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KEYLAND DEVELOPMENTS LTD

NORTH BIERLEY PHASE 2 LAND

PHASE 1 GEOENVIRONMENTAL DESK STUDY

JUNE 2021

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PHASE 1 GEOENVIRONMENTAL DESK STUDY

JUNE 2021

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DRAWINGS	TITLE	SCALE
LD10258-001	Site Location Plan	1:20,000
LD10258-002	Site Plan Aerial	1:2,500
LD10258-003	Geological and Mining Site Features Plan	1:1,750
LD10258-004	Shaded Relief Map	1:1,750
LD10258-005	Slope Map	1:1,750

1 EXECUTIVE SUMMARY

1.1.1 This executive summary forms part of the overall report and should not be considered in isolation.

Table 1.1 Executive Summary	
Site location	The site is located at the southern extent of the former North Bierley Wastewater Treatment Works (WWTW), adjacent to the junction of the M606 and M62 motorways at National Grid Reference E418097, N427124.
Current Use and History	Since prior to 1854 the site has been recorded as greenfield. By the 1890's the site was occupied by a coal pit with spoil heaps and tramways. By the early 1900's part of the site was occupied by part of the wider North Bierley Sewage Works to the north. By the 1970's the part of the sewage works located on-site is recorded as the North Brierly Bierley Water Pollution Control Works and infilling is indicated within the south western section of the site. It is understood that the Water Pollution Control Works on-site ceased operation in 2010. The site has been derelict to the present day.
Adjacent land uses	The site is bound by the Hunsworth Beck to the east, the M62 motorway to the south, and M606 motorway to the west. At the time of writing earth-works are being undertake at the land immediately to the north of the site.
Anticipated Ground Conditions	Previous site investigation works at the site have identified between 0.3m and 8.4m of Made Ground, underlain by residually weathered bedrock comprising firm to stiff, sandy, gravelly Clay to depths of between 6m and 12m bgl, which were in turn underlain by mudstone interbedded with siltstone to depth of between 15.8m and 24m, underlain by sandstone (Clifton Rock) to depths of between, at least, 31.5m and 35m bgl.
Groundwater Vulnerability	The site is underlain by superficial deposits and solid strata that are both classified as Secondary A Aquifers.
Mining	The site lies within a Coal Authority Development High Risk Area and there are recorded and evidence for unrecorded shallow coal mine workings beneath and within the immediate vicinity of the site. Three mine entries are also recorded at the site.
Contamination Issues	Potential contamination issues from previous land use and existing on and off-site land uses. Previous WA investigations did not identify any contamination in soils that exceeded commercial screening criteria. Elevated concentrations of nickel, total petroleum hydrocarbons and polycyclic aromatic hydrocarbons were detected within groundwater.
Preliminary Conceptual Model and Risk Assessment	Low to moderate environmental risk to Human Health and Controlled Waters. A low to moderate risk from ground gas is envisaged.
Geotechnical Issues	Overall Moderate risk to the proposed development. Includes shallow coal mining setting, unknown ground conditions, made ground, settlement, slope stability, groundwater, aggressive ground, compressible soils and weathered bedrock, obstructions / live services, expansive soils, collapse compression, buried highwalls and rock weathering.
Recommendations	Further site investigation is recommended to further quantify contamination and geotechnical risks as previous investigations were of limited extent and did not investigate all areas. If they have not been undertaken previously, then a flood risk assessment and ecological surveys are recommended.
Overall Risk	Based on the information summarised within this report the site is considered to present an overall Moderate risk .

2 INTRODUCTION

2.1 Instruction

2.1.1 This report has been prepared in accordance with instructions issued by Keyland Developments Ltd, via email correspondence dated 31st March 2021 from Mr Matthew Turnbull of Keyland Developments Ltd. 2 Bond Court, Leeds, LS1 2JZ. The work follows a proposal (JC/LD10225-001) and the work has been carried out in accordance with the terms of engagement; both dated 15th February 2021.

2.2 Site Location

2.2.1 The site is located at the southern extent of the former North Bierley Wastewater Treatment Works (WWTW), as indicated on the site location plan, Drawing No. LD10258-001 (1:20,000 Scale) and LD10258-002 (1:2,500 scale). The site is located approximately 6km south of Bradford city centre, adjacent to the junction of the M606 and M62 motorways at National Grid Reference E418097, N427124. The site comprises c. 6.82Ha of derelict land and is bound by Hunsworth Beck to the east, the M62 motorway to the south, the M606 motorway to the west and the former North Bierley WWTW to the north (at the time of writing significant earthworks and redevelopment were underway at this location).

2.3 Background

2.3.1 Wardell Armstrong (WA) previously undertook desk study and site investigation works (see Section 7.0) for the proposed commercial development of the wider North Bierley WWTW and this also covered the site. Planning permission and development works have since begun at the land of the former North Bierley WWTW to the north, but the southern extent of the North Bierley WWTW (the site) was retained for possible future development.

2.3.2 We understand that planning permission is now being sought for the site and an updated Phase 1 report is now required that builds upon the existing information together with any new information that may be available from key agencies (e.g. Local Authority and / or Environment Agency). This information is to be used so that the conceptual site model and subsequent risk assessments can be updated, the main constraints to development can be identified, and the report undertaken in line with recent guidance (e.g. Land Contamination Risk Management).

2.4 Scope and Objectives

2.4.1 The purpose of the desk study is to provide an updated desk based qualitative assessment of the potential geoenvironmental risks and liabilities associated with the site from a review of previous WA reports and site investigations that have been undertaken at the site and those other sources as outlined in Section 2.7. The scope of the works are as follows:

- An updated review of past and current uses of the site and surrounding area including the nature of any hazards and physical constraints.
- To provide updated information in relation to the sites environmental setting including geology, geochemistry, mining, hydrogeology and hydrology.
- A recent site walkover of the site identifying key environmental and geotechnical abnormal items.
- To identify any aspect of the current site that would require immediate attention (e.g. unstable buildings, insecure fences, hazardous substances accessible to trespassers or likely to be dispersed by wind or water).
- An updated review to identify potential contamination sources, pathways and receptors, including those that could be added in the future, so that an update can be provided to the preliminary conceptual site model.
- To provide an updated qualitative ground contamination risk assessment and a preliminary geotechnical risk assessment to identify any potential stability, contamination constraints and liabilities to the proposed development that may arise in context with the past and present use of the site.
- Updated requirements or otherwise for future studies including a potential intrusive site investigation prior to development and to give an early indication of possible remedial requirements.
- Provide information relevant to workers health and safety and to the protection of the environment during field investigations.
- Identify, if necessary, the need to involve regulatory bodies in intrusive investigations.

2.4.2 This report has been prepared in compliance with BS 5930, BS 10175 and the Land Contamination Risk Management (LCRM).

2.5 Proposed Site Use

2.5.1 It is understood that Keyland are considering the long-term development options for the site and that a commercial / industrial use is envisaged. The current proposed development plan is attached at Appendix G.

2.6 Limitations of Report

2.6.1 The report does not constitute or contain a valuation nor is it a full rigorous environmental audit.

2.6.2 A site walkover visit has been carried out and a reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site or its surrounds that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

2.6.3 The findings and recommendations are considered to be valid and appropriate at the time of preparation and for the specific purpose or purposes intended. Wardell Armstrong LLP will not be liable if any findings are used by third parties, without the written agreement of the company, or if an interpretation is made and action taken without further consultation.

2.6.4 The possibility of significant variation in ground conditions existing on site in comparison to those described within this report cannot be discounted.

2.7 Data Sources

2.7.1 The following sources of information have been reviewed:

- Landmark Envirocheck Report and associated maps, dated 6th May 2021 attached at Appendix A.
- Historical Ordnance Survey Maps.
- Coal Authority online mapping products and databases.
- Coal Authority Coal Mining Consultants Report, dated 6th May 2021 and attached at Appendix F.
- British Geological Society published maps, databases, borehole records and memoirs.
- WA Phase I Environmental Assessment, referenced SH10534-RPT-004, dated November 2017.

- WA Phase II Geo-Environmental Assessment, referenced SH10534-RPT-002C, dated November 2017.
- WA Mining Remediation Strategy, referenced SH10534-REP-003C, dated October 2017.
- Site walkover notes and photographs attached at Appendix C.
- Other Mining Archives including the Mining Instability Study of GB prepared by Ove Arup.
- Zetica Unexploded Ordnance Risk Maps attached at Appendix D.
- Flood maps for planning and long-term flood risk.

2.7.2 A summary of the findings from previous WA site investigations and subsequent ground gas and groundwater monitoring, sampling and testing are included within Section 7.0 and have been incorporated throughout this report. However, it is beyond the scope of this report to undertake a detailed review of the all the previous WA site investigations that have been undertaken at the site.

3 SITE HISTORY AND CURRENT LAND USE

3.1 Site History

3.1.1 Historic maps and previous desk study information have been used to identify previous land uses, including any significant potentially contaminative uses. Where other features that may have an effect on development of the site have been identified, they are described. The history of the site and the surrounding area from 1854 to the current day is presented in Table 3.1.

Table 3.1: Summary of Land Use		
Date	Site Land Use	Adjacent Land Use
1854	The site is recorded as predominantly agricultural fields, with Hunsworth Beck in the very east of the site and Sugden Beck within the southern part of the site. A small stream / ditch is also present within the northern section of the site. Both of which are indicated to flow into Hunsworth Beck.	The site is surrounded by agricultural fields. Hanging Wood is located adjacent to the site to the east. Hunsworth Woollen Mill is located c. 235m south east of the site. The West Riding Union Railway is located 440m south west of the site. Bail Pit and Mill Pit are located 420m and 530m north west of the site respectively and Oakenshaw Mill is located c. 670m North-West.
1893	Sometime between 1854 and 1893, the centre of the site has been occupied by an Old Coal Pit with suspected excavations or spoil heaps. A tramway is also present on-site and extends off-site to the north, south and south-west.	Bail Pit and Mill Pit are no longer identified. Oakenshaw Mill is identified as Oak Mills (Disused). A Mill Stream is recorded 20m north east of the site. Mill Ponds associated with Hunsworth Mill extended to within 50m south east of the site and are shown to overflow into Hunsworth Beck. Valley Pit (Coal and Ironstone) is located c. 60m north of the site, connected to the site via a tramway. Tylor's Lift (Pumping Engine) is labelled 100m south of the site. North Bierley Joint Hospital is recorded 130m west and the Spen Valley Chemical Works is located 220m south west of the site. North Bierley Sewage Works is located c. 210m to the north. Numerous coal and ironstone pits and collieries are recorded within 500m of the site.
1908	Sometime between 1893 and 1908, part of the wider Sewage Works (Bradford Corporation) to the north of the site, is recorded within the north eastern and central eastern sections of the site. To facilitate the above, infilling is indicated to have occurred at the location of the old coal pit and the tramway sidings are no longer recorded.	Valley Pit to the north of the site is no longer identified, however suspected spoil heaps remain. Grove Rope Works is located c. 160m south west of the site. North Bierley Hospital is indicated to be treating infectious diseases. A Rifle Range with targets is recorded c. 500m to the north west of the site. Many of the coal and ironstone pits and collieries

Table 3.1: Summary of Land Use

Date	Site Land Use	Adjacent Land Use
		within 500m of the site are now recorded as disused.
1922	The Old Coal Pit is no longer identified, and the associated tramways are no longer present. However, some of the spoil heaps remain. The Sewage Works has extended into the southern section of the site, with some associated infrastructure also being recorded.	Hunsworth Mill (dyeing and finishing) has expanded significantly and has extended to within 150m south east of the site. Several tanks and chimneys are noted. Old coal shafts are noted at the location of Taylors Lift c. 150m south east of the site.
1938	The sewage works have been further developed, with filter beds and tanks covering the northern section of the site. The infrastructure in the south of the site now includes sludge beds, filter bed, humus tanks, settling tanks, a storm tank and septic tanks. Some earthworks are also indicated to have been undertaken in this area. The stream that crosses the northern section of the site is no longer recorded and has possibly been culverted as indicated by an excavation within this area.	A tramway and a series of filter beds with syphon chambers are recorded 10m north and north west of the site. Several tanks associated with some reservoirs are recorded 130m south east of the site. Several storm tanks, precipitation tanks and general tanks are recorded 210m north of the site.
1958	Sometime between 1948 and 1958, the sewage works infrastructure within the southern section of the site is now listed as a works and the various tanks are no longer labelled as such. 'Sinks' are recorded in the northern section of the site at the location where the stream is suspected to have been culverted. A small structure is recorded within the north westernmost section of the site. The position of Sugden Beck within the southern portion of the site seems to have shifted slightly.	The tramway to the north west of the site is no longer recorded and a bund appears to have been constructed adjacent to Hunsworth Beck. A pond is recorded 130m south east of the site at the location of the former Taylors Pump. The Spen Chemical Works is now listed as a works and the Chain Bar Garage is located 220m south of the site. The North Bierley Hospital is now listed as a geriatrics hospital.
1967	No significant change.	The rope works is now listed as a works.
1973-1974	The works on site is now referred to as North Bierley Water Pollution Control Works, with further filter beds and settling tanks constructed in the north and a large sludge bed within the south easter section of the site. Electricity transmission lines are recorded across the northern section of the site. Most of the infrastructure within the southern section of the site is no longer recorded. Sugden Beck is also no longer recorded and is suspected to have been culverted beneath the site.	The M62 motorway has been constructed along the southern boundary of the site, and the M606 motorway along the western boundary adjacent to the site. Embankments associated within the motorways have resulted in steep slopes along the sites southern and western boundaries. The reservoirs located 40m to the south east and the works and garage to 220m to the south west are no longer recorded. Hunsworth Mills are now recoded as the Hunsworth Dye Works with associated reservoirs and

Table 3.1: Summary of Land Use

Date	Site Land Use	Adjacent Land Use
		tanks being recorded 150m south east of the site. The Sewage Works 200m to the north has expanded with several tanks and is now also recorded as the North Bierley Water Pollution Control Works. Scandinavia Mills and a Plant Hire Depot are recorded c. 500m south east of the site.
1976 -1990	A change in contours by 1976 indicates that significant upfilling of the land within the south western section of the site has occurred.	Sometime between 1976 and 1983 the sewage works to the north are indicated to have extended southwards towards the site. This includes several circular filter beds.
1996	Sometime between 1992 and 1996 several small tanks are recorded adjacent to the filter beds within the central section of the site.	Sometime between 1992 and 1995 Hunsworth Dye Works is indicated to have been partly demolished and or the area redeveloped.
2000-2016	No significant change	The North Bierley Hospital to the west appears to have been partially demolished. Sometime between 2000 and 2006 new buildings have been constructed at the location of the former North Bierley Hospital.
Present day	It is understood that the Water Pollution Control Works ceased operation in 2010. Sometime between 2016 and 2021 the circular filter beds and the small tanks within the centre of the site are no longer recorded. However, the disused filtration tanks, disused filter beds and disused settlement tanks remain. The remainder of the site is unoccupied grassland with several mounds of colliery spoil within its southern section.	The wider sewage works is recorded on mapping until 2021. However, significant earthworks are now being undertaken at the land immediately to the north of the site and little remains of the sewage works.

3.2 Present Site Use

3.2.1 A site walkover was carried out on 29th April 2021 by a WA Engineer. The site walkover notes are attached at Appendix C. The following observations were made for the area:

- The site comprises undeveloped land with a large, grassed mound within its south western section and several smaller mounds within its central section. A disused filter bed complete with filter media and other relict sewage work infrastructure was present within the northern section of the site. Hunsworth Beck lies within the eastern part of the site and flows to the south east.

- The site was mostly grassed with a mixture of young to mature trees along the eastern, southern and western boundaries. Semi-mature to mature trees were noted alongside Hunsworth Beck in the east, along the slope to the south and as isolated thickets along the western boundary. Mature woodland was noted on the opposite side of Hunsworth Beck.
- The site has variable topography but is relatively flat across its northern, central and eastern sections. A steeply sloped mound rising 6-8m from typical site levels is present within the south western section of the site. A steep slope is present alongside Hunsworth Beck in the east and steep slopes are present alongside the motorway embankments that abut the site in the south and west, with the latter encroaching into the westernmost section of the site.
- An L-shaped mound 2-3m high was present within the centre of the site comprising possible colliery spoil (very sandy gravel of shale and mudstone) with several smaller mounds of similar materials immediately to the north and a linear 0.5 – 1m high bund alongside Hunsworth Beck.
- A small green industrial housing unit was noted within the south eastern section of the site that contained a valve. A strong sewage / putrid odour was noted. Small grey industrial housing units were also noted within the southern and south western parts of the site. However, these could not be accessed during the site walkover.
- 2 No. manholes were noted adjacent to the green industrial housing unit noted above. Three outfalls (c. 300mm diameter pipes) that appear to be from beneath the site were noted within the south easternmost section of the site and out falling to Hunsworth Beck. A c. 1.5m diameter above ground pipeline was noted to the north of the site alongside Hunsworth Beck that connects to a suspected pump station. Electricity pylons and transmission lines cross the northernmost section of the site.
- General fly tipping was noted at the land immediately to the south of the site. Some rotten timber sleepers, discarded water pump tubing and gas cannister were noted within the central section of the site.
- A very shallow and subtle elongate bowl-shaped depression is indicated within the central northern section of the site.

3.3 Asbestos

3.3.1 Asbestos was not identified during the site walkover. However, the walkover survey does not constitute an asbestos survey and not all areas of the site may have been visited or made available for inspection. No asbestos was identified in soil samples tested during previous WA site investigations at the site. However, further unrecorded asbestos may be present within structures and Made Ground at the site.

3.3.2 In the event that asbestos is identified in the future or if it is considered that there is a risk that asbestos exists in existing structures, a full asbestos survey should be carried out. Guidance on the need for asbestos surveys and the method of carrying them out are given in HSE Publication HSG264.

3.4 Ecology

3.4.1 Although a site visit has been carried out, this was not specifically for ecological purposes and has not been undertaken by a qualified ecologist. However, no potential ecological features of note were identified during the site walkover. The entire site lies within an area of Adopted Green Belt, and the south eastern extent of the site lies within an Area of Unadopted Greenbelt. The site is classed as a Nitrate Vulnerable Zone. Ancient Woodland is recorded 16m north east, 192m east and 528m north of the site.

3.4.2 There are no other sensitive land uses (e.g. Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, Special Areas of Conservation etc.) within 2km of the site.

3.5 Invasive Plants

3.5.1 Previous reporting for the site noted the presence of Himalayan balsam, Japanese knotweed and cotoneaster for the wider site alongside the Hunsworth Beck corridor. However, invasive plant species were not identified on site at the time of the site walkover, but the survey was not specifically for ecological purposes, was not undertaken by a trained ecologist and most of the corridor alongside Hunsworth Beck was relatively inaccessible.

3.6 Archaeology

3.6.1 Nothing of archaeological importance was identified during the site walkover and no archaeological features or heritage assets (e.g. listed buildings, scheduled monuments, or sites) have been noted for the site from historical mapping or from available Historic Environment Records.

3.6.2 However, the desk study and site walkover are not for archaeological purposes and it is recommended that specialist support is sought during the design of any future re-development. The former coal pit and mine shafts that were recorded at the site may be of industrial archaeological interest.

3.7 **Environmental Management**

3.7.1 As the site is non-operational, no issues relating to environmental management were identified during the site visit. Some minor fly tipping was observed within the central section of the site.

4 GEOLOGICAL AND HYDROGEOLOGICAL INFORMATION

4.1 Geology

4.1.1 The assessment of the geology of the site is based on the published geological mapping (Sheets Yorkshire 231NE and 232NW Solid and Drift Editions, 1:10,560 scale) supplemented by the geological memoir, topographical plans and a site visit. Online data from the British Geological Survey (BGS) has been researched and borehole records included at Appendix B.

4.1.2 A summary of relevant geological information is provided in Table 4.1. This information has been supplemented by information contained within the Envirocheck Report.

Table 4.1 Summary of Relevant Geological Data	
Strata	Description
Made Ground	Made Ground is recorded across the south western and eastern sections of the site. Previous WA site investigations at the site have identified Made Ground to depths of between 0.3m and 8.4m bgl that predominantly comprises colliery spoil like materials. An area of worked ground is also recorded on BGS maps within central northern section of the site.
Superficial Deposits	Superficial deposits are recorded to be absent across most of the site. However, Alluvium (clay, sand and gravel) is recorded across the eastern part of the site (a limited thickness is envisaged) and alongside Hunsworth Beck.
Solid Geology	The solid geology is described as the Pennine Lower Coal Measures Formation that comprises interbedded grey mudstone, siltstone and pale grey sandstone with more numerous and thicker coal seams in the upper part. The Clifton Rock (sandstone) is recorded to outcrop within the eastern section of the site.
Geological Structures	No faults are recorded at the site. An underground fault within the Black Bed Coal is recorded c. 35m north east of the site. The site is bound to the north, east, south and west by a series of interconnecting faults that form a fault block. The nearest of the faults is located c. 320m to the south west. A shallow rock dip of c. 2° to the east is indicated.
Other Linear Features	The Shertcliffe Coal is recorded to outcrop within the south easternmost section of the site c. 95m to the south west on the other side of the valley. The CA also have records of a coal seam outcropping at the site (Whinmoor Coal). Those coal seams above the Shertcliffe Coal and all the way to the Top Lousey Coal are also noted to outcrop between 65m and 280m to the north east of the site in the steep valley side that is present to the north east. Due to topographical effects it is likely that erosion has removed many of these coal seams from the geological sequence that is present beneath the site. However, older coal seams in the stratigraphic sequence may be present at shallow depth beneath the site. Further information regarding coal is outlined in Section 5.

