspondence Address: -
20D	286	NE	411210 411357	Site Address: Meltham H W R C, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD9 4AP Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR012 EPR reference: EA/EPR/CP3995ZY/S003 Operator: Sita (Kirklees) Ltd Waste Management licence No: 61064 Annual Tonnage: 0.0 Issue Date: 01/04/1996 Effective Date: - Modified: - Surrendered Date: 26/05/2011 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Meltham H W R C Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details
21E	332	E	411269 411327	Site Address: Bent Ley Road, Meltham, Huddersfield, HD7 3AP Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WEL003 EPR reference: - Operator: Wells & Moorhouse Limited Waste Management licence No: 61013 Annual Tonnage: 0.0 Issue Date: 20/06/1991 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Land Off Bent Ley Road Correspondence Address: Bent Ley Road, Meltham, Huddersfield, HD7 3AP
22E	332	E	411269 411327	Site Address: Bent Ley Road, Meltham, Huddersfield, HD7 3AP Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WEL003 EPR reference: - Operator: Wells & Moorhouse (dismantlers) Limited Waste Management licence No: 61013 Annual Tonnage: 0.0 Issue Date: 20/06/1991 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Land Off Bent Ley Road Correspondence Address: Bent Ley Road, Meltham, Huddersfield, HD7 3AP
23E	332	E	411269 411327	Site Address: Land/premises At, Bent Ley Road, Meltham, Huddersfield, West Yorkshire, HD7 3AP Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WEL003 EPR reference: EA/EPR/GP3295ZF/A001 Operator: Wells & Moorhouse (Dismantlers) Ltd Waste Management licence No: 61013 Annual Tonnage: 10000.0 Issue Date: 20/06/1991 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Land Off Bent Ley Road Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Honley Wood North Side, Knowle Lane, Honley, Huddersfield, West Yorkshire Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR007 EPR reference: - Operator: Sita (kirklees) Limited Waste Management licence No: 61057 Annual Tonnage: 0.0 Issue Date: 01/04/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Honley Wood North Side Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Northside Quarry, Knowle Lane, Honley, Huddersfield, West Yorkshire, HD9 4HL Type: Co-Disposal Landfill Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR007 EPR reference: EA/EPR/FP3495ZN/V005 Operator: Suez Recycling And Recovery Kirklees Ltd Waste Management licence No: 61057 Annual Tonnage: 4999.0 Issue Date: 01/04/1996 Effective Date: - Modified: 30/06/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Honley Wood North Side Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Northside Quarry, Knowle Lane, Honley, Huddersfield, West Yorkshire, HD9 4HL Type: Co-Disposal Landfill Site Size: < 25000 tonnes Environmental Permitting Regulations Issue Date: 01/04/1996 Effective Date: - Modified: 30/04/2015 Surrendered Date: 0 Expiry Date: - Cancelled Date: -

ID	Distance (m)	Direction	NGR	Details	
				(Waste) Licence Number: KIR007 EPR reference: EA/EPR/FP3495ZN/V003 Operator: Sita (Kirklees) Ltd Waste Management licence No: 61057 Annual Tonnage: 4999.0	Status: Modified Site Name: Honley Wood North Side Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Honley Wood North Side, Knowle Lane, Honley, Huddersfield, West Yorkshire Type: Co-Disposal Landfill Site Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR007 EPR reference: - Operator: Sita (kirklees) Limited Waste Management licence No: 61057 Annual Tonnage: 0.0	Issue Date: 01/04/1996 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Honley Wood North Side Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Northside Quarry, Knowle Lane, Honley, Huddersfield, West Yorkshire, HD9 4HL Type: Co-Disposal Landfill Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR007 EPR reference: FP3495ZN/V002 Operator: Sita (kirklees) Limited Waste Management licence No: 61057 Annual Tonnage: 4999.0	Issue Date: 01/04/1996 Effective Date: - Modified: 31/03/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Honley Wood North Side Correspondence Address: -
Not shown	1129	E	412015 411611	Site Address: Northside Quarry, Knowle Lane, Honley, Huddersfield, West Yorkshire, HD9 4HL Type: Co-Disposal Landfill Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KIR007 EPR reference: EA/EPR/FP3495ZN/V002 Operator: Sita (Kirklees) Limited Waste Management licence No: 61057 Annual Tonnage: 4999.0	Issue Date: 01/04/1996 Effective Date: - Modified: 31/03/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Honley Wood North Side Correspondence Address: -



4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

24

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1A	0	On Site	Thomson Research Associates	410795 411127	Spinksmire Mill, Huddersfield Road, Meltham, Holmfirth, HD9 4AN	Colours, Chemicals and Water Softeners and Supplies	Industrial Products
2A	0	On Site	Zest for Print	410795 411127	Unit 2 Spinksmire Mill, Huddersfield Road, Meltham, Holmfirth, HD9 4AN	Published Goods	Industrial Products
3	0	On Site	Electricity Sub Station	410792 411105	HD9	Electrical Features	Infrastructure and Facilities
4	12	S	Electricity Sub Station	410847 411057	HD9	Electrical Features	Infrastructure and Facilities
5	48	E	E D S Haulage	410969 411138	7a, Bent Ley Road, Meltham, Holmfirth, HD9 4AP	Distribution and Haulage	Transport, Storage and Delivery
6	51	NE	Meltham Carbide Precision	410992 411270	Riverside Works, Bent Ley Road, Meltham, Holmfirth, HD9 4AP	Precision Engineers	Engineering Services
7	74	SW	Works	410715 411003	HD9	Unspecified Works Or Factories	Industrial Features
8	76	E	Chimney	411020 411265	HD9	Chimneys	Industrial Features
9	81	S	Electricity Sub Station	410736 410982	HD9	Electrical Features	Infrastructure and Facilities
10	84	E	Structherm	411010 411145	Bent Ley Road, Meltham, Holmfirth, HD9 4AP	General Construction Supplies	Industrial Products
11B	89	S	Electricity Sub Station	410855 410971	HD9	Electrical Features	Infrastructure and Facilities
12	91	E	Electricity Sub Station	411036 411231	HD9	Electrical Features	Infrastructure and Facilities
13B	96	S	Electricity Sub Station	410878 410964	HD9	Electrical Features	Infrastructure and Facilities
14	114	E	Warehouse	411059 411263	HD9	Container and Storage	Transport, Storage and Delivery
15C	120	E	M P S Springs	411058 411290	Bent Ley Road, Meltham, Holmfirth, HD9 4AP	Special Purpose Machinery and Equipment	Industrial Products
16C	120	E	Dinsmore Textile Solutions	411058 411290	Bent Ley Road, Meltham, Holmfirth, HD9 4AP	Industrial Coatings and Finishings	Industrial Products
17	139	SE	Disposables UK Ltd	410942 410942	Evolution Mill Meltham Mills, Meltham, Holmfirth,	Disposable Products	Consumer Products

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
HD9 4FA							
18	156	NE	Gibson Taylor Tranzol Ltd	411083 411320	Bent Ley Farm, Bent Ley Road, Meltham, Holmfirth, HD9 4AP	Distribution and Haulage	Transport, Storage and Delivery
19D	176	S	Motorworks B M W	410813 410880	The Old School House, Meltham Mills Road, Meltham, Holmfirth, HD9 4AT	New Vehicles	Motoring
20D	184	S	Wks	410818 410872	HD9	Unspecified Works Or Factories	Industrial Features
21	205	E	Works	411151 411252	HD9	Unspecified Works Or Factories	Industrial Features
22	209	NE	Outfall	411076 411411	HD9	Waste Storage, Processing and Disposal	Infrastructure and Facilities
23	215	SW	Outfall	410580 410943	HD9	Waste Storage, Processing and Disposal	Infrastructure and Facilities
24	226	S	Adventure Climb Rescue	410922 410839	Meltham Mills, Meltham Mills Industrial Estate, Meltham, Holmfirth, HD9 4AR	Special Purpose Machinery and Equipment	Industrial Products

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
ALV-XCSV	ALLUVIUM	CLAY, SAND AND GRAVEL

5.3 Bedrock and Solid Geology

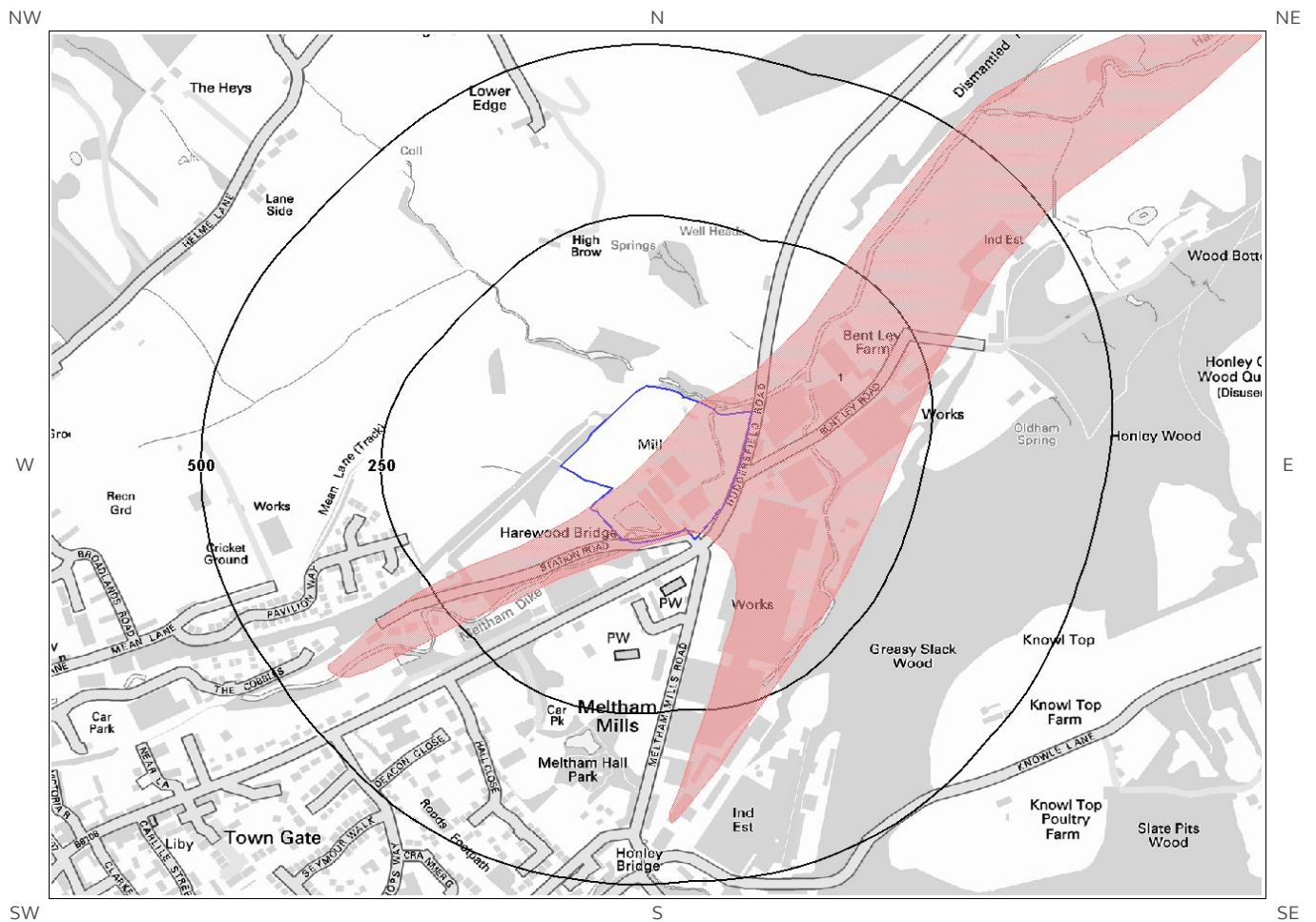
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
HDW-SDST	HUDDERSFIELD WHITE ROCK	SANDSTONE
ROSSE-MDSI	ROSSENDALE FORMATION	MUDSTONE AND SILTSTONE

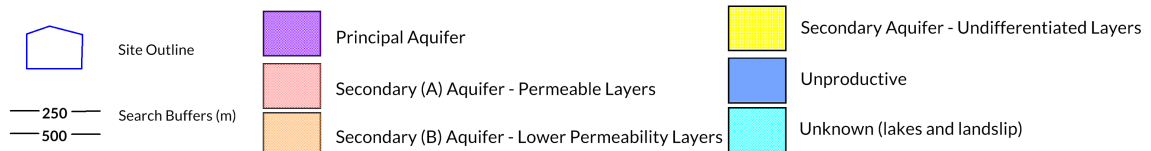
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

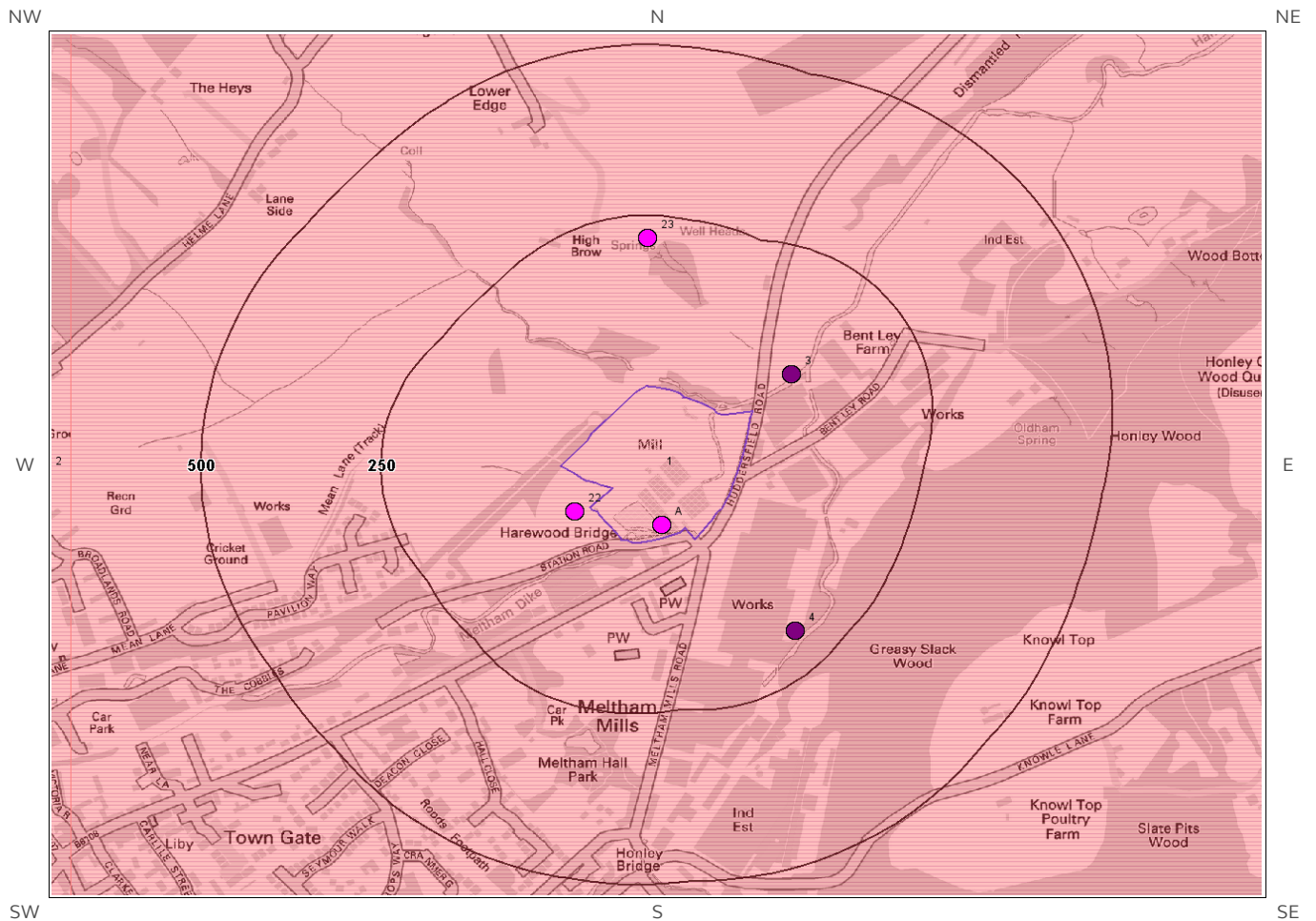
6a. Aquifer Within Superficial Geology



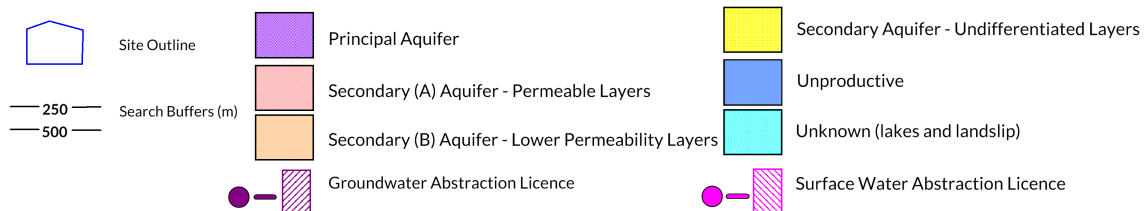
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6b. Aquifer Within Bedrock Geology and Abstraction Licences



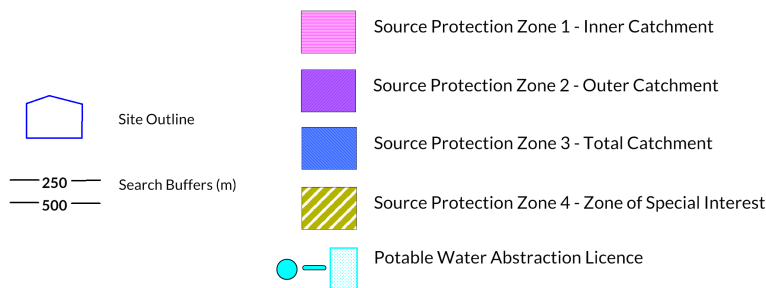
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6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