Table 4.1 Summary of Relevant Geological Data	
Geohazards	Maximum Hazard Rating Recorded
Landslides	Low for part of the slopes along the western and southern sections of the site.
Collapsible deposits	Very Low
Compressible deposits	Moderate associated with the Alluvium within the eastern section of the site. The remainder of the site is recorded as very low to no hazard.
Ground dissolution	No hazard
Running sands	Low associated with the Alluvium within the eastern section of the site. The remainder of the site is recorded as very low to no hazard.
Shrinkage/swelling clay	Very Low

4.1.3 There are several BGS Boreholes available on-site and previous WA site investigation works have also been undertaken at the site as outlined in Section 7.0. The following general ground conditions are indicated:

- Made Ground to depths of between 0.3m and 8.4m below ground level (bgl) with the thickest deposits being present beneath the mound within the south western section of the site, underlain by;
- Predominantly firm, becoming stiff, orangish brown, mottled grey, sandy, gravelly Clay with low cobble and boulder content, underlain in places by dense to very dense, angular to subrounded, fine to coarse, clayey Gravel of sandstone (both possibly weathered bedrock) to depths of between 6m and 12m bgl, underlain by;
- Very weak to weak, highly weathered dark grey Mudstone interbedded with and / or grading at depth to weak to medium strong, thinly laminated, grey Siltstone to depths of between 15.8m and 24.0m bgl, underlain by;
- Strong to very strong, slightly weathered, grey Sandstone (Clifton Rock) to proven depth of 31.5m bgl and at least 35.0m bgl where boreholes were terminated.

4.1.4 Possible shallow coal mine workings and coal seams have also been recorded and these are discussed further in Section 5.

4.1.5 Those BGS boreholes recorded at the site encountered groundwater during drilling at depths of between 2.4m and 9.5m bgl. Groundwater monitoring from installations within boreholes from the previous WA investigation at the site record groundwater levels between 1.49m and 9.60m bgl. Based on the groundwater monitoring data

groundwater flows were indicated to be variable within a flow to east and / or south east.

4.2 Hydrogeology

4.2.1 Hydrogeological information indicates that the superficial deposits (Alluvium) within the eastern section of the site are classified as a Secondary A Aquifer. The underlying solid strata is also classified as a Secondary A Aquifer.

4.2.2 There are two groundwater abstraction licences within a 1km radius of the site. The nearest is located 320m southwest (NGR: 417901 426699) and is operated by Cleckheaton & District Golf Club which is licensed to abstract an unspecified amount of groundwater per year for 'Golf Courses: Spray Irrigation - Direct' purposes. None of the other groundwater abstractions relate to sensitive end uses (e.g. potable water).

4.2.3 The site does not lie within a source protection zone.

4.3 Groundwater Vulnerability Classification

4.3.1 The site is recorded to be in an area of combined medium vulnerability, relating to both the superficial and bedrock aquifers. This is an area able to transmit pollution to groundwater.

4.4 Hydrology

4.4.1 The nearest graded surface watercourse is the Hunsworth Beck, which forms the eastern boundary of the site and lies at an elevation of c. 86m AOD, flows towards the south east and is culverted beneath the M62 motorway embankment. The Environment Agency has assigned an overall classification of moderate (2019) and a General Quality Assessment (Chemistry) rating of E (Poor) for this stretch of Hunsworth Beck

4.4.2 Examination of the available data has revealed a single surface water abstraction licences within 1km of the site. This is located 72m north of the site and is operated by Hunsworth Dyeing Company Ltd, which is licensed to abstract an unspecified amount of surface water per year for 'General Industrial' purposes. The license has since been revoked. None of the other surface water abstractions relate to sensitive end uses (e.g. potable water).

4.5 Flooding

4.5.1 To assess the potential flood risk at the site, reference has been made to the flood map for planning and the long-term flood risk information on the Gov.uk website. According to the flood risk map for planning most of the site is located within a Flood

Zone 1 and have a low risk of flooding (less than 1 in 1000 annual probability). The eastern section of the site and an area in the north east alongside Hunsworth Beck are recorded as being in Flood Zone 3 and have a high risk of flooding (1 in 100 or greater annual probability). The north eastern section of the site and a small area alongside Hunsworth Beck are also recorded to lie within a Flood Zone 2 and have a medium probability of flooding (between a 1 in 100 and 1 in 1,000 annual probability).

- 4.5.2 According to the long-term flood risk map most of the site is located in a very low flood risk area where the chance of flooding is less than 0.1%. A linear area, surrounding Hunsworth Beck is located within a high-risk area where the chance of flooding is greater than 3.3%. An area alongside Hunsworth Beck and within the north eastern section of the site are located within medium risk area where the chance of flooding is between 1% and 3.3%. A small area within the north eastern section of the site is recorded within a low-risk area where the chance of flooding is between 0.1% and 1%.
- 4.5.3 The BGS Groundwater Flooding Susceptibility Map shows that the majority of the site is located in area where there is limited potential for groundwater flooding to occur. The eastern and southern sections of the site are located within an area where there is potential for groundwater flooding of property situated below ground level and for groundwater flooding to occur at the surface.

5 MINING AND QUARRYING

5.1 General

5.1.1 Research of the mining setting is based on examination of the published topographical, historical and geological information along with other mining archive information and observations from the previous site investigation. A Coal Authority Consultants Mining Report has been obtained, dated 6 May 2021 and is attached at Appendix F.

5.1.2 Further details on the mining setting of the site are included in our Coal Mining Risk Assessment (ref:LD10258-RPT-002).

5.2 Coal Mining

5.2.1 The south western and central western sections of the site are recorded within a Coal Authority Development High Risk Area where the CA believe that probable unrecorded shallow coal mine workings may be present. A former coal pit was located on-site and historically coal and ironstone pits were numerous within the surrounding area.

5.2.2 The Consultants Mining Report obtained for the site has also identified recorded shallow coal mine workings beneath the site within the Whinmoor Coal (at depths of c. 2m bgl), two untreated mine entries within the central section of the site (although the BGS indicate that a third mine entry is also present) and recorded deep coal mine workings beneath the site within the Black Bed Coal (0.8m thick) at depths of between 58m and 70m and the Better Bed Coal (0.6m thick) at depths of between 96m and 115m bgl.

5.2.3 The Consultants Mining Report also states that there are no current mining activities affecting the site and the site does not lie within influencing distance of any presently known planned future workings. No faults, fissures or breaklines are noted at the site and there is no evidence of recorded surface workings (although former coal pit / opencast is indicated on-site from the Envirocheck Report), CA managed tips, mine gas (although high methane concentrations have been recorded from monitoring wells at the site) or water treatment schemes at the site or within influencing distance of the site. There are also no records of investigative or remedial activity.

5.2.4 During the previous WA site investigation at the site three rotary open boreholes were drilled within the southern section of the site. Possible evidence for shallow coal mine workings were encountered in WA BH6 as well as BGS Boreholes SE12NE912 and SE12NE914 at depths of between 11.3m and 18.5m bgl (between 86.56m and 77.72m

AOD). It is suspected that these may be workings within the Whinmoor Coal Seam and indicate that unrecorded workings may be present within the southern part of the site beyond the extent of the recorded workings within this coal seam. Further unrecorded workings within this coal seam may also be present beneath the site.

5.2.5 BGS Boreholes (SE12NE408, SE12NE410 and SE12NE411) located c. 20m to the west of the site encountered unrecorded workings possibly within the Shertcliffe Coal at depths of between 3.7m and 11.6m bgl (between 96.2m and 89.7m AOD). A comparison of the elevations of the workings to the elevations at the site indicates that the coal seam has likely been eroded out across most of the site. However, there are areas within the westernmost part of the site where unrecorded workings within this seam may also be present. Further unrecorded workings within this coal seam may also be present beneath the site.

5.2.6 Many of the geological and coal mining related features are shown on Drawing LD10258-003 and further detailed information and assessments (including abandonment plans) can be found within the WA CMRA that has been produced for the site (ref:LD10258-RPT-002).

5.3 Other Mining

5.3.1 The site is recorded to lie within a low risk BGS Non-Coal Mining Area where localised small-scale mining may have occurred.

5.3.2 There are three BGS recorded mineral sites located within 500m of the site. The nearest non-coal related site is located 431m north west of the site at Rail Pit, where ironstone is recorded to have been extracted by opencast methods. Other sites relate to the extraction of sandstone from the Clifton Rock. Mining at both locations has now ceased.

5.3.3 Abandonment plan records show that underground ironstone workings are recorded to have been undertaken beneath the site from within the Black Bed Ironstone (1m thick) and possibly the White Mine Ironstone (2.1m thick) that directly overlie the Black Bed Coal. These ironstone directly overlie the Black Bed Coal and were worked alongside this coal via a working method known as 'top slicing' where following systematic extraction the workings were allowed to collapse.

6 ENVIRONMENTAL SETTING AND CONSULTATIONS

6.1 Contaminated Land Register Entries and Notices

6.1.1 Examination of the available data has not revealed any recorded contaminated land entries or notices, on or within 2km of the site.

6.2 Landfill

6.2.1 There are three BGS Recorded Landfill sites recorded within 1km of the site. The nearest is located approximately 532m to the north and relates to Chatts Wood. No other information is provided. The remaining two are located 862m and 994m south west of the site and are both listed as threats to ground and surface water.

6.2.2 There are six Historical Landfill sites recorded within 1km of the site. The nearest is located approximately 316m to the south east and relates to the Hunsworth Dyeing Company. Deposited Waste included inert and commercial wastes between 30th April 1980 and 31st December 1991.

6.2.3 There are three Registered Landfill sites recorded within 1km of the site. The nearest is located approximately 308m to the south east and was operated by Hunsworth Dyeing Company Ltd and is dated 2nd April 1980. The max input rate was recorded as less than 10,000 tonnes per year and included construction and demolition wastes, excavation waste and maximum waste permitted by license. Prohibited wastes were listed as biodegradable / putrescible wastes, poisonous, noxious and polluting wastes. There are no Local Authority Landfill Sites recorded within 1km of the site.

6.2.4 There are features on historical maps and areas of potentially infilled land, which may indicate the presence of unrecorded landfilling activities at and within influencing distance of the site. Several such areas are located on-site and relate to the historical coal pit and unknown filled ground relating to ponds, marsh and streams. Several areas of potentially infilled ground are also recorded within the immediate vicinity of the site; the nearest being 6m to the east.

6.3 Waste Management

6.3.1 A single Registered Waste Transfer site is recorded 689m north west of the site and has been included as it lies upstream of Hunsworth Beck. This is operated by Common Road and Tyres & Co Ltd. and is dated 1st July 1994. The max input rate is noted as less than 10,000 tonnes per year and authorised wastes include inner tubes, rubber dust, scrap bagmomatics and tyres.

6.3.2 There are no Integrated Pollution Control Registered Waste Sites, Licensed Waste Management Facilities, Registered Waste Treatment or Disposal Sites and hazardous substance sites within 500m of the site.

6.4 Environmental Issues

6.4.1 The following environmental issues for the site and surrounding land have been reviewed from the Envirocheck report and those with the potential to have impacted or influences the site are outlined below;

- There are six discharge consents recorded on site that pertain to sewage discharges (Storm Overflow / Storm Tank and Final Treated Effluent) into Hunsworth Beck From the WWTW / Sewage Treatment Works (Water Company) operated by Yorkshire Water Services Ltd and the Bradford Corporation which are now all revoked. There are a further twenty-two discharge consents recorded within 250m of the site. The nearest is 1m north of the site and pertains to sewage discharges (pumping station) into and / or from Hunsworth Beck and operated by the Yorkshire Water Company Ltd.
- There are three pollution incidents to controlled waters recorded at the site, ranging from categories 1 – 3 (Minor – Major). The major incident pertains to sewage (treated effluent) and the minor incident pertains to chemicals (acids). In both instances the receiving waterbody is listed as freshwater stream / river including Spen Beck/ Dean Beck. There are thirteen further pollution incidents to controlled waters, ranging from Minor to Significant, within 250m of the site.

6.4.2 13 No. industrial / commercial land uses are record within 250m of the site and this includes Tanks, Refrigerators & Freezers – Servicing & Repairs, Cosmetic Manufacturers, Freight Forwarders, Distribution Services, Boilers – Servicing, Replacements & Repairs, Boiler Manufacturers, Boxes & Cartons, Lifting Equipment and Transport and finally Storage and Delivery. Most are recorded as inactive, are located downstream of the site and due to more modern working practices are unlikely to constitute significant potentially contaminative sources.

6.4.3 6 No. public infrastructure features are recorded on-site, and this pertains to filter beds, settling tanks, water pollution and control works and sludge beds. A further eleven are noted within 250m of the site, and this includes Weirs, Filter Beds and Water Pollution Control Works.

6.5 Radon

6.5.1 The Envirocheck report indicates that the site is in a Lower probability radon area where less than 1% of homes are above the Action Level. Consequently, no radon protective measures are indicated to be necessary in the construction of new dwellings or extensions.

6.6 Unexploded Ordnance

6.6.1 A Zetica Pre-Desk Study Assessment has been undertaken for the site and it is indicated that the site has not been subject to military activity and that there are no readily available records to indicate that the site was bombed. Consequently, further investigation was not considered essential in this instance. Full details of the assessment are included within Appendix D.

7 PREVIOUS REPORTS

7.1.1 Previous WA reporting that has been undertaken for the wider North Bierley WWTW are summarised below.

URS Corporation Ltd. Phase I Environmental Site Assessment, October 2006

7.1.2 A Phase I Environmental Site Assessment was carried out by URS Corporation Ltd in November 2006 (report ref. 44320048). At the time of writing the wider North Bierley WWTW site was still operational. Site specific information from this report has already been included within the preceding sections of the report and has not been repeated here.

7.1.3 The conceptual model identified potential sources of contamination from former on-site operations (e.g. contamination resulting from settlement tanks, sludge beds, organic matter, fuels), nearby off-site operations (e.g. chemical works, rope works, cotton mill, mills, garages, coal pits etc.) and Made Ground.

Wardell Armstrong Phase II Geo-Environmental Assessment, June 2012 (revised November 2017)

7.1.4 Within the wider North Bierley WWTW site, a total of seven cable percussion boreholes, three of which had rotary follow-on, ten window sample boreholes and nineteen trial pits were completed. Observations from the intrusive works confirmed the presence of relatively homogenous Made Ground to depths of between 0.15m and 8.40m for the wider site.

7.1.5 The geology of the wider site was relatively homogenous and comprised made ground (up to 8.4m bgl to the south of the site) underlain by soft to stiff, orange-brown mottled grey, sandy, gravelly clay with occasional layers of very sandy, very clayey Gravel; both of which were believed to be representative of weathered bedrock, which were in turn underlain by weak to moderate strong mudstone and sandstone of the Pennine Lower Coal Measures Formation.

7.1.6 Soil and groundwater samples were tested for a suite of potential contaminants. The soil concentrations for all contaminants were below their respective GAC for a commercial land use. In addition, no asbestos fibres were detected in soil samples.

7.1.7 Exceedences of nickel, total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH) were identified in groundwater sampled and tested from BH5 and

BH6, which were present within the south western section of the site. At these locations groundwater was recorded at depths of between 7.41m and 9.60m from within the suspected weathered bedrock strata. Groundwaters from the wider site also recorded concentrations of chromium, chromium VI and cadmium that exceeded their screening values.

- 7.1.8 Previous WA site investigations and monitoring have recorded high concentrations of methane (max. 34.6% v/v) at the location of BH5, but flow rates were typically low (up to 0.2 l/hr). A gassing regime of Characteristic Situation 2 (CS2) was attributed at the site, compared to CS1 across the wider site.

Wardell Armstrong Mining Remediation Strategy, Revised November 2015

- 7.1.9 A Mining Remediation Strategy was carried out by WA in November 2015 relating to the wider site, site specific information from this report has already been included within the preceding sections of the report and updated where relevant.

Wardell Armstrong Phase I Environmental Assessment, November 2017

- 7.1.10 A previous Phase I was carried out by WA in November 2017 relating to the wider site, site specific information from this report has already been included within the preceding sections of the report and updated where relevant.

8 PRELIMINARY CONCEPTUAL SITE MODEL

8.1 Background

8.1.1 Following a review of the information presented in this report a preliminary conceptual site model has been prepared to show the characteristics of the site and show the relationships between possible contaminants, pathways and receptors. Whilst the future uses of the site are not known, the Preliminary Conceptual Site model is based upon an assumed future commercial end use. This should be refined as more detail becomes available on both the proposed end use and the ground conditions present.

8.1.2 Potential sources, pathways and receptors have been identified and the risks associated with possible pollutant linkages outlined in the sections below.

8.2 Potential Sources of Contamination

8.2.1 Based on the desk study information the following potentially contaminative on-site and off-site sources have been identified.

On-site Sources

8.2.2 Potential Sources of Contamination On-Site include:

- Former Sewage Works / WWTW (later the North Bierley Water Pollution and Control Works) that included sludge beds, filter beds and media, a humus tank, settling tanks, storm tank and septic tanks. Possible contaminants include metals, metalloids and their compounds; inorganic compounds; acids / alkalis; asbestos organic compounds; Polychlorinated Biphenyls (PCB's) and other transformer oils; micro-organisms (pathogens); and ground gases.
- Former Coal Pit and associated spoil heaps. Possible contaminants include heavy metals (e.g. lead, zinc, copper, tin, arsenic and cadmium).
- Former tramway and sidings associated with the former coal pit. Possible contaminants include Fuel oils; Lubricating oil; Paraffin; PCB's; PAH's; Solvents; Ethylene glycol; Creosote; Herbicides; Ferrous Residues; Metal fines; Asbestos; Ash and Sulphate.
- Made ground present across the site associated with various contaminants attributable to historical on and possibly off site uses (including asbestos and ground gas). Previous investigations at the site found that soil concentrations for all contaminants were below their respective GAC for a commercial land use at the time of writing. Asbestos fibres were not detected in soils. However,

only limited testing was undertaken and there were areas of the site that have not been investigated (e.g. at the location of the filter bed). In particular the mound that is present within the south western section of the site may have been formed from materials that were located off-site.

- Existing and redundant underground infrastructure beneath the site that is indicated to outfall to Hunsworth Beck within the south eastern section of the site. Includes the industrial housing unit with valve / pump that had a strong putrid / sewage odour. Possible contaminants includes those associated with the former sewage works.
- General fly tipping within the central section of the site. Possible contaminants could include heavy metals and asbestos.
- Discharge consents recorded on-site that pertain to sewage storm overflow discharges and final treated effluent into Hunsworth Beck and Pollution Incidents that pertained to sewage materials (final effluent) and chemicals (acids). Possible contaminants are similar to those for a sewage works noted above.
- The Made Ground, Alluvium and Coal Seams / Coal Mine Workings constitute potential ground gas sources. Previous WA site investigations and monitoring have recorded high concentrations of methane (max. 34.6% v/v) at the location of BH5. However, flow rates were typically low (up to 0.2 l/hr) with Characteristic Situation 2 being indicated.

Off-site Sources

8.2.3 Potential Sources of Contamination off-site include:

- The wider North Bierley Sewage Works (later the North Brierly Bierley Water Pollution Control Works) and that extended northwards from the sites northern boundary. Included filter beds, tanks etc.
- Junction 11 to the adjacent M62 and M606 motorways. Fly tipping was noted at the land immediately to the south of the site and some industrial housing units and manholes were also noted.
- Mill stream and Mill Ponds recorded 50m south east of the site (indicated to have overspilled into Hunsworth Beck adjacent to the site) linked to the Hunsworth Woollen Mill (later dyeing and finishing) that includes numerous tanks located between 150m and 235m south east of the site.

- Numerous coal and ironstone pits and interconnected tramways within the surrounding area; the nearest of which is the Valley Pit (coal and ironstone) located 60m north of the site.
- North Bierley Joint Hospital (treating infectious diseases) recorded 130m west of the site.
- Grove Rope Works (later a works) located 160m south west of the site.
- Spen Valley Chemical Works (later Chain Bar Garage) located 220m south west of the site.
- Surrounding landfills and areas of infilled ground that could constitute an off-site ground gas source. The nearest landfill being located 308m to the south east and the nearest area of infilled land being 6m to the east of the site.
- Registered Waste Transfer Site located 689m to the north of the site (but upstream of Hunsworth Beck).
- Surrounding coal seams and coal mine workings.
- Numerous discharge consents and pollution incidents to controlled waters with the nearest being located 1m north of the site.
- Surrounding current and recent industrial / commercial land uses as outlined in Section 6.3.2.

8.3 Pathways

Human Health

8.3.1 In terms of human health, the main potential exposure pathways are considered to be inhalation of soil dust and vapours / ground gas, dermal contact and ingestion of soils, dust, and waters. However, the viability of these pathways varies as follows:

- Following development of the site there is expected to be an increase in hard-standing areas, which would help to minimise the dermal, ingestion and inhalation pathways (excluding ground gas and vapours).
- Construction workers and to a lesser extent current site users are likely to have acute interaction with soil and materials, so they are likely to be at risk from all three potential pathways whilst working on the site (i.e. dermal contact, ingestion and inhalation).

- Windblown pathways are most likely during construction of the site but will be significantly reduced following development of the site due to the increase in hardstanding areas.

Controlled Waters Pathways – Groundwater

8.3.2 The main pathways by which contaminants are likely to reach groundwaters on-site is through the infiltration of rainwater causing vertical movement through the unsaturated zone followed by vertical and lateral movement of contaminants within groundwater as follows:

- Currently, most of the site is vegetated derelict land with only a limited thickness of clayey and / or sandy topsoil, so vertical migration pathways are likely. During development vertical migration pathways are likely to increase following removal of vegetation and during earthworks. Following development, vertical migration pathways are likely to be significantly reduced from the baseline due to an increase in hardstanding areas and the possible use of low permeability clean cover systems in areas of Public Open Space (POS). Surface waters are also more likely to be captured by drainage before soaking into the ground.
- Due to the predominantly granular nature of the Made Ground materials beneath the site vertical migration pathways are likely. However, the underlying residually weathered bedrock is indicated to be of low permeability, and this is in turn predominantly underlain by mudstone bedrock, so vertical migration pathways at depth are limited.
- Lateral migration would predominate at the interface between the Made Ground and underlying predominantly low permeability bedrock materials. Lateral migration of groundwaters could also occur within any coal mine workings that are present beneath the site and within sandstone layers (e.g. Clifton Rock) that are confined by low permeability strata (e.g. mudstones).
- The groundwater flow direction of any shallow perched waters within Made Ground or Alluvium would be dictated by the geometry of the interface noted above. Based on previous WA groundwater monitoring data a flow to the east / south east is currently envisaged.
- Continuity may be present with shallow perched groundwaters within Made Ground and Alluvium beneath the site and Hunsworth Beck. Based on our current understanding of the site it is unlikely that the deeper groundwaters

within bedrock are in continuity with the shallow groundwaters or Hunsworth Beck.