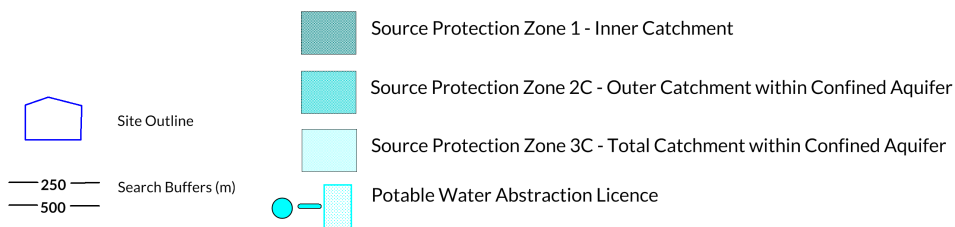
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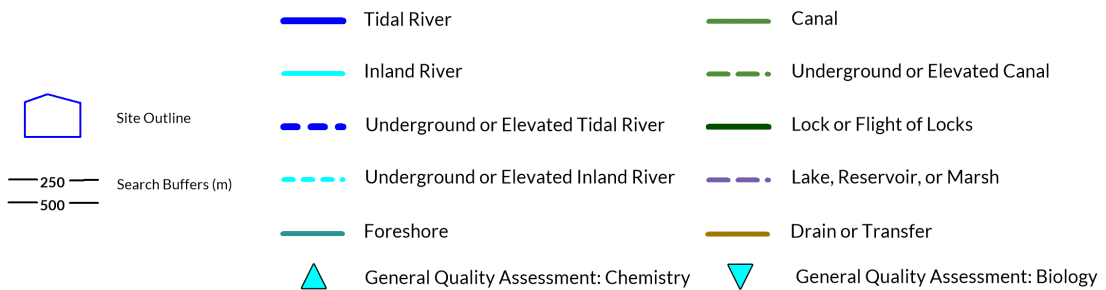
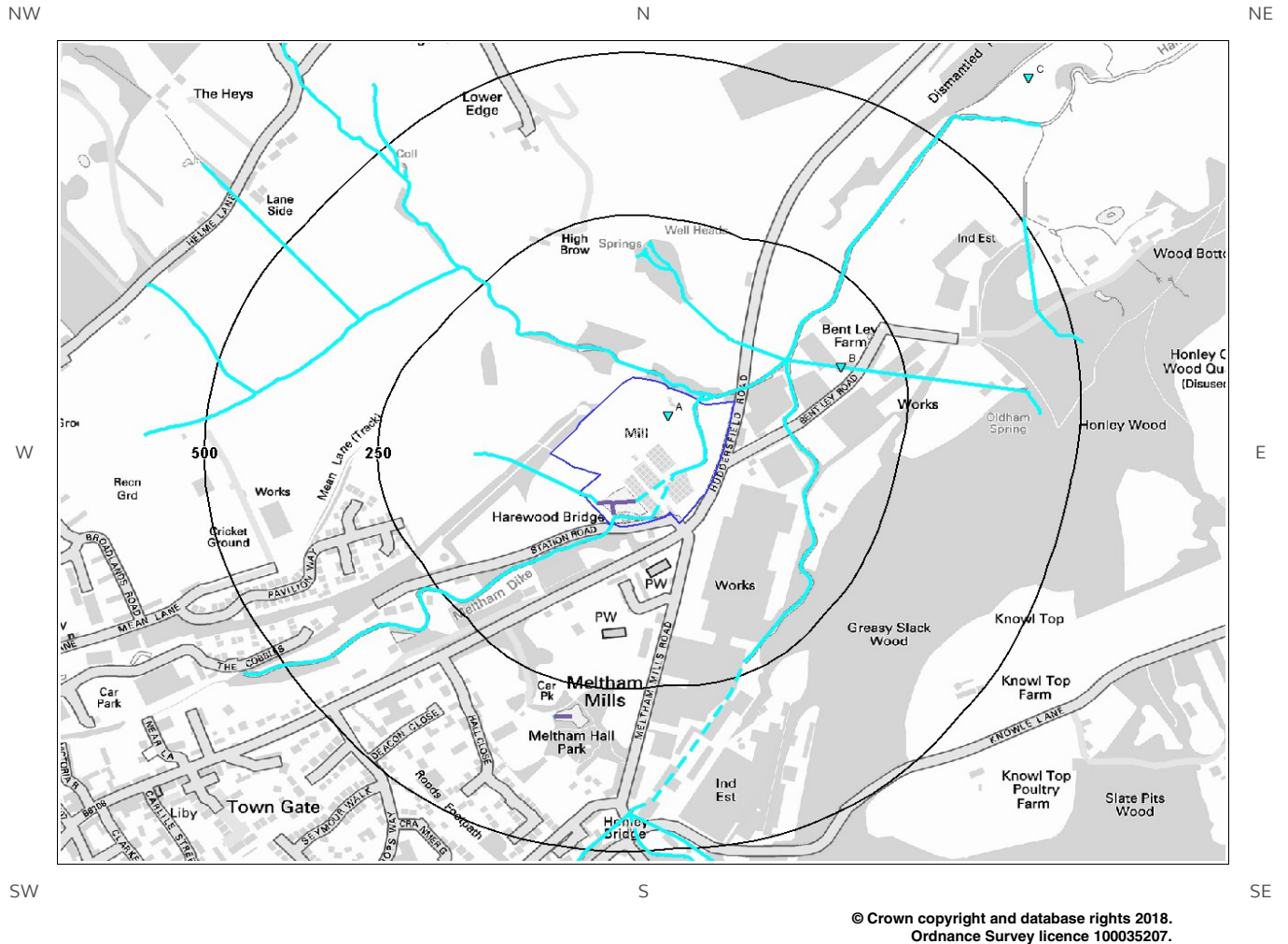
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
3	75	NE	411000 411300	Status: Historical Licence No: 2/27/10/060 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: WELL HEADS Data Type: Point Name: NICHOL & PRATT LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1979 Version End Date:
4	192	SE	411005 410925	Status: Active Licence No: NE/027/0010/002 Details: Process Water Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT AND MELTHAM MILLS Data Type: Point Name: CAMIRA FABRICS LTD Annual Volume (m³): 20000 Max Daily Volume (m³): 400 Original Application No: - Original Start Date: 14/02/2014 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 14/02/2014 Version End Date:
Not shown	911	E	411800 410900	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO4 - MILLSTONE GRIT - MELTHAM Data Type: Point Name: K & P ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	911	E	411800 410900	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO4 - CARBONIFEROUS MILLSTONE GRIT - MELTHAM Data Type: Point Name: ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1092	N	411330 412270	Status: Historical Licence No: 2/27/10/047 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: SPRING - MILLSTONE GRIT - NETHERTON Data Type: Point Name: THE PINK LINK LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 09/08/2001 Version End Date:
Not shown	1092	N	411330 412270	Status: Historical Licence No: 2/27/10/047 Details: General Washing/Process Washing Direct Source: GROUNDWATERS Point: SPRING Data Type: Point Name: S B H EXPRESS SERVICES LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/11/1993 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO1 Data Type: Point Name: ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO3 - MILLSTONE GRIT - MELTHAM Data Type: Point Name: K & P ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO2 Data Type: Point Name: ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO1 - MILLSTONE GRIT - MELTHAM Data Type: Point Name: K & P ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO2 - MILLSTONE GRIT - MELTHAM Data Type: Point Name: K & P ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1259	E	412100 410700	Status: Historical Licence No: 2/27/10/036 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL NO3 Data Type: Point Name: ENGLAND Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1585	SW	409800 409800	Status: Historical Licence No: 2/27/10/110 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: BROOK DYEING CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 02/09/1970 Expiry Date: - Issue No: 100 Version Start Date: 02/09/1970 Version End Date:
Not shown	1585	SW	409800 409800	Status: Historical Licence No: 2/27/10/110 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - MILLSTONE GRIT - MELTHAM Data Type: Point Name: BROOK CARPETS LTD Annual Volume (m³): 59098 Max Daily Volume (m³): 227.3 Original Application No: - Original Start Date: 02/09/1970 Expiry Date: - Issue No: 101 Version Start Date: 26/03/2008 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1633	SW	409710 409810	Status: Historical Licence No: 2/27/10/078(G) Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: GRAVITY Data Type: Point Name: BROOK DYEING CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 02/07/1982 Version End Date:
Not shown	1633	SW	409710 409810	Status: Historical Licence No: 2/27/10/078(G) Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: SPRING - MELTHAM Data Type: Point Name: BROOK DYEING CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 101 Version Start Date: 29/04/2002 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
19A	0	On Site	410820 411080	Status: Historical Licence No: 2/27/10/123 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: MELTHAM DYKE VIA MILL DAM Data Type: Point Name: NORTHERN DYERS LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 21/09/1999 Expiry Date: 31/12/2004 Issue No: 1 Version Start Date: 21/09/1999 Version End Date:
20A	0	On Site	410820 411080	Status: Historical Licence No: 2/27/10/125 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: MELTHAM DYKE VIA MILL DAM Data Type: Point Name: NORTHERN DYERS LTD Annual Volume (m³): 62293 Max Daily Volume (m³): 325 Application No: - Original Start Date: 13/03/2005 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 13/03/2005 Version End Date:
21A	0	On Site	410820 411080	Status: Active Licence No: 2/27/10/125/R01 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: MELTHAM DYKE VIA MILL DAM Data Type: Point Name: NORTHERN DYERS LTD Annual Volume (m³): 56064 Max Daily Volume (m³): 325 Application No: - Original Start Date: 01/04/2015 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/04/2015 Version End Date:
22	22	W	410700 411100	Status: Historical Licence No: 2/27/10/028 Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: MELTHAM DYKE Data Type: Point Name: QUARMBY & SYKES (HOLDINGS) LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
23	216	N	410800 411500	Status: Historical Licence No: 2/27/10/059 Annual Volume (m³): - Max Daily Volume (m³): -

ID	Distance (m)	Direction	NGR	Details
				Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: HALL DYKE Data Type: Point Name: NICHOL & PRATT LTD Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1979 Version End Date:
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR Data Type: Point Name: TOWNDOOR LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 12/11/1996 Version End Date:
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR - MELTHAM MILLS Data Type: Point Name: TOWNDOOR LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 12/11/1996 Version End Date:
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR Data Type: Point Name: TOWNDOOR LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 12/11/1996 Version End Date:
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR - MELTHAM MILLS Data Type: Point Name: TOWNDOOR LTD Annual Volume (m³): 463692 Max Daily Volume (m³): 1364 Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 09/01/2008 Version End Date:
Not shown	1354	NW	409900 412300	Status: Historical Licence No: 2/27/11/065 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: SPRING - BLACKMOOR FOOT RESERVOIR Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/12/1980 Version End Date:
Not shown	1354	NW	409900 412300	Status: Active Licence No: 2/27/11/065 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: BLACKMOOR FOOT RESERVOIR Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Annual Volume (m³): 1.241e+007 Max Daily Volume (m³): 1.241e+007 Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/03/2013 Version End Date:
Not shown	1635	SW	409720 409800	Status: Historical Licence No: 2/27/10/078(S) Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: ROYD EDGE CLOUGH-RIVER HOLME SYSTEM - MELTHAM Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 101 Version Start Date: 29/04/2002 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Name: BROOK DYEING CO LTD				
Not shown	1635	SW	409720 409800	Status: Historical Licence No: 2/27/10/078(S) Details: General use relating to Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER HOLME - MELTHAM Data Type: Point Name: BROOK DYEING CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 28/04/1966 Expiry Date: - Issue No: 101 Version Start Date: 29/04/2002 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

Identified

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR - MELTHAM MILLS Data Type: Point Name: TOWNDOOR LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	844	SE	411500 410500	Status: Historical Licence No: 2/27/10/015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: SURFACE WATER Point: STREAM FED RESERVOIR Data Type: Point Name: TOWNDOOR LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/12/1965 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1354	NW	409900 412300	Status: Historical Licence No: 2/27/11/065 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: SPRING - BLACKMOOR FOOT RESERVOIR Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1354	NW	409900 412300	Status: Active Licence No: 2/27/11/065 Details: Potable Water Supply - Direct Direct Source: SURFACE WATER Point: BLACKMOOR FOOT RESERVOIR Data Type: Point Name: YORKSHIRE WATER SERVICES LTD Annual Volume (m³): 1.241e+007 Max Daily Volume (m³): 1.241e+007 Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site

Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
62	NW	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
96	N	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
480	N	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site Identified

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
65A	0	On Site	410850 411225	River Name: Meltham Dike Reach: Folly Dolly Beck Conf Meltham Dike/th End/Start of Stretch: Start of Stretch NGR	C	C	C	C	B
66A	0	On Site	410850 411225	River Name: Meltham Dike Reach: Deer Hill Moss Folly Dolly Beck End/Start of Stretch: End of Stretch NGR	C	C	C	C	B
67B	162	E	411100 411300	River Name: Mag Brook/hall Dike Reach: Conf.meltham Dike/thhall Dyke At Meltham End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
68B	162	E	411100 411300	River Name: Meltham Dike Reach: Folly Dolly Beck Conf Meltham Dike/th End/Start of Stretch: End of Stretch NGR	C	C	C	C	B
69C	655	NE	411371 411746	River Name: Mag Brook/hall Dike Reach: Conf.meltham Dike/thhall Dyke At Meltham End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
70C	655	NE	411371 411746	River Name: Mag Brook/hall Dike Reach: Hall Dyke At Melthamspring Wood End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
2	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	0 On Site	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 17.2
5	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
6	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	0 On Site	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 18.3
9	0 On Site	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
10	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.4
12	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
13	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
26	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
27	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	0 On Site	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 17.2
30	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
31	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
32	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	0 On Site	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 18.3
34	0	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	On Site			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8
35	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
36	0 On Site	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.4
37	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
38	0 On Site	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	5 NE	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
15	5 NE	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
16	5 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
39	5 NE	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
40	5 NE	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
41	5 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.6
17	10 S	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.8
42	10 S	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 4.8
18	11 N	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.7
43	11 N	Meltham Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.7
19	12 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.5
44	12 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.5
20	56 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
45	56 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	77 E	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.5
46	77 E	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.5
22	85 E	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
47	85 E	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	86 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
48	86 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
24	88 NE	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
49	88 NE	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
25	91 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
50	91 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
26	99 NE	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	99 NE	Hall Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
51	99 NE	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
52	99 NE	Hall Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.6
28	111 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
53	111 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	132 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
54	132 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	137	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	E			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
55	137 E	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
31	172 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
56	172 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
32	173 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
57	173 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	185 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
58	185 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
34	188 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
59	188 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
35	194 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
36	194 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
60	194 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
61	194 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	202 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
38	202 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
62	202 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
63	202 N	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
39	232 SE	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
64	232 SE	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
40	278 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
65	278 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
41	291 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
42	291 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
66	291 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
67	291 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
43	300 S	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.9
Not shown	300 S	Not specified	Lake, loch or reservoir.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 13.9
44	306 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	306 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
45	344 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	344 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
70	344 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
71	344 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
47	419 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	419 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
48	434 S	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5
Not shown	434	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.5
49	435 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
50	435 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	435 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	435 W	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
51	441 S	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
52	441 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
53	441 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	441 S	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	441 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	441 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
54	442 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
55	442 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
Not shown	442 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	442 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
56	458 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
57	458 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	458 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	458 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
58	459 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
59	459 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
60	459 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	459 E	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	459 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	459 NW	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
61	479 NE	Hall Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8
Not shown	479 NE	Hall Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.8
62	485 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
Not shown	485 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
63	486 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	486 S	Not specified	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
64	494 S	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4
Not shown	494 S	Thick Hollins Dike	Inland river not influenced by normal tidal action.	Catchment Area: Aire and Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4

6.11 Surface Water Features

Surface water features within 250m of the study site

Identified

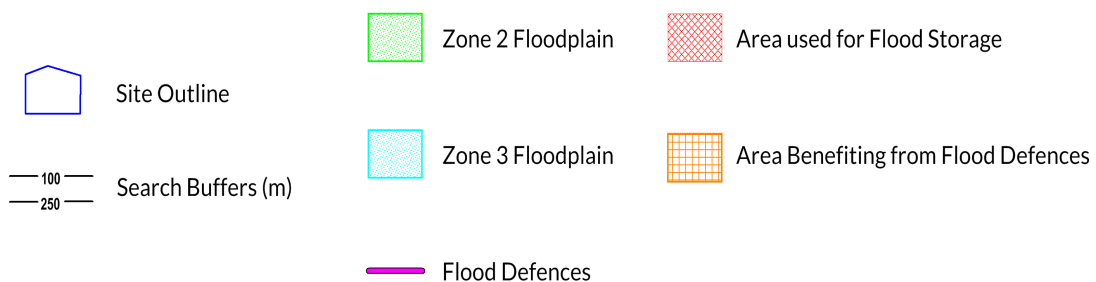
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
0	On Site
0	On Site
0	On Site
0	On Site
10	S
20	NE
30	NW
56	W
74	E
76	NW
87	E
91	N
132	N
136	E
160	N
167	NW
173	N
173	N
185	N
188	N
202	N
202	N
218	SE
246	SW

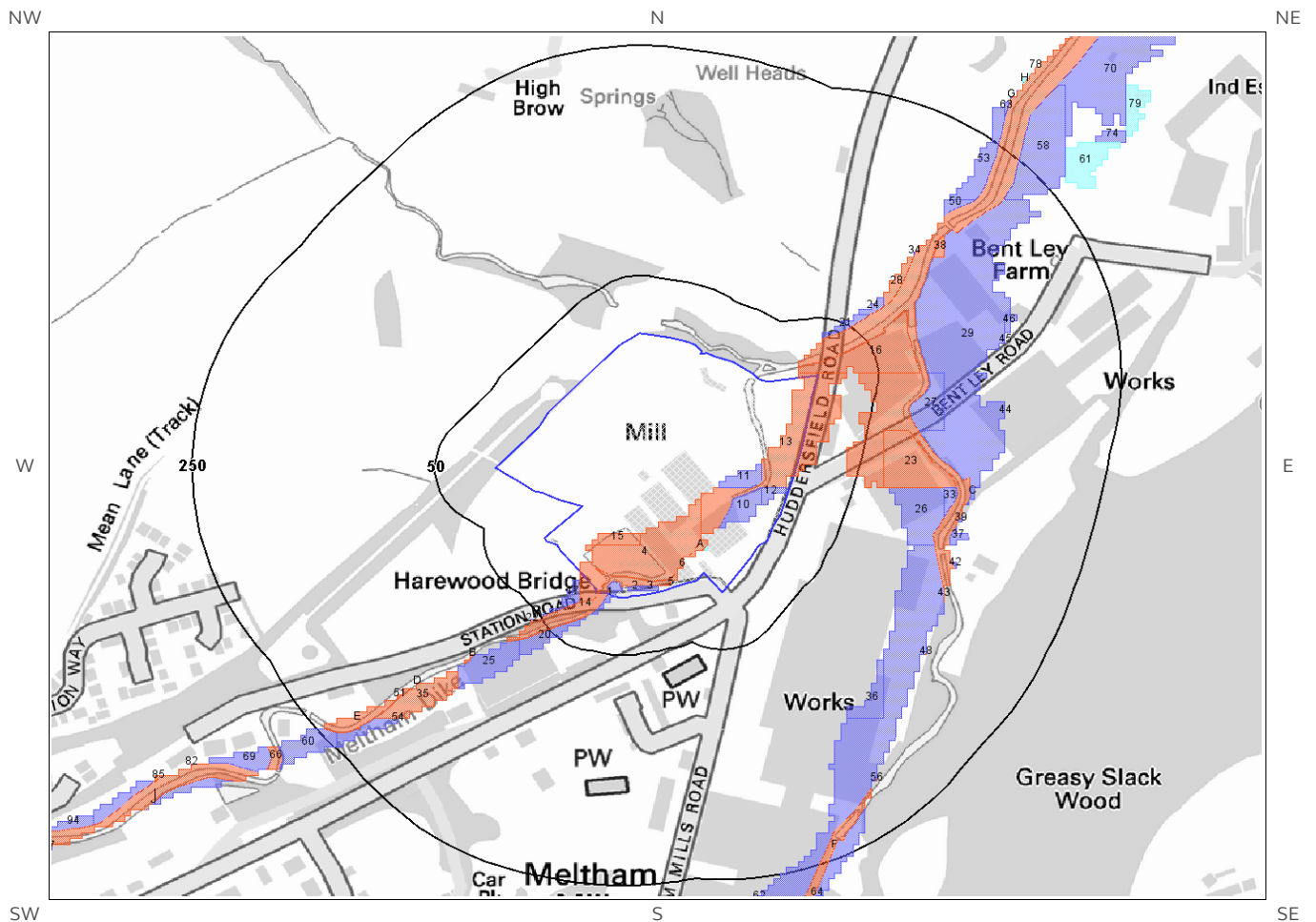
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



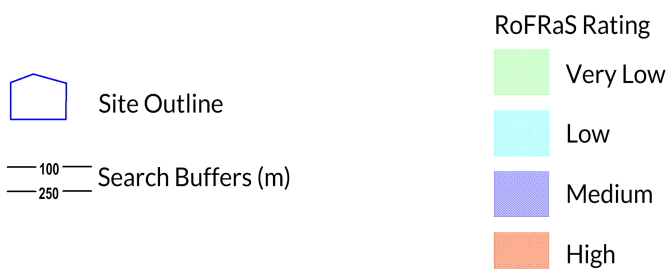
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	0	On Site	29-May-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	0	On Site	30-May-2018	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite

High

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Medium
2	0.0	On Site	Medium

3	0.0	On Site	Medium
4	0.0	On Site	High
5	0.0	On Site	Medium
6	0.0	On Site	High
7A	0.0	On Site	High
8A	0.0	On Site	Low
9A	0.0	On Site	Medium
10	0.0	On Site	Medium
11	0.0	On Site	Medium
12	0.0	On Site	Medium
13	0.0	On Site	High
14	0.0	On Site	High
15	0.0	On Site	High
16	3.0	N	High
17	5.0	SW	Medium
18	9.0	N	High
19	17.0	SW	Medium
20	22.0	SW	Medium
21	33.0	N	Medium

7.4 Flood Defences

Flood Defences within 250m of the study site None identified
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified

Clearwater Flooding or Superficial Deposits Flooding Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

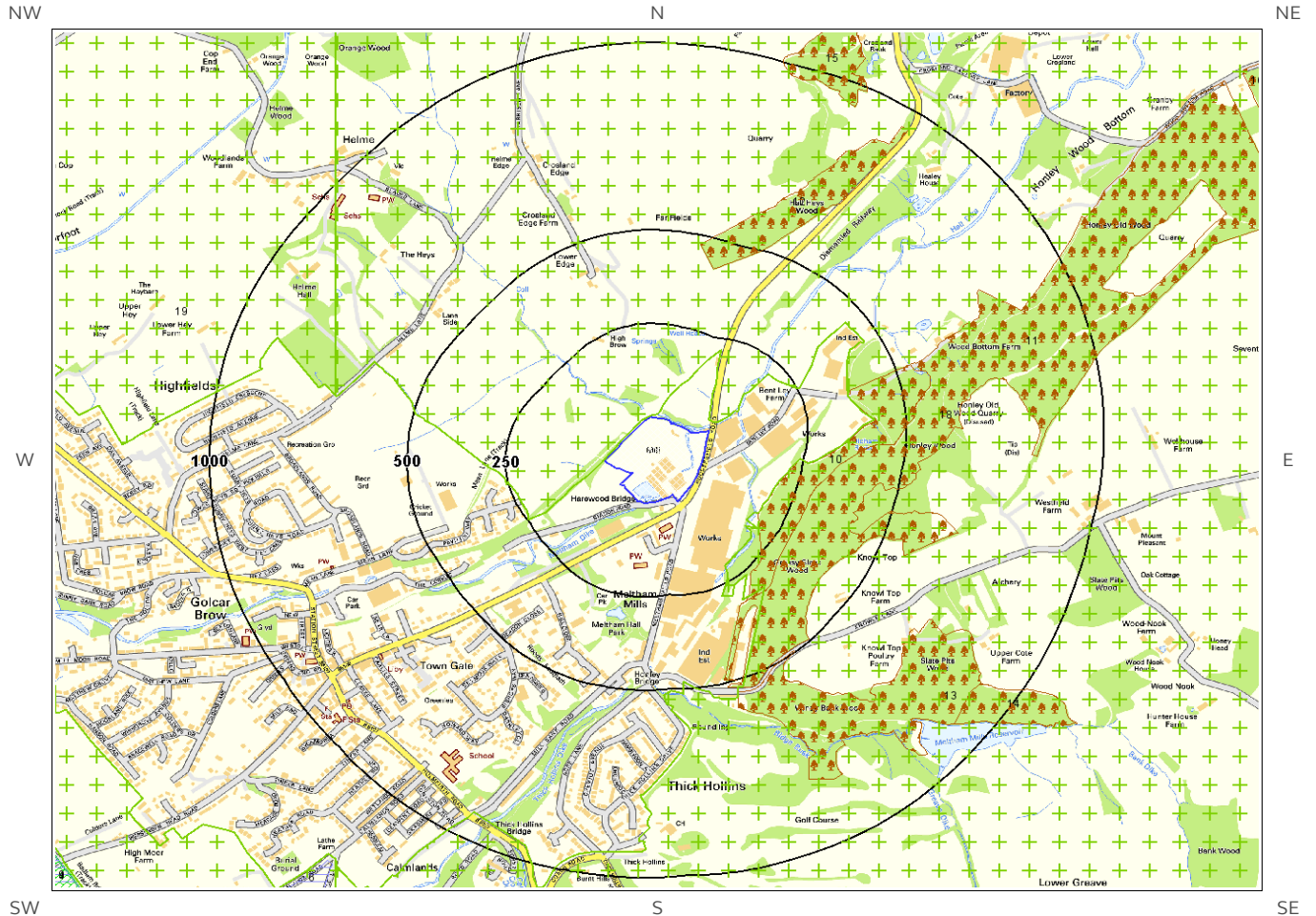
British Geological Survey confidence rating in this result

Low

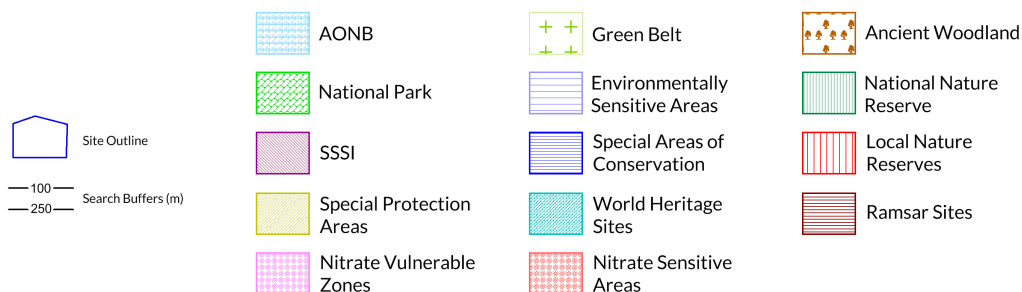
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site	Identified
---	------------

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

8

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
10	182	SE	UNKNOWN	Ancient Replanted Woodland
11	282	SE	UNKNOWN	Ancient and Semi-Natural Woodland
12	421	N	UNKNOWN	Ancient and Semi-Natural Woodland
13	495	SE	UNKNOWN	Ancient and Semi-Natural Woodland
14	894	SE	UNKNOWN	Ancient Replanted Woodland
15	942	NE	UNKNOWN	Ancient and Semi-Natural Woodland
16	1622	NE	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1843	N	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