- Vertical migration of groundwater may occur via the mine shafts or any broken / fractured ground that is present beneath the site. Fractures and other discontinuities may also provide vertical migration pathways.
- Vertical and lateral migration pathways may also exist via historic and future man-made features such as foundations (e.g. piles), underground infrastructure / voids, old drainage channels, excavations and buried services. This includes the existing drainage that is indicated to be present beneath the site.

Controlled Waters Pathways – Surface Water

8.3.3 The main pathway by which contaminants are likely to reach surface water receptors is through surface water run-off / overland flow as follows:

- Most of the site is relatively flat at 90m AOD and will facilitate surface water seeping into the ground before run-off / overland flow. However, there are steep slopes within the western, south western and southern sections of the site and steep slopes off-site to the east that would direct any surface water run-off towards Hunsworth Beck. However, significant leaching of contaminants to surface water features are unlikely.
- A low point at c. 88m AOD exists within the south eastern section of the site, but a similar situation to that outlined above is envisaged.
- The motorway embankments that abut the site to the south and west will also act as barriers to surface water runoff / overland flow from areas off-site. Excavations occurring at the land immediately to the north of the site have likely increased surface water run-off within these areas and this could impact upon the site as it is located downgradient.
- During development of the site surface water run-off is likely to increase due to the removal of vegetation and topsoil. However, management of these surface waters would be required, and this should limit pathways to Hunsworth Beck.
- Following the development of the site it is envisaged that surface water pathways will be reduced as any water will likely to be captured within on-site drainage before they encounter any surface water receptors or soils.

Ground Gas Pathways

- 8.3.4 Ground gas generation of the source is the main factor in the potential for the lateral migration of any ground gases and groundwater itself can sometimes facilitate lateral migration of dissolved ground gases. Ingress and accumulation then occurs once the ground gas has reached a valid receptor (e.g. a building). Inhalation is the main pathway for human health receptors.
- 8.3.5 Ground gas pathways are likely to be similar to those envisaged for groundwaters. The mine shafts could act as a direct pathway for the vertical migration of ground gas from underlying coal seams and / or abandoned coal mine workings. Any broken ground and / or fractures within bedrock, either resulting from workings or naturally occurring, could also provide pathways. However, for the latter, the residually weathered bedrock is of low permeability and would likely prevent the vertical migration of ground gas from underlying coal seams / workings.
- 8.3.6 Vertical migration of ground gases from the Made Ground and Alluvium are viable pathways due to their shallow depth.
- 8.3.7 Lateral migration of ground gases could also occur within coal mine workings and this could facilitate the migration of ground gas from workings located off-site if interconnected.
- 8.3.8 Vertical and lateral migration pathways may also exist via historical and future man-made features such as foundations (e.g. piles), underground infrastructure / voids, old drainage channels, excavations and buried services.

Fauna and Flora

- 8.3.9 The main pathways include ingestion and root uptake.

8.4 Receptors

- 8.4.1 Several sensitive receptors have been identified.

Human Health

- 8.4.2 Human health receptors include current site users, future site users / occupiers, construction workers, and the general public / adjacent site users. In most instances the most sensitive receptor would be an adult.

Groundwater

- 8.4.3 Groundwater receptors include the superficial and bedrock Secondary A Aquifers that are present beneath the site. Groundwater has been recorded at the site at depths of between 1.5m and 9.6m bgl (between 87.5m and 85.90m AOD) from within the residually weathered bedrock.
- 8.4.4 Exceedences of nickel, total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH) were identified in groundwater sampled and tested from BH5 and BH6, which were present within the south western section of the site. At these locations groundwater was recorded at depths of between 7.41m and 9.60m from within the suspected weathered bedrock strata. Groundwaters from the wider site also recorded concentrations of chromium, chromium VI and cadmium that exceeded their screening values.
- 8.4.5 Only one groundwater abstraction is noted within 1km of the site, and it is not considered to be overly sensitive.
- 8.4.6 The superficial Secondary A Aquifer is indicated to be of limited later and vertical extent. The bedrock Secondary A Aquifer is also indicated to comprise several minor aquifers restricted to individual high permeability strata (e.g. sandstone beds) and separated from each other by low permeability strata (e.g. mudstone). Consequently, groundwater tables are likely to be perched and isolated from one another.

Surface Water

- 8.4.7 Hunsworth Beck is considered to be the most sensitive surface water receptor due to its immediate proximity to the site and that it is a graded watercourse. However, the EA have assigned an overall classification of moderate and a General Quality Assessment (Chemistry) rating of E (Poor).
- 8.4.8 Two surface water abstractions are noted within 1km of the site, but none of them are considered to be overly sensitive.

Building and Services

- 8.4.9 Historic, current and future buildings and service infrastructure (including those adjacent to the site) are also potential receptors.

Fauna and Flora

- 8.4.10 Vegetation and other wildlife noted at the site.

9 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

9.1 Introduction

- 9.1.1 In line with EA guidance Land Contamination: Risk Management June 2019 (LCRM) the information gather throughout this report can be used to carry out a Preliminary Qualitative Risk Assessment.
- 9.1.2 The CIRIA document Contaminated Land Risk Assessment – a guide to good practice C552, 2001 defines the Consequence of Risk, Probability of Risk Being Realised and Risk Classification Definition. These definitions are provided in Appendix E and are used to provide a preliminary qualitative risk assessment for each identified source, pathway, receptor linkage.
- 9.1.3 The combined CSM and preliminary qualitative risk assessment for each identified source, pathway, receptor linkage can be found in the Table 9.1 below:

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Re- realised* ²	Risk Rating	Necessary Actions / Commentary
Potential contamination in soil/groundwater originating from the following on-site sources: 1. Former Sewage Works 2. Made Ground present across the site 3. Former Coal Pit 4. Former tramway and sidings 5. Existing above ground and underground infrastructure. 6. General fly tipping 7. Discharge consents and pollution incidents.	Human Health (inhalation, dermal contact, and ingestion).	Future site users	Medium	Low	Low to moderate (low with mitigation)	No exceedences of commercial screening criteria from previous site investigation. However, limited testing was undertaken. Further intrusive investigation is recommended to determine the nature and potential contamination within areas not investigated during the previous SI, including the area beneath the former filter beds in the north of the site and the area of the former coal pit in the centre of the site. As part of these works an updated contamination assessment should be undertaken that incorporates all the previous works so that the risks can be confirmed. Mitigating measures may be required to protect future site users if contamination is identified, and this would likely include clean cover systems within areas of soft landscaping as a minimum. Increased risk to construction workers due to acute interaction with soils. Risk to construction workers can be managed through the use of appropriate and safe working procedures and the use of appropriate PPE. Risk to off-site users can be managed by undertaking development works in accordance with a construction environment management plan (CEMP) or similar.
		Current site users	Medium	Low	Low to moderate	
		Construction workers	Medium	Low	Low to moderate (Low with mitigation)	
		Adjacent site users	Medium	Unlikely	Low	

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Re- alised* ²	Risk Rating	Necessary Actions / Commentary
	Controlled waters (migration of groundwater through the ground and surface water run-off/overland flow).	Superficial Secondary A Aquifer	Medium	Low	Low to moderate (Low with mitigation)	<p>Exceedences of contaminants were identified in groundwater from the previous WA investigation from groundwaters within the residually weathered bedrock strata. However, pathways to deeper water bearing strata of greater sensitivity within bedrock (e.g. Clifton Rock) are considered unlikely.</p> <p>Further intrusive investigation is recommended as outlined above for human health and should include groundwater and surface water sampling and testing.</p> <p>During development of the site temporary pathways may be created. These should be identified and managed in accordance with a construction environment management plan (CEMP) or similar.</p>
		Bedrock Secondary A Aquifer	Medium	Unlikely	Low	
		Hunsworth Beck	Mild	Likely	Low to Moderate (Low with mitigation)	
	Buildings / Infrastructure (Direct contact)	Future and existing buildings and water pipes	Mild	Likely	Low to Moderate (Low with mitigation)	<p>A worst-case design sulphate class of DS-2 and Aggressive Chemical for Concrete (ACEC) class of AC-2 has been recorded from previous WA site investigations. Colliery spoil has been identified at the site and has the potential to be aggressive to concrete.</p> <p>Intrusive investigations should be undertaken for the site to obtain further site-specific information, followed by assessment of sulphate class and aggressive chemical for concrete class. If required, mitigating measures could include concrete design to withstand chemical attack and barrier pipe/ductile pipes for water supply pipes.</p>

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Realised* ²	Risk Rating	Necessary Actions / Commentary
	Flora and Fauna	Existing vegetation and potential fauna on site and future vegetation	Minor	Likely	Low	The site is vegetated with grasses and numerous young to mature trees that have developed within potentially contaminated soils. Future vegetation may be planted and come into contact with potentially contaminated soils. Less sensitive plant species may need to be considered.
On-site ground gas sources including: 1. Made Ground / Infilled ground 2. Coal seams and / or coal mine workings 3. Alluvium 4. Relict / redundant sewage works infrastructure.	Buildings (gas / vapour migration, ingress, and accumulation). Human Health (inhalation of vapours)	Future site users	Medium	Low	Low to Moderate (Low with mitigation)	A low to moderate ground gas generation potential is envisaged based on those recorded sources. The main risk being from coal mine workings beneath the site, but pathways are limited (other than mine shafts). Previous ground gas monitoring at the site has recorded high concentrations of methane (up to 34.6%) and low flows (up to 0.2 l.hr) that are indicative of CS2. Ground gas monitoring, contamination testing and intrusive investigations are recommended, followed by an updated ground gas risk assessment based on all the available WA data. Continue ground gas monitoring to facilitate permit surrender. Mitigation measures for new buildings on-site are likely to include ground gas protection. Drilling and grouting and capping of mine shafts to prevent the migration of ground gases from mine workings. Locate structures away from mine shafts.
		Existing and future site buildings	Medium	Low	Low to Moderate (Low with mitigation)	
		Current site users	Medium	Unlikely	Low	
		Adjacent Site Users	Medium	Unlikely	Low	
		Adjacent buildings	Medium	Unlikely	Low	

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Re-actualised* ²	Risk Rating	Necessary Actions / Commentary
Off-site sources including: 1. Former sewage works. 2. Former Hunsworth Woollen Mill 3. Former coal & ironstone pits. 4. Former North Bierley Hospital	Inhalation, dermal contact, and ingestion	Future site users	Medium	Low	Low to Moderate (Low with mitigation)	Risks are similar to those for on-site sources as contaminants from historical surrounding uses may have been deposited at the site (e.g. mound within the south western section of the site). Necessary actions as noted for on-site sources.
		Current site users	Medium	Low	Low to Moderate	
		Construction workers	Medium	Low	Low to moderate (Low with mitigation)	
5. Former Grove Rope Works 6. Former Spen Valley Chemical Works 7. Surrounding landfills and infilled ground. 8. Discharge consents and pollution incidents	Migration of groundwater through the ground and surface water run-off/overland flow to those receptors beneath and at the site	Superficial Secondary A Aquifer	Medium	Low	Low to moderate	In most cases migration of contaminants to the site via surface water / overland flow is unlikely due to the presence of physical barriers (e.g. motorway embankments) and that interception by local drainage in developed areas is likely to occur. Those sources downstream of Hunsworth Beck (i.e. to the south) are unlikely to have impacted the site. Any groundwater contamination from those sources immediately to the north of the site could have migrated to the site via surface water run-off / overland flow. Lateral migration of contaminated groundwater already the ground may have occurred. Necessary actions as noted above for on-site sources.
		Bedrock Secondary A Aquifer	Medium	Unlikely	Low	
		Hunsworth Beck	Mild	Likely	Low to moderate	

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Re-actualised* ²	Risk Rating	Necessary Actions / Commentary
9. Surrounding current and industrial / commercial land uses. 10. Coal seams and coal mine workings 11. Registered waste transfer site	Direct contact	Future and existing buildings and water pipes	Mild	Likely	Low to Moderate (Low with mitigation)	Risks are similar for those on-site sources as contaminants from historical surrounding uses may have been deposited at the site in areas of unknown fill. Necessary actions as noted for on-site sources.
Other off-site ground gas sources including: 5. Potential areas of infilled land 6. Made Ground. 7. Landfills 8. Alluvium 9. Coal seams / workings	Buildings (gas / vapour migration, ingress and accumulation). Human Health (inhalation of vapours)	Future site users	Medium	Low	Low to moderate (Low with mitigation)	A low to moderate ground gas generation potential is envisaged for those viable off-site sources, so the risk from explosion and hence the consequence are reduced. Furthermore, large open spaces are envisaged for a commercial / industrial development. Those ground gases sources located upgradient of the site are unlikely to impact upon the site. Pathways for ground gas to the site from off-site sources are dependent on the permeability of the strata, which are indicated to be predominantly of low permeability.
		Current site users	Medium	Unlikely	Low	
		Existing and future buildings	Medium	Low	Low to moderate (Low with mitigation)	

Table 9.1: Preliminary Qualitative Environmental Risk Assessment

Source / Contaminant	Pathways	Receptors	Consequence of Risk Being Realised* ¹	Probability of Risk Being Re-actualised* ²	Risk Rating	Necessary Actions / Commentary
<p>Notes</p> <p>*¹ Considers both the potentially severity of the hazard and the sensitivity of the receptor. Where applicable, the most sensitive receptor / hazard has been used for the overall assessment.</p> <p>*² Considers both the presence of the hazard and the integrity of the pathway. Where applicable, the most likely hazard / pathways have been used for the overall assessment.</p>						

10 PRELIMINARY GEOTECHNICAL RISK ASSESSMENT

- 10.1.1 It is a requirement of the National Planning Policy Framework (NPPF) Clause 121 for a site potentially at risk from ground instability to be assessed. Consideration has been given to the risk of potential causes of ground instability arising from the ground conditions present at the site.
- 10.1.2 Those risks pertaining to ground instability identified from the desk study information are outlined in Table 10.1 on the following pages.
- 10.1.3 It should be noted that this list is not exhaustive and has been included to provide preliminary guidance on the most likely geotechnical hazards that are present at the site. Any recommendations / comments made are based on publicly available data and are of a general / conservative nature in the absence of site-specific information. Comments should be treated as preliminary until such a time as the ground conditions have been clarified in more detail following suitable site investigation works.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Shallow Coal Mining	Shallow workings that do not have sufficient overlying strata have the potential to reach the surface and cause damage to foundations, external areas and services. Untreated mine shafts may also result in catastrophic collapse and / or settlement.	<ul style="list-style-type: none"> The site lies within a CA Development High Risk Area and in an area where shallow recorded coal mine workings and mine entries are present. There is also evidence for unrecorded shallow coal mine workings beneath the site as outlined in Section 6. 	Moderate to High	A Coal Mining Risk Assessment is required to quantify the risk. Rotary boreholes should be undertaken to approx. 30m to further assess the potential for unrecorded shallow coal mine workings at the site and to delineate those possible workings already identified. Trial trenching to locate the positions of the mine entries and delineate any unrecorded opencast features. Mitigation measures could include raft foundations, grouting and / or taking piled foundations beyond the depth of the coal.
Unforeseen Variable Ground Conditions	Ground related risks are one of the major causes of delays on construction projects and can result in significant additional costs if geotechnical abnormal items are not identified.	<ul style="list-style-type: none"> Inherent variability envisaged due to the presence of a former coal pit in the centre of the site, with unknown depth and infill and the presence of large mound within the south western section of the site. The ground below the filter beds in the north of the site has not yet been investigated. Natural superficial deposits and bedrock are recorded as being variable and previous WA site investigations indicate that a residually weathered bedrock profile is present. 	Moderate	Intrusive site investigation should be undertaken, for parts of the site not covered during previous WA investigations including below the former filter beds and the area of the former coal pit, to establish ground conditions and geotechnical properties.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Made Ground and Total Settlements	Made Ground in particular may settle variably, have poor bearing capacity and may suffer significant movements due to loading and cases other than imposed loading (e.g. self-weight settlement or collapse compression). This would be problematic for foundations, external and infrastructure elements	<ul style="list-style-type: none"> Numerous colliery spoil heaps and areas of infilled ground are indicated for the site and the site has been subject to various site usages that could have resulted in Made Ground being present at the site. BGS maps indicate that Made Ground is present at the site and previous WA site investigation identified variable Made ground throughout the site between 0.3 and 8.4m in thickness. 	Low to Moderate	Further site investigation should be undertaken to establish ground conditions and geotechnical properties. Ground improvement may be required to improve the load carrying characteristics of the Made Ground. Piled foundations with suspended floors or rafts may be required for structures that are sensitive to small movements. Surcharging or removal of Made Ground may also be an option if not too deep. If significant settlement is envisaged then settlement calculations, mini zone load tests and / or monitoring to quantify settlement risk.
Slope Stability	Damage by slope failure can occur through the removal of supporting ground from under structures, externals or services or by the movement of material onto property. Large landslides can be catastrophic.	<ul style="list-style-type: none"> Although the majority of the site is relatively flat, a steeply sloped mound rising 6-8m from typical site levels is present in the south-west of the site and steep slopes are present within the westernmost section of the site, alongside Hunsworth Beck and adjacent to the sites southern boundary; all of which are indicated to comprise Made Ground. Envirocheck data indicates that the maximum landslide risk at the site is low. 	Low to Moderate	Intrusive investigation of the mound and the slope within the westernmost section of the site to determine constituents. Slope stability assessment to quantify the risk and to inform development layout and / or to allow for mitigation measures to be implemented. Avoid large amounts of water entering the ground through pipe leakage or soakaways. Do not undercut or place large amounts of material on slopes without technical advice.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Groundwater	Specific problems relate to water ingress into open excavations that may result in instability and collapse. Capillary rise in embankments may also cause instability problems. Softening of sub-grade material may occur. Reduced bearing capacity for some types of foundations. Sub artesian groundwater may cause issues for deep piled foundations. Groundwater levels may vary seasonally and change following any changes to site levels.	<ul style="list-style-type: none"> • Previous ground investigation at the site recorded groundwater at depths of 1.5m and 9.6m bgl (between 87.5m and 85.90m AOD) • The site lies within an area where the BGS state that there is potential for groundwater flooding to occur at the surface and for properties constructed below ground. 	Low to Moderate	Groundwater control measures during excavations, particularly in proximity to Hunsworth Beck and in the south of the site (e.g. dewatering / barriers). Drainage and foundation designs that consider groundwater conditions. Groundwater monitoring to be carried out.
Aggressive Ground	Acidic ground and sulphates / sulphides in soil and rock may degrade the concrete and steel used in foundations.	<ul style="list-style-type: none"> • A worst-case design sulphate class of DS-2 and Aggressive Chemical for Concrete (ACEC) class of AC-2 has been recorded from previous WA site investigations. Colliery spoil has been identified at the site and has the potential to be aggressive to concrete. 	Low to Moderate	Further intrusive investigations should be undertaken, particularly for those areas that have not been previously investigated, followed by further assessment that incorporates all WA data to confirm the above. Mitigating measures could include concrete design to withstand chemical attack and barrier pipe / ductile pipes for water supply pipes.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Compressible Natural Soils / Rock	Some types of ground may undergo volume reduction over time if loaded or if the groundwater level changes. This may lead to excessive settlement of the ground and damage to overlying buildings, externals, pipes or services by differential settlement.	<ul style="list-style-type: none"> • Envirocheck data indicates that the maximum compressible ground risk at the site is moderate and that this is associated with the Alluvium within the eastern section of the site. However, the alluvium is indicated to be of limited extent and thickness, so the risk is reduced. • Residually weathered bedrock is recorded beneath the site at shallow depth and is indicative to be of medium compressibility from previous WA investigations. However, only a single sample was tested. 	Low to Moderate	In the first instance, further consolidation / settlement tests using laboratory and field methods to quantify the risk. Otherwise see recommendations for Made Ground and Total Settlements.
Obstructions / Live Services	Man-made obstructions in the form of buried structures or services may be present. Obstructions may delay site investigation works and affect subsequent design and construction (e.g. piling). Damage to a buried structure may create hazards by instigating collapse or by releasing these liquids or gases leading to other issues. Some services may have easement requirements.	<ul style="list-style-type: none"> • Due to the historical development that has occurred at the site, obstructions are likely to be present such as relict foundations (e.g. at the location of the filter beds) and redundant infrastructure that is indicated to be present. • Services are indicated to be present beneath the site and this includes gas, electricity, a foul sewer, overhead powerlines and surface water. 	Low to Moderate	Probing may be required for some types of foundations if significant obstructions are present that cannot be removed. A utilities search and / or survey should be undertaken to locate possible live services. Establish easement requirements.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Expansive Soils (Shrink / Swell)	Some types of ground can change volume due to changes in moisture content induced by weather variations, vegetation, or man-made activities. This shrink / swell behaviour typically causes significant ground movement to a depth of approx. 3m that can potentially damage building foundations, externals, pipes, or services by differential movements.	<ul style="list-style-type: none"> • Envirocheck data indicates that the maximum risk from shrink / swell at the site is very low. • Previous investigations at the site indicate that the cohesive Made ground and Natural strata at the wider site is of low to moderate shrinkage potential. • There are trees recorded on site, which have the potential to cause shrinkage of soil. 	Low to Moderate	Local deepening of foundations near to trees may be required. Consideration may also need to be given to external hard-standing areas and services to avoid differential movements if expansive soils cannot be avoided or removed. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management.
Rock Weathering	Generally, the top few metres of bedrock are weathered with engineering properties very different from those of the underlying fresh rock. Weathering subjects the ground to a series of physical and chemical process. These can include stress fluctuations, volume changes, oxidation and reduction which can result in reduced strength, loss of structure, leaching of minerals, growth of new minerals and reduced confining pressure. This variability can be problematic for foundations.	<ul style="list-style-type: none"> • During previous investigations at the site superficial clay was encountered down to a maximum depth of 10.5m, which was interpreted as weathered bedrock indicative of an extensive weathered zone. 	Low to moderate	Important to determine depth and nature of the weathered zone as foundations may have to be taken deeper if a weathered zone is encountered and / or specialist ground improvement may be required. Significant changes to design and construction may be required during the works.