4

The following Environmentally Sensitive Area records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	ESA Name	Data Source
6	1237	SW	North Peak	Natural England
Not shown	1344	SW	North Peak	Natural England
Not	1530	SW	North Peak	Natural England

ID	Distance (m)	Direction	ESA Name	Data Source
shown				
9	1741	SW	North Peak	Natural England

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

5

The following National Park records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NP Name	Data Source
Not shown	1395	SW	Peak District	Natural England
Not shown	1398	SW	Peak District	Natural England
Not shown	1530	SW	Peak District	Natural England
4	1742	SW	Peak District	Natural England
Not shown	1762	SW	Peak District	Natural England

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

6

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ID	Distance	Direction	Green Belt Name	Local Authority Name
18	2	NW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
19	703	W	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
Not shown	1054	S	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
Not shown	1305	SW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
Not shown	1420	SW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
Not shown	1633	SW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property no significant increase in insurance risk due to natural slope instability problems.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

Identified

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Kirklees Council
Phone: 01484 221 000
Web: <http://www.kirklees.gov.uk/>
Address: Civic Centre 3, Market Street, Huddersfield, HD1 1WG

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

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<https://www.groundsure.com/terms-and-conditions-may25-2018>



Mewies Engineering Consultants Ltd
The Old Chapel, STATION ROAD,
HUGGLESCOTE, LE67 2GB

Groundsure Reference: GS-5502712

Your Reference: 7731N

Report Date 4 Oct 2018

Report Delivery Method: Email - pdf

Geo Insight

Address: HUDDERSFIELD ROAD, MELTHAM, HOLMFIRTH, HD9 4BU

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: HUDDERSFIELD ROAD, MELTHAM, HOLMFIRTH, HD9 4BU

Date: 4 Oct 2018

Reference: GS-5502712

Client: Mewies Engineering Consultants Ltd



Aerial Photograph Capture date: 26-Mar-2012

Grid Reference: 410826,411260

Site Size: 3.87ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	Yes
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	Yes
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	3	1	17	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	7	14

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	2	0	0	0	2
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

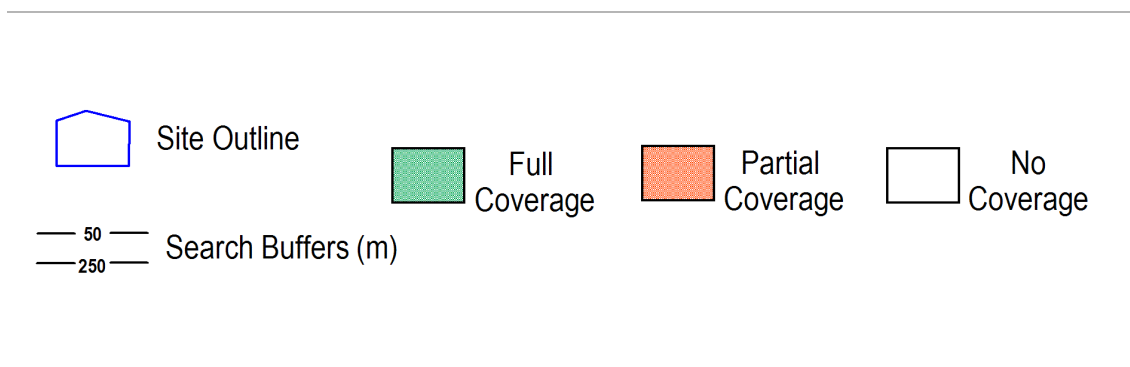
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	1		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	5	2	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	2	Not Searched	
9.3 Historical Railways	2	0	1	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	681.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1054.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1305.0	Some deposits are mapped	Full	Full	Some deposits are mapped

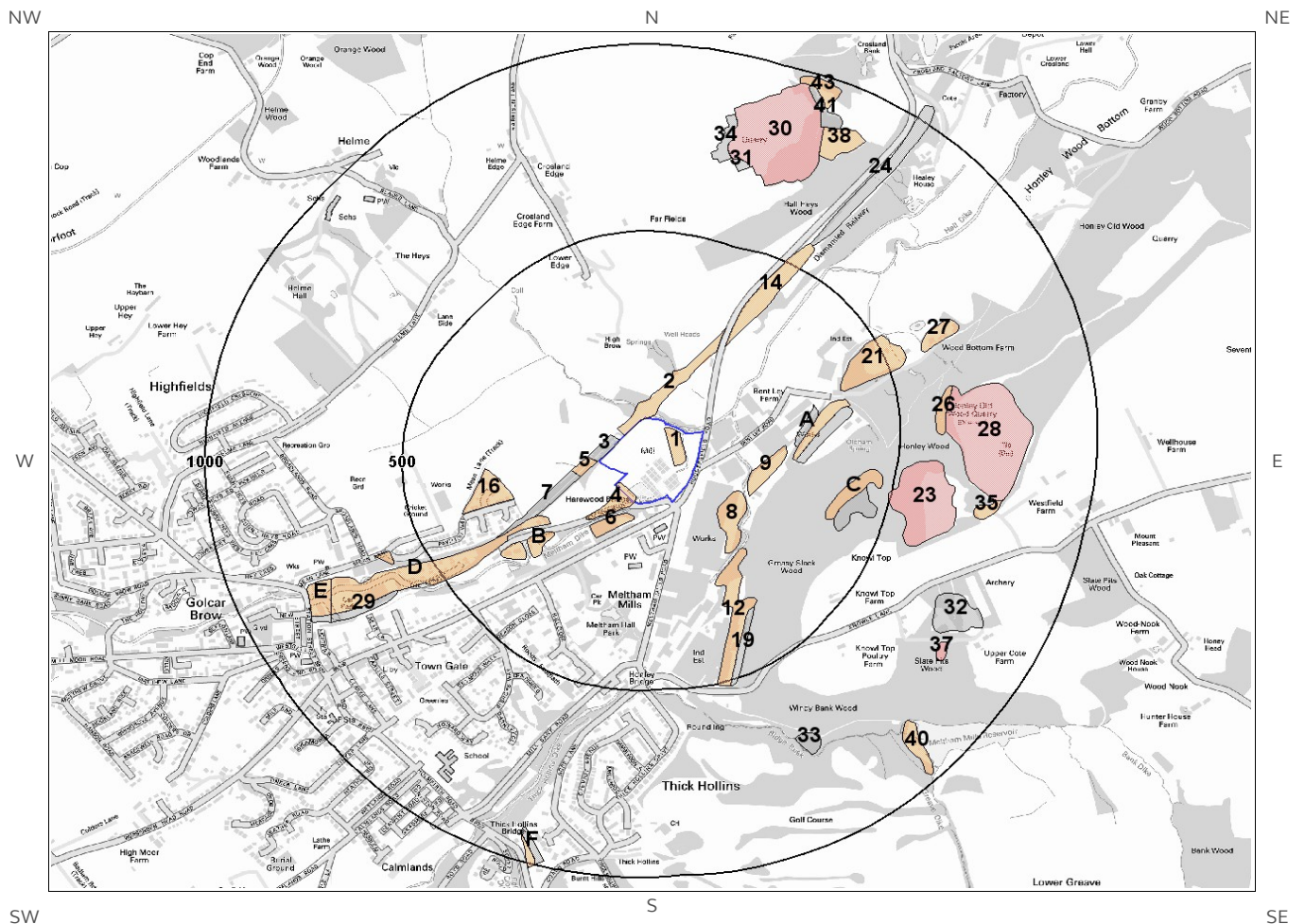
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

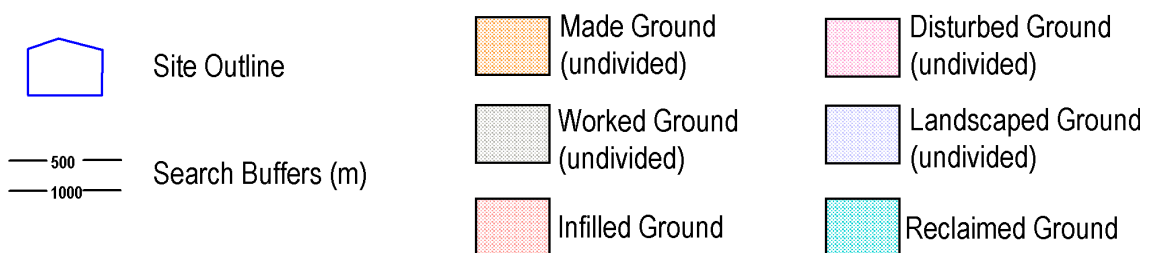
Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend



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1. Geology 1:10,000 scale

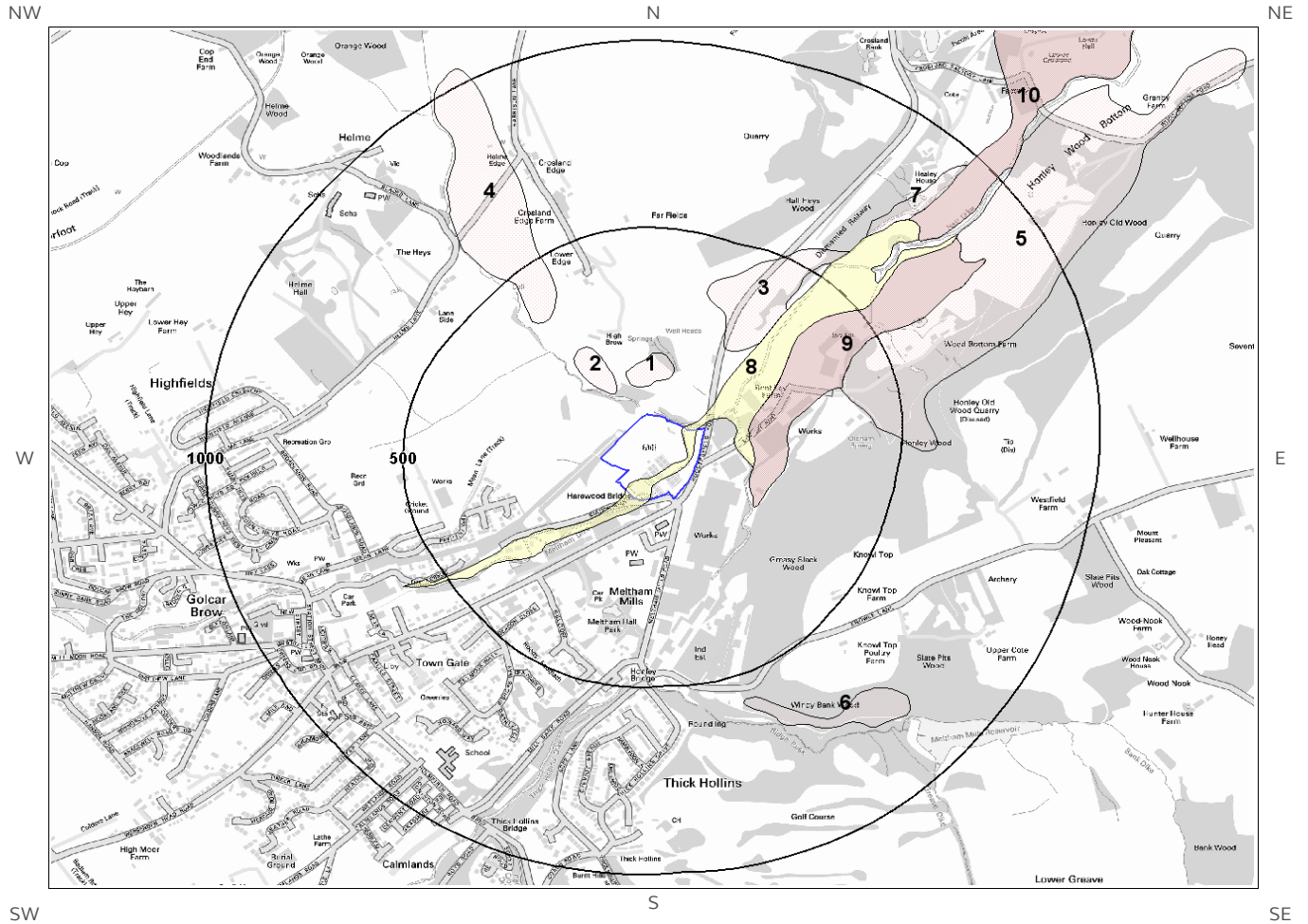
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

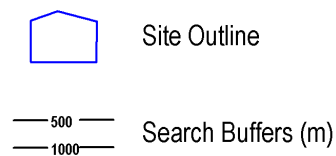
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
4	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	3.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	30.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	61.0	SW	WGR-VOID	Worked Ground (Undivided)	Void
8	99.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	140.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10D	192.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11B	199.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
12	211.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
13A	233.0	E	WGR-VOID	Worked Ground (Undivided)	Void
14	235.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
15A	237.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
16	237.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
17A	243.0	E	WGR-VOID	Worked Ground (Undivided)	Void
18B	284.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
19	346.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
20C	354.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
21	364.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
22C	378.0	E	WGR-VOID	Worked Ground (Undivided)	Void
23	493.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
8	0.0	On Site	ALV-XCSV	Alluvium - Clay, Sand And Gravel	Clay, Sand And Gravel
9	110.0	E	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

1.2.2 Landslip

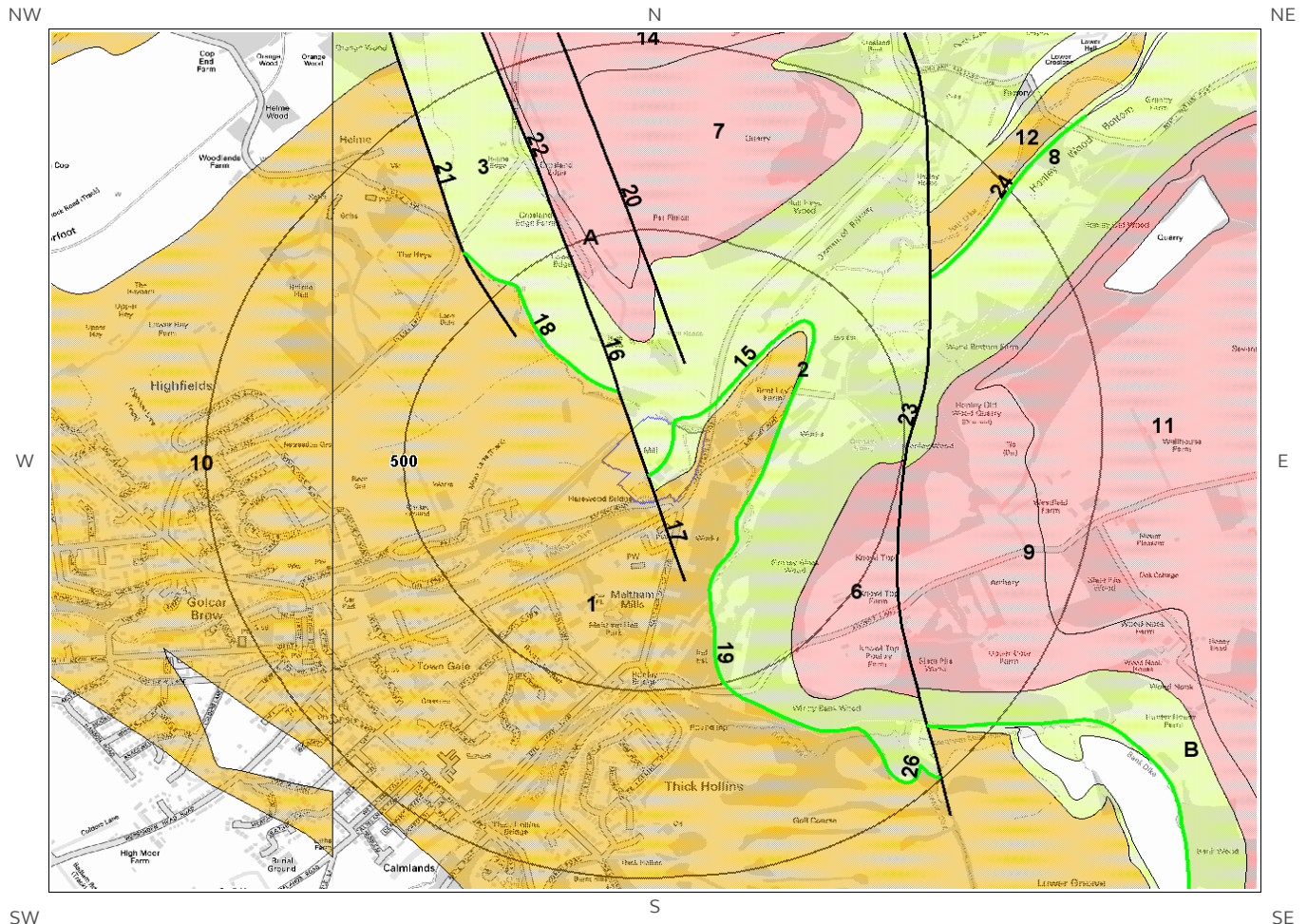
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	74.0	N	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
2	94.0	NW	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
3	215.0	N	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
4	354.0	NW	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
5	359.0	E	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

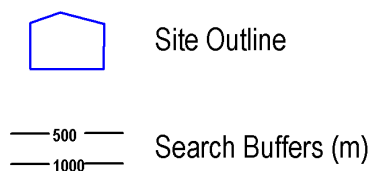
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	HDW-SDST	Huddersfield White Rock - Sandstone	Marsdenian Sub-age
2	0.0	On Site	MG-MDSS	Millstone Grit Group [see Also Migr] - Mudstone, Siltstone And Sandstone	Namurian Age
3	97.0	NW	MG-MDSS	Millstone Grit Group [see Also Migr] - Mudstone, Siltstone And Sandstone	Namurian Age
4A	202.0	N	RF-SDST	Rough Rock Flags - Sandstone	Yeadonian Sub-age
5A	348.0	N	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age
6	375.0	SE	RF-SDST	Rough Rock Flags - Sandstone	Yeadonian Sub-age
7	400.0	N	RF-SDST	Rough Rock Flags - Sandstone	Yeadonian Sub-age

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

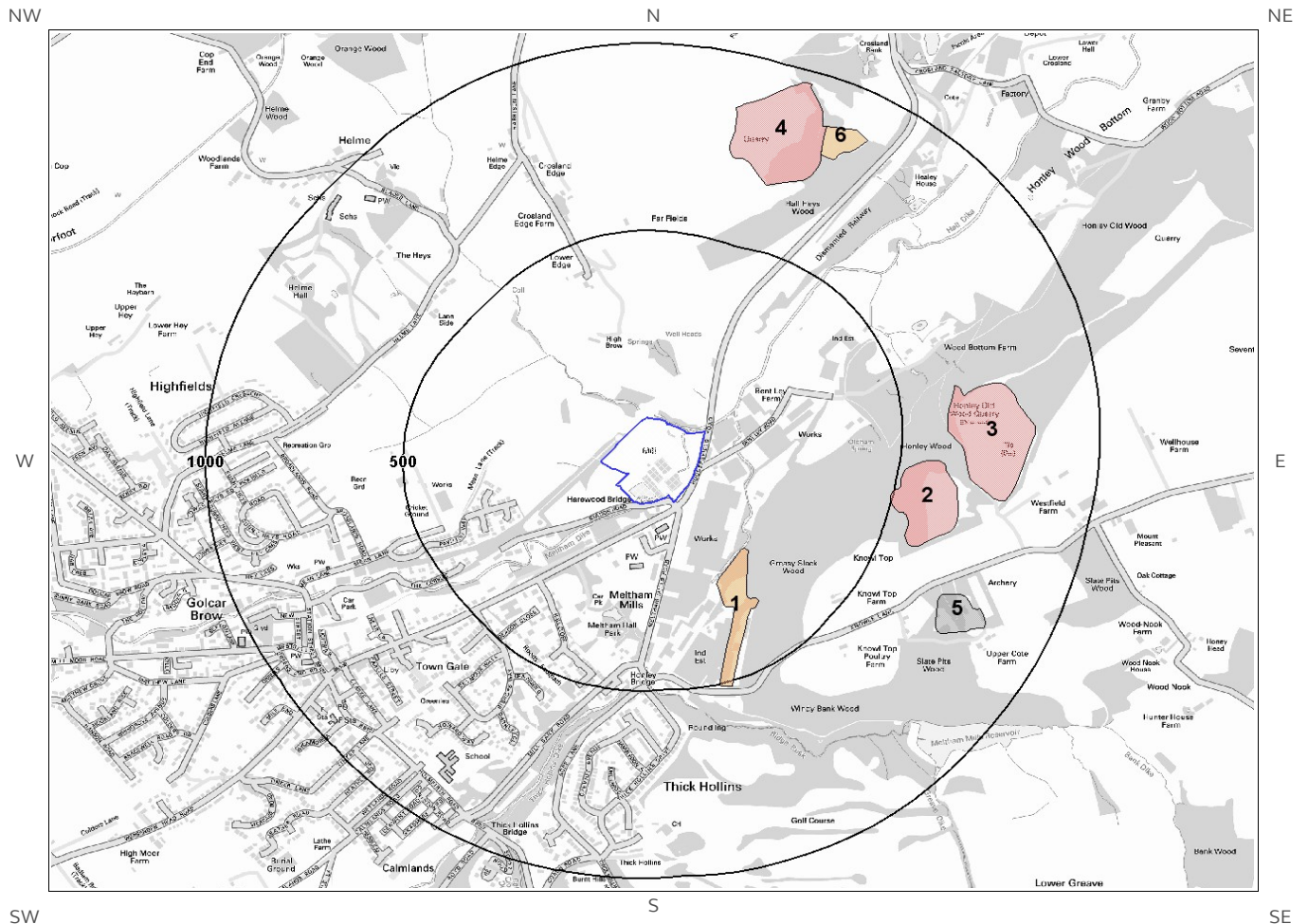
ID	Distance (m)	Direction	Category Description	Feature Description
15	0.0	On Site	ROCK	Coal seam, inferred
16	0.0	On Site	FAULT	Normal fault, observed; downthrow not specified
17	0.0	On Site	FAULT	Normal fault, inferred; downthrow not specified
18	98.0	NW	ROCK	Coal seam, inferred
19	148.0	SE	ROCK	Coal seam, inferred
20	160.0	N	FAULT	Normal fault, inferred; crossmarks on downthrow side
21	384.0	NW	FAULT	Normal fault, inferred; crossmarks on downthrow side
22	397.0	NW	FAULT	Normal fault, inferred; crossmarks on downthrow side