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
Buried Highwalls	Severe differentials settlements can occur if buildings are constructed over buried highwalls to former excavations. In particular placing a building partly on the natural ground and partly on fill.	<ul style="list-style-type: none"> A BGS Recorded Mineral Site is located on-site that pertains to opencast operations where coal was worked. OS historical mapping and Envirocheck data also indicates that potential excavations / extractive operations with subsequent backfilling (noted as infilled land or extractive industries) are associated with the old coal pit that was recorded on-site between 1854 and 1893 and disused sometime between 1908 and 1922. 	Low to moderate	Site investigation works to determine if any buried highwalls are present and to determine the properties and geometry of the fill so that exclusion zones can be delineated. In the first instance avoid building over a buried highwall. If construction over a buried highwall cannot be avoided then piled or raft foundations may mitigate against any unacceptable movements and reduce the extent of any exclusion zones. Flexible connections for services and thicker construction for roads. If buried highwalls are not significant then excavation and backfill may be possible.
Collapse Compression	Susceptible materials (e.g. colliery spoil) prone to water inundation if left in-situ. Collapse may occur due to increased loads and / or more commonly the addition of water causing damage to structures, externals and services by sudden or differential settlements.	<ul style="list-style-type: none"> Colliery spoil is indicated to be present at the site that may be susceptible to collapse compression. 	Low to moderate	Assessment via wetting / loading tests, if susceptible materials are noted to be present. Rafts or piled foundations for structures, ground improvement techniques for externals and services. Where practicable, excavation of recompaction and reengineering as engineered fill. Avoid large amounts of water entering the ground via soakaways.
Combustion	Colliery spoil combustion is a common occurrence, particularly on older spoil heaps formed by loose tipping over the edge of	<ul style="list-style-type: none"> Colliery spoil and Made Ground is indicated to be present at the site that may be susceptible to combustion. 	Low to moderate	Calorific value testing should be undertaken if susceptible materials are to be used as engineered fill. Stockpiles should be protected to prevent ignition and any

Table 10.1: Preliminary Geotechnical Risk Assessment

Potential Hazard	Description / Outline of Hazard	Pertinent Site-Specific Details	Considered Risk	General Recommendations (generally, only applicable if new structures or groundworks are proposed)
	<p>the heap. Spoil composition and consistency varies widely, but loose tipped heaps containing a high proportion of carbonaceous materials are most likely to combust. Spoil heaps may be ignited spontaneously (e.g. due to self-heating) or accidentally by external sources (e.g. lighting of fires or the tipping of hot ashes).</p>			<p>susceptible material used as engineered fill may need to be placed at depth to prevent accidental ignition. Compaction of materials at high moisture content with small air voids to significantly reduce the risk.</p>

11 CONCLUSIONS AND RECOMMENDATIONS

11.1.1 The subject site comprises undeveloped land with a large, grassed mound within its south western section and several smaller mounds within its central section. Historically the site was occupied by a former coal pit and later comprised part of the North Bierley Sewage Works (later the North Brierly Bierley Water Pollution Control Works) with a remnant filter bed and other relict sewage work infrastructure currently present at the site. It is understood that the site is to be redeveloped for a commercial / industrial end use, however a proposed development / layout plan is yet to be finalised.

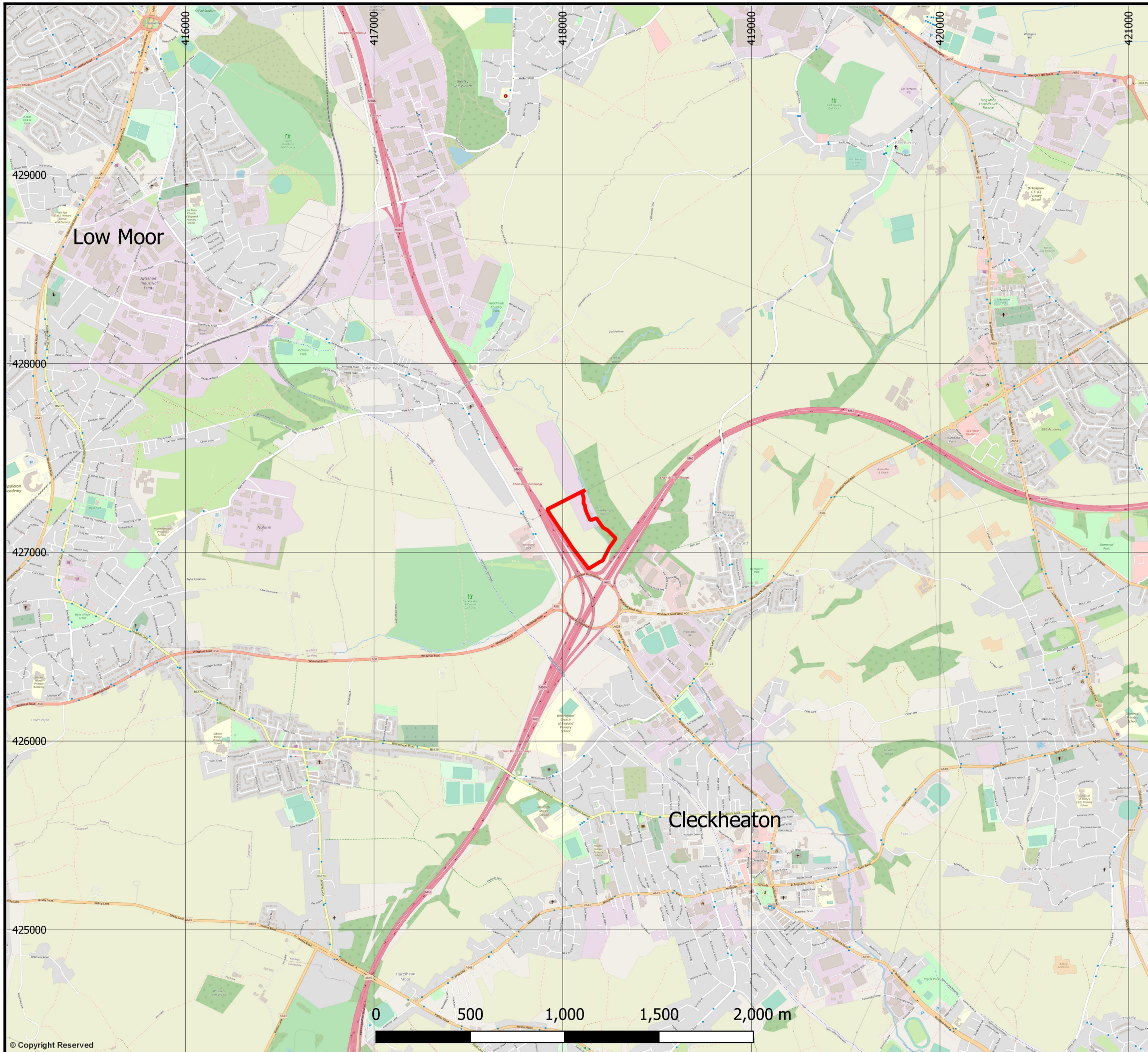
11.1.2 The site has been subject to a previous WA site investigation that was undertaken for the wider area, but only limited site investigations have been undertaken across the site. Further site investigation is recommended at the site, particularly for those areas where previous investigation was not undertaken (e.g. disused filter bed) to further quantify the contamination and geotechnical risks. These works would likely include for the following:

- A combined geoenvironmental and geotechnical intrusive site investigation including an appropriate number of shallow and deep exploratory holes with sufficient sampling and testing to allow for an updated generic quantitative risk assessment to be undertaken for those identified receptors (human health and controlled waters) and to assess the ground engineering conditions at the site.
- The installation of ground gas and groundwater monitoring wells, with subsequent monitoring, to allow for an updated ground gas risk assessment to be undertaken for the entire site. This will determine the requirement for any ground gas protection measures for the proposed development and the requirement for any temporary works in regard to dewatering etc.
- Following on from these intrusive works an updated contamination assessment should be undertaken that incorporates all the previous and ongoing WA works so that the risks posed from the site can be fully quantified.


11.1.3 The site lies within a CA Development High Risk Area and in an area where shallow recorded coal mine workings, recorded mine entries and unrecorded shallow coal mine workings are present. A detailed assessment of the coal mining situation beneath the site and the requirement for any further works are included with our Coal Mining Risk Assessment (ref: LD10258-RPT-002).

- 11.1.4 Underground services and infrastructure are present at site. It is recommended that full-service plans are obtained for the site prior to any intrusive site investigation works and construction activities. For some services, an exclusion / easement zone may be required to protect them from damage, and this could have impacts for any proposed development if these features are to be retained.
- 11.1.5 The eastern section of the site is recorded to lie within a Flood Zone 2 and 3. It is recommended that a Flood Risk Assessment is undertaken to quantify the risk. If this has not been previously undertaken then WA can undertake this service.
- 11.1.6 The former coal pit and mine shafts that were recorded at the site may be of industrial archaeological interest. It is recommended that specialist support is sought during the design of any future redevelopment. If this has not been previously undertaken then WA can undertake this service.
- 11.1.7 Possible ecological features may be present at the site and it is recommended that ecological surveys are undertaken to quantify the risks. If this has not been previously undertaken then WA can undertake this service.
- 11.1.8 The variable gradients / slopes, service easements, level tie-ins with the land to the north, mine entries and those other factors noted in the geotechnical risk register act as constraints to the creation of a development platform. Careful planning will be required to ensure that maximum developable areas are realised at the site and this will require early liaison with the various regulators.

DRAWINGS



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Legend
 Site Boundary



Notes

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PROJECT
NORTH BIERLEY PHASE 2 LAND

DRAWING TITLE
SITE LOCATION PLAN

DRG No.	LD10258-001	REV	
DRG SIZE	A3	SCALE	1:20,000
		DATE	01/06/21
DRAWN BY	JC	CHECKED BY	MP
		APPROVED BY	MP



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Site Boundary

Notes

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PROJECT	NORTH BIERLEY PHASE 2 LAND
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DRAWING TITLE	SITE LOCATION PLAN AERIAL
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DRG No.	LD10258-002	REV	
DRG SIZE	A3	SCALE	1:2,500
		DATE	01/06/2021
DRAWN BY	JC	CHECKED BY	MP
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Legend

- Site Boundary
- CA Development High Risk Area
- CA Recorded Shallow Coal Mine Workings
- Approximate Historical Coal Pit Extents
- Pennine Lower Coal Measures
- Pennine Lower Coal Measures Sandstone
- Mine Entry 15m Radius
- ▲ BGS Boreholes Possible Workings in Shertcliffe Coal
- ◆ BGS Boreholes Possible Workings in Whinmoor Coal
- BGS Coal Seam Outcrop
- - - Coal Authority Coal Seam Outcrop
- X Coal Authority Mine Entries
- X BGS Mine Entry
- ⊕ Previous Borehole Locations
- ▼ Previous Window Sample Hole Locations
- ⊠ Previous Trial Pit Locations

Notes

SH = Shertcliffe Coal
 LI = Little Coal
 CN = Churwell Thin Coal
 TR = Trub Coal
 m bgl = metres below ground level
 m AOD = metres above ordnance datum

This drawings is for illustrative purposes only. Actual coal seam positions may differ based on the site investigation works.
 Contains data from the Coal Authority WMS, this information has been extracted from the national coal mining database, held and maintained by the Coal Authority © Crown copyright May 2021.
 BGS Geology 10k and 50k: Contains British Geological Survey materials © NERC [2021].

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NORTH BIERLEY PHASE 2

PROJECT

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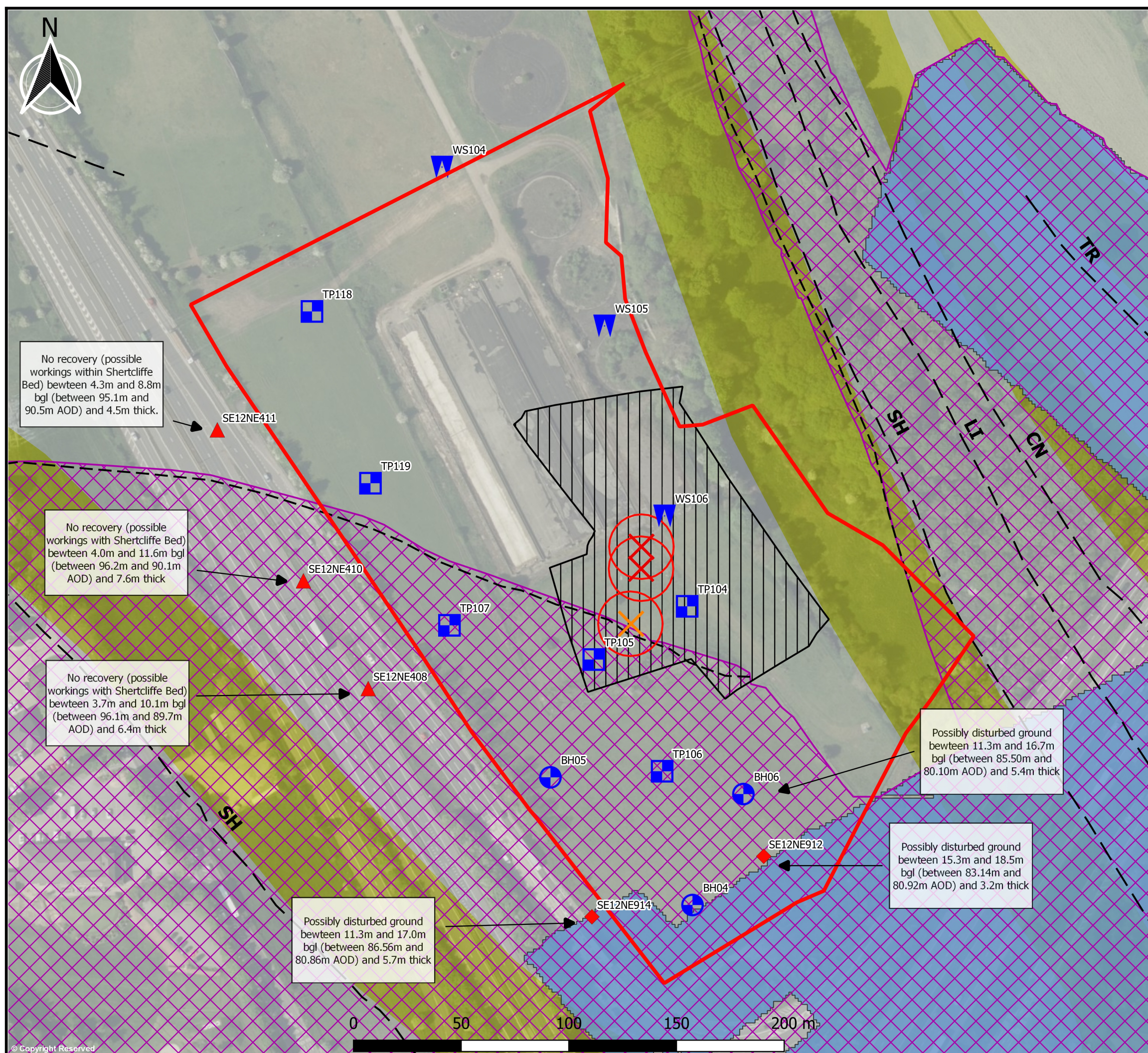
DRAWING TITLE

GEOLOGICAL/MINING SITE FEATURES PLAN

DRG No. LD10258-003	REV
DRG SIZE A3	SCALE 1:1,750
DRAWN BY JC	CHECKED BY MP
	DATE 01/06/21
	APPROVED BY MP

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Legend

Site Boundary

Elevations in Meters Above Ordnance Datum

- 82
- 98
- 114
- 131
- 147

Notes

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DRAWING TITLE
SHADED RELIEF MAP

DRG No. **LD10258-004** REV

DRG SIZE **A3** SCALE **1:1,750** DATE **01/06/2021**

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Legend

- Site Boundary
- Slope Degrees
 - 0
 - 7.5
 - 15
 - 22.5
 - 30+

Notes

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DRAWING TITLE
SLOPE MAP

DRG No.	LD10258-005	REV	
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APPENDIX A

Landmark Envirocheck Reports and Maps

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

278083497_1_1

Customer Reference:

LD10258

National Grid Reference:

418110, 427130

Slice:

A

Site Area (Ha):

6.82

Search Buffer (m):

1000

Site Details:

Site at 418090, 427110

Client Details:

Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thorncliffe Park
Chapletown
Sheffield
S35 2PH

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	47
Hazardous Substances	53
Geological	54
Industrial Land Use	71
Sensitive Land Use	84
Data Currency	85
Data Suppliers	91
Useful Contacts	92

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 5	6	22	5	7
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 14				10
Integrated Pollution Prevention And Control	pg 16				2
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 16				4
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 17	Yes			
Pollution Incidents to Controlled Waters	pg 17	3	13	8	23
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 25		3		2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 26		1	3	6
Water Abstractions	pg 27		1	3	2 (*9)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 31	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 32	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 32	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 32	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 32	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 32	3	20	30	70

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 47				3
Historical Landfill Sites	pg 47			2	4
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 48	1	3	4	17
Potentially Infilled Land (Water)	pg 50	4	5	2	5
Registered Landfill Sites	pg 51			2	1
Registered Waste Transfer Sites	pg 52				2
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 53				1
Planning Hazardous Substance Consents	pg 53				2
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 54	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 54	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 64	1		2	21
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 68	Yes	n/a	n/a	n/a
Mining Instability	pg 69	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 69	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 69	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 69	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 69	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 69	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 70	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 71		10	8	45
Fuel Station Entries					
Points of Interest - Commercial Services	pg 76		3	1	10
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 78	4	2	6	18
Points of Interest - Public Infrastructure	pg 80	6	11	8	4
Points of Interest - Recreational and Environmental	pg 82				3
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 84		2		1
Areas of Adopted Green Belt	pg 84	1			2
Areas of Unadopted Green Belt	pg 84	1			
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 84	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	0	1	418150 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	0	1	418200 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	0	1	418200 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	0	1	418105 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	0	1	418100 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	0	1	418105 427300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	0	1	418150 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	0	1	418250 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	0	1	418150 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (SE)	0	1	418105 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	0	1	418200 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NE (N)	0	1	418105 427150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	0	1	418150 427150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	1	1	418150 427200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	2	1	418200 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	8	1	418100 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	15	1	418250 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	18	1	418050 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	20	1	418300 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (E)	29	1	418300 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	45	1	418200 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	58	1	418300 427000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	70	1	418250 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	70	1	418350 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	74	1	418350 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	75	1	418100 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	83	1	418300 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	88	1	418200 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	99	1	418350 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	106	1	418300 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	109	1	418050 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	113	1	418250 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (S)	115	1	418105 426800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	118	1	417950 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	120	1	418400 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	121	1	418100 427450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	140	1	418350 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	148	1	418000 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	170	1	418450 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	172	1	418450 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	179	1	417950 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	198	1	417900 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	215	1	418105 426700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	215	1	418150 426700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	220	1	418500 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	220	1	418100 427550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	232	1	418050 426700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	232	1	418500 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	265	1	418105 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	265	1	418150 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	267	1	418100 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	271	1	418550 427130
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	271	1	418550 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	278	1	418400 427350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	279	1	418050 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (S)	288	1	418250 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (NW)	295	1	417900 427550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	297	1	418550 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	298	1	417850 426800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	315	1	418105 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	315	1	418150 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	320	1	418600 427100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	321	1	418200 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	321	1	418600 427050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	322	1	417750 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	326	1	418050 427650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	327	1	418050 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	334	1	418250 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	338	1	417800 426800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SW)	356	1	417900 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	363	1	417700 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	377	1	418650 427000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	382	1	418250 426550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	390	1	418650 426950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	391	1	417850 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	391	1	417700 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	416	1	418100 426500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SW)	426	1	417850 426600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SW)	429	1	417800 426650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	432	1	418650 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	437	1	418000 426500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	445	1	418300 426500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	454	1	418700 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	476	1	418700 426850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (SW)	488	1	417550 426900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SW)	499	1	417750 426600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 2 Effective Date: 23rd December 1985 Issued Date: 23rd December 1985 Revocation Date: 4th December 1989 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from COPA 1974 Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100
1	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 2 Effective Date: 23rd December 1985 Issued Date: 23rd December 1985 Revocation Date: 4th December 1989 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from COPA 1974 Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100
1	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 1 Effective Date: 6th May 1980 Issued Date: 6th May 1980 Revocation Date: 22nd December 1985 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from 1978 Order Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100
1	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 1 Effective Date: 6th May 1980 Issued Date: 6th May 1980 Revocation Date: 22nd December 1985 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from 1978 Order Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Bradford Corporation Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 14 Effective Date: 1st January 1970 Issued Date: 13th September 1967 Revocation Date: 5th May 1980 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100
1	<p>Discharge Consents</p> <p>Operator: Bradford Corporation Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 13 Effective Date: 20th March 1965 Issued Date: 20th March 1965 Revocation Date: 31st December 1969 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 100m</p>	A13SE (S)	0	2	418100 427100
2	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Moorend Sewage Pumping Station Off Whitehall Road, Cleckheaton, West Yorkshire, Uk, Bd19 6hg Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Npswqd009807 Permit Version: 1 Effective Date: 12th March 2010 Issued Date: 12th March 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NE (NE)	1	2	418140 427180
2	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 10 Effective Date: 16th March 1999 Issued Date: 16th March 1999 Revocation Date: 29th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder & Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NE (NE)	9	2	418150 427180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 8 Effective Date: 1st March 1998 Issued Date: 22nd December 1998 Revocation Date: 15th March 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NE (NE)	9	2	418150 427180
3	<p>Discharge Consents</p> <p>Operator: Bradford Corporation Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 14 Effective Date: 1st January 1970 Issued Date: 13th September 1967 Revocation Date: 5th May 1980 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (NE)	28	2	418200 427200
3	<p>Discharge Consents</p> <p>Operator: Bradford Corporation Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 13 Effective Date: 20th March 1965 Issued Date: 20th March 1965 Revocation Date: 31st December 1969 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (NE)	28	2	418200 427200
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: North Bierley Cso Off Cliffe Hollins Lane, Oakenshaw, Nr Cleckheaton, West Yorkshire, Bd12 7et Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Npswqd010861 Permit Version: 1 Effective Date: 15th March 2010 Issued Date: 15th March 2010 Revocation Date: 25th September 2018 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	75	2	418090 427400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd</p> <p>Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 3 Effective Date: 1st April 2009 Issued Date: 14th October 2008 Revocation Date: 30th March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd</p> <p>Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 25th February 2005 Revocation Date: 18th September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd</p> <p>Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 1 Effective Date: 1st April 2000 Issued Date: 25th October 1999 Revocation Date: 31st March 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire</p> <p>Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 12 Effective Date: 25th October 1999 Issued Date: 25th October 1999 Revocation Date: 31st March 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder & Hunsworth Beck Status: Consent expired Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 10 Effective Date: 16th March 1999 Issued Date: 16th March 1999 Revocation Date: 29th March 1999 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder & Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 11 Effective Date: 30th March 1999 Issued Date: 16th March 1999 Revocation Date: 24th October 1999 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder & Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 8 Effective Date: 1st March 1998 Issued Date: 22nd December 1998 Revocation Date: 15th March 1999 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	84	2	418090 427410
4	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: North Bierley Cso Off Cliffe Hollins Lane, Oakenshaw, Nr Cleckheaton, West Yorkshire, Bd12 7et Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Npswqd010861 Permit Version: 2 Effective Date: 26th September 2018 Issued Date: 26th September 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	88	2	418090 427414

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 5 Effective Date: 31st January 1997 Issued Date: 31st January 1997 Revocation Date: 31st May 1997 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 6 Effective Date: 1st June 1997 Issued Date: 31st January 1997 Revocation Date: 28th February 1998 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 5 Effective Date: 31st January 1997 Issued Date: 31st January 1997 Revocation Date: 31st May 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 6 Effective Date: 1st June 1997 Issued Date: 31st January 1997 Revocation Date: 28th February 1998 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 4 Effective Date: 1st March 1992 Issued Date: 5th December 1989 Revocation Date: 30th January 1997 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 3 Effective Date: 5th December 1989 Issued Date: 5th December 1989 Revocation Date: 29th February 1992 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 4 Effective Date: 1st March 1992 Issued Date: 5th December 1989 Revocation Date: 30th January 1997 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200
5	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 3 Effective Date: 5th December 1989 Issued Date: 5th December 1989 Revocation Date: 29th February 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Hunsworth Beck Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A13NE (E)	104	2	418300 427200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: North Bierley Wwtw, Cliffe Hollins Lane, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: E14 Permit Version: 12 Effective Date: 25th October 1999 Issued Date: 25th October 1999 Revocation Date: 31st March 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Calder & Hunsworth Beck Status: Consent expired Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	254	2	417970 427540
7	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 3 Effective Date: 1st April 2009 Issued Date: 14th October 2008 Revocation Date: 30th March 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	429	2	417860 427680
7	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 2 Effective Date: 31st March 2010 Issued Date: 25th February 2005 Revocation Date: 18th September 2010 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	429	2	417860 427680
7	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Spen Valley Wwtw The Bottoms, Smithies Lane, Heckmondwike, West Yorkshire, Wf13 3rd Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7549 Permit Version: 1 Effective Date: 1st April 2000 Issued Date: 25th October 1999 Revocation Date: 31st March 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: R. Calder/R. Spen/Hunsworth Bk Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	429	2	417860 427680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p>Discharge Consents</p> <p>Operator: Hunsworth Dyeing Co Ltd, Property Type: Undefined Or Other Location: Hunsworth Dyeing Co, Whitehall Road, Cleckheaton, Bradford Authority: Environment Agency, North East Region Catchment Area: Calder Reference: 3364 Permit Version: 1 Effective Date: 1st January 1982 Issued Date: 1st January 1982 Revocation Date: 18th October 1990 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Not Supplied Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m</p>	A9NW (SE)	467	2	418600 426700
9	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: M62 Hunsworth Lane Hunsworth, Cleckheaton, Nr Bradford, West Yorkshire, Bd19 4dt Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wadc1106 Permit Version: 2 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: 1st October 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Lodge Beck Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A19SE (NE)	741	2	418850 427550
9	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: M62 Hunsworth Lane Hunsworth, Cleckheaton, Nr Bradford, West Yorkshire, Bd19 4dt Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wadc1106 Permit Version: 1 Effective Date: 18th September 1989 Issued Date: 18th September 1989 Revocation Date: 13th April 2009 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Lodge Beck Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A19SE (NE)	741	2	418850 427550
10	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Whitehall Road Cso, Whitehall Road, Cleckheaton, West Yorkshire, Bd19 4ef Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wa6376 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 26th March 2004 Revocation Date: 30th March 2018 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Spen Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A9SW (SE)	790	2	418690 426330

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Whitehall Road Cso, Whitehall Road, Cleckheaton, West Yorkshire, Bd19 4ef Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wa6376 Permit Version: 3 Effective Date: 31st March 2018 Issued Date: 21st February 2018 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Spen Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A9SW (SE)	792	2	418695 426331
10	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Whitehall Road Cso, Whitehall Road, Cleckheaton, West Yorkshire, Bd19 4ef Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wa6376 Permit Version: 1 Effective Date: 11th June 1991 Issued Date: 11th June 1991 Revocation Date: 30th March 2004 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Spen Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A9SW (SE)	796	2	418700 426330
11	<p>Discharge Consents</p> <p>Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: New Street Cso Adj To No 13, Oakenshaw, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra8244 Permit Version: 1 Effective Date: 31st March 2004 Issued Date: 11th February 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: High Royds Beck Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	845	2	417690 428060
12	<p>Discharge Consents</p> <p>Operator: Lower Chatts Farm Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Lower Chatts Cottage Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Aire Reference: Wra7109 Permit Version: 1 Effective Date: 28th November 1994 Issued Date: 28th November 1994 Revocation Date: 1st October 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: High Royds Beck Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m</p>	A23SW (N)	926	2	417800 428200
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane., Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: Bx6391 Dated: 31st March 2004 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry Status: Revoked - Now IPPC Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: Bv6137 Dated: 19th December 2003 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: Bs8583 Dated: 25th July 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: Br9251 Dated: 18th April 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: Bj9665 Dated: 15th March 2001 Process Type: IPC minor (non-substantial) variation to previous variation Description: 4.5 A (F) Inorganic Chemical processes within the Chemical Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: BC5776 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.2 A (B) processes involving Asbestos within the Mineral Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
13	<p>Integrated Pollution Controls</p> <p>Name: Tmd Friction Uk Ltd Location: Hunsworth Lane, Cleckheaton, West Yorkshire, Bd19 3uj Authority: Environment Agency, North East Region Permit Reference: AI0152 Dated: 1st August 1993 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 3.2 A (B) processes involving Asbestos within the Mineral Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	628	2	418500 426400
14	<p>Integrated Pollution Controls</p> <p>Name: Econosto Ltd Location: Scandinavia Mills, CLECKHEATON, West Yorkshire, BD19 3UJ Authority: Environment Agency, North East Region Permit Reference: AI0144 Dated: 12th November 1993 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 3.2 A (A) processes involving Asbestos within the Mineral Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9NE (SE)	736	2	418781 426492

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	<p>Integrated Pollution Controls</p> <p>Name: Econosto Ltd Location: Hunsworth Lane, CLECKHEATON, West Yorkshire, BD19 3UJ Authority: Environment Agency, North East Region Permit Reference: BD0524 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.2 A (A) processes involving Asbestos within the Mineral Industry Status: Authorisation revoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A9NE (SE)	740	2	418786 426492
15	<p>Integrated Pollution Controls</p> <p>Name: Econosto Ltd Location: HUNSWORTH LANE,, CLECKHEATON, WEST YORKSHIRE, BD19 3UJ Authority: Environment Agency, North East Region Permit Reference: AP3711 Dated: 15th December 1994 Process Type: IPC minor (non-substantial) variation to previous variation Description: 3.2 A (A) processes involving Asbestos within the Mineral Industry Status: Authorisation superseded by a substantial or non substantial variation Positional Accuracy: Manually positioned to the road within the address or location</p>	A9SW (SE)	777	2	418768 426416
16	<p>Integrated Pollution Prevention And Control</p> <p>Name: Tmd Friction Uk Ltd Location: Cleckheaton Brake Pad Manufacture, TMD Friction UK Ltd, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 3UJ Authority: Environment Agency, North East Region Permit Reference: Ep3133lg Original Permit Ref: Ep3533bu Effective Date: 30th March 2006 Status: Superseded By Variation Application Type: Variation App. Sub Type: Standard Positional Accuracy: Manually positioned to the road within the address or location Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherwise Prescribed) (Unless Glazing Etc) Primary Activity: Y Activity Code: 6.4 B (A) (IV) Activity Description: Coating, Printing And Textiles; Using Solvents Greater Than 5T/12 Months (Unless 6.4 B (A) (III)) Primary Activity: N</p>	A19SE (NE)	783	2	418835 427646
17	<p>Integrated Pollution Prevention And Control</p> <p>Name: Tmd Friction Uk Ltd Location: Cleckheaton Brake Pad Manufacture, Tmd, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 3UJ Authority: Environment Agency, North East Region Permit Reference: Ep3533bu Original Permit Ref: Ep3533bu Effective Date: 19th August 2005 Status: Superseded By Variation Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the road within the address or location Activity Code: 4.2 A(1) (D) Activity Description: Inorganic Chemicals; Using Etc Of Antimony Etc (Unless Otherwise Prescribed) (Unless Glazing Etc) Primary Activity: Y Activity Code: 6.4 B (A) (IV) Activity Description: Coating, Printing And Textiles; Using Solvents Greater Than 5T/12 Months (Unless 6.4 B (A) (III)) Primary Activity: N</p>	A9SW (SE)	800	2	418694 426321
18	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Scendura Railko Location: Scandinavian Mills, Bradford Road, CLECKHEATON, West Yorkshire, BD19 3UJ Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/8 Textile and fabric coating of finishing processes Status: Authorisation revoked Positional Accuracy: Manually positioned to the address or location</p>	A9SW (SE)	611	3	418462 426397

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Scandura Ltd Location: PO Box 18, Scandinavian Mills, Bradford Road, CLECKHEATON, West Yorkshire, BD19 3UJ Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: Part B - General Coating Process (No Specific Reference) Status: Authorisation revoked Positional Accuracy: Manually positioned to the address or location</p>	A9SW (SE)	612	3	418437 426381
19	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Novus Sealing Ltd Location: Hunsworth Lane, Cleckheaton, Bd19 3uj Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: PPC E 138 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG6/28 Rubber processes Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	A9SW (SE)	770	3	418729 426388
20	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Cleckheton Motors Location: Bradford Road, Cleckheaton, BD19 3LN Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Supplied Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles Status: Authorisation revoked Positional Accuracy: Manually positioned to the road within the address or location</p>	A4NW (SE)	963	3	418633 426089
	Nearest Surface Water Feature	A13NE (NE)	0	-	418159 427153
21	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Industrial Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Chemicals - Acid Note: Not Supplied Incident Date: 19th January 1991 Incident Reference: 118958 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A13NW (NW)	0	2	418000 427200
22	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Water Company Sewage: Sewage Treatment Works Location: Todmorden/Source Calder Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 7th November 1989 Incident Reference: 104888 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A13NE (N)	0	2	418100 427300
23	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Water Company Sewage: Sewage Treatment Works Location: North Bierley Sewage Treatment Works, River Spen Authority: Environment Agency, North East Region Pollutant: Sewage - Treated Effluent Note: Watercourse :Spen Beck/Dean Beck; From Upstream Spenborough To River Calder Incident Date: Not Supplied Incident Reference: SL980160 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m</p>	A13SE (SE)	0	2	418200 427000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewage Treatment Works Location: Road Bridge B6117, /Battyeferd Bridge Calder 04C Authority: Environment Agency, North East Region Pollutant: Organic Wastes: Other Suspended Solids Note: Not Supplied Incident Date: 23rd April 1991 Incident Reference: 121628 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	25	2	418200 427195
24	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewage Treatment Works Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Chemicals - Other Organic Note: Not Supplied Incident Date: 21st October 1991 Incident Reference: 127316 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	29	2	418205 427195
25	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 10th June 1991 Incident Reference: 123180 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SE (E)	31	2	418300 427100
26	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewage Treatment Works Location: Balme Road/Road Bridge A58 Spen 09 Authority: Environment Agency, North East Region Pollutant: Rubber (Including Tyres) Note: Not Supplied Incident Date: 14th May 1990 Incident Reference: 110684 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (N)	67	2	418100 427395
27	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 7th July 1989 Incident Reference: 101240 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	140	2	418400 427000
27	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 13th September 1989 Incident Reference: 103344 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	143	2	418400 426995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 22nd September 1989 Incident Reference: 103576 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	147	2	418405 426995
28	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 8th August 1989 Incident Reference: 102209 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	221	2	418500 427095
28	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Hunsworth Lane Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 24th April 1989 Incident Reference: 8942 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	221	2	418500 427100
29	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Road Bridgea62/Liversedge Spen 05 Authority: Environment Agency, North East Region Pollutant: Process Water Note: Not Supplied Incident Date: 29th July 1990 Incident Reference: 113180 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	224	2	418200 426700
30	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Whitehall Road West Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 10th January 1989 Incident Reference: 8478 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	232	2	418500 427000
30	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 7th December 1989 Incident Reference: 106005 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	233	2	418500 426995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 12th August 1989 Incident Reference: 102367 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	238	2	418505 426995
31	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 2nd November 1989 Incident Reference: 104808 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	279	2	418500 426900
32	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewage Treatment Works Location: Spen Afu Authority: Environment Agency, North East Region Pollutant: Other Sewage Note: Fish Killed: No Information; Spen Afu Incident Date: 17th August 1995 Incident Reference: SL950830 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	329	2	418500 426800
32	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Fish Killed: No Information; Spen Afu Incident Date: 17th July 1995 Incident Reference: SL951547 Catchment Area: Aire Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	332	2	418500 426795
32	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 28th August 1991 Incident Reference: 125652 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	334	2	418505 426800
32	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Mouth/Gomersal Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 19th June 1989 Incident Reference: 100366 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	336	2	418505 426795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Mouth/Scotia Beck Batley Beck Afl Authority: Environment Agency, North East Region Pollutant: Oils - Tars/Bitumen Note: Not Supplied Incident Date: 31st March 1992 Incident Reference: 131735 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	445	2	418300 426500
34	Pollution Incidents to Controlled Waters Property Type: Road Location: M62, East Of Junction 26 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Fish Killed: No Information Incident Date: 26th November 1995 Incident Reference: SL950866 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	467	2	418500 427600
35	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 24th November 1989 Incident Reference: 105660 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	470	2	418600 426695
36	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Spenborough, SPEN Authority: Environment Agency, North East Region Pollutant: Unknown Note: Fish Killed: No Information; Spen Incident Date: 24th March 1995 Incident Reference: SL950401 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	542	2	418500 426500
37	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 20th January 1994 Incident Reference: 149685 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	570	2	417600 427700
38	Pollution Incidents to Controlled Waters Property Type: Textile industry Location: CLECKHEATON Authority: Environment Agency, North East Region Pollutant: Other Chemicals Note: No Fish Killed Incident Date: 9th September 1997 Incident Reference: SL970967 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	668	2	418400 426300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 24th April 1990 Incident Reference: 109753 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	701	2	417400 427700
40	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 18th July 1991 Incident Reference: 124524 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	705	2	417500 427795
40	Pollution Incidents to Controlled Waters Property Type: Construction/Demolition Location: Mouth/Todmorden Calder Afl Authority: Environment Agency, North East Region Pollutant: Cement/Mortar Note: Not Supplied Incident Date: 21st May 1990 Incident Reference: 110815 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	709	2	417500 427800
41	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Mouth/Todmorden Calder Afl Authority: Environment Agency, North East Region Pollutant: Rubber (Including Tyres) Note: Not Supplied Incident Date: 31st August 1990 Incident Reference: 114445 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	742	2	418700 426400
41	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 22nd March 1991 Incident Reference: 120863 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	746	2	418700 426395
42	Pollution Incidents to Controlled Waters Property Type: Contaminated Land Location: Unnamed Tributary Of The Spen, At Snelsing Road Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: Spen Beck/Dean Beck; Fish Killed: No Information Incident Date: Not Supplied Incident Reference: SL981033 Catchment Area: Calder Tributaries Receiving Water: Groundwater Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	761	2	418400 426200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 29th March 1993 Incident Reference: 141972 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	820	2	418700 426300
44	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Mouth/Todmorden Calder Afl Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 20th July 1990 Incident Reference: 112873 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	828	2	417600 427995
44	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: SPEN Authority: Environment Agency, North East Region Pollutant: Other Chemicals Note: Fish Killed: No Information; Spen Incident Date: 18th January 1995 Incident Reference: SL950192 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	832	2	417600 428000
45	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Storm Overflow Location: Spen Beck, CLECKHEATON Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: No Fish Killed Incident Date: 19th June 1997 Incident Reference: SL970625 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3NE (S)	831	2	418300 426100
46	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Union St/A62 Road Bridge Spen 04 Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 3rd July 1990 Incident Reference: 112247 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	849	2	419100 427295
46	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Union St/A62 Road Bridge Spen 04 Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 2nd July 1990 Incident Reference: 112482 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	850	2	419100 427300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Union St/A62 Road Bridge Spen 04 Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: Not Supplied Incident Date: 12th June 1989 Incident Reference: 100412 Catchment Area: Not Given Receiving Water: Reservoir Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	849	2	417400 427900
48	Pollution Incidents to Controlled Waters Property Type: Farm Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Agricultural: Slurry - Store And Tank Discharges Note: Not Supplied Incident Date: 24th December 1991 Incident Reference: 129420 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SW (W)	881	2	417100 426900
49	Pollution Incidents to Controlled Waters Property Type: Other Farming Location: Spen Afu Authority: Environment Agency, North East Region Pollutant: Other Note: Fish Killed: No Information; Spen Afu Incident Date: 6th August 1995 Incident Reference: SL950796 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SW (N)	896	2	417900 428200
50	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Storm Overflow Location: OAKENSHAW Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: Fish Killed: No Information; Oakenshaw Incident Date: 27th November 1995 Incident Reference: SL950820 Catchment Area: Calder Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A23SW (N)	921	2	417800 428195
51	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: New Street Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 19th January 1989 Incident Reference: 8480 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	921	2	417600 428100
52	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Road Bridge B6117, /Battieford Bridge Calder 04C Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Organic Food Process Waste Note: Not Supplied Incident Date: 29th March 1994 Incident Reference: 150410 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	952	2	419000 427700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Rubbish Note: Not Supplied Incident Date: 19th November 1993 Incident Reference: 148779 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	960	2	418800 426200
54	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Foul Sewer Location: Gomersal/Source Spen Afu Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 5th July 1994 Incident Reference: 152421 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	984	2	417200 427900
	River Quality Name: Spen_Beck/Dean_Beck GQA Grade: River Quality E Reach: Hunsworth_Beck_Sugden_Bec Estimated Distance (km): .3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13NE (NE)	11	2	418195 427178
	River Quality Name: Spen_Beck/Dean_Beck GQA Grade: River Quality E Reach: High_Royds_Beck_Hunsworth_Bec Estimated Distance (km): 1 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13NE (N)	31	2	418161 427296
	River Quality Name: Sugden_Beck GQA Grade: Not Supplied Reach: Sugden_Beck_At_Elm_C_Hunsworth_Bec Estimated Distance (km): 1.9 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13SW (SW)	147	2	417860 426933
	River Quality Name: Spen_Beck/Dean_Beck GQA Grade: River Quality E Reach: Sugden_Beck_Cleckheato Estimated Distance (km): 1.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A9NW (SE)	543	2	418620 426601
	River Quality Name: Spen_Beck/Dean_Beck GQA Grade: River Quality E Reach: Low_Moor_Beck_High_Royds_Bec Estimated Distance (km): .6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A17NE (NW)	764	2	417744 427998

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 27th September 2004 Incident Reference: 268643 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Cutting Oils	A14SW (E)	193	2	418464 427015
56	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 12th March 2008 Incident Reference: 570569 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Storm Sewage	A18SW (N)	267	2	417960 427550
57	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 21st June 2015 Incident Reference: 1347118 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert Materials And Wastes: Soils And Clay	A8NE (S)	311	2	418210 426612
58	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 2nd February 2006 Incident Reference: 374958 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Oils - Cutting Oils	A9NW (SE)	381	2	418548 426780
59	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 25th October 2007 Incident Reference: 541076 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Specific Waste Materials: Vehicles And Vehicle Parts	A14SW (SE)	505	2	418712 426812
60	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 10th March 2008 Incident Reference: 569817 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Specific Waste Materials: Vehicles And Vehicle Parts	A9NE (SE)	626	2	418818 426752
61	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 18th March 2003 Incident Reference: 143962 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Minewater	A9SW (SE)	758	2	418755 426431
62	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 8th June 2006 Incident Reference: 405449 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Minewater	A9SW (SE)	786	2	418689 426334

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 29th April 2002 Incident Reference: 75556 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Pollutant Not Identified: Not Identified	A17NE (NW)	871	2	417703 428097
64	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 25th August 2001 Incident Reference: 26783 Water Impact: Category 2 - Significant Incident Air Impact: Category 3 - Minor Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: General Biodegradable : Other	A23SW (N)	893	2	417789 428161
65	Water Abstractions Operator: Hunsworth Dyeing Company Ltd Licence Number: 2/27/13/020 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 2182 Yearly Rate (m3): 343160 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13NE (N)	72	2	418100 427400
66	Water Abstractions Operator: Cleckheaton & District Golf Club Licence Number: 2/27/13/221/R01 Permit Version: 1 Location: Borehole - Coal Measures - Cleckheaton Authority: Environment Agency, North East Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Cleakheaton & District Golf Club, Club House, Bradford, Cleakheaton Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	320	2	417901 426699
66	Water Abstractions Operator: Cleckheaton & District Golf Club Licence Number: 2/27/13/221 Permit Version: 1 Location: Borehole - Coal Measures - Cleckheaton Authority: Environment Agency, North East Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Cleakheaton & District Golf Club, Club House, Bradford, Cleakheaton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	320	2	417901 426699