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

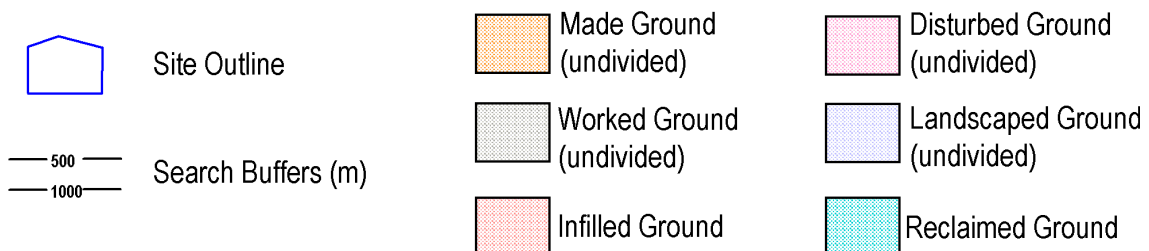
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 086

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

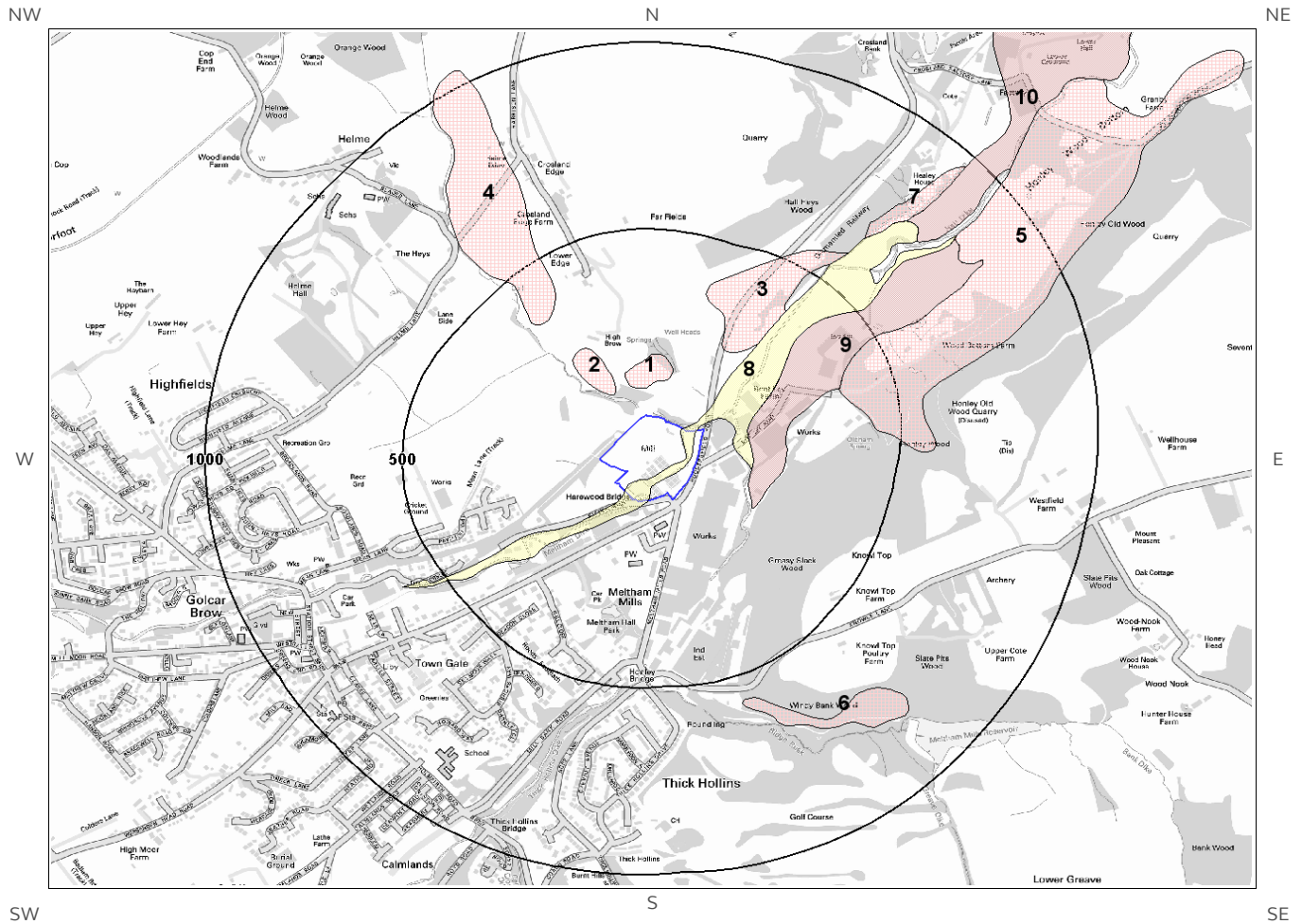
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	212.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	493.0	E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

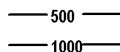
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
8	0.0	On Site	ALV-XCSV	ALLUVIUM	CLAY, SAND AND GRAVEL
9	110.0	E	HEAD-DMTN	HEAD	DIAMICTON

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	Very Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	74.0	N	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
2	94.0	NW	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
3	216.0	N	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
4	354.0	NW	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
5	359.0	E	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

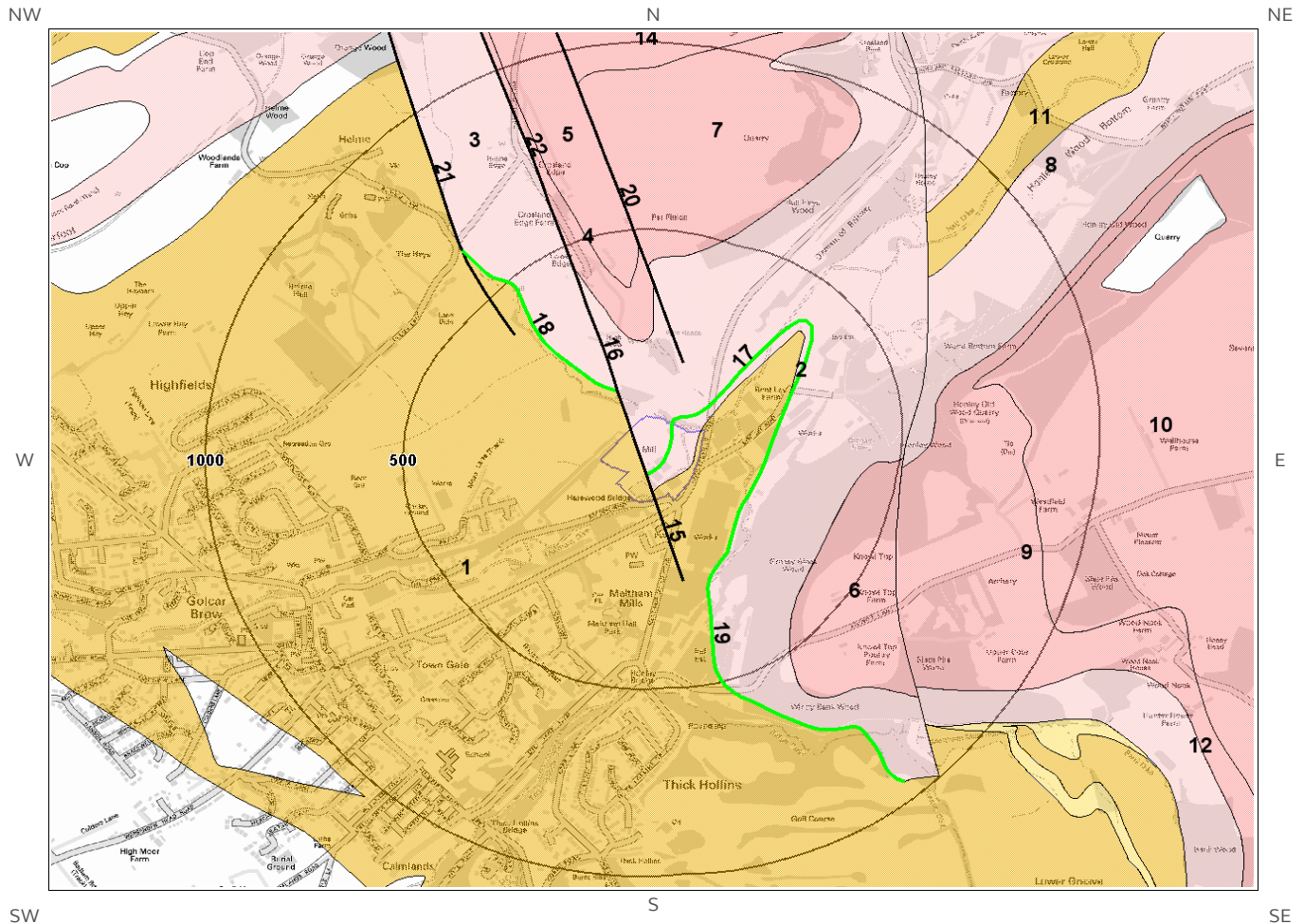
2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

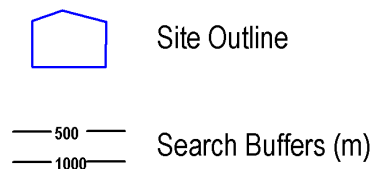
No

Database searched and no data found.

2.3 Bedrock and linear features map (1:50,000 scale)



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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 086

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	HDW-SDST	HUDDERSFIELD WHITE ROCK - SANDSTONE	NAMURIAN
2	0.0	On Site	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
3	98.0	NW	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
4	201.0	N	RF-SDST	ROUGH ROCK FLAGS - SANDSTONE	NAMURIAN
5	348.0	N	RR-SDST	ROUGH ROCK - SANDSTONE	NAMURIAN
6	375.0	SE	RF-SDST	ROUGH ROCK FLAGS - SANDSTONE	NAMURIAN
7	400.0	N	RF-SDST	ROUGH ROCK FLAGS - SANDSTONE	NAMURIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low
0.0	On Site	Fracture	High	Moderate

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
15	0.0	On Site	FAULT	Fault, inferred
16	0.0	On Site	FAULT	Fault, observed
17	0.0	On Site	ROCK	Coal seam, inferred
18	98.0	NW	ROCK	Coal seam, inferred
19	148.0	SE	ROCK	Coal seam, inferred
20	160.0	N	FAULT	Fault, inferred
21	385.0	NW	FAULT	Fault, inferred
22	396.0	NW	FAULT	Fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

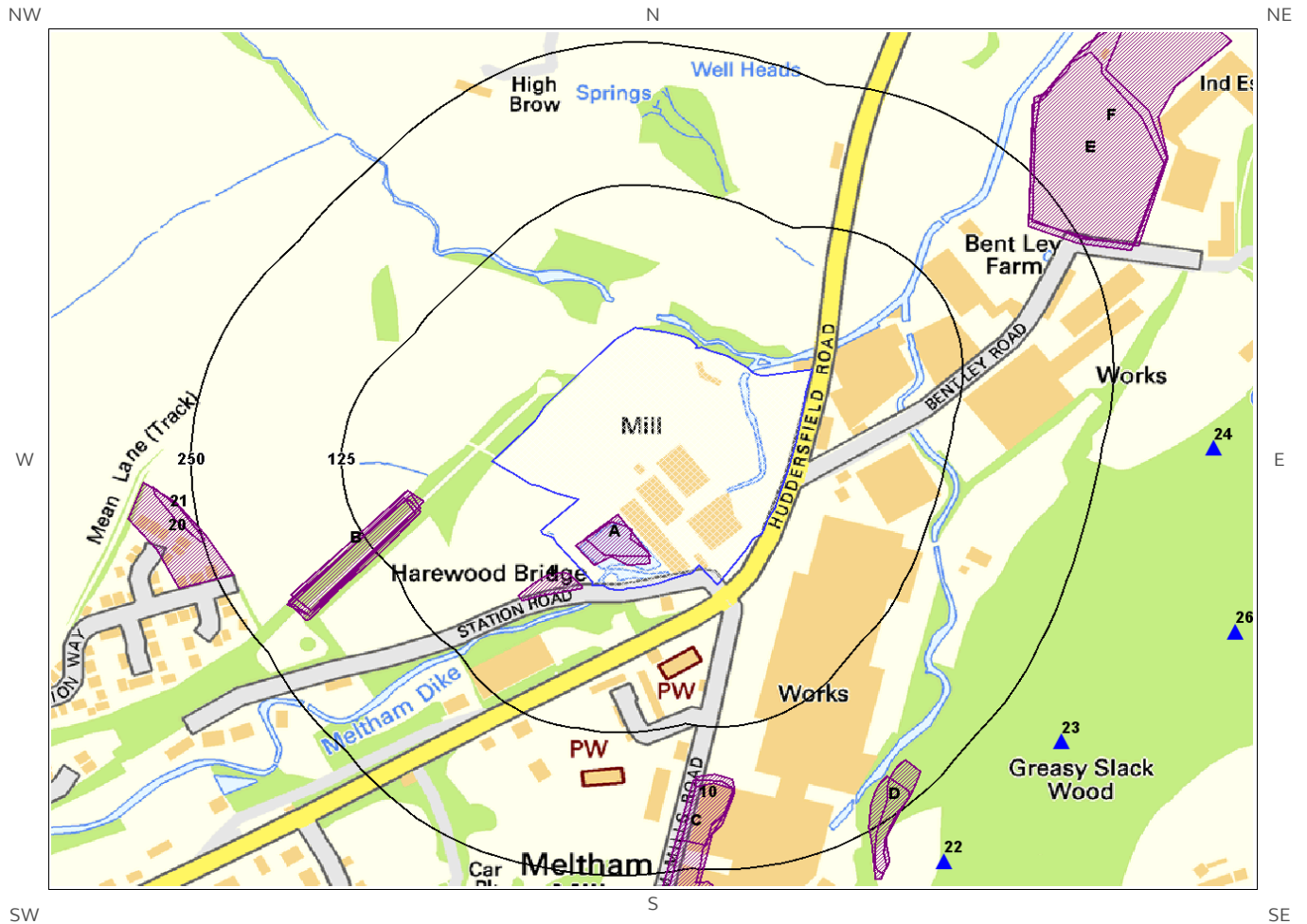
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

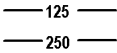
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	410781 411095	Pond	1891
2A	0.0	On Site	410785 411102	Pond	1969
3A	0.0	On Site	410785 411102	Pond	1984
4	9.0	SW	410729 411057	Refuse Heap	1904
5B	67.0	SW	410569 411089	Cuttings	1951
6B	72.0	SW	410566 411085	Cuttings	1984
7B	74.0	SW	410567 411081	Cuttings	1948
8B	74.0	SW	410567 411081	Cuttings	1904
9B	78.0	SW	410566 411084	Cuttings	1891
10	166.0	S	410860 410861	Pond	1948
11C	172.0	S	410848 410817	Ponds	1891
12C	174.0	S	410849 410815	Mill Ponds	1904
13D	218.0	SE	411010 410856	Refuse Heap	1951
14D	219.0	SE	411010 410846	Refuse Heap	1948
15E	219.0	NE	411182 411439	Sewage Works	1948
16E	219.0	NE	411182 411439	Sewage Works	1904
17E	223.0	NE	411183 411460	Sewage Works	1951
18F	223.0	NE	411211 411466	Sewage Works	1969
19F	223.0	NE	411211 411466	Sewage Works	1984
20	237.0	SW	410423 411102	Refuse Heap	1969
21	248.0	W	410421 411120	Refuse Heap	1951

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

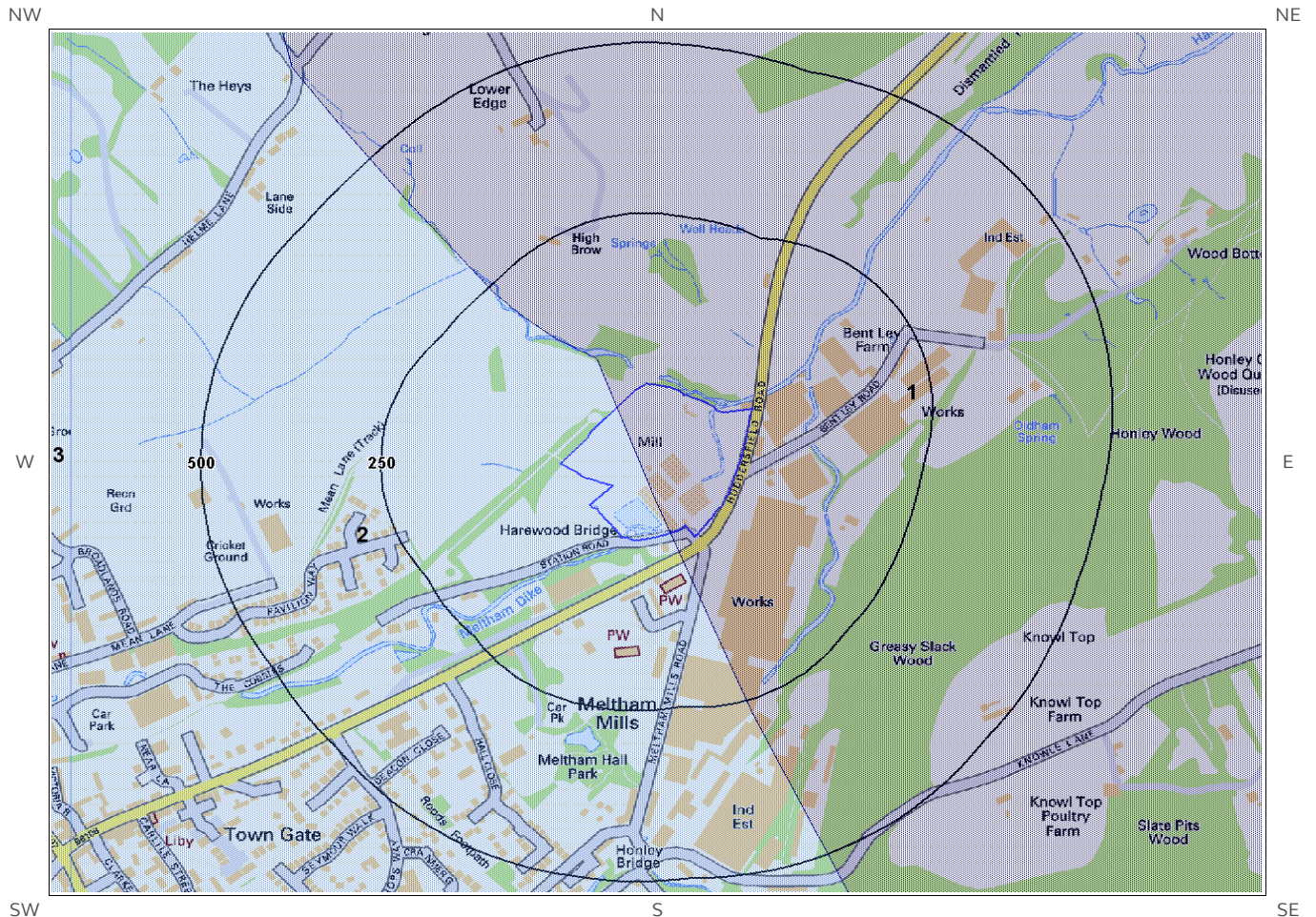
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
22	307.0	SE	411055 410816	Coal, Deep	Greasy Slack Wood Coal Pits	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
23	309.0	SE	411153 410921	Coal, Deep	Greasy Slack Wood Coal Pits	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
24	340.0	E	411279 411178	Coal, Deep	Honley Wood Coal Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	364.0	N	410764 411646	Sandstone	Far Fields	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
26	397.0	E	411297 411017	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	442.0	E	411355 411050	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	448.0	E	411377 411121	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	590.0	E	411516 411092	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

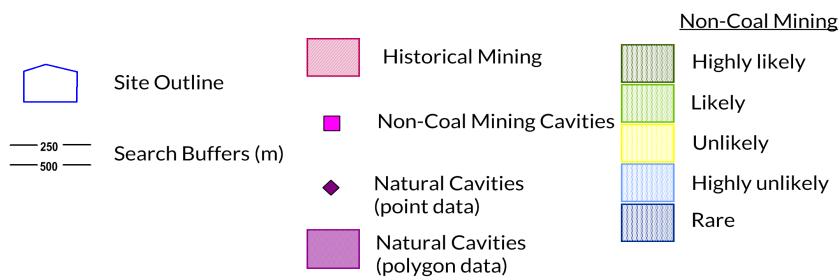
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	599.0	E	411505 411005	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	644.0	E	411590 411280	Sandstone	Klondike	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	694.0	SE	411547 410838	Sandstone	Slate Pits Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	734.0	SE	411218 410414	Sandstone	Thick Hollins	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	752.0	N	411140 411974	Sandstone	Warrick	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	762.0	SE	411527 410664	Sandstone	Slate Pits Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	769.0	E	411715 411215	Sandstone	Honley Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	777.0	N	411030 412030	Sandstone	Warwick	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	787.0	SE	411610 410755	Sandstone	Slate Pit Wood Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	857.0	N	411084 412098	Sandstone	Warwick	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	906.0	N	411262 412096	Sandstone	Warwick	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	913.0	N	411177 412131	Sandstone	Bank Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	961.0	S	410505 410132	Sandstone	Woodside	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
2	0.0	On Site	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
3	681.0	W	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	708.0	S	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