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	<p>Water Abstractions</p> <p>Operator: Cleckheaton & District Golf Club Licence Number: 2/27/13/187 Permit Version: 100 Location: Borehole - Coal Measures - Cleckheaton Authority: Environment Agency, North East Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 168 Yearly Rate (m3): 13500 Details: Cleakheaton & District Golf Club, Club House, Bradford, Cleakheaton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th March 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8NW (SW)	320	2	417900 426700
67	<p>Water Abstractions</p> <p>Operator: Metrotect Limited Licence Number: 2/27/13/022 Permit Version: 100 Location: Borehole Authority: Environment Agency, North East Region Abstraction: Other Industrial/Commercial/Public Services: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 20 Yearly Rate (m3): 6000 Details: Whitechapel Road, Cleckheaton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st October 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A8SE (S)	733	2	418300 426200
67	<p>Water Abstractions</p> <p>Operator: Metrotect Ltd Licence Number: 2/27/13/022 Permit Version: 100 Location: Borehole - Coal Measures - Cleckheaton Authority: Environment Agency, North East Region Abstraction: Chemicals: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Whitechapel Road, Cleckheaton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st October 1996 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A8SE (S)	733	2	418300 426200
	<p>Water Abstractions</p> <p>Operator: City Of Bradford Metropolitan Council Licence Number: 2/27/13/158 Permit Version: Not Supplied Location: Balancing Reservoir Adj To Furnace Road, Low Moor, BRADFORD Authority: Environment Agency, North East Region Abstraction: Unclassified (Other) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 8600 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A21SE (NW)	1549	2	416800 428300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Water Abstractions</p> <p>Operator: Solenis Uk Industries Ltd Licence Number: 2/27/13/121 Permit Version: 104 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st January 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Solenis Uk Industries Ltd Licence Number: 2/27/13/121 Permit Version: 104 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st January 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Basf Plc Licence Number: 2/27/13/121 Permit Version: 103 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Basf Plc Licence Number: 2/27/13/121 Permit Version: 103 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Water Abstractions</p> <p>Operator: Basf Performance Products Plc Licence Number: 2/27/13/121 Permit Version: 102 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Basf Performance Products Plc Licence Number: 2/27/13/121 Permit Version: 102 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Ciba Uk Plc Licence Number: 2/27/13/121 Permit Version: 101 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th April 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350
	<p>Water Abstractions</p> <p>Operator: Ciba Uk Plc Licence Number: 2/27/13/121 Permit Version: 101 Location: Borehole - Coal Measures - Low Moor Authority: Environment Agency, North East Region Abstraction: Chemicals: Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Ciba Speciality Chemicals Water Treatments Works Limited, Cleakheaton Road, Low Moor, Bradford, West Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th April 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A21SW (NW)	1724	2	416610 428350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Groundwater Vulnerability Map</p> <p>Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data</p>	A13NE (NE)	0	4	418146 427150
	<p>Groundwater Vulnerability Map</p> <p>Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: No Data</p>	A13SE (S)	0	4	418105 427000
	<p>Groundwater Vulnerability Map</p> <p>Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data</p>	A13NW (W)	0	4	418000 427130
	<p>Groundwater Vulnerability Map</p> <p>Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data</p>	A13NE (NE)	0	4	418179 427196

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (SE)	0	4	418105 427130
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (SE)	0	4	418105 427130
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (NE)	0	4	418146 427150
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	0	2	418150 427150
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	0	2	418150 427155
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 193.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A13NE (E)	0	5	418161 427153
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 73.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NW (NW)	0	5	417980 427249
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 176.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NE (N)	0	5	418129 427192
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 560.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A13NE (NE)	2	5	418148 427181

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NE (NE)	8	5	418148 427181
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 124.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A13SE (SE)	11	5	418259 427025
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 325.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NE (NE)	13	5	418181 427202
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 153.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13SE (E)	14	5	418292 427084
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NW (NW)	17	5	417908 427241
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 390.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13NW (W)	67	5	417852 427226
78	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A13SE (SE)	133	5	418353 426942
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 212.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A13SE (SE)	141	5	418358 426933
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 277.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13SE (SE)	141	5	418358 426933

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 263.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (S)	165	5	417981 426814
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (S)	185	5	417981 426814
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	197	5	417966 426814
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	200	5	417962 426814
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 102.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	203	5	417959 426814
86	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (SE)	226	5	418280 426736
87	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 38.4 Watercourse Level: Underground Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (SE)	228	5	418284 426737
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 243.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (S)	236	5	418144 426679
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 94.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (SE)	237	5	418321 426748

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	249	5	418519 427148
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	288	5	417857 426807
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.7 Watercourse Level: Underground Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (SE)	289	5	418415 426754
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	289	5	417856 426806
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 0.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	289	5	417857 426806
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NE (SE)	298	5	418428 426754
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 70.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SW (E)	301	5	418580 427099
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NW (S)	303	5	417968 426663
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 123.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A13SW (SW)	308	5	417830 426807

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 117.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NW (S)	308	5	417963 426661
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	314	5	418582 427168
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.0 Watercourse Level: Underground Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	319	5	418460 426760
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	324	5	418473 426768
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 48.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	328	5	418482 426772
104	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.1 Watercourse Level: Underground Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	360	5	418525 426780
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 105.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	371	5	417720 426856
106	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 122.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	376	5	417726 426839
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	377	5	418539 426773

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	389	5	417964 427688
109	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	389	5	417964 427688
110	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	390	5	417963 427688
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 135.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A8NW (SW)	395	5	417875 426620
112	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 95.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	402	5	418019 427720
113	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	404	5	417950 427698
114	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 463.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	409	5	417970 427712
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	411	5	418641 427273
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 116.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	411	5	418641 427273

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 50.4 Watercourse Level: Underground Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	434	5	417637 426867
118	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 218.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	437	5	418031 427759
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 382.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A9NW (SE)	440	5	418560 426691
120	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 92.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	482	5	417588 426855
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 266.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	512	5	417742 426590
122	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 69.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18NE (N)	559	5	418211 427882
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	567	5	417502 426831
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 55.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	579	5	417490 426826
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 78.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SE (SW)	626	5	417435 426824

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 79.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18NE (N)	628	5	418226 427950
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 85.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	653	5	417721 427860
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: Underground Permanent: True Watercourse Name: Hunsworth Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	654	5	417740 427871
129	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	675	5	417366 426840
130	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 65.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	685	5	417352 426842
131	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 121.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	689	5	417661 427869
132	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: High Royds Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	689	5	417661 427869
133	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 112.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18NE (N)	693	5	418264 428009
134	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.7 Watercourse Level: Underground Permanent: True Watercourse Name: High Royds Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	726	5	417649 427905

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.5 Watercourse Level: Underground Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	734	5	417519 426514
136	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 80.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	735	5	417300 426831
137	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	740	5	417498 426533
138	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 524.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: High Royds Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	744	5	417641 427922
139	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	765	5	417475 426520
140	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	769	5	417471 426518
141	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 144.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NE (NW)	776	5	417561 427916
142	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	781	5	417459 426516
143	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 443.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Cockleshaw Beck Catchment Name: Aire and Calder Primacy: 1	A18NE (N)	785	5	418328 428087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Spen River Catchment Name: Aire and Calder Primacy: 1	A9SW (SE)	789	5	418691 426332
145	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A9SW (SE)	789	5	418691 426332
146	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 123.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A9SW (SE)	796	5	418493 426202
147	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 239.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A9SW (SE)	796	5	418534 426222
148	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	802	5	417223 426829
149	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	810	5	417435 426499
150	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NE (SW)	819	5	417429 426493
151	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Spen River Catchment Name: Aire and Calder Primacy: 1	A9SW (SE)	822	5	418710 426305
152	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	824	5	417203 426819

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	832	5	417195 426815
154	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	832	5	417196 426815
155	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 152.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	835	5	419108 427184
156	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 54.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	839	5	417198 426798
157	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 73.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	847	5	417397 426489
158	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 118.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	848	5	417178 426814
159	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NW (NW)	857	5	417417 427923
160	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	862	5	417205 426745
161	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	865	5	417206 426738

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
162	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.3 Watercourse Level: Underground Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NW (NW)	884	5	417361 427914
163	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NW (NW)	895	5	417351 427920
164	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 69.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SE (E)	901	5	419080 427490
165	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 156.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	912	5	417328 426473
166	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 161.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	912	5	417328 426473
167	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 119.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	920	5	417072 426865
168	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	920	5	417072 426865
169	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 158.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	941	5	419140 427459
170	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	941	5	419140 427459

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
171	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	945	5	417043 426871
172	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.4 Watercourse Level: Underground Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	950	5	417036 426873
173	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19NE (NE)	951	5	418897 427877
174	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 188.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Low Moor Beck Catchment Name: Aire and Calder Primacy: 1	A17NW (NW)	956	5	417292 427949
175	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 201.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Toad Holes Beck Catchment Name: Aire and Calder Primacy: 1	A17NW (NW)	956	5	417292 427949
176	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	956	5	417029 426878
177	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 37.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	957	5	419213 427288
178	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19NE (NE)	961	5	418902 427887
179	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 76.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	966	5	419244 427126

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
180	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 96.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	967	5	419236 427219
181	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 132.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19NE (NE)	968	5	418905 427894
182	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15SW (E)	970	5	419250 427112
183	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15SW (E)	971	5	419251 427109
184	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15SW (E)	972	5	419252 427092
185	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 259.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Sugden Beck Catchment Name: Aire and Calder Primacy: 1	A11SE (W)	976	5	417002 426894
186	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SE (NE)	978	5	418982 427791
187	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 150.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15NW (E)	978	5	419234 427301
188	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Stubs Beck Catchment Name: Aire and Calder Primacy: 1	A7NW (SW)	981	5	417205 426530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
189	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.5 Watercourse Level: Underground Permanent: True Watercourse Name: Spen River Catchment Name: Aire and Calder Primacy: 1	A9SE (SE)	982	5	418797 426170
190	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Lodge Beck Catchment Name: Aire and Calder Primacy: 1	A15SW (E)	993	5	419272 427024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	BGS Recorded Landfill Sites Site Name: Chatts Wood Location: Cliffe Hollins Lane, BRADFORD, Yorks Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good	A18NE (N)	532	-	418191 427858
192	BGS Recorded Landfill Sites Site Name: Whitehall Rd Tip Location: Wesfields, Dyke, NR BRADFORD, West Yorkshire Authority: British Geological Survey, National Geoscience Information Service Ground Water: Threat to ground water Surface Water: Threat to surface water Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good	A7NW (SW)	862	-	417407 426449
193	BGS Recorded Landfill Sites Site Name: Law Tip Location: Whitehall Rd, Wyke, NR BRADFORD, West Yorkshire Authority: British Geological Survey, National Geoscience Information Service Ground Water: Threat to ground water Surface Water: Threat to surface water Geology: List. Coal Measure Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good	A7SW (SW)	994	-	417251 426441
194	Historical Landfill Sites Licence Holder: Hunsworth Dyeing Company Limited Location: Dyehouse Drive, Cleckheaton Name: Land off Whitehall Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04158 First Input Date: 30th April 1980 Last Input Date: 31st December 1991 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0805 BGS Ref: Not Supplied Other Ref: 4700/0222	A9NW (SE)	316	2	418445 426746
195	Historical Landfill Sites Licence Holder: Hunsworth Dyeing Company Limited Location: Cleckheaton Name: Land off Whitehall Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD30228 First Input Date: 1st January 1919 Last Input Date: 31st March 1994 Specified Waste Type: Deposited Waste included Inert, Industrial and Special Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0799 BGS Ref: Not Supplied Other Ref: 4700/0043, 4700/0272	A14SW (SE)	348	2	418548 426849
196	Historical Landfill Sites Licence Holder: Not Supplied Location: Cliffe Hollins Lane, Bradford, Yorkshire Name: Chatts Wood Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31572 First Input Date: 31st December 1960 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1097 Other Ref: Not Supplied	A18NE (N)	533	2	418191 427859

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	Historical Landfill Sites Licence Holder: Not Supplied Location: Wesfields, Dyke, Near Bradford, West Yorkshire Name: Whitehall Road Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31585 First Input Date: 31st December 1927 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Industrial Waste and Liquid Sludge Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1140 Other Ref: Not Supplied	A7NW (SW)	861	2	417408 426450
198	Historical Landfill Sites Licence Holder: K C Cawthray Limited Location: Bradford Road, Oakenshaw Name: Oakenshaw Spinning Mills Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04021 First Input Date: 31st December 1988 Last Input Date: 31st December 1989 Specified Waste: Deposited Waste included Inert and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0484 BGS Ref: Not Supplied Other Ref: 4700/0667	A17NW (NW)	915	2	417302 427903
199	Historical Landfill Sites Licence Holder: Not Supplied Location: Whitehall Road, Wyke, Near Bradford, West Yorkshire Name: Low Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31573 First Input Date: 31st December 1927 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Industrial Waste and Liquid Sludge Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1098 Other Ref: Not Supplied	A7SW (SW)	993	2	417251 426441
	Local Authority Landfill Coverage Name: Kirklees Metropolitan Borough Council - Has not been able to supply Landfill data		0	6	418105 427130
	Local Authority Landfill Coverage Name: Bradford Metropolitan City Council - Has not been able to supply Landfill data		689	7	417660 427870
200	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NE (SE)	0	-	418105 427130
201	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NW (NW)	66	-	417959 427323
202	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13SE (SE)	69	-	418268 426919
203	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13SW (SW)	156	-	417927 426935
204	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NE (NE)	297	-	418427 427356

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14SW (SE)	358	-	418536 426807
206	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	427	-	417619 427532
207	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A7NE (SW)	478	-	417671 426725
208	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A12SE (W)	507	-	417445 427047
209	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	526	-	417682 427698
210	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A12NW (W)	613	-	417308 427290
211	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	617	-	417478 427660
212	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (NW)	637	-	417419 427622
213	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A18NW (N)	700	-	417954 428011
214	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14NE (E)	725	-	418986 427239
215	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A9NE (SE)	798	-	418834 426460
216	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (W)	805	-	417155 427485
217	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A19SE (NE)	809	-	418798 427785
218	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (NW)	844	-	417278 427776
219	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A7NW (SW)	863	-	417404 426452
220	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17NE (NW)	951	-	417436 428047

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
221	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A16SE (NW)	957	-	417047 427624
222	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A22SE (N)	992	-	417666 428213
223	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A22SE (N)	993	-	417700 428231
224	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17NW (NW)	997	-	417393 428077
225	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	0	-	418193 427056
226	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (NW)	0	-	417979 427253
227	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	0	-	418200 426952
228	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	0	-	418220 427077
229	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (E)	6	-	418286 427100
230	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	28	-	418286 427034
231	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	134	-	418361 426955
232	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (S)	207	-	418077 426713
233	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (SE)	238	-	418327 426750
234	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1908	A8NW (S)	283	-	417995 426670
235	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	456	-	418553 426657
236	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	516	-	418598 426616
237	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1854	A17SE (NW)	562	-	417561 427662
238	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1908	A17NE (NW)	677	-	417642 427846
239	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A17NW (NW)	909	-	417336 427926
240	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A17NW (NW)	993	-	417250 427962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
241	<p>Registered Landfill Sites</p> <p>Licence Holder: Hunsworth Dyeing Co Ltd Licence Reference: 222 Site Location: Whitehall Road, Cleckheaton, West Yorkshire, Bd19 4dh Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 2nd April 1980 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good Authorised Waste: Constr'N/Demol. Waste Excavation Waste Max.Waste Permitted By Licence Prohibited Waste: Biodegradable/Putrescible Waste Poisonous, Noxious, Polluting Wastes</p>	A9NW (SE)	308	2	418438 426750
242	<p>Registered Landfill Sites</p> <p>Licence Holder: Hunsworth Dyeing Co Ltd Licence Reference: 43 Site Location: Whitehall Road, Cleckheaton, West Yorkshire, Bd19 4dh Licence Easting: 418600 Licence Northing: 426800 Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 3rd May 1979 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Ind. Non-Haz. Inert, Non-Putresc. Industrial Effluent Treatment Sludge Prohibited Waste: Poisonous, Noxious, Polluting Wastes</p>	A14SW (SE)	418	2	418600 426800
243	<p>Registered Landfill Sites</p> <p>Licence Holder: K C Cawthray Ltd Licence Reference: 667 Site Location: Oakenshaw Spinning Mills, Bradford Road, Oakenshaw, Bradford, West Yorkshire Licence Easting: 417250 Licence Northing: 427950 Operator Location: 258 Huddersfield Road, Low Moor, BRADFORD, West Yorkshire, BD12 0TJ Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1988 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Excavation Waste Solid, Inert Constr'N/Demol. Waste Prohibited Waste: Liable To Cause Environmental Hazards Poisonous, Noxious, Polluting Wastes Putrescible Waste</p>	A17NW (NW)	984	2	417250 427950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
244	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: G Pearce (Acorn Skip Hire) Licence Reference: 1144 Site Location: Hillside Works, Whitehall Road, Hunsworth, Cleckheaton, West Yorkshire Operator Location: Acorn House, 3 Yew Trees Avenue, NORTHOWRAM, West Yorkshire, HX3 7JD Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st February 1993 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned within the geographical locality Boundary Quality: Not Supplied Authorised Waste: Bulky Household Waste Max.Storage In Licence Max.Waste Permitted By Licence Plant Mat'L From Gardens Uncontam. Com/Ind. From Shop/Off./Ind. Uncontam. Constr'N/Demol. Waste Prohibited Waste: Animal And Food Wastes Liable To Cause Environmental Hazards Poisonous, Noxious, Polluting Wastes</p>	A9NW (SE)	586	2	418770 426750
245	<p>Registered Waste Transfer Sites</p> <p>Licence Holder: Common Road Tyres & Co Ltd Licence Reference: 1298 Site Location: Oak Mills, Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st July 1994 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Inner Tubes Max.Storage In Licence Max.Waste Permitted By Licence Rubber Dust Scrap Bagomatics Tyres Prohibited Waste: Liable To Cause Environmental Hazards Poisonous, Noxious, Polluting Wastes</p>	A17NE (NW)	689	2	417700 427890

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
246	<p>Notification of Installations Handling Hazardous Substances (NIHHS)</p> <p>Name: Transco. Location: Whitechapel Road, CLECKHEATON, West Yorkshire, BD19 6HZ Status: Not Active Positional Accuracy: Manually positioned to the address or location</p>	A4NW (S)	898	8	418490 426089
247	<p>Planning Hazardous Substance Consents</p> <p>Name: Bg Transco Plc Location: Cleckheaton Holder Station, Whitechapel Road/Bradford Road, CLECKHEATON, . Authority: Kirklees Metropolitan Borough Council, Planning Services Application Ref: 2000/52/91098/Eo Hazardous: Liquefied extremely flammable gas (including LPG) and natural gas (whether Substance: liquefied or not) Maximum Quantity: 24 Application date: 3rd April 2000 Decision: Deemed Consent GrantedGranted Positional Accuracy: Located by supplier to within 10m</p>	A4NW (S)	897	6	418490 426090
247	<p>Planning Hazardous Substance Consents</p> <p>Name: British Gas Location: North Eastern, Whitechapel Road, Cleckheaton, West Yorkshire, Bd19 6 Authority: Kirklees Metropolitan Borough Council, Planning Services Application Ref: 92/50/04973/Ao Hazardous: Liquefied extremely flammable gas (including LPG) and natural gas (whether Substance: liquefied or not) Maximum Quantity: 24 Application date: 18th November 1992 Decision: Deemed Consent GrantedGranted Positional Accuracy: Manually positioned to the address or location</p>	A4NW (S)	898	6	418488 426088

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13NE (SE)	0	1	418105 427130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (E)	0	1	418230 427178
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (SE)	0	1	418105 427130
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (NE)	0	1	418146 427150
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	0	1	418171 427164
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	28	1	418264 427000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	33	1	417976 427024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 120 - 180 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A13SE (SE)	42	1	418303 427033
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NE (NE)	80	1	418283 427221
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NW (N)	84	1	418087 427409
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NE (NE)	115	1	418290 427258
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A13NE (NE)	143	1	418313 427280
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	169	1	418105 427500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	170	1	418104 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	175	1	418162 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 120 - 180 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A18SW (N)	180	1	418058 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (N)	190	1	418204 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SW (N)	200	1	418010 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SW (E)	220	1	418500 427113

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SW (E)	222	1	418500 427044
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NW (E)	223	1	418500 427130
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (NE)	300	1	418366 427509
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8NW (SW)	309	1	417871 426730
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18SE (NE)	315	1	418383 427500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 120 - 180 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 30 - 45 mg/kg</p> <p>Concentration:</p>	A14SW (SE)	318	1	418500 426824

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8NW (S)	394	1	417992 426549
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A9NW (SE)	396	1	418500 426687
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NW (NE)	411	1	418592 427344
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8NW (S)	420	1	418050 426500
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8SW (S)	517	1	418087 426400
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8SW (S)	560	1	417884 426415

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14SE (SE)	595	1	418817 426816
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18NW (N)	596	1	417918 427893
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17SE (NW)	640	1	417500 427711
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	660	1	417689 427852
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8SE (S)	662	1	418408 426310
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A9NE (SE)	662	1	418794 426645

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A8SW (S)	665	1	417810 426336
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 45 - 60 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18NE (N)	669	1	418105 428000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 45 - 60 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18NE (N)	676	1	418215 428000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 45 - 60 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18NE (N)	720	1	418384 428000
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (NE)	722	1	418658 427826
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	729	1	417500 427824

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 45 - 60 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A18NE (N)	735	1	418192 428063
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A7NW (SW)	747	1	417357 426720
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A14NE (E)	775	1	418998 427368
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	783	1	417500 427889
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	796	1	417605 427964
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 45 - 60 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (NE)	823	1	418598 428000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A23SE (N)	827	1	418231 428150
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NE (NW)	849	1	417500 427967
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A7SE (SW)	870	1	417628 426207
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (N)	872	1	418495 428118
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 15 - 25 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (N)	872	1	418510 428111
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (NE)	873	1	418582 428071