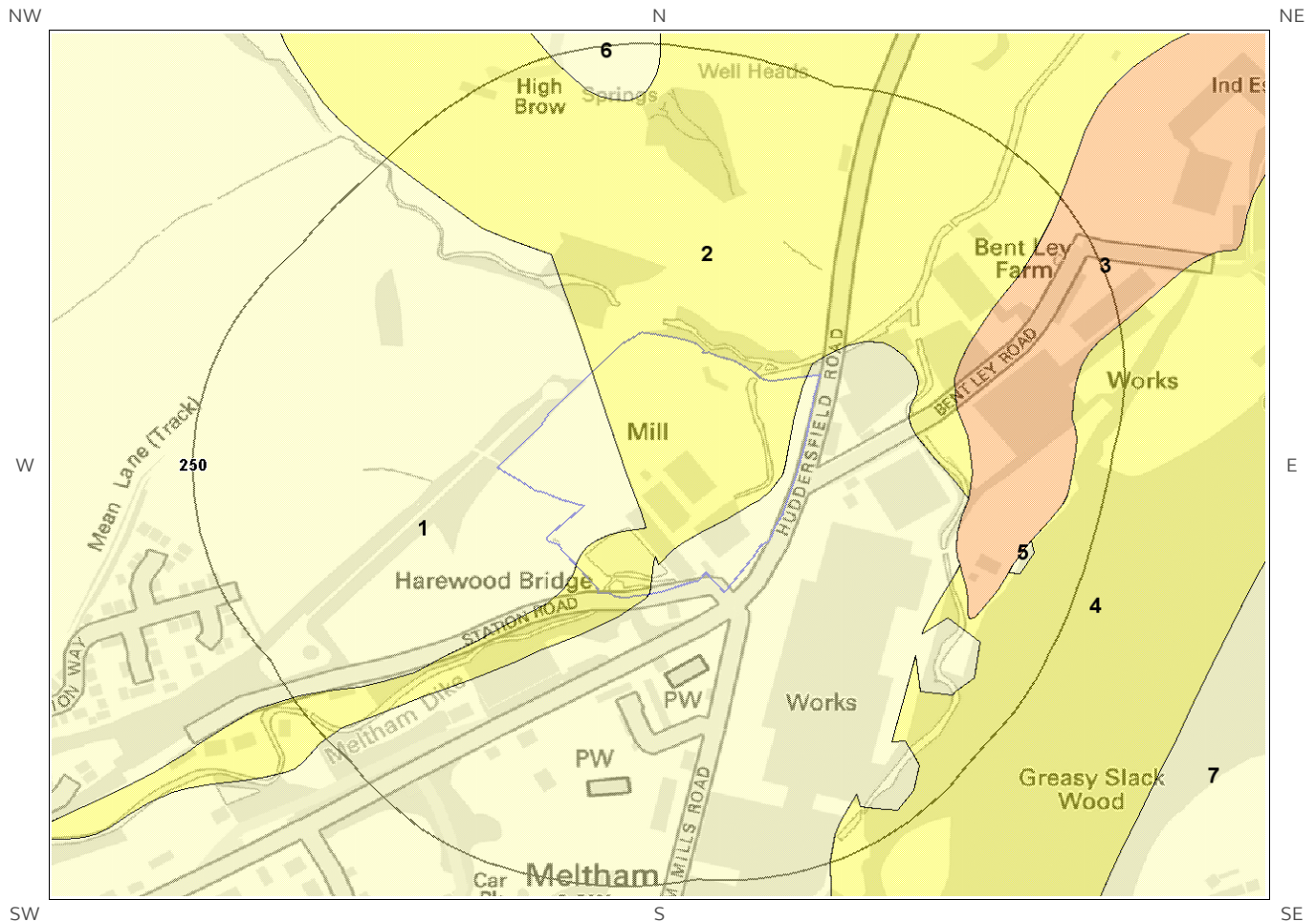
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

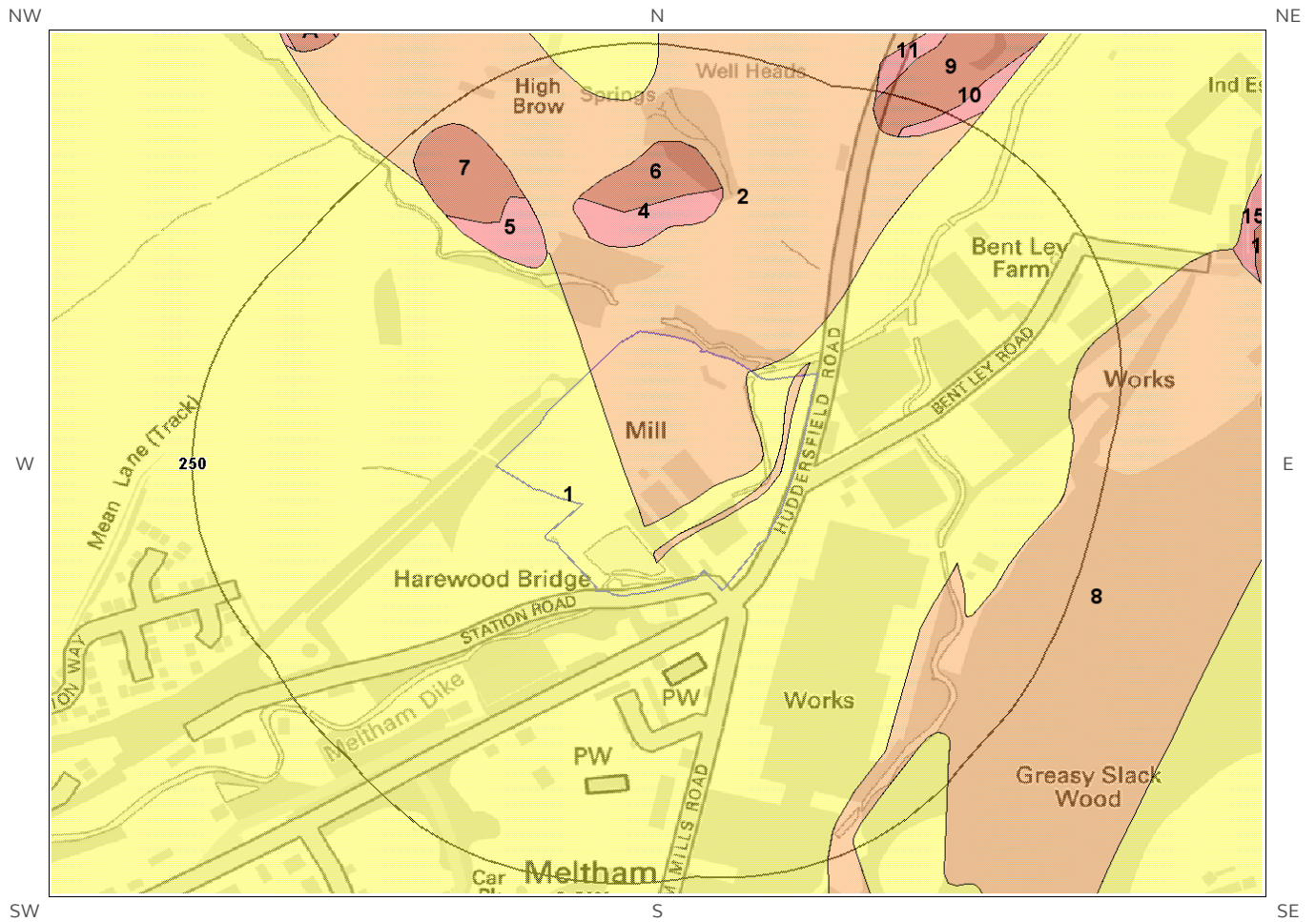


Shrink Swell Clay Legend

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6.2 Landslides map

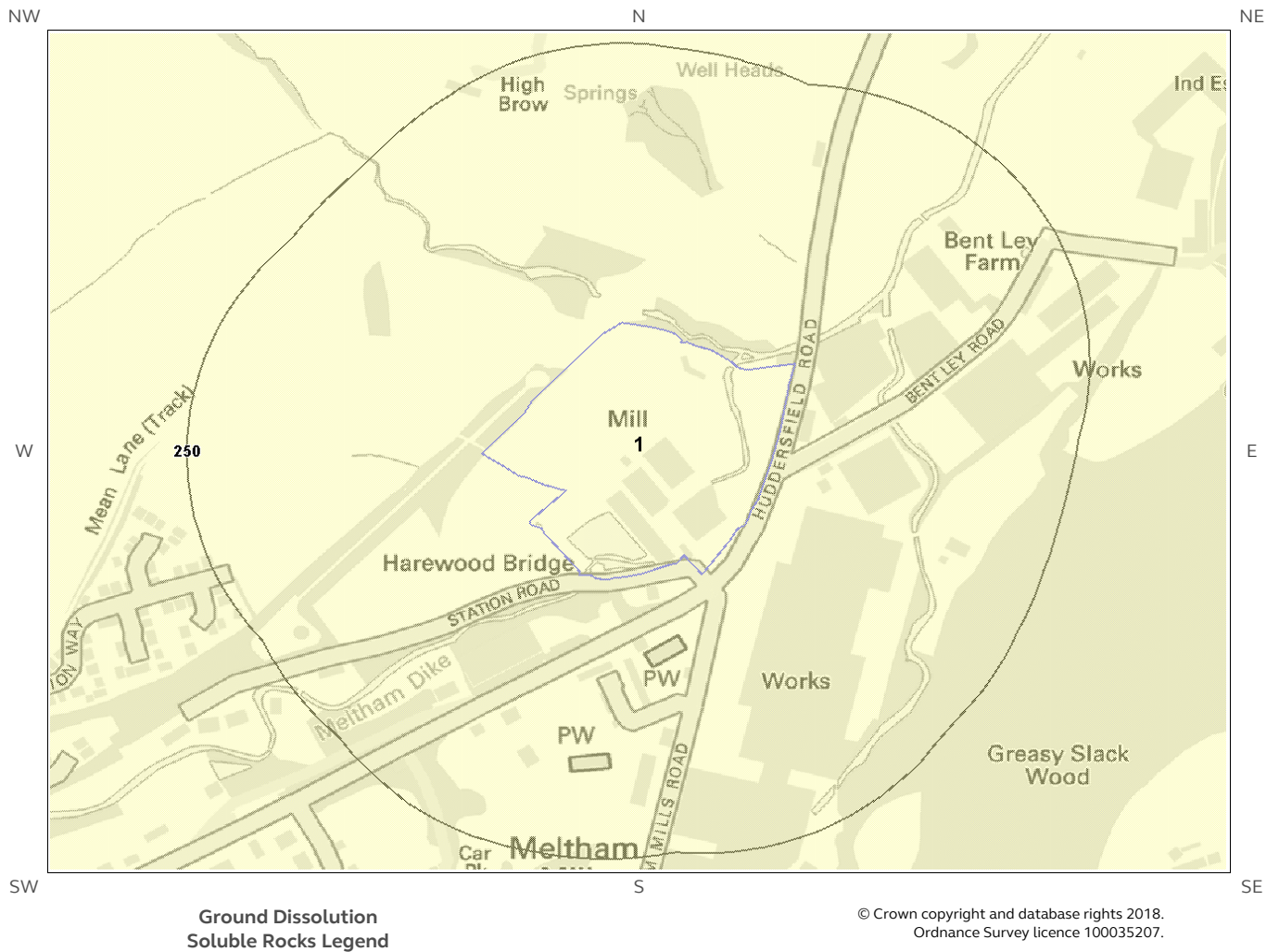


Landslides Legend

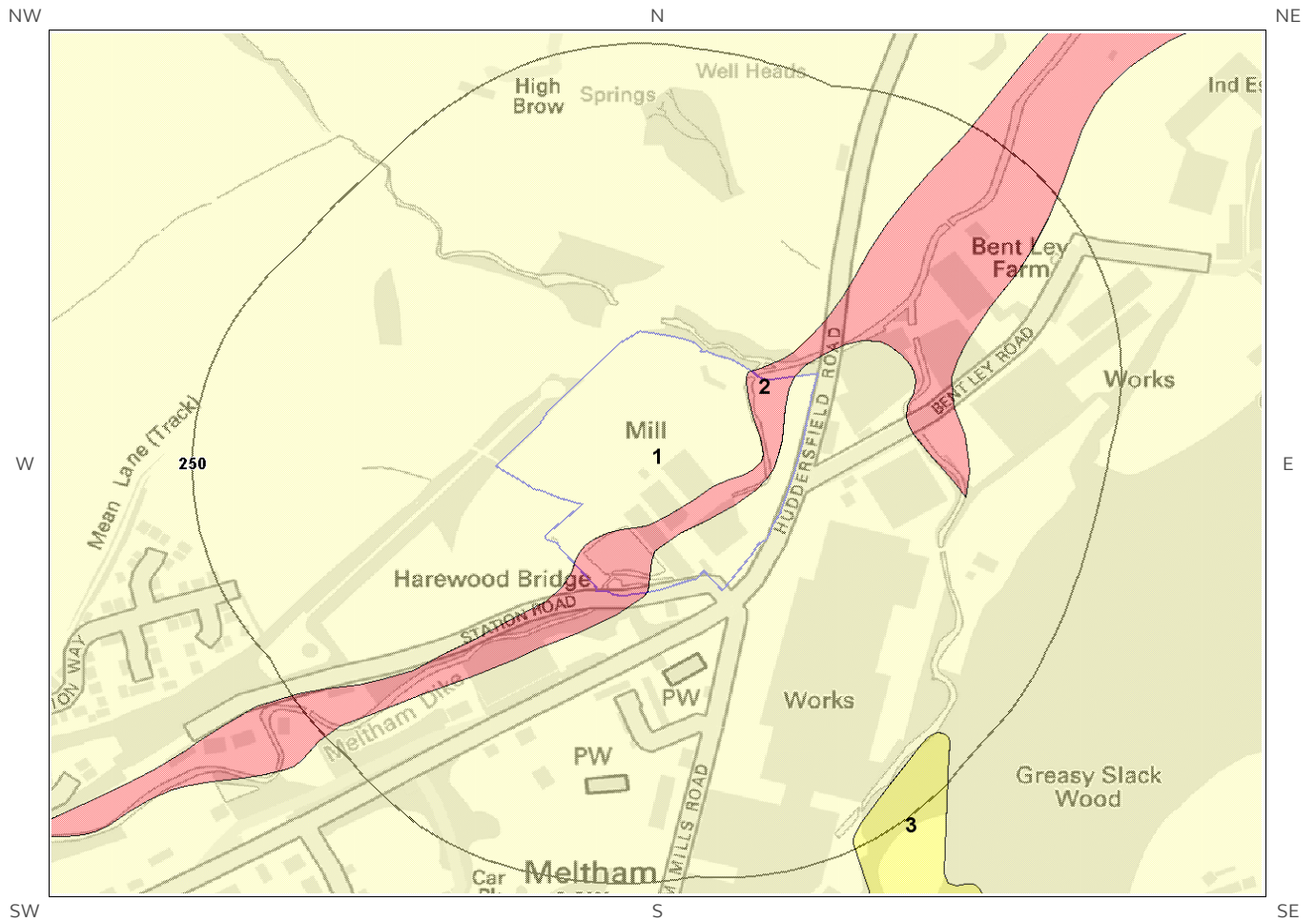
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6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map

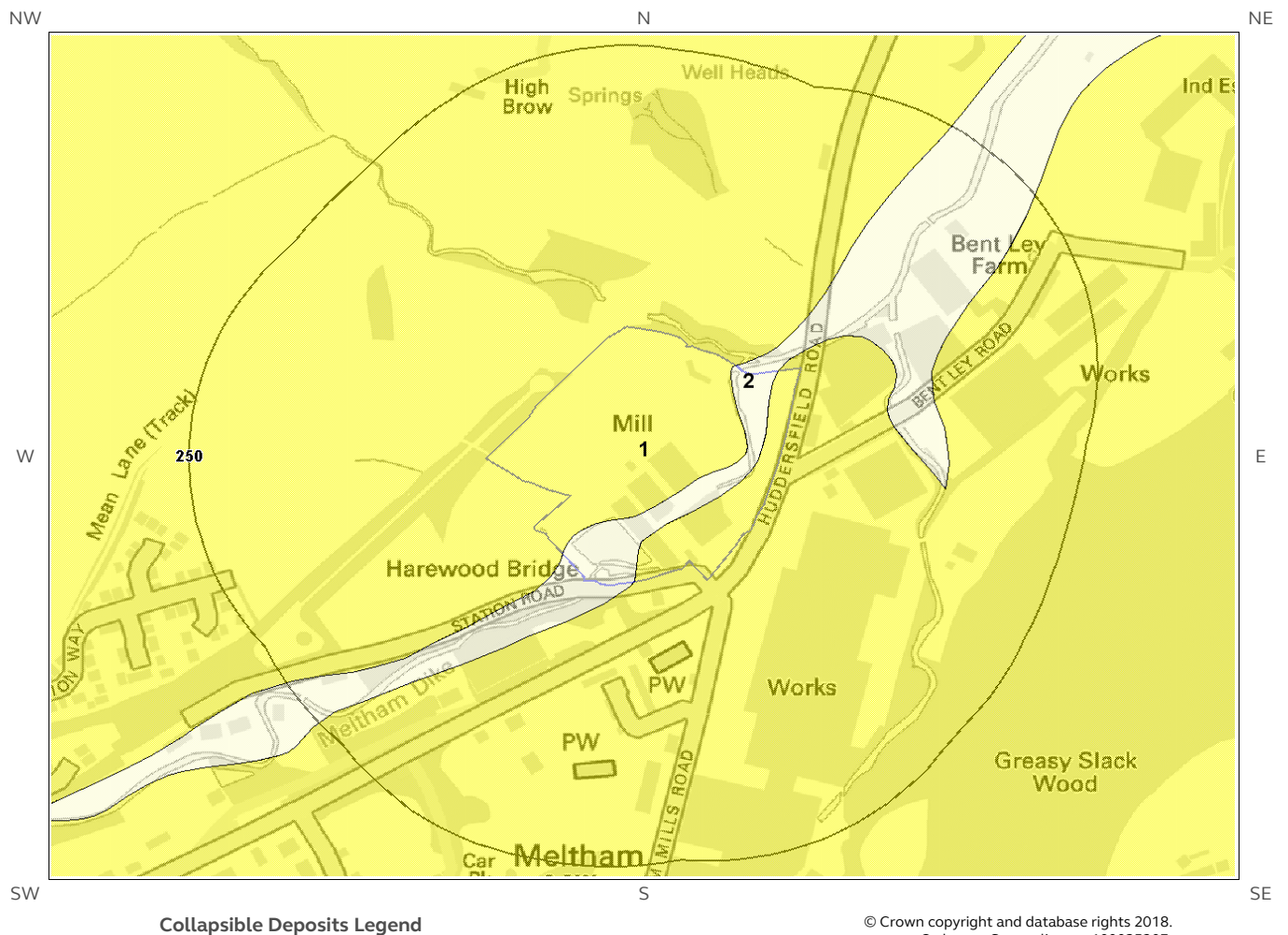


Compressible Deposits Legend

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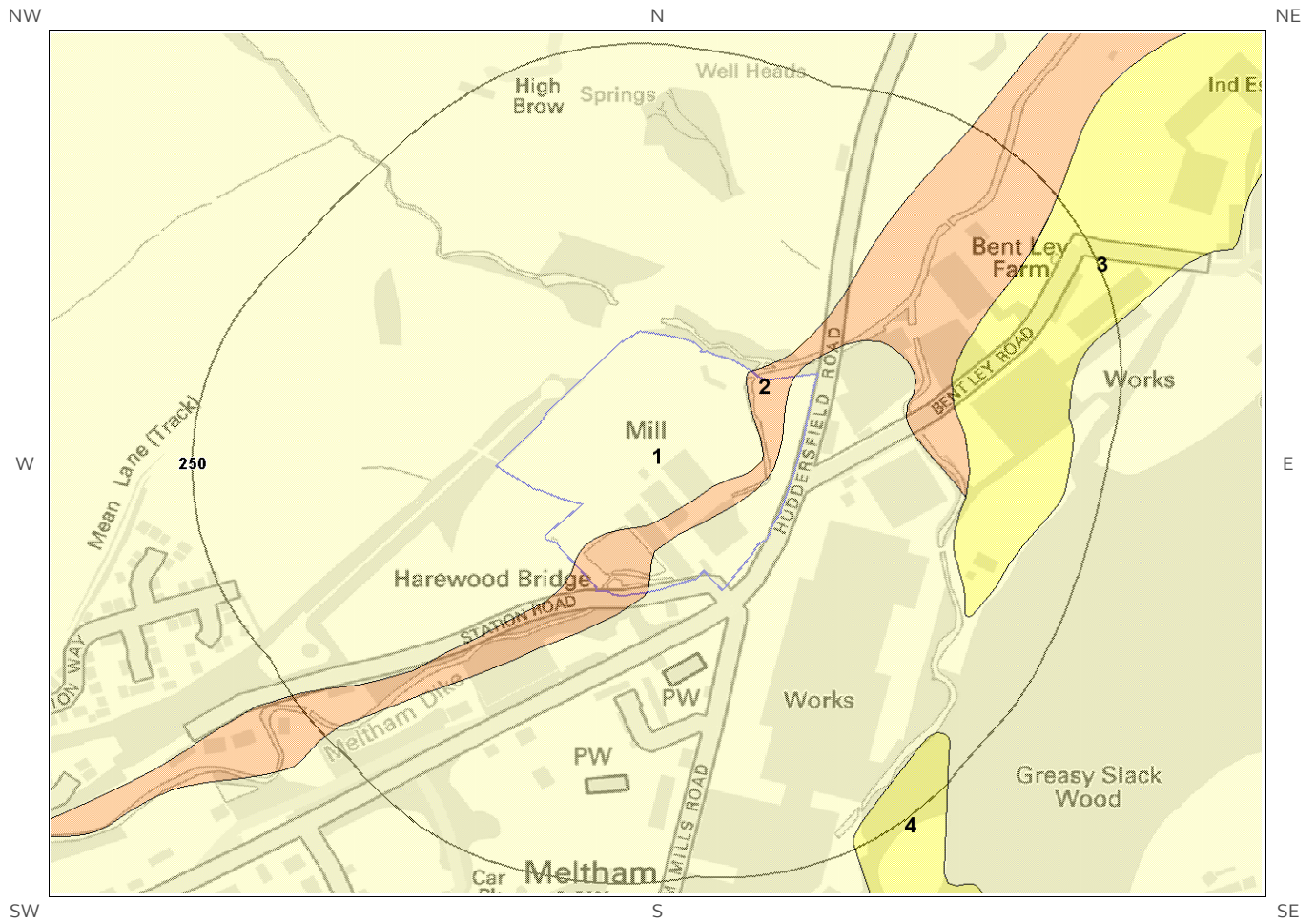


6.5 Collapsible Deposits map



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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Moderate

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Hazard Rating	Details
3	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

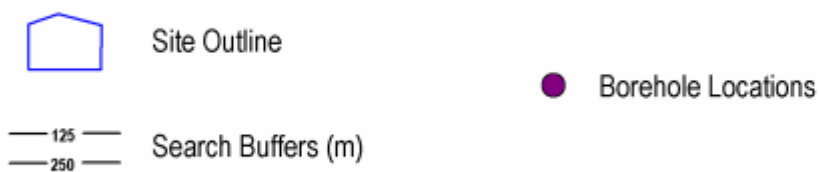
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	159.0	E	411064 411071	SE11SW159	51.0	MELTHAM MILLS

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/19851690

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

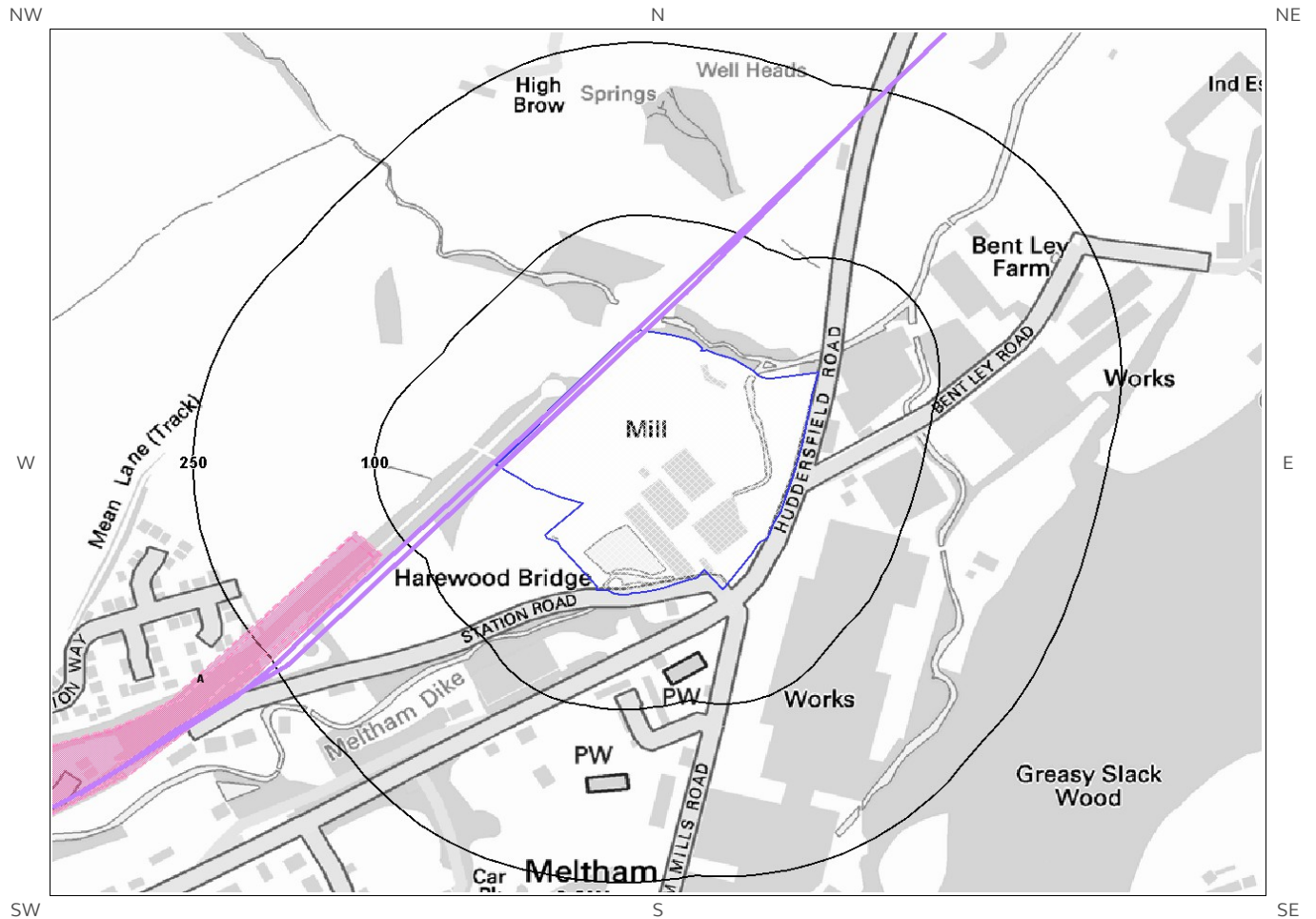
7

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
3.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
36.0	N	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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	Site Outline		Underground or Partially Underground Railway / Subway System		Railway Track (OpenStreetMap)
	Search Buffers (m)		Railway Tunnel (OS Mapping)		High Speed 2
	250		Abandoned or Dismantled Railway (OpenStreetMap)		High Speed 2 Revised Proposed Route
	500		Railway Track (OS Mapping)		Crossrail 1
					Railway and/or Tunnel Feature from Historical Mapping

9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1A	122	SW	410358 410924	Railway Sidings	1951
2A	129	SW	410330 410909	Railway Sidings	1933

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? Yes

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
0	On Site	Abandoned
0	On Site	Abandoned
241	SW	Abandoned

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



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NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS Geological Hazards Reports and general geological enquiries

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www.coal.gov.uk



The Coal Authority

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Public information access office
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133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



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APPENDIX D

Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1892-1893

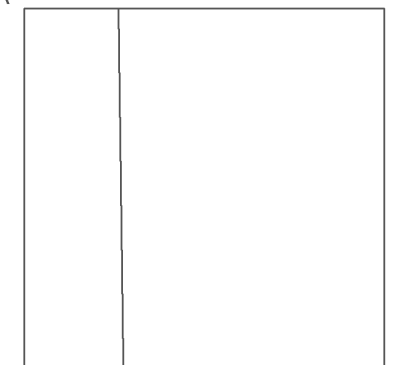
Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Surveyed 1893
Revised 1893
Edition N/A
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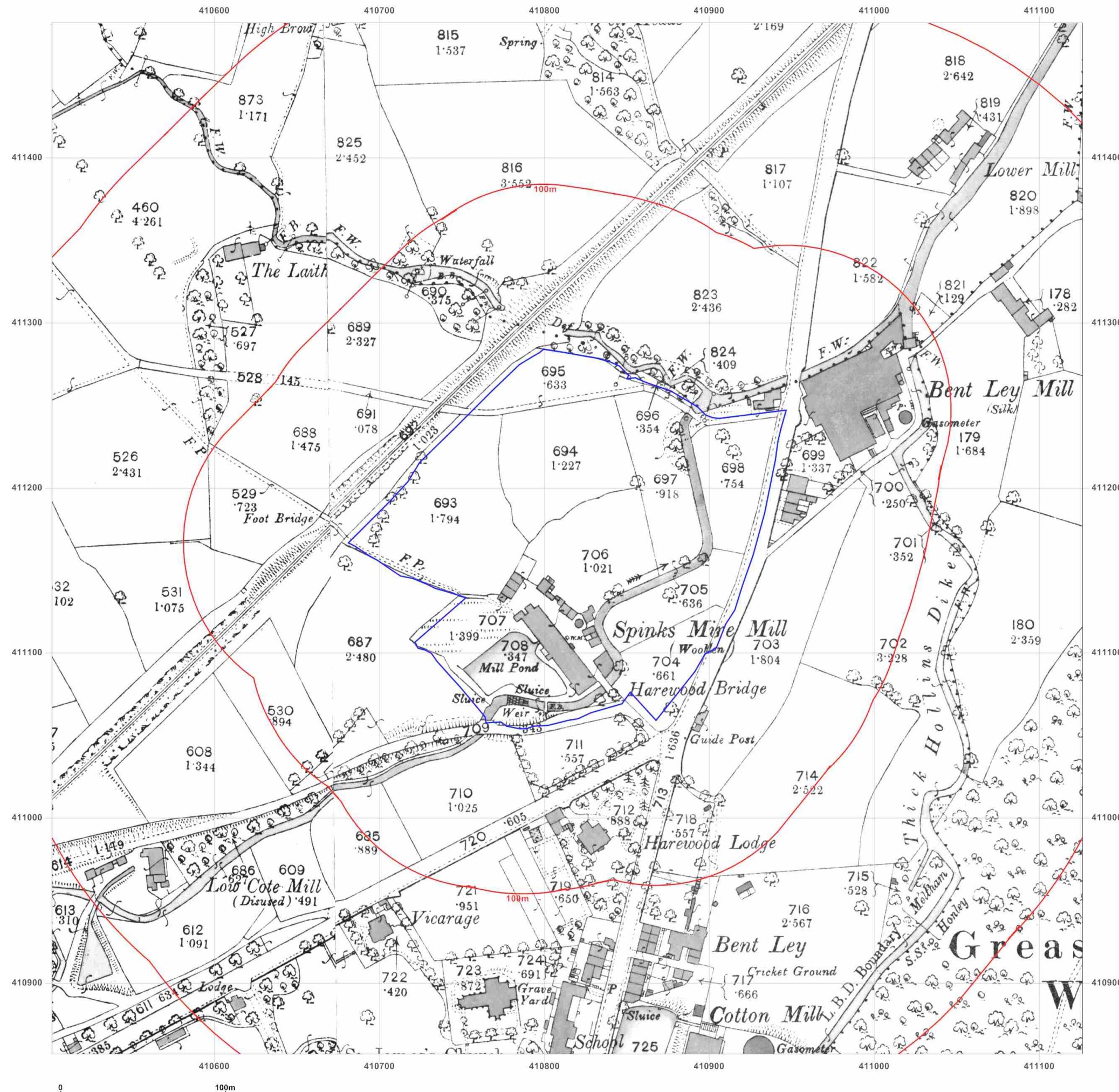


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Map legend available at:
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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1906

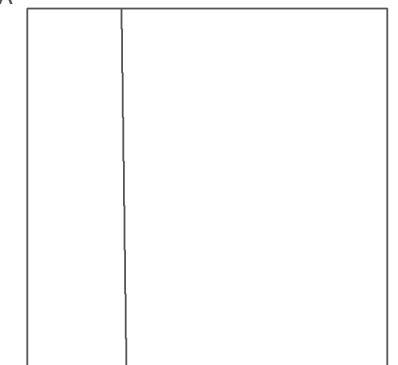
Scale: 1:2,500

Printed at: 1:2,500



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Revised 1906
Edition N/A
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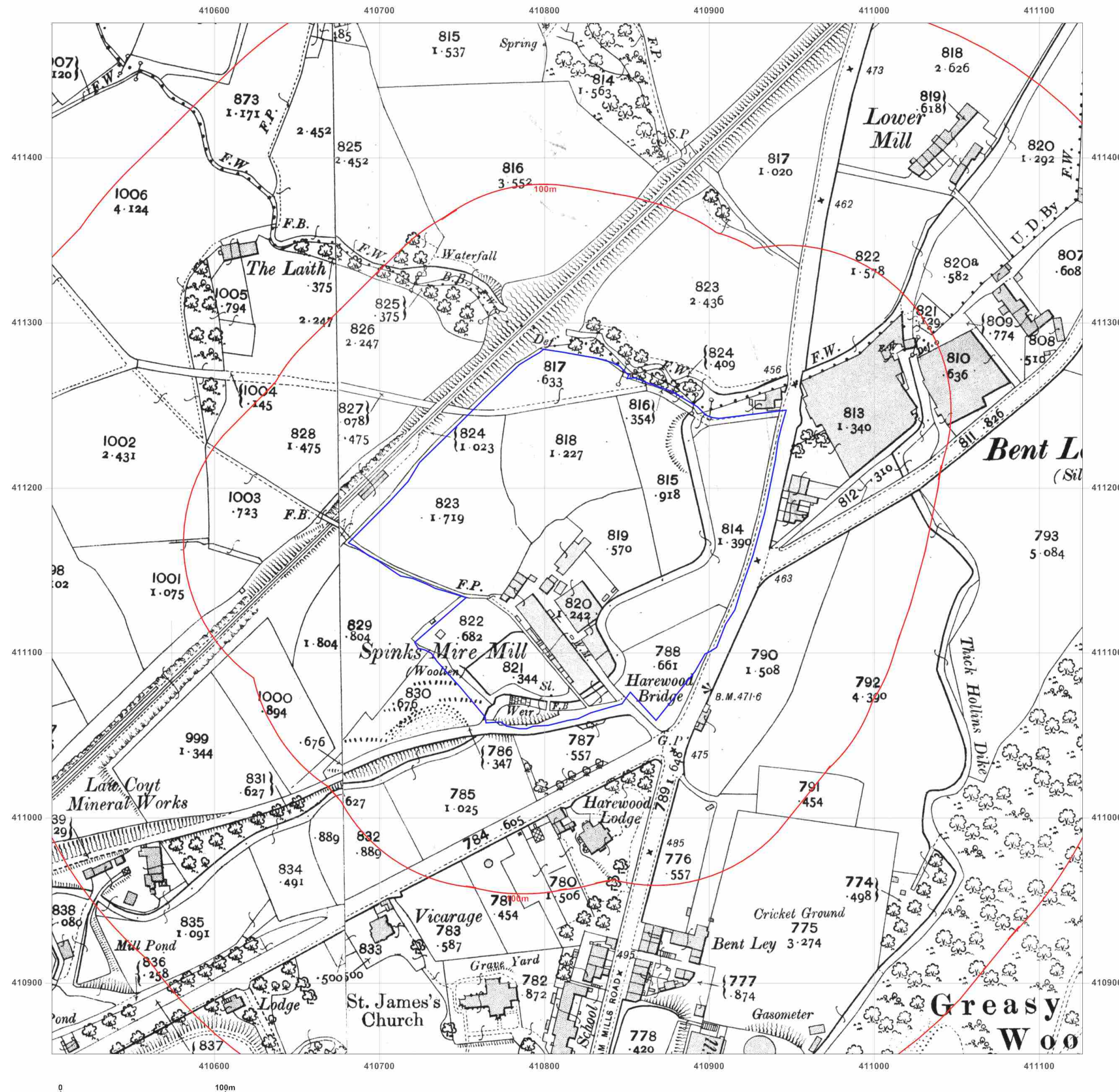


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Site Details:

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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1913

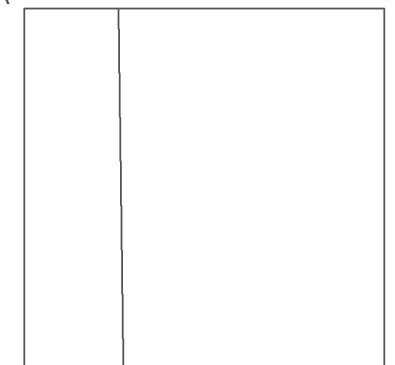
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Revised 1913
Edition N/A
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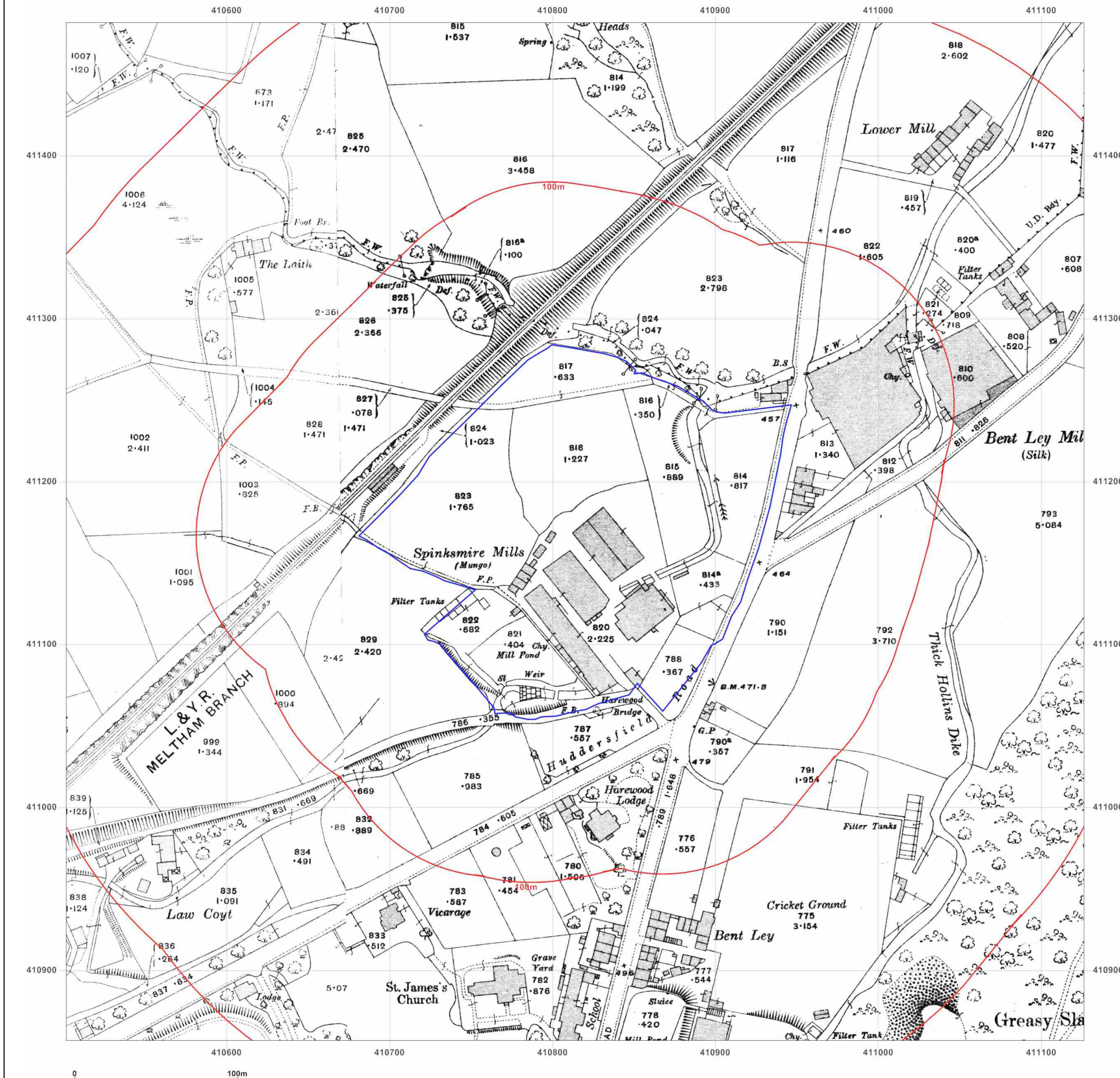


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Site Details:

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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



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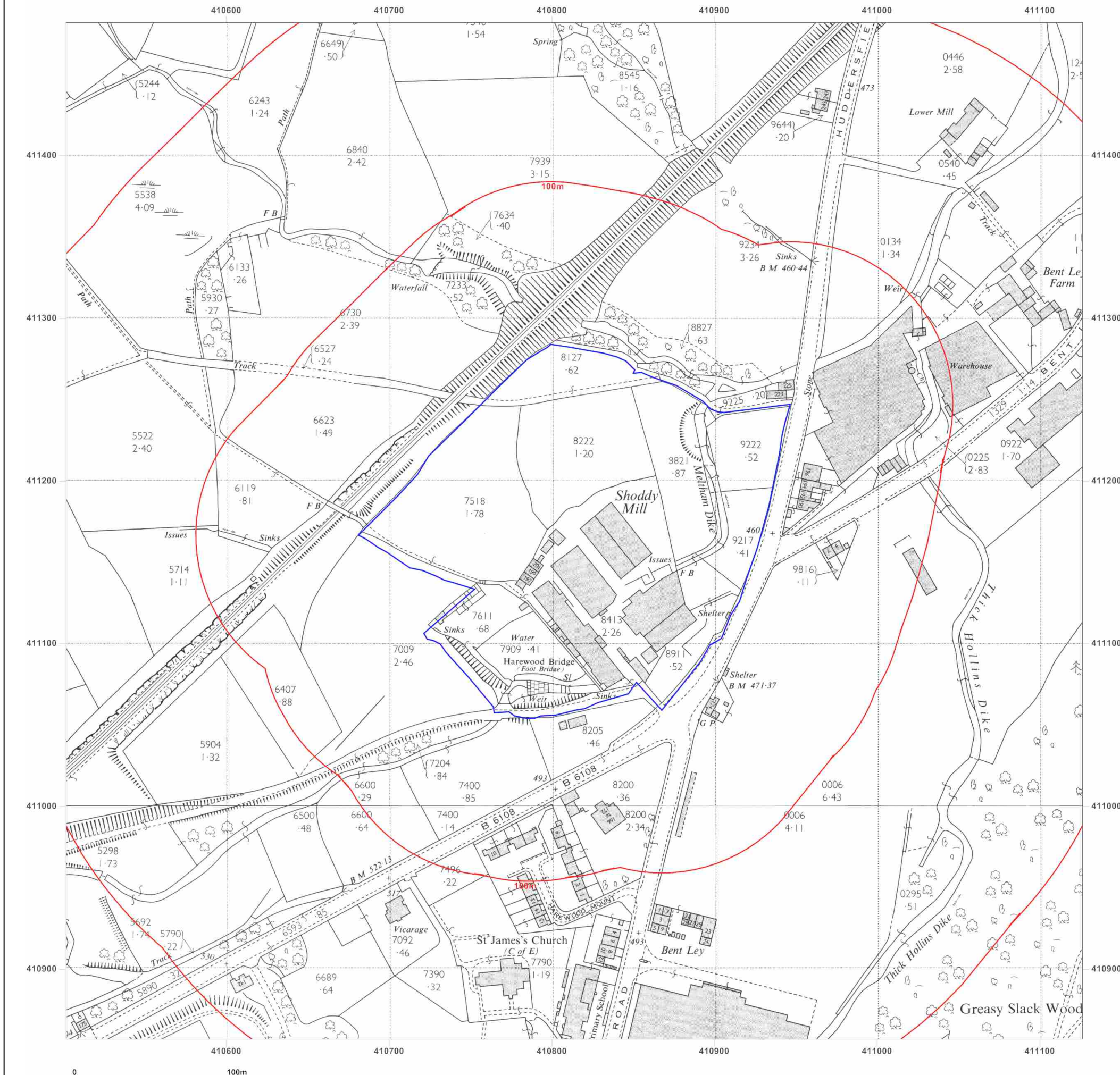


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Site Details:

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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

Map date: 1983-1987

Scale: 1:2,500

Printed at: 1:2,500



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Revised N/A
Edition N/A
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Surveyed N/A
Revised N/A
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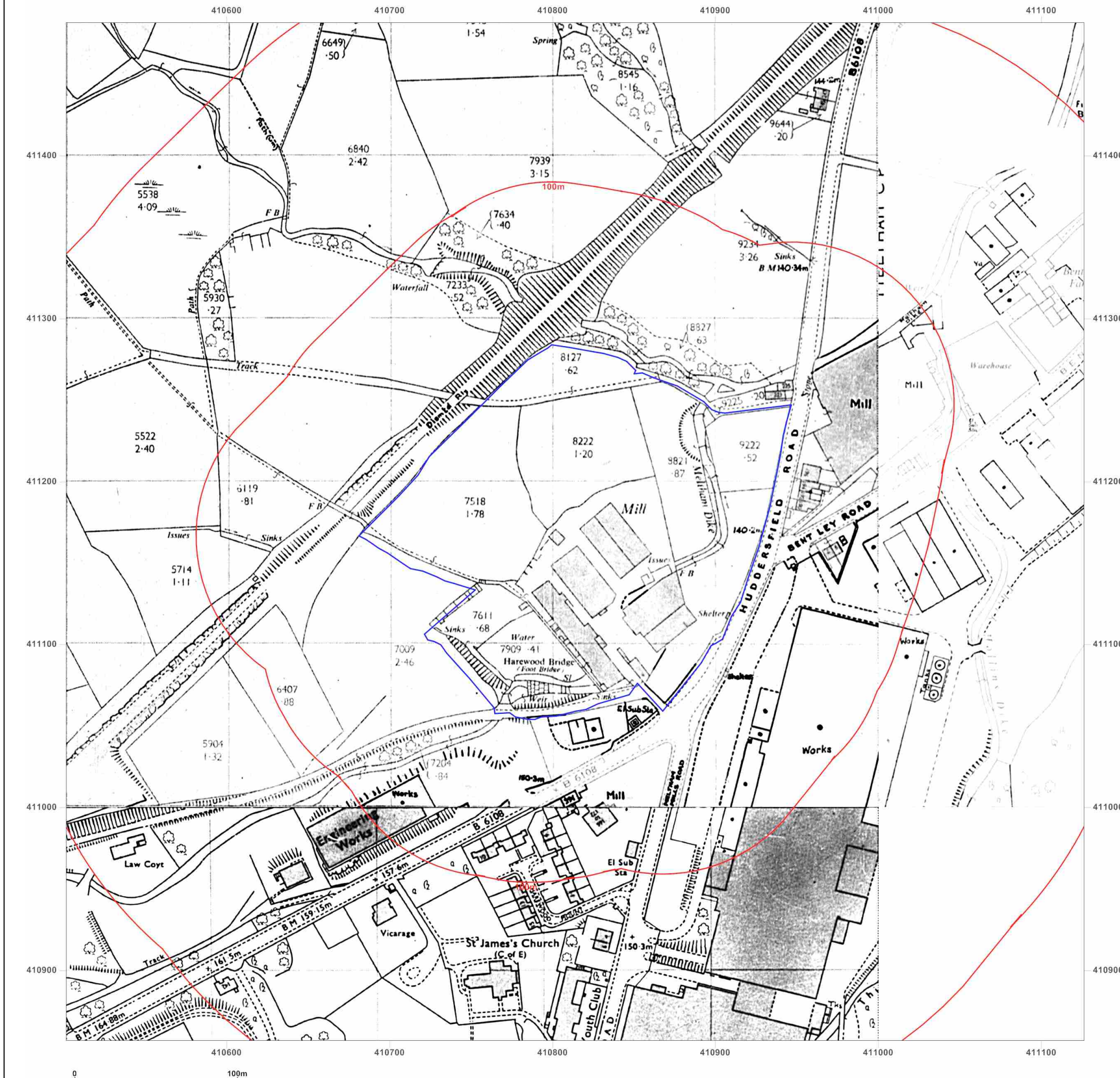