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A19NW (NE)	894	1	418561 428107
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NW (NW)	905	1	417294 427883
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 60 - 90 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A24SW (N)	907	1	418438 428179
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A7NW (SW)	907	1	417349 426453
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A11NE (W)	918	1	417000 427130
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A7NW (SW)	933	1	417147 426702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A23SE (N)	945	1	418164 428275
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A17NW (NW)	947	1	417278 427925
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 25 - 35 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: <100 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A16SE (W)	968	1	417000 427536
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A23SE (N)	972	1	418353 428274
	<p>BGS Estimated Soil Chemistry</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Soil Sample Type: Rural Soil</p> <p>Arsenic 35 - 45 mg/kg</p> <p>Concentration:</p> <p>Cadmium <1.8 mg/kg</p> <p>Concentration:</p> <p>Chromium 90 - 120 mg/kg</p> <p>Concentration:</p> <p>Lead Concentration: 100 - 200 mg/kg</p> <p>Nickel 15 - 30 mg/kg</p> <p>Concentration:</p>	A15SW (E)	996	1	419276 427059
248	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Hunsworth Little Wood</p> <p>Location: Hunsworth, Cleckheaton, West Yorkshire</p> <p>Source: British Geological Survey, National Geoscience Information Service</p> <p>Reference: 73799</p> <p>Type: Opencast</p> <p>Status: Ceased</p> <p>Operator: Unknown Operator</p> <p>Operator Location: Not Supplied</p> <p>Periodic Type: Carboniferous</p> <p>Geology: Pennine Coal Measures Group</p> <p>Commodity: Coal - Deep</p> <p>Positional Accuracy: Located by supplier to within 10m</p>	A13SE (S)	0	1	418113 427087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
249	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Rail Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73523 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	431	1	417608 427526
249	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Rail Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73523 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	431	1	417608 427526
250	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Mill Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72221 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	544	1	417664 427708
250	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Mill Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72221 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	544	1	417664 427708
250	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Oakenshaw Mill Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72223 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clifton Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	590	1	417649 427752
251	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Fern House Location: Hunsworth, Cleckheaton, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73787 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A14SE (SE)	566	1	418792 426831

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
252	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Newton Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73522 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	1	417472 427653
252	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Newton Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73522 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	1	417472 427653
253	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Bridge Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72224 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	626	1	417551 427734
253	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Bridge Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72224 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	626	1	417551 427734
254	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Oakenshaw Mill Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72222 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clifton Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	627	1	417592 427763
255	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Hunsworth Location: Hunsworth, Cleckheaton, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73707 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A14NE (E)	720	1	418982 427235

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
256	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Merchant House Location: Merchant Fields, Batley, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73726 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	720	1	418766 426499
257	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Shigston Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73521 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	784	1	417250 427638
257	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Shigston Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73521 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	784	1	417250 427638
258	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Boyd Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73520 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	815	1	417144 427483
258	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Boyd Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73520 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	815	1	417144 427483
259	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Booth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73517 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	900	1	417210 427783

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
259	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Booth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73517 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	900	1	417210 427783
260	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Garth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72220 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A16SE (NW)	967	1	417030 427610
260	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Garth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72220 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A16SE (NW)	967	1	417030 427610
261	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Chatts Hill Pit Location: Chatt'S Wood, Leeds, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72233 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A22SE (N)	984	1	417709 428226
261	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Chatts Hill Pit Location: Chatt'S Wood, Leeds, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72233 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A22SE (N)	984	1	417709 428226
	<p>BGS Measured Urban Soil Chemistry</p> <p>No data available</p>				
	<p>BGS Urban Soil Chemistry Averages</p> <p>No data available</p>				
	<p>Coal Mining Affected Areas</p> <p>Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.</p>	A13NE (SE)	0	9	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (SE)	0	-	418105 427130
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418171 427164
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418130 427165
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	418201 427030
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	418023 427089
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	8	1	418230 427178
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	48	1	418181 427302
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	133	1	418290 427258
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	140	1	418321 427317
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	156	1	418434 427099
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	196	1	418095 427525
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418179 427196
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418130 427165
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418179 427196
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	0	1	418132 427044
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	6	1	418230 427178
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	143	1	418313 427280
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
262	<p>Contemporary Trade Directory Entries</p> <p>Name: Technical Retail Services Ltd Location: The Dye House, Dyehouse Drive, West 26 Industrial Estate, CLECKHEATON, West Yorkshire, BD19 4TY Classification: Refrigerators & Freezers - Servicing & Repairs Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	186	-	418362 426849
263	<p>Contemporary Trade Directory Entries</p> <p>Name: Orean Personal Care Ltd Location: Unit E1, Stubs Beck Lane, West 26 Industrial Estate, Cleckheaton, BD19 4TT Classification: Cosmetic Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	187	-	418451 426998
263	<p>Contemporary Trade Directory Entries</p> <p>Name: Vokera Ltd Location: Unit E2, Stubs Beck Lane, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TT Classification: Boiler Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	191	-	418451 426987
263	<p>Contemporary Trade Directory Entries</p> <p>Name: Vokera Ltd Location: Hawthorne House, Unit E2, Stubs Beck Lane, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TT Classification: Boilers - Servicing, Replacements & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	191	-	418451 426987
264	<p>Contemporary Trade Directory Entries</p> <p>Name: Hauser Yorkshire Ltd Location: Unit 3, Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TS Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	187	-	418414 426937
264	<p>Contemporary Trade Directory Entries</p> <p>Name: Alliance Health Care Distribution Ltd Location: Unit 3, Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, BD19 4TS Classification: Distribution Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SE (SE)	187	-	418413 426937
265	<p>Contemporary Trade Directory Entries</p> <p>Name: Multi Packaging Solutions Location: Park House Woodland Park, Bradford Road, Chain Bar, Cleckheaton, West Yorkshire, BD19 6BW Classification: Boxes & Cartons Status: Active Positional Accuracy: Automatically positioned to the address</p>	A13SW (W)	198	-	417786 427069
266	<p>Contemporary Trade Directory Entries</p> <p>Name: Material Handling Devices Location: 563, Bradford Road, Chain Bar, Cleckheaton, BD19 6BU Classification: Lifting Equipment Status: Active Positional Accuracy: Automatically positioned to the address</p>	A12NE (W)	227	-	417702 427296
267	<p>Contemporary Trade Directory Entries</p> <p>Name: A C L Precision Ltd Location: Unit E1, Stubs Beck Lane, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TT Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (E)	248	-	418508 426977
267	<p>Contemporary Trade Directory Entries</p> <p>Name: Vokera Location: Stubs Beck Lane, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TT Classification: Boilers - Servicing, Replacements & Repairs Status: Active Positional Accuracy: Manually positioned to the address or location</p>	A14SW (E)	249	-	418508 426974

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
268	<p>Contemporary Trade Directory Entries</p> <p>Name: Parkam Chilled Foods Location: Unit 4, Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TS Classification: Frozen Food Processors & Distributors Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	269	-	418470 426873
269	<p>Contemporary Trade Directory Entries</p> <p>Name: Rentokil Pest Control Location: Centurion Way, Cleckheaton, West Yorkshire, BD19 3QE Classification: Pest & Vermin Control Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A8NE (SE)	384	-	418417 426634
269	<p>Contemporary Trade Directory Entries</p> <p>Name: Rentokil Property Care Location: Centurion Way, Cleckheaton, West Yorkshire, BD19 3QE Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A8NE (SE)	384	-	418417 426634
270	<p>Contemporary Trade Directory Entries</p> <p>Name: Valmar Sideloaders Ltd Location: Unit 3, Centurion Way, Cleckheaton, West Yorkshire, BD19 3QB Classification: Mechanical Handling Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A8NE (SE)	396	-	418342 426576
271	<p>Contemporary Trade Directory Entries</p> <p>Name: Hart & Clough Location: Ezra House, Littlewood Drive, West 26 Industrial Estate, CLECKHEATON, West Yorkshire, BD19 4TQ Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	424	-	418645 426856
271	<p>Contemporary Trade Directory Entries</p> <p>Name: Amadeus Press Location: Ezra House, Littlewood Drive, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TQ Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	424	-	418645 426856
271	<p>Contemporary Trade Directory Entries</p> <p>Name: Woods Ltd Location: Littlewood Drive, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TQ Classification: Print Finishers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SW (SE)	424	-	418645 426856
272	<p>Contemporary Trade Directory Entries</p> <p>Name: Group Auto Location: Unit 4a Littlewood Drive, West 26 Industrial Estate, Cleckheaton, West Yorkshire, BD19 4TQ Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	473	-	418631 426740
273	<p>Contemporary Trade Directory Entries</p> <p>Name: Econosto Ltd Location: Hunsworth La, Cleckheaton, West Yorkshire, BD19 4DT Classification: Gaskets Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A14NE (E)	559	-	418804 427272
274	<p>Contemporary Trade Directory Entries</p> <p>Name: Arrid Solutions Location: 176, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 4DX Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A14SE (E)	580	-	418860 427082
275	<p>Contemporary Trade Directory Entries</p> <p>Name: Volkswagen Van Centre Location: Chain Bar Road, Cleckheaton, BD19 3QF Classification: Commercial Vehicle Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	612	-	418467 426399

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	<p>Contemporary Trade Directory Entries</p> <p>Name: Goliath Footwear Ltd Location: Goliath House, Chain Bar Road, Cleckheaton, BD19 3QF Classification: Footwear - Manufacturers and Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	616	-	418509 426419
275	<p>Contemporary Trade Directory Entries</p> <p>Name: Volkswagen Van Centre West Yorkshire Location: Chain Bar Road, Cleckheaton, West Yorkshire, BD19 3QF Classification: Commercial Vehicle Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	629	-	418480 426386
276	<p>Contemporary Trade Directory Entries</p> <p>Name: M P Transport Location: Haley House, Whitehall Road, Cleckheaton, West Yorkshire, BD19 4DN Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	626	-	418818 426753
276	<p>Contemporary Trade Directory Entries</p> <p>Name: Darpak Packaging Systems Ltd Location: Hillside Works, Whitehall Road, Cleckheaton, West Yorkshire, BD19 4DW Classification: Packaging & Wrapping Equipment & Supplies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	626	-	418818 426753
276	<p>Contemporary Trade Directory Entries</p> <p>Name: Tas Commercial Location: Unit 13-14, Hillside Works, Whitehall Road, Cleckheaton, West Yorkshire, BD19 4DN Classification: Tank Cleaning & Repairing Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	626	-	418818 426753
276	<p>Contemporary Trade Directory Entries</p> <p>Name: Conntrans B F D Ltd Location: Conntrans Unit 12, Hillside Works, Whitehall Road, Cleckheaton, BD19 4DN Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	627	-	418818 426751
276	<p>Contemporary Trade Directory Entries</p> <p>Name: Hillside Fabrications Ltd Location: Unit 15, Hillside Works, Whitehall Road, Cleckheaton, BD19 4DN Classification: Aluminium Fabricators Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	627	-	418818 426751
277	<p>Contemporary Trade Directory Entries</p> <p>Name: Flexitallic Ltd Location: Scandinavia Mills, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 4LN Classification: Sealant Compounds & Applications Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	639	-	418710 426559
278	<p>Contemporary Trade Directory Entries</p> <p>Name: Common Road Tyre Co Ltd Location: Oak Mills, Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire, BD12 7ER Classification: Tyre Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	686	-	417699 427886
278	<p>Contemporary Trade Directory Entries</p> <p>Name: Hales Waste Control Ltd Location: Oak Mills, Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire, BD12 7ER Classification: Waste Disposal Services Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A17NE (NW)	686	-	417699 427886
278	<p>Contemporary Trade Directory Entries</p> <p>Name: Oak Mills Location: Oak Mills, Cliff Hollins Lane, Oakenshaw, Bradford, BD12 7ER Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17NE (NW)	686	-	417698 427886

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
279	<p>Contemporary Trade Directory Entries</p> <p>Name: Van Centre West Yorkshire Ltd Location: Chain Bar Road, Cleckheaton, West Yorkshire, BD19 3QF Classification: Car Customisation & Conversion Specialists Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	A9SW (SE)	690	-	418562 426364
279	<p>Contemporary Trade Directory Entries</p> <p>Name: Aprile Ltd Location: Spen Lane, Cleckheaton, West Yorkshire, BD19 3SP Classification: Freight Forwarders Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A9SW (SE)	690	-	418562 426364
279	<p>Contemporary Trade Directory Entries</p> <p>Name: Thompson Davis & Co Ltd Location: Spen Trading Estate, Cleckheaton, West Yorkshire, BD19 3SP Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	691	-	418562 426364
279	<p>Contemporary Trade Directory Entries</p> <p>Name: Benbeck Forwarding Ltd Location: Spen Trading Estate, Cleckheaton, West Yorkshire, BD19 3SP Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	691	-	418562 426364
279	<p>Contemporary Trade Directory Entries</p> <p>Name: Tool Bank Location: Unit 5, Chain Bar Road, Cleckheaton, West Yorkshire, BD19 3QF Classification: Press Tool Manufacturers & Distributors Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	A9SW (SE)	691	-	418562 426364
280	<p>Contemporary Trade Directory Entries</p> <p>Name: P Scriven Location: 270, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 4DT Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	735	-	418877 427505
281	<p>Contemporary Trade Directory Entries</p> <p>Name: Elite Blinds Location: 383, Whitehall Road West, Cleckheaton, West Yorkshire, BD19 4EE Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9NE (SE)	746	-	418915 426682
282	<p>Contemporary Trade Directory Entries</p> <p>Name: Technical Services Uk Ltd Location: Unit 6, Scandinavia Court, Chain Bar Road, CLECKHEATON, West Yorkshire, BD19 3QW Classification: Commercial Vehicle Component Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	776	-	418635 426308
282	<p>Contemporary Trade Directory Entries</p> <p>Name: Technical Services Uk Ltd Location: Unit 6, Scandinavia Court, Chain Bar Road, Cleckheaton, West Yorkshire, BD19 3QW Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	776	-	418635 426308
283	<p>Contemporary Trade Directory Entries</p> <p>Name: C J Winterburne Location: Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire, BD12 7ET Classification: Agricultural Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A18NW (N)	828	-	417897 428128
284	<p>Contemporary Trade Directory Entries</p> <p>Name: Westco Aircraft Location: Lawrence House, Riverside Drive, Cleckheaton, West Yorkshire, BD19 4DH Classification: Chemicals - Distributors & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	834	-	418766 426336

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
285	<p>Contemporary Trade Directory Entries</p> <p>Name: Novus Sealing Ltd Location: 1, Hunsworth Lane, Cleckheaton, West Yorkshire, BD19 4EJ Classification: Seal & Joint Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	834	-	418556 426194
286	<p>Contemporary Trade Directory Entries</p> <p>Name: H M & S Ltd Location: Riverside Drive, Cleckheaton, West Yorkshire, BD19 4DH Classification: Disability Equipment - Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	841	-	418697 426272
286	<p>Contemporary Trade Directory Entries</p> <p>Name: Cutwel Ltd Location: Unit A, Riverside Drive, Cleckheaton, BD19 4DH Classification: Cutting Tools & Machinery Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	841	-	418696 426272
287	<p>Contemporary Trade Directory Entries</p> <p>Name: Ralph Pearson Location: Cliff Hollins Lane, Oakenshaw, Bradford, West Yorkshire, BD12 7ET Classification: Meat - Wholesale Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A23SW (N)	847	-	417976 428166
288	<p>Contemporary Trade Directory Entries</p> <p>Name: Kingston Reprographics Location: Kilroyd Dr, Cleckheaton, West Yorkshire, BD19 4EA Classification: Office Equipment Manufacturers & Distributors Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	A9NE (E)	874	-	419090 426744
289	<p>Contemporary Trade Directory Entries</p> <p>Name: Maple Cleaning Services Location: 726a, Bradford Road, Oakenshaw, Bradford, BD12 7DY Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	A17NW (NW)	886	-	417344 427902
290	<p>Contemporary Trade Directory Entries</p> <p>Name: Border Technologies Location: Whitechapel Road, Cleckheaton, BD19 6HY Classification: Machinery - Industrial & Commercial Status: Active Positional Accuracy: Automatically positioned to the address</p>	A4NW (SE)	904	-	418536 426103
290	<p>Contemporary Trade Directory Entries</p> <p>Name: Stoneacre Rochdale Location: The Weaving Shed, 183, Bradford Road, Cleckheaton, West Yorkshire, BD19 3TT Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A4NW (S)	930	-	418526 426070
290	<p>Contemporary Trade Directory Entries</p> <p>Name: Stoneacre Rochdale Location: 183 Bradford Road, Cleckheaton, West Yorkshire, BD19 3TT Classification: Car Dealers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A4NW (S)	933	-	418533 426070
291	<p>Contemporary Trade Directory Entries</p> <p>Name: Walker Wade Location: Security House, 181, Bradford Road, Cleckheaton, West Yorkshire, BD19 3TT Classification: Roller Shutter Manufacturers Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	A9SW (SE)	918	-	418593 426118
291	<p>Contemporary Trade Directory Entries</p> <p>Name: Clemo Location: Bradford Road, Cleckheaton, West Yorkshire, BD19 3TT Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A4NW (SE)	927	-	418587 426104

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
292	<p>Contemporary Trade Directory Entries</p> <p>Name: Transmark Heaton Valves Ltd Location: Heaton House Unit E, Riverside Drive, Cleckheaton, West Yorkshire, BD19 4DH Classification: Valve Manufacturers & Suppliers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SE (SE)	927	-	418811 426252
292	<p>Contemporary Trade Directory Entries</p> <p>Name: M R C Global Inc Location: Heaton House Unit E, Riverside Drive, Cleckheaton, West Yorkshire, BD19 4DH Classification: Valve Manufacturers & Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A9SE (SE)	927	-	418811 426252
293	<p>Contemporary Trade Directory Entries</p> <p>Name: Norwood Engineering Co Location: 53, Wyke Lane, Oakenshaw, Bradford, West Yorkshire, BD12 7EE Classification: Engineers - General Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A17SW (NW)	949	-	417112 427728
294	<p>Contemporary Trade Directory Entries</p> <p>Name: K N K Kolor Ltd Location: Unit 1a, Intouch House, Riverside Drive, Cleckheaton, West Yorkshire, BD19 4DH Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A9SW (SE)	952	-	418757 426178
295	<p>Contemporary Trade Directory Entries</p> <p>Name: Westex Carpets Ltd Location: Castlemills, Moorend, Cleckheaton, West Yorkshire, BD19 3PS Classification: Carpets & Rugs - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	A4NW (SE)	965	-	418584 426059
295	<p>Contemporary Trade Directory Entries</p> <p>Name: Walker Wade Location: Security House, 181, Bradford Road, Cleckheaton, BD19 3TT Classification: Roller Shutter Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A4NW (S)	967	-	418555 426043
295	<p>Contemporary Trade Directory Entries</p> <p>Name: Elegant Stone Location: Moorend Works, Bradford Road, Cleckheaton, BD19 3TT Classification: Stone Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A4NW (S)	967	-	418555 426043
296	<p>Contemporary Trade Directory Entries</p> <p>Name: Equipstock Ltd Location: 51, Hawthorn Lane, CLECKHEATON, West Yorkshire, BD19 3TR Classification: Engineering Materials Status: Active Positional Accuracy: Automatically positioned to the address</p>	A4NW (S)	969	-	418476 426007
297	<p>Contemporary Trade Directory Entries</p> <p>Name: Briggs Burners Ltd Location: 179, Bradford Road, Cleckheaton, West Yorkshire, BD19 3TT Classification: Heating Equipment - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	A4NW (SE)	993	-	418635 426056
298	<p>Points of Interest - Commercial Services</p> <p>Name: Alliance Health Care Distribution Ltd Location: Unit 3 Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, BD19 4TS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A13SE (SE)	187	10	418413 426937
298	<p>Points of Interest - Commercial Services</p> <p>Name: Hauser Yorkshire Ltd Location: Unit 3, Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, BD19 4TS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A13SE (SE)	187	10	418414 426937

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	<p>Points of Interest - Commercial Services</p> <p>Name: Hauser Yorkshire Ltd Location: Unit 3, Hanging Wood Way, West 26 Industrial Estate, Cleckheaton, BD19 4TS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A13SE (SE)	187	10	418414 426937
299	<p>Points of Interest - Commercial Services</p> <p>Name: Transmec (UK) Ltd Location: Littlewood Drive, West 26 Industrial Estate, Cleckheaton, BD19 4TQ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9NW (SE)	474	10	418630 426737
300	<p>Points of Interest - Commercial Services</p> <p>Name: Conntrans Bfd Ltd Location: Hillside Works, Whitehall Road, Cleckheaton, BD19 4DW Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	626	10	418818 426753
300	<p>Points of Interest - Commercial Services</p> <p>Name: Conntrans B F D Ltd Location: Conntrans Unit 12 Hillside Works, Whitehall Road, Cleckheaton, BD19 4DN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9NE (SE)	627	10	418818 426751
301	<p>Points of Interest - Commercial Services</p> <p>Name: Aprile Ltd Location: Spen Lane, Cleckheaton, West Yorkshire, BD19 3SP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9SW (SE)	690	10	418562 426364
301	<p>Points of Interest - Commercial Services</p> <p>Name: Benbeck Forwarding Ltd Location: Spen Trading Estate, Cleckheaton, BD19 3SP Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9SW (SE)	691	10	418562 426364
302	<p>Points of Interest - Commercial Services</p> <p>Name: Auto Body Fit Location: 4 Rooks Avenue, Cleckheaton, BD19 3YD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	A3NE (S)	917	10	418214 426001
303	<p>Points of Interest - Commercial Services</p> <p>Name: M R C Transmark Ltd Location: Heaton House, Riverside Drive, Cleckheaton, BD19 4DH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9SE (SE)	927	10	418811 426252
303	<p>Points of Interest - Commercial Services</p> <p>Name: M R C Transmark Location: Heaton House, Riverside Drive, Cleckheaton, BD19 4DH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	A9SE (SE)	927	10	418811 426252
304	<p>Points of Interest - Commercial Services</p> <p>Name: Clemo Mg Rover Location: 183 Bradford Road, Cleckheaton, BD19 3TT Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	A4NW (SE)	927	10	418587 426104
305	<p>Points of Interest - Commercial Services</p> <p>Name: Martin Lambert Location: 12 Teasel Close, Bradford Road, Oakenshaw, Bradford, BD12 7DH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	A17NW (NW)	982	10	417276 427971
305	<p>Points of Interest - Commercial Services</p> <p>Name: Martin Lambert Auto Electricals Location: 12a Teasel Close, Oakenshaw, Bradford, BD12 7DH Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	A17NW (NW)	984	10	417287 427982