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Site Details:

HUDDERSFIELD ROAD,
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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

Map date: 1988-1993

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1990
Edition N/A
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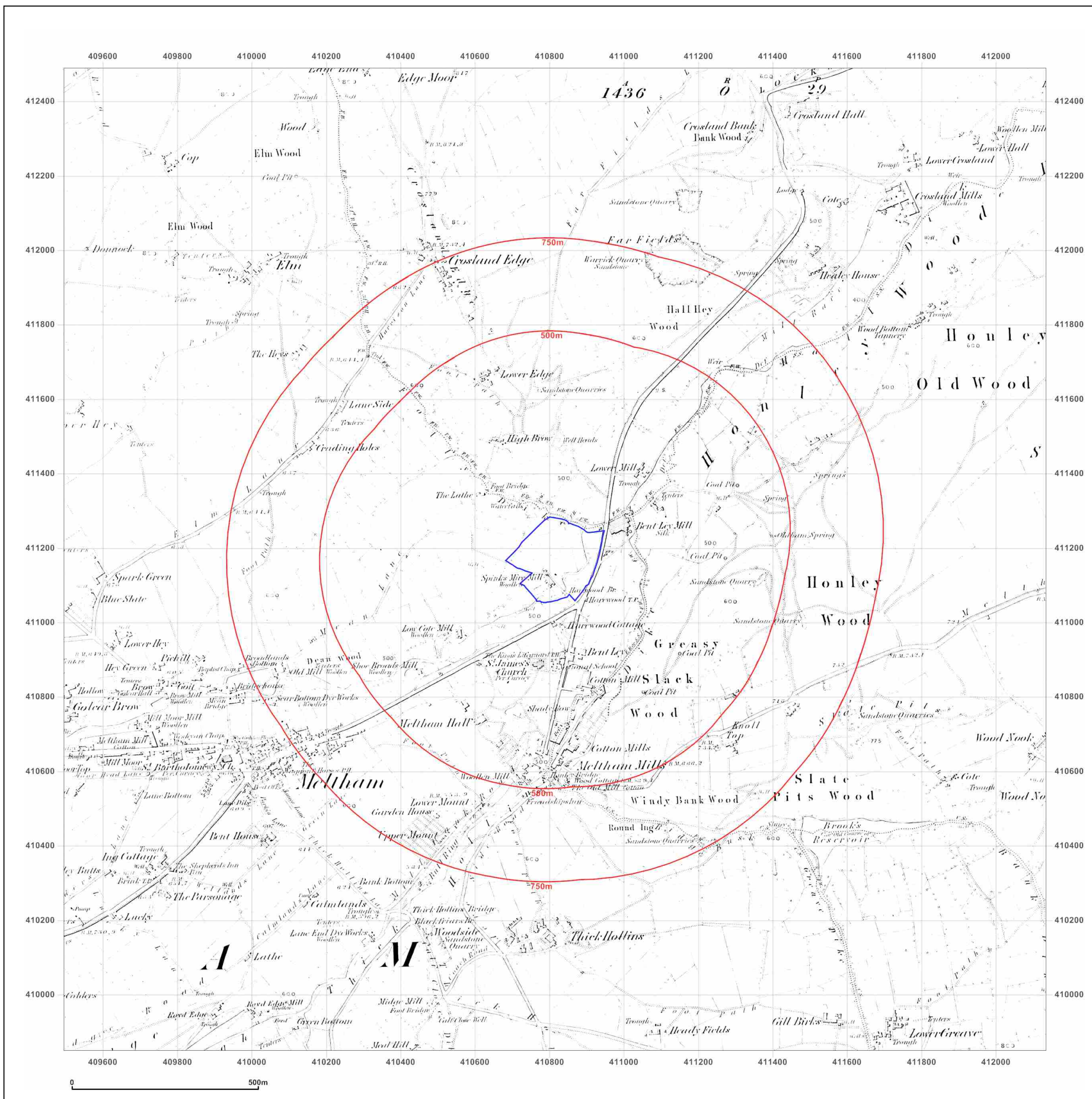
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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1891
Edition N/A
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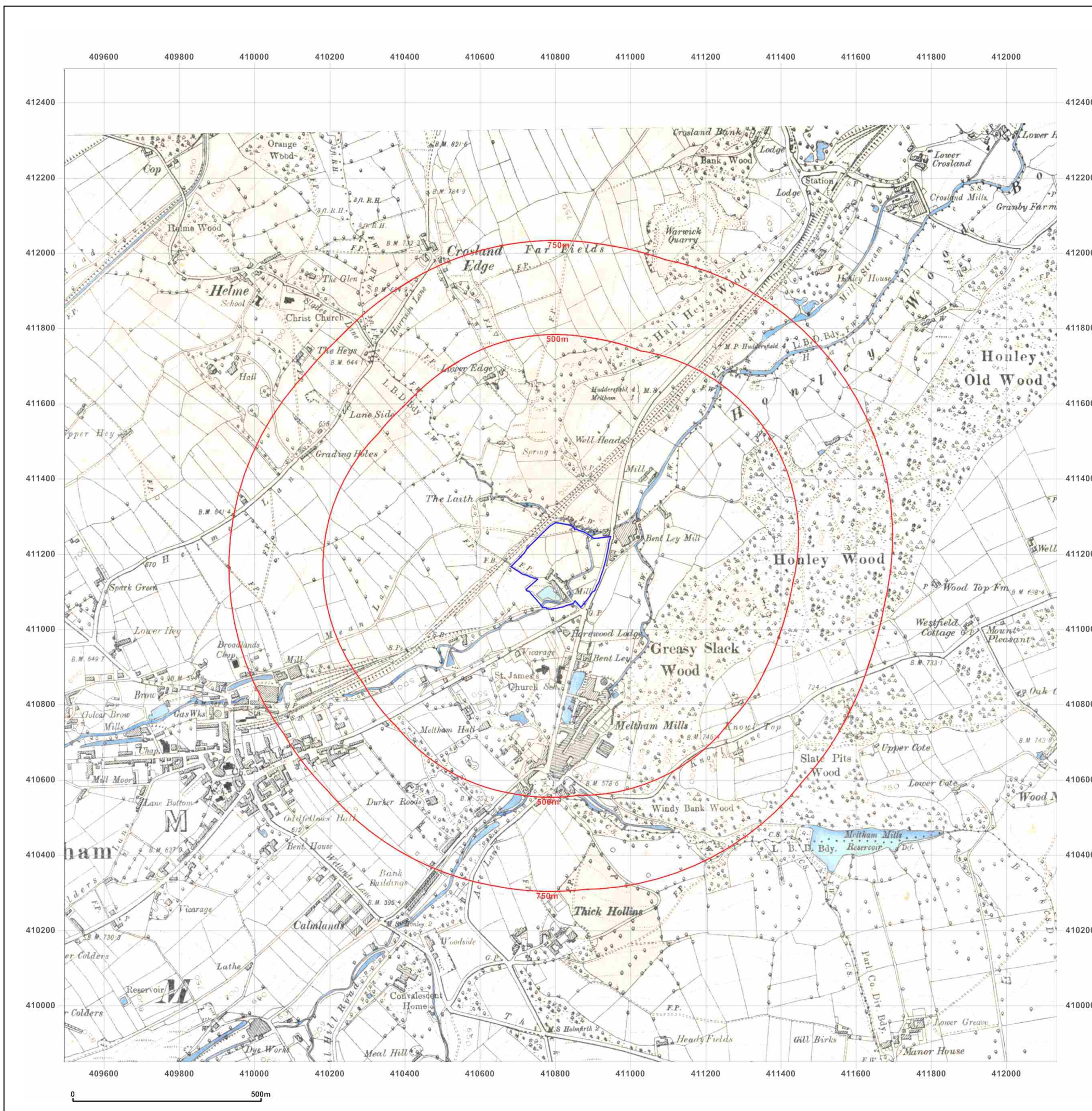


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Site Details:

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4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1904-1905

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1904
Edition N/A
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Levelled N/A

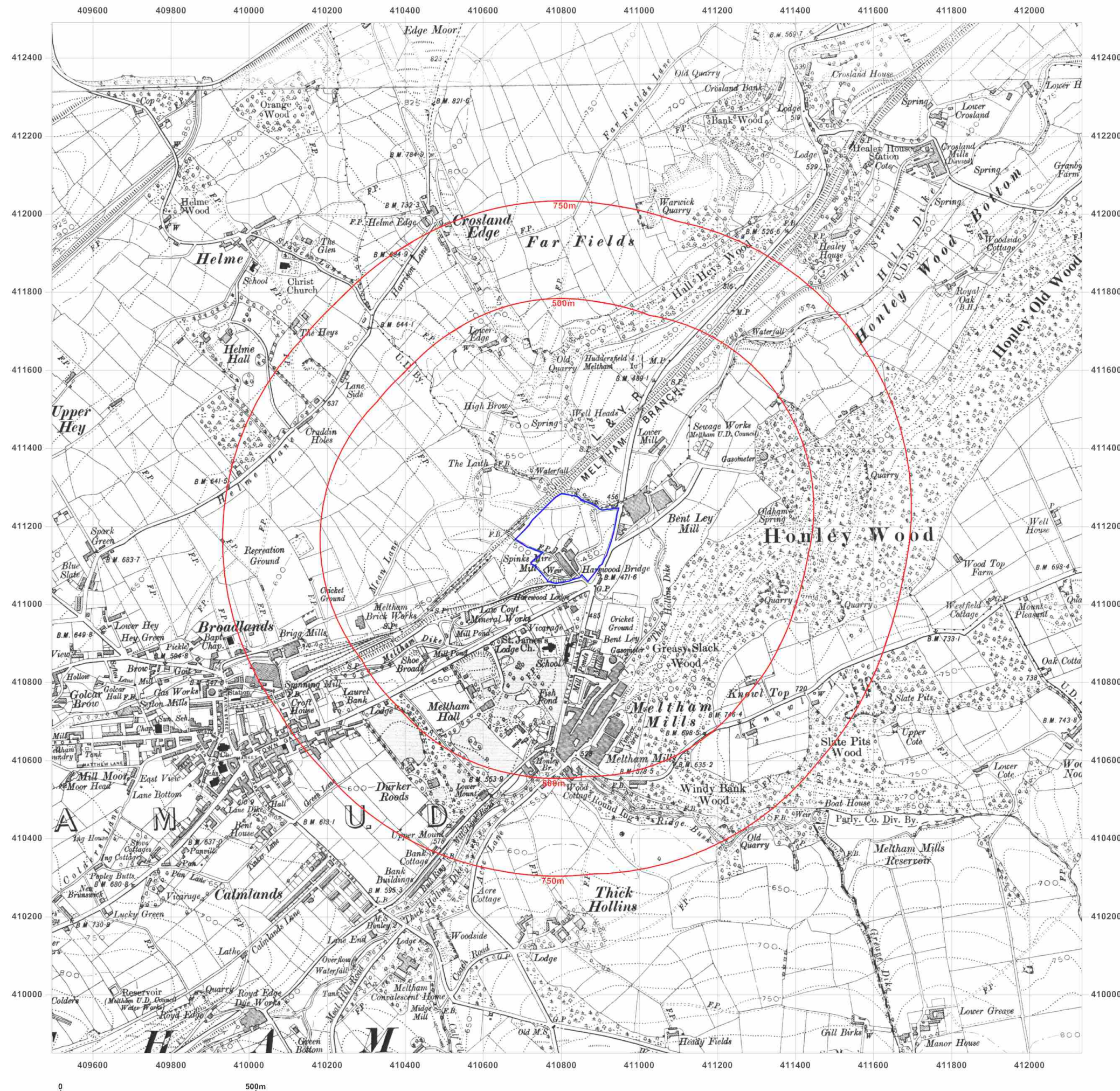


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Site Details:

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MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1930-1933

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1933
Edition 1933
Copyright N/A
Levelled N/A

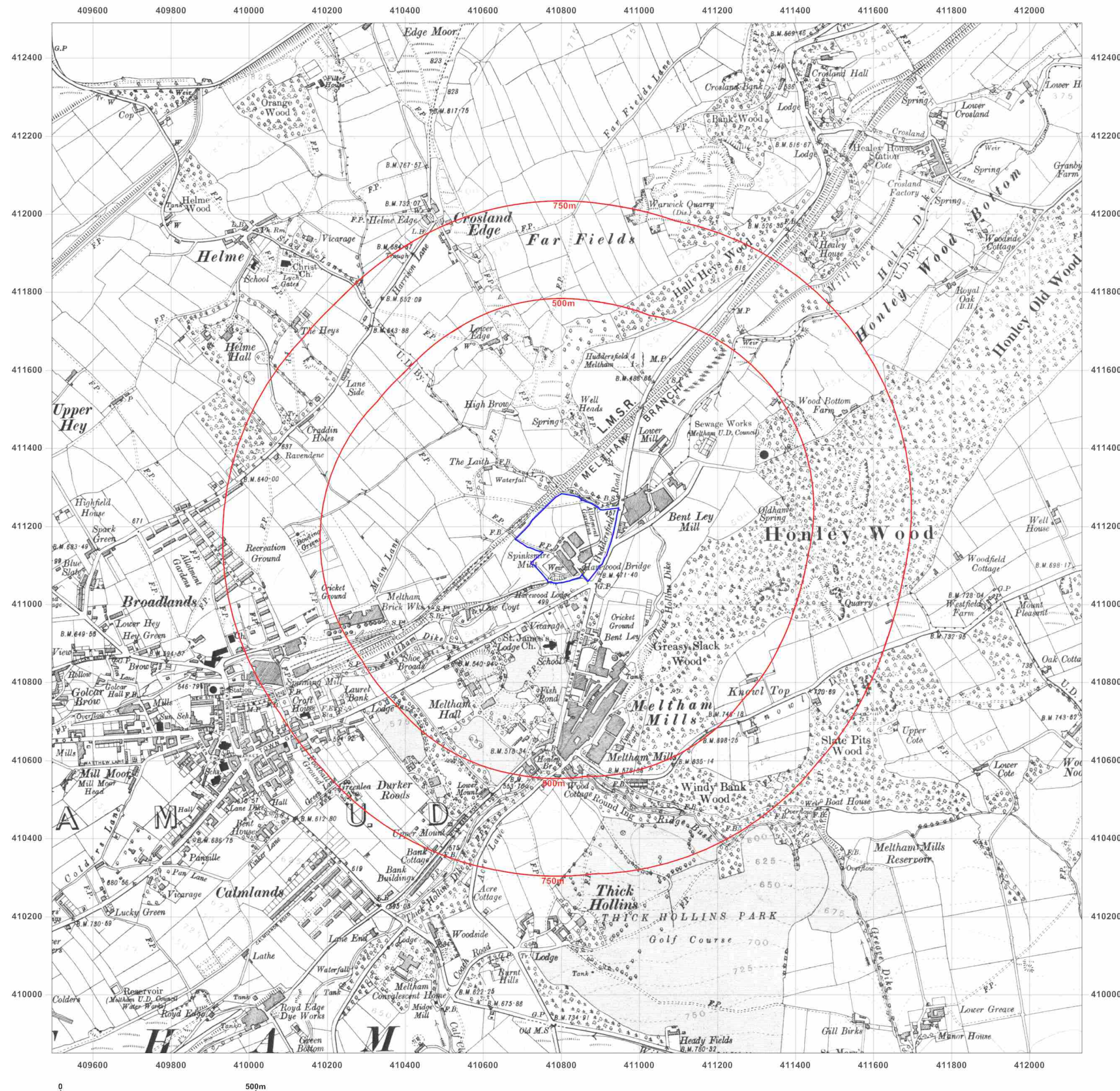


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Production date: 04 October 2018

Map legend available at:
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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised 1948
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Surveyed 1851
Revised 1948
Edition N/A
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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: Provisional

Map date: 1951-1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1955
Edition 1956
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

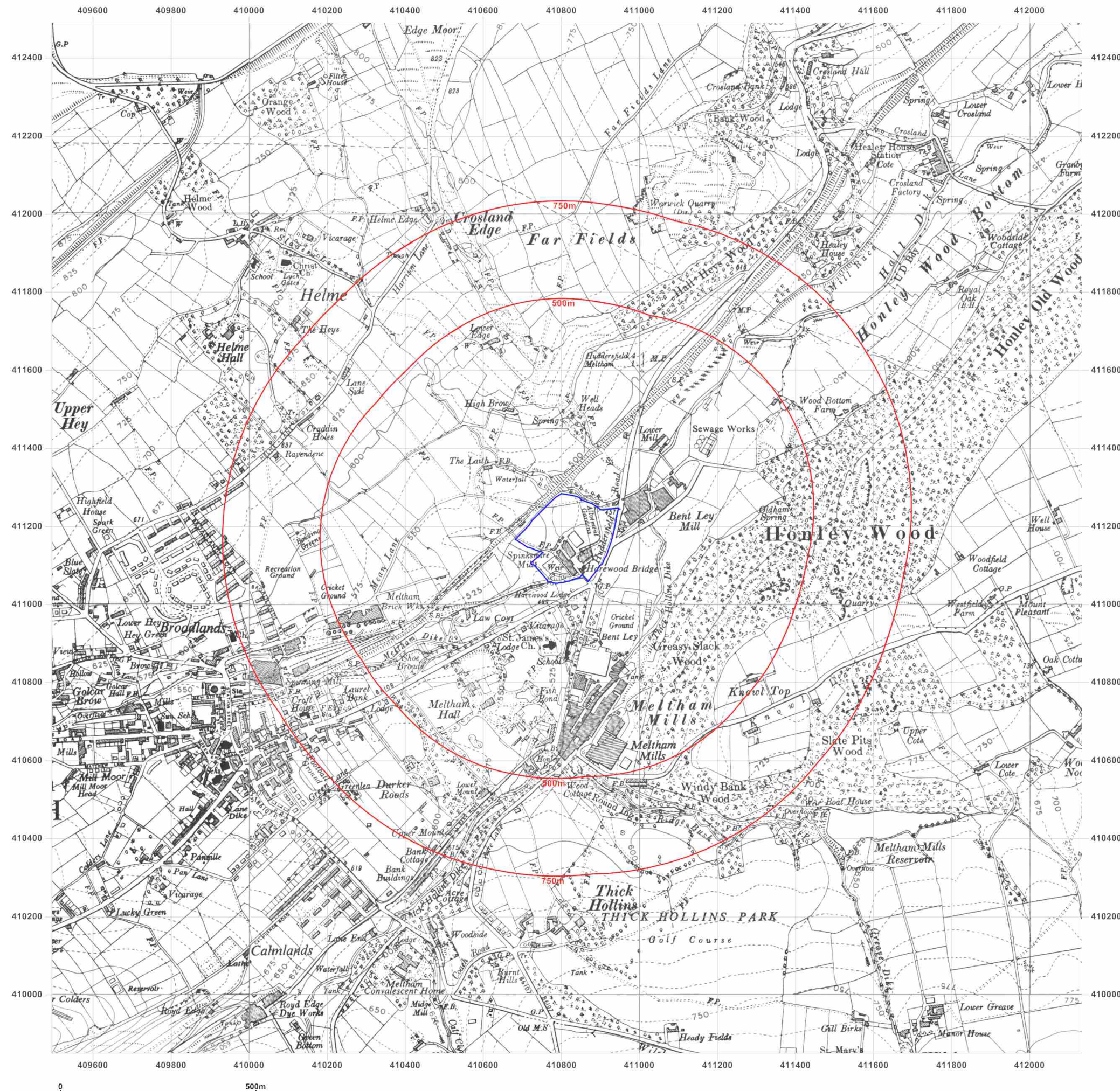


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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: Provisional

Map date: 1965-1969

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

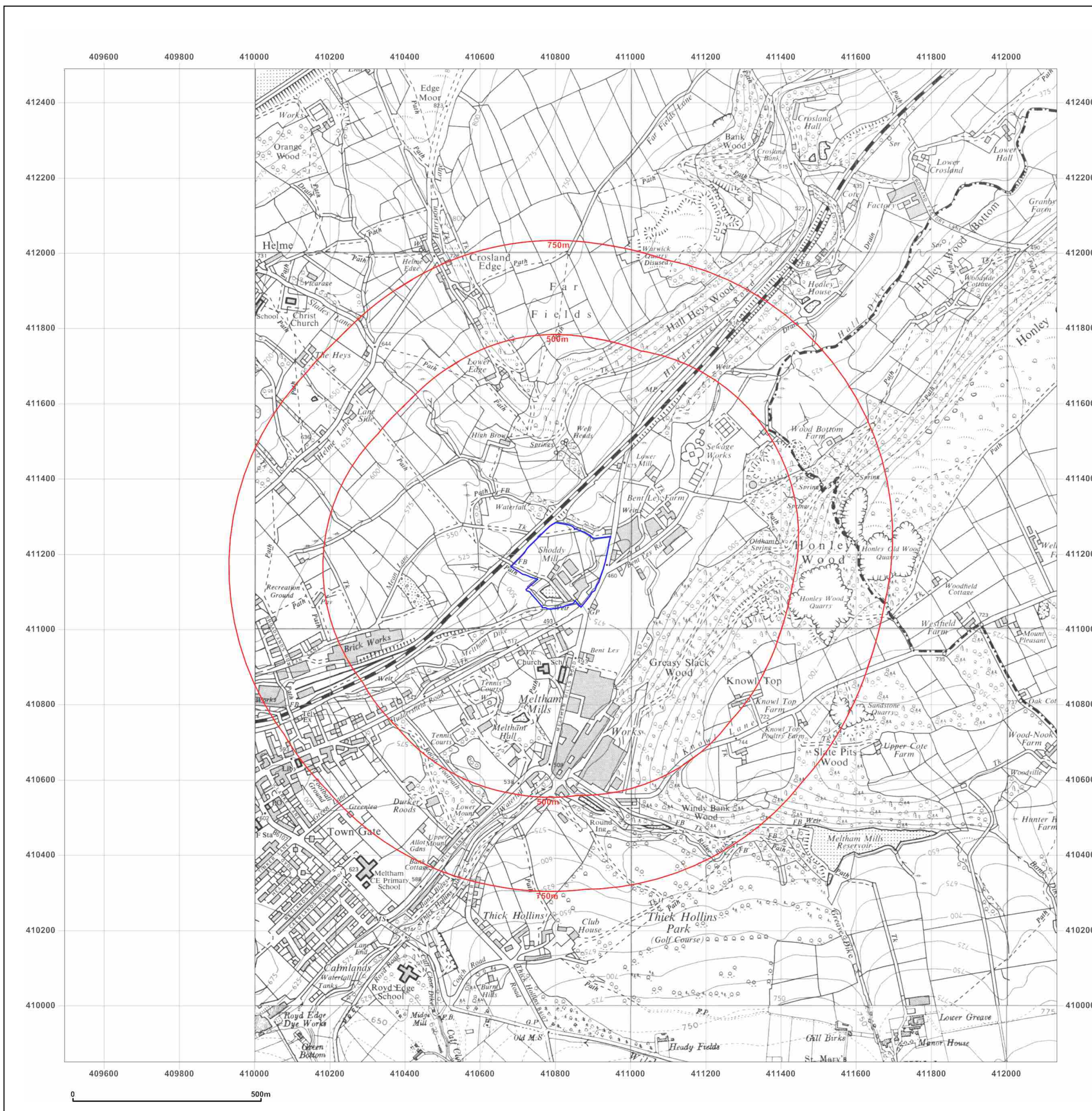


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Production date: 04 October 2018

Map legend available at:
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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

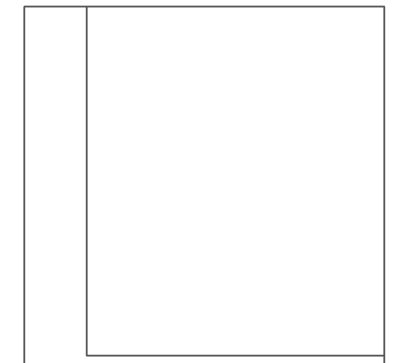
Map date: 1984

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1983
Revised 1984
Edition N/A
Copyright N/A
Levelled N/A

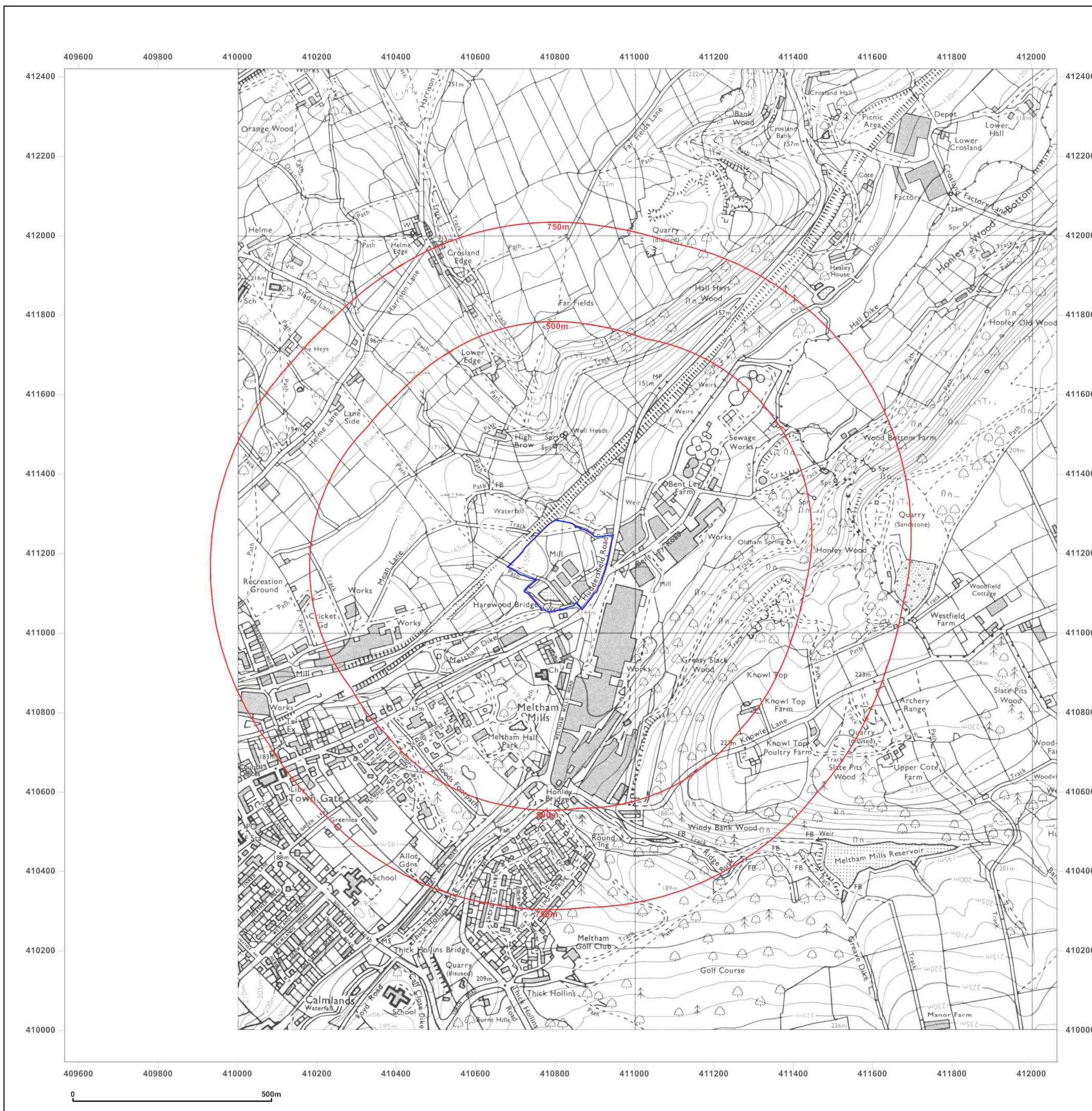


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Production date: 04 October 2018

Map legend available at:
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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



2002

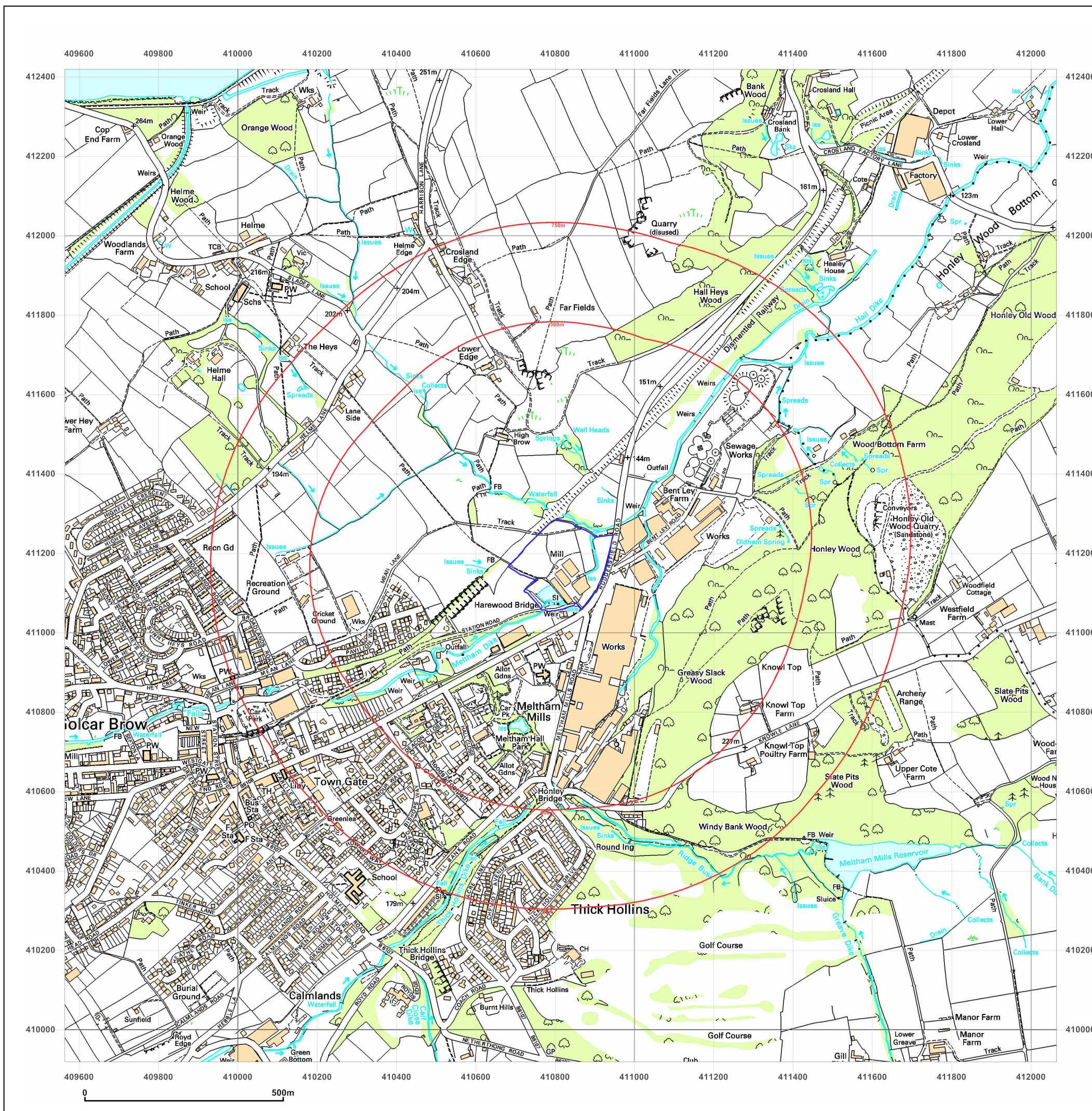


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Production date: 04 October 2018

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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

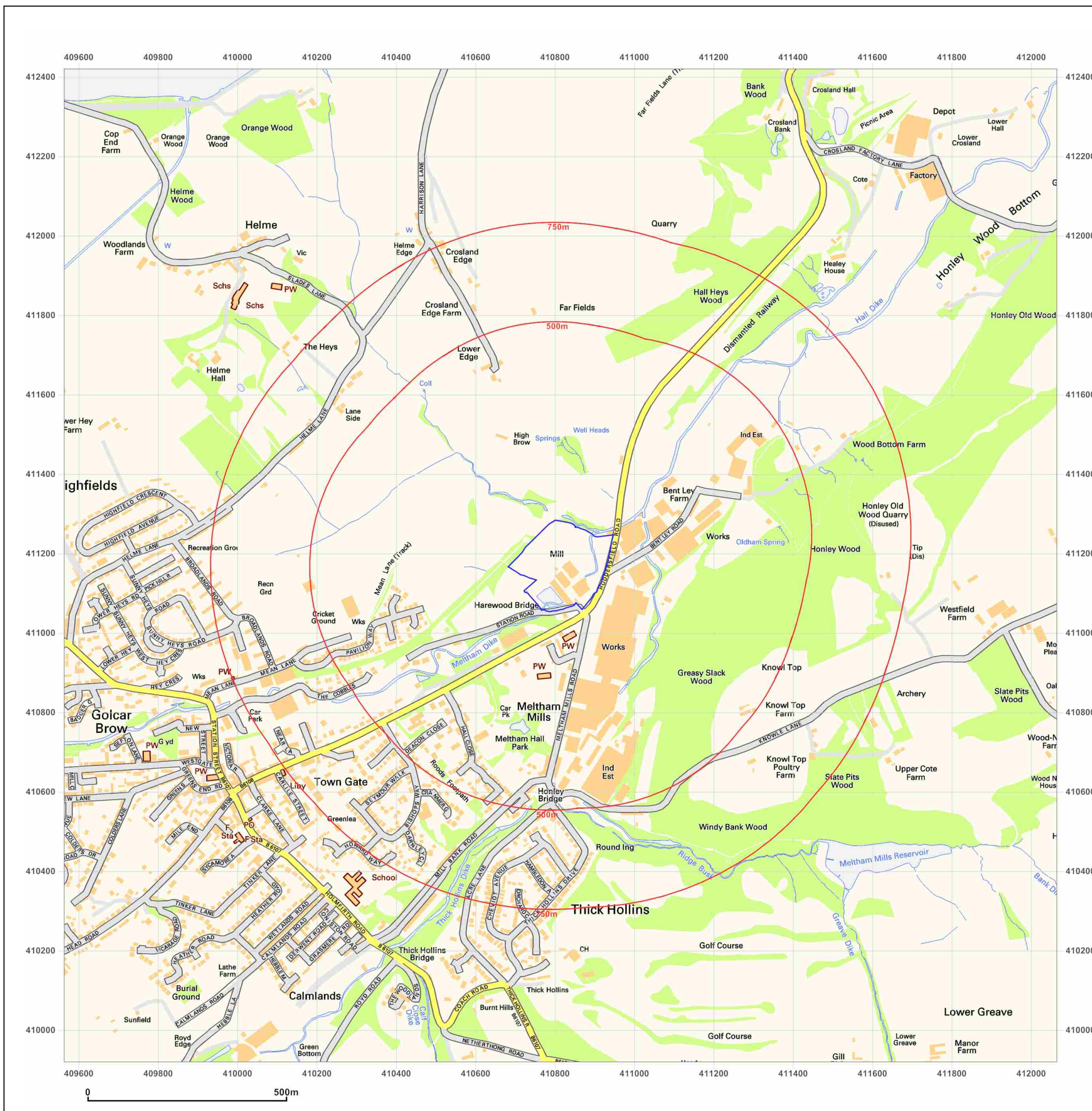


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Production date: 04 October 2018

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Site Details:

HUDDERSFIELD ROAD,
MELTHAM, HOLMFIRTH, HD9
4BU

Client Ref: 7731N
Report Ref: GS-5502713
Grid Ref: 410814, 411169

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



2014

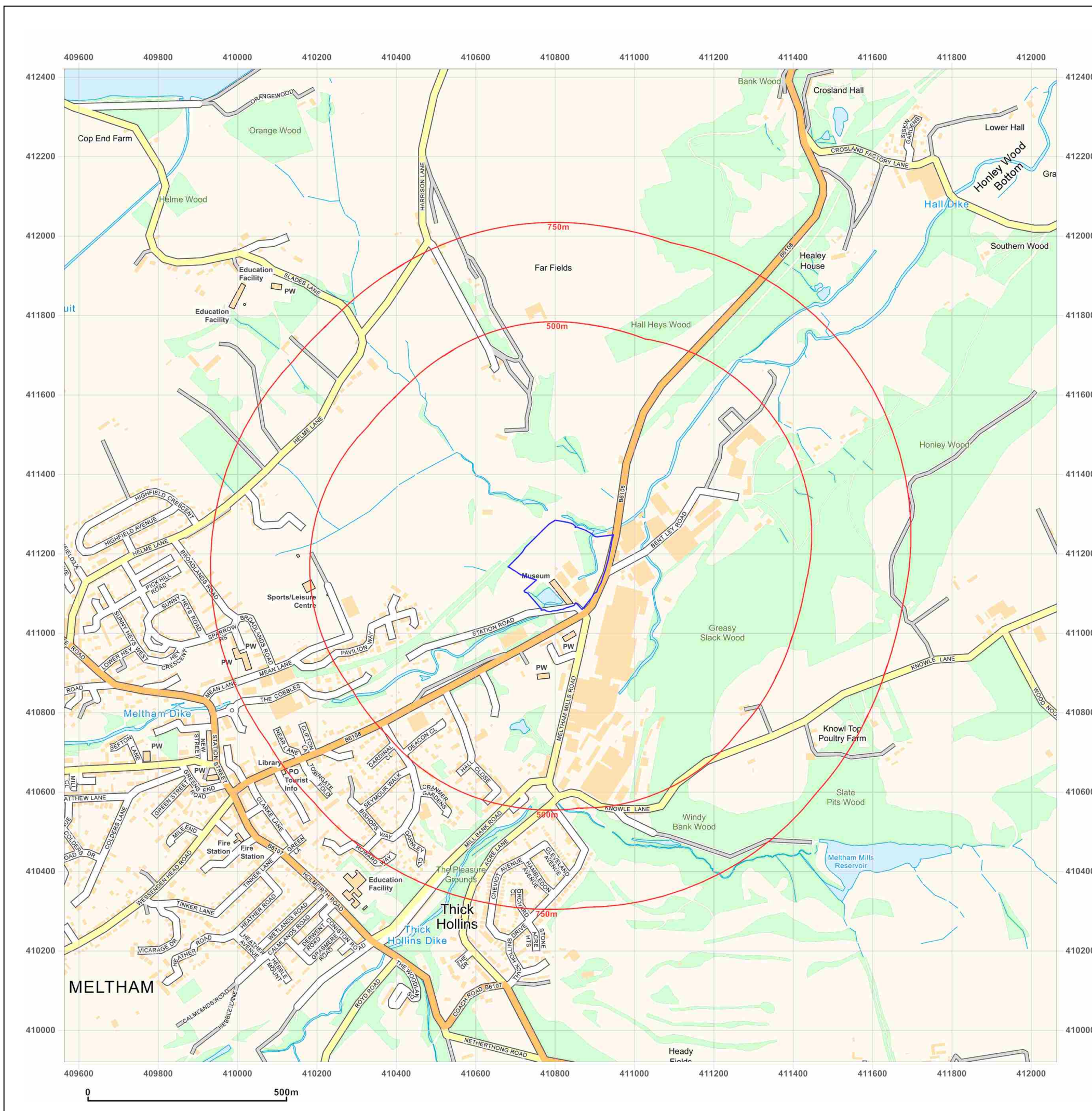


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Production date: 04 October 2018

Map legend available at:
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APPENDIX E

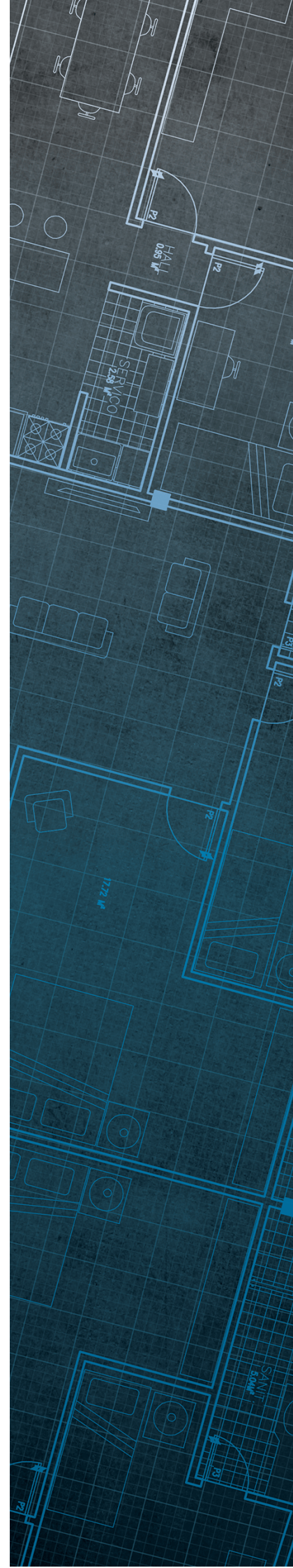


The Coal
Authority

Consultants Coal Mining Report

Huddersfield Road
Meltham
Holmfirth
Kirklees
HD9 4BU

Date of enquiry:	4 October 2018
Date enquiry received:	4 October 2018
Issue date:	4 October 2018
Our reference:	51001954793001
Your reference:	7730N



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

M-EC

Enquiry address

Huddersfield Road
Meltham
Holmfirth
Kirklees
HD9 4BU

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

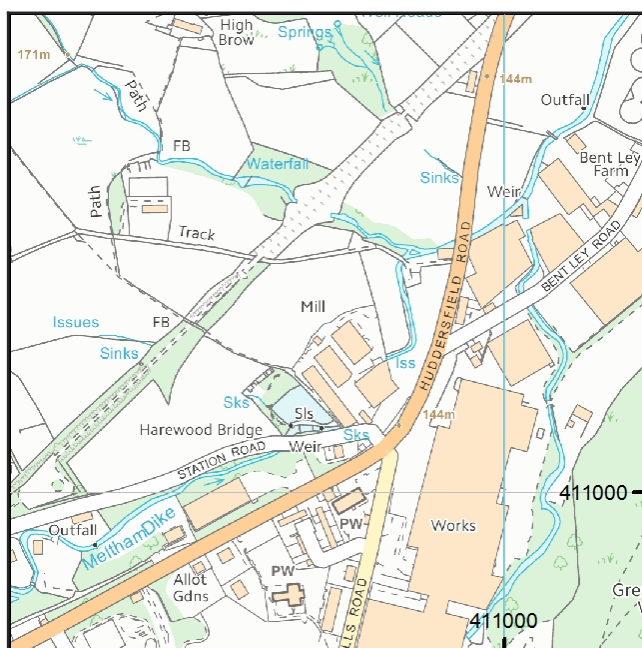
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 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

None available.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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VAT receipt

Issued by	The Coal Authority 200 Lichfield Lane Mansfield Nottinghamshire NG18 4RG
Tax point date	04 October 2018
Issued to	M-EC WELLINGTON HOUSE LEICESTER ROAD IBSTOCK LEICESTERSHIRE LE67 6HP
Property search for	HUDDERSFIELD ROAD MELTHAM HOLMFIRTH KIRKLEES HD9 4BU
Reference number	
Date of issue	04 October 2018
Cost	£106.79
VAT @ 20%	£21.36
Total received	£128.15
VAT registration	

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
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Road Safety

Flood Risk & Drainage

Structures

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