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
306	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	0	10	418041 427237
306	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	0	10	418051 427260
307	Points of Interest - Manufacturing and Production Name: Tanks Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	0	10	418130 427161
307	Points of Interest - Manufacturing and Production Name: Control Works Location: BD4 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	0	10	418128 427084
308	Points of Interest - Manufacturing and Production Name: Water Pollution Control Works Location: BD12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	168	10	417939 427427
309	Points of Interest - Manufacturing and Production Name: Control Works Location: BD12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	209	10	418023 427517
310	Points of Interest - Manufacturing and Production Name: Premier Meetings Location: Whitehall Road, Cleckheaton, BD19 6HG Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A8NE (SE)	280	10	418430 426784
311	Points of Interest - Manufacturing and Production Name: Water Pollution Control Works Location: BD12 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	303	10	417883 427550
312	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	364	10	417948 427652
312	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	414	10	417876 427672
312	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	417	10	417887 427681
313	Points of Interest - Manufacturing and Production Name: Hillside Works Location: BD19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	495	10	418701 426813

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
313	Points of Interest - Manufacturing and Production Name: Hillside Works Industrial Estate Location: BD19 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	510	10	418718 426811
313	Points of Interest - Manufacturing and Production Name: Hillside Works Industrial Estate Location: BD19 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	511	10	418720 426813
314	Points of Interest - Manufacturing and Production Name: Hub 26 Location: Scandinavia Mills, Hunsworth Lane, Cleckheaton, BD19 4LN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NW (SE)	606	10	418675 426569
315	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	656	10	418217 426263
315	Points of Interest - Manufacturing and Production Name: Tanks Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	707	10	418154 426208
316	Points of Interest - Manufacturing and Production Name: Tank Location: BD12 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	684	10	417722 427896
317	Points of Interest - Manufacturing and Production Name: Tanks Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	720	10	418171 426195
317	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	746	10	418246 426177
317	Points of Interest - Manufacturing and Production Name: Tanks Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	776	10	418262 426149
317	Points of Interest - Manufacturing and Production Name: Tanks Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	789	10	418217 426130
318	Points of Interest - Manufacturing and Production Name: Tank Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	934	10	419027 427638
319	Points of Interest - Manufacturing and Production Name: Touchbase Location: Whitehall Road Nurseries, Whitehall Road, Cleckheaton, BD19 6HG Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A7SW (SW)	951	10	417375 426347

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
319	Points of Interest - Manufacturing and Production Name: Tank Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A7SW (SW)	959	10	417377 426331
320	Points of Interest - Manufacturing and Production Name: Works Location: BD19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	980	10	418525 426015
320	Points of Interest - Manufacturing and Production Name: Works Location: BD19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A4NW (S)	983	10	418528 426012
320	Points of Interest - Manufacturing and Production Name: Business Park Location: BD19 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	995	10	418548 426008
320	Points of Interest - Manufacturing and Production Name: Tank Location: BD19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	998	10	418546 426004
320	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	999	10	418532 425997
321	Points of Interest - Public Infrastructure Name: Water Pollution Control Works Location: BD4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	0	10	418127 427087
321	Points of Interest - Public Infrastructure Name: Sludge Bed Location: BD4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	0	10	418222 427113
321	Points of Interest - Public Infrastructure Name: Sludge Bed Location: BD4 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	0	10	418222 427114
322	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	0	10	418059 427173
322	Points of Interest - Public Infrastructure Name: Settling Tanks Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NE (N)	0	10	418110 427223
322	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	0	10	418069 427174

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
323	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	6	10	418033 427293
323	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	84	10	417977 427352
324	Points of Interest - Public Infrastructure Name: Weir Location: BD12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	80	10	418088 427405
324	Points of Interest - Public Infrastructure Name: Weir Location: BD12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	80	10	418085 427404
324	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	97	10	418047 427403
324	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (N)	100	10	418037 427401
325	Points of Interest - Public Infrastructure Name: Water Pollution Control Works Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	168	10	417939 427427
325	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	179	10	417997 427469
325	Points of Interest - Public Infrastructure Name: Filter Beds Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	182	10	417988 427468
326	Points of Interest - Public Infrastructure Name: Weir Location: BD19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	175	10	418379 426902
326	Points of Interest - Public Infrastructure Name: Weir Location: BD19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	177	10	418383 426905
327	Points of Interest - Public Infrastructure Name: Settlement Tank Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	291	10	417978 427586

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
327	Points of Interest - Public Infrastructure Name: Settlement Tank Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	292	10	417979 427587
327	Points of Interest - Public Infrastructure Name: Settlement Tank Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	325	10	417964 427617
327	Points of Interest - Public Infrastructure Name: Settlement Tank Location: BD12 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	326	10	417964 427618
327	Points of Interest - Public Infrastructure Name: Sluices Location: BD12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	336	10	417893 427593
327	Points of Interest - Public Infrastructure Name: Sluices Location: BD12 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	350	10	417877 427600
328	Points of Interest - Public Infrastructure Name: Weir Location: BD19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	305	10	418440 426757
328	Points of Interest - Public Infrastructure Name: Weir Location: BD19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	312	10	418451 426759
329	Points of Interest - Public Infrastructure Name: Incinerator Location: BD12 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	548	10	418126 427879
330	Points of Interest - Public Infrastructure Name: Wrawby Services Ltd Location: Unit 8/A Hillside Works, Whitehall Road, Cleckheaton, BD19 4DN Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A9NE (SE)	626	10	418818 426753
331	Points of Interest - Public Infrastructure Name: Garden of Rest Location: BD12 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	716	10	417455 427774
331	Points of Interest - Public Infrastructure Name: Garden of Rest Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	717	10	417455 427775
332	Points of Interest - Recreational and Environmental Name: Play Area Location: BD19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	748	10	419001 426872

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
333	Points of Interest - Recreational and Environmental Name: Play Area Location: BD19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	932	10	418641 426130
334	Points of Interest - Recreational and Environmental Name: Playground Location: Mill Carr Hill Road, BD4 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A22SE (NW)	956	10	417628 428154

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
335	Ancient Woodland Name: Not Supplied Reference: 1410261 Area(m ²): 45011.87 Type: Ancient and Semi-Natural Woodland	A13NE (NE)	16	11	418182 427203
336	Ancient Woodland Name: Great And Little Hunsworth Woods Reference: 1103093 Area(m ²): 38621.11 Type: Ancient and Semi-Natural Woodland	A14NW (E)	192	11	418470 427148
337	Ancient Woodland Name: Chatts Wood Reference: 1103092 Area(m ²): 27010.68 Type: Ancient and Semi-Natural Woodland	A18NE (N)	528	11	418185 427855
338	Areas of Adopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Unitary Development Plan Status: Adopted Plan Date: 1st March 1999	A13NE (SE)	0	12	418105 427130
339	Areas of Adopted Green Belt Authority: Bradford Metropolitan City Council Plan Name: Bradford District Replacement Udp Status: Adopted Plan Date: 31st October 2005	A17NE (NW)	688	13	417654 427866
340	Areas of Adopted Green Belt Authority: Bradford Metropolitan City Council Plan Name: Bradford District Replacement Udp Status: Adopted Plan Date: 31st October 2005	A23SW (N)	985	13	417852 428280
341	Areas of Unadopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Local Plan Status: Submission Draft Plan Date: 25th April 2017	A13NE (NE)	0	12	418161 427159
342	Nitrate Vulnerable Zones Name: Spen Beck From Source To River Calder Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (SE)	0	4	418105 427130

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Leeds City Council - Planning and Development Bradford Metropolitan City Council - Environmental Health Environment Agency - Head Office Kirklees Metropolitan Borough Council - Planning Services Calderdale Metropolitan Borough Council - Environmental Health	April 2014 January 2020 June 2020 November 2013 September 2014	Annual Rolling Update Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North East Region	January 2021	Quarterly
Enforcement and Prohibition Notices Environment Agency - North East Region	March 2013	Annual Rolling Update
Integrated Pollution Controls Environment Agency - North East Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - North East Region	January 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control Kirklees Metropolitan Borough Council - Environmental Health Department Leeds City Council - Neighbourhoods Department Bradford Metropolitan City Council - Environmental Health Calderdale Metropolitan Borough Council - Environmental Health	April 2014 June 2014 October 2014 October 2014	Variable Variable Variable Variable
Local Authority Pollution Prevention and Controls Kirklees Metropolitan Borough Council - Environmental Health Department Leeds City Council - Neighbourhoods Department Bradford Metropolitan City Council - Environmental Health Calderdale Metropolitan Borough Council - Environmental Health	April 2014 August 2014 October 2014 October 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Kirklees Metropolitan Borough Council - Environmental Health Department Bradford Metropolitan City Council - Environmental Health Leeds City Council - Neighbourhoods Department Calderdale Metropolitan Borough Council - Environmental Health	April 2014 January 2013 June 2014 October 2014	Variable Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	January 2021	
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	Annual Rolling Update
Registered Radioactive Substances Environment Agency - North East Region	June 2016	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	January 2021 January 2021	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	January 2021	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	October 2017	Quarterly

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	March 2021	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	March 2021	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	March 2021	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	March 2021	Quarterly
Flood Defences Environment Agency - Head Office	March 2021	Quarterly
OS Water Network Lines Ordnance Survey	September 2020	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually



Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	January 2021 January 2021	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	January 2021 January 2021	Quarterly Quarterly
Local Authority Landfill Coverage Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council - Environmental Health Kirklees Metropolitan Borough Council - Planning Services Leeds City Council - Planning and Development	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council - Environmental Health Kirklees Metropolitan Borough Council - Planning Services Leeds City Council - Planning and Development	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	Not Applicable Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Kirklees Metropolitan Borough Council - Planning Services Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council Leeds City Council - Planning and Development	August 2015 February 2016 February 2016 February 2016	Variable Variable Variable Variable
Planning Hazardous Substance Consents Kirklees Metropolitan Borough Council - Planning Services Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council Leeds City Council - Planning and Development	August 2015 February 2016 February 2016 February 2016	Variable Variable Variable Variable
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	April 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	February 2021	Quarterly
Gas Pipelines National Grid	January 2021	
Points of Interest - Commercial Services PointX	March 2021	Quarterly
Points of Interest - Education and Health PointX	March 2021	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2021	Quarterly
Points of Interest - Public Infrastructure PointX	March 2021	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2021	Quarterly
Underground Electrical Cables National Grid	April 2021	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt Bradford Metropolitan City Council Calderdale Metropolitan Borough Council Kirklees Metropolitan Borough Council Leeds City Council	June 2020 June 2020 June 2020 June 2020	As notified As notified As notified As notified
Areas of Unadopted Green Belt Bradford Metropolitan City Council Calderdale Metropolitan Borough Council Kirklees Metropolitan Borough Council Leeds City Council	June 2020 June 2020 June 2020 June 2020	As notified As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	January 2021	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	February 2021	Bi-Annually
Marine Nature Reserves Natural England	July 2019	Bi-Annually
National Nature Reserves Natural England	January 2021	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest Natural England	February 2021	Bi-Annually
Special Areas of Conservation Natural England	July 2020	Bi-Annually
Special Protection Areas Natural England	February 2021	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

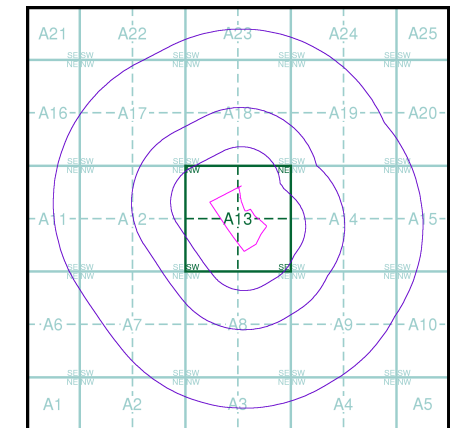
Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Kirklees Metropolitan Borough Council - Environmental Health Department West Riding House, 9 Manchester Road, Huddersfield, West Yorkshire, HD1 3HH	Telephone: 01484 221000 Email: customer.relations@kirklees.gov.uk Website: www.kirklees.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Kirklees Metropolitan Borough Council - Planning Services PO BOX B93, Civic Centre III, Off Market Street, Huddersfield, West Yorkshire, HD1 2JR	Telephone: 01484 221000 Fax: 01484 221613 Website: www.kirklees.gov.uk
7	Bradford Metropolitan City Council - Planning Department 3rd Floor, Jacobs Well, Bradford, West Yorkshire, BD1 5RW	Telephone: 01274 432111 Fax: 01274 752045 Website: www.bradford.gov.uk
8	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
9	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
11	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
12	Kirklees Metropolitan Borough Council Town Hall, Civic Centre, Huddersfield, West Yorkshire, HD1 2TA	Telephone: 01484 221000 Fax: 01484 442768 Website: www.kirklees.gov.uk
13	Bradford Metropolitan City Council City Hall, Bradford, West Yorkshire, BD1 1HY	Telephone: 01274 432111 Fax: 01274 752045 Website: www.bradford.gov.uk
14	Calderdale Metropolitan Borough Council Crossley House, Crossley Street, Halifax, West Yorkshire, HX1 1TP	Telephone: 01422 357257 Fax: 01422 392238 Website: www.calderdale.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org

Contact	Name and Address	Contact Details
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A

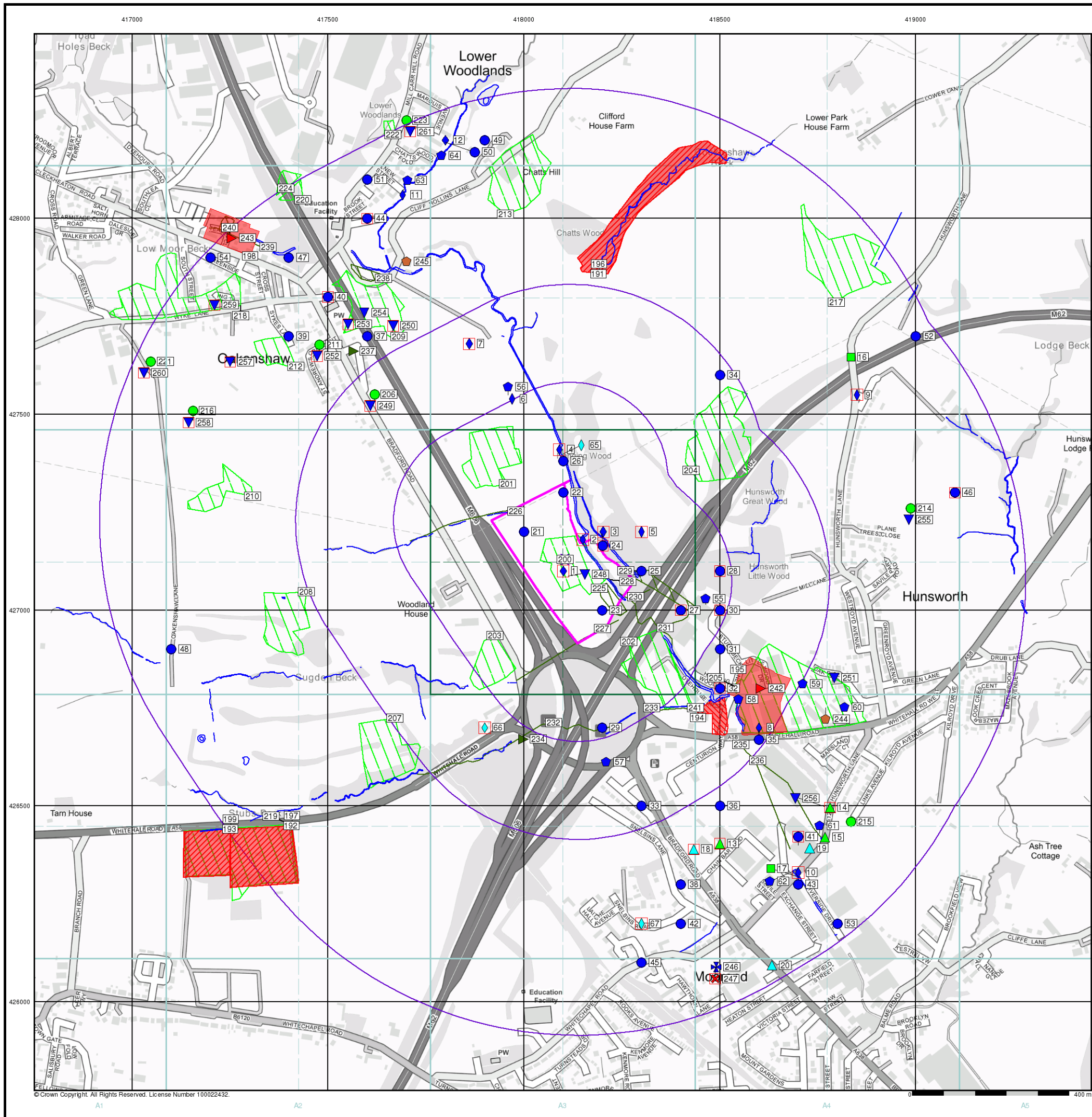


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details






Site at 418090, 427110












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Industrial Land Use Map

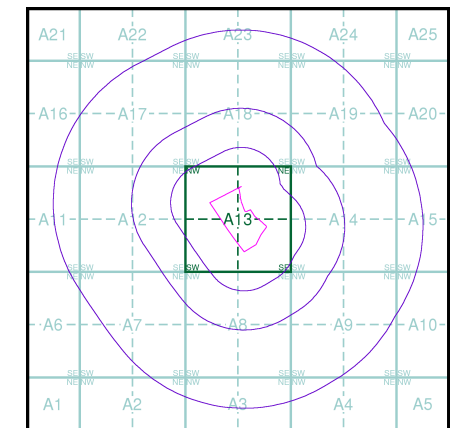
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

Industrial Land Use

-  Contemporary Trade Directory Entry
-  Fuel Station Entry
-  Gas Pipeline
-  Points of Interest - Commercial Services
-  Points of Interest - Education and Health
-  Points of Interest - Manufacturing and Production
-  Points of Interest - Public Infrastructure
-  Points of Interest - Recreational and Environmental
-  Underground Electrical Cables

Industrial Land Use Map - Slice A

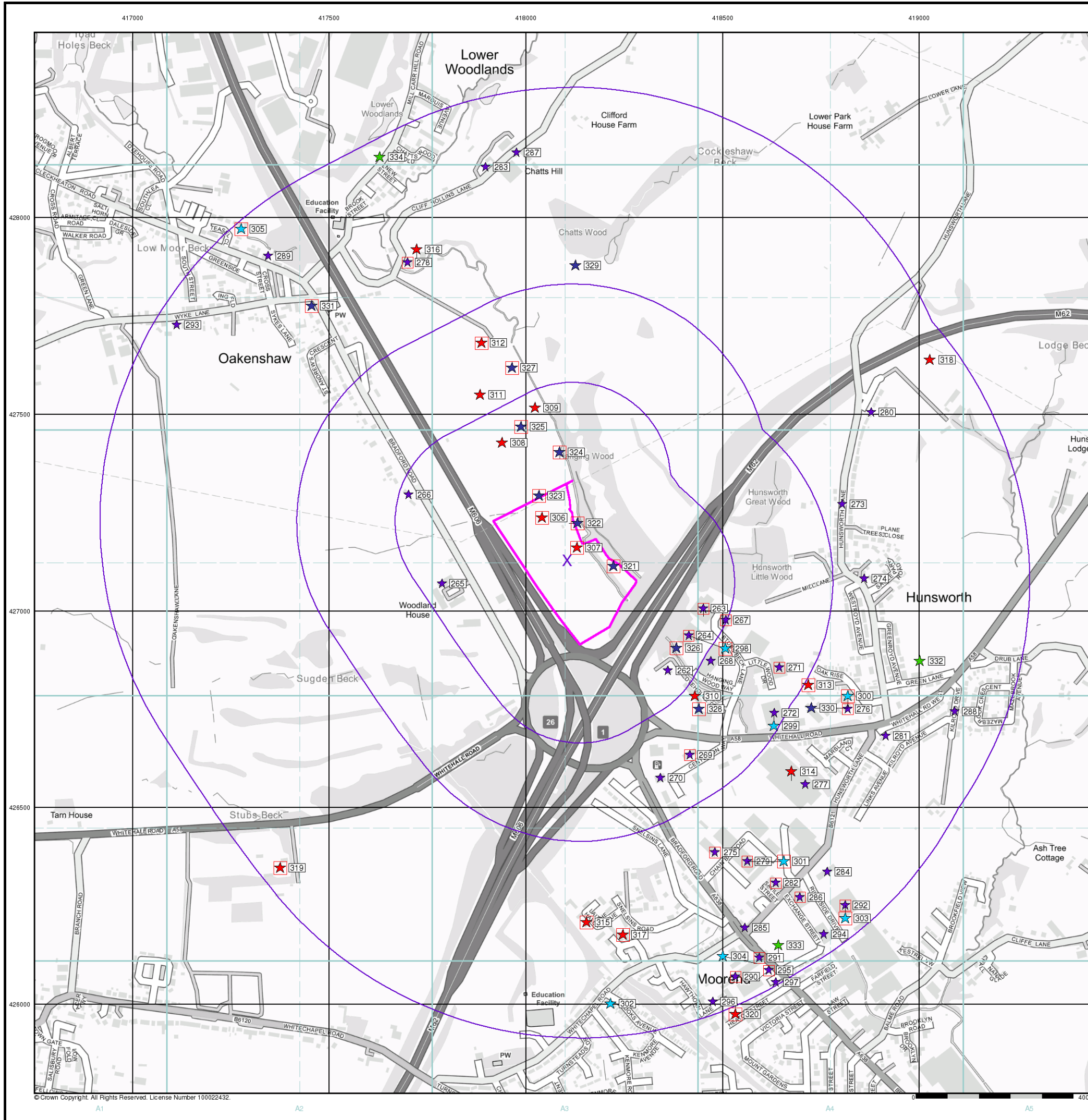


Order Details




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 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
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 Search Buffer (m): 1000

Site Details






Site at 418090, 427110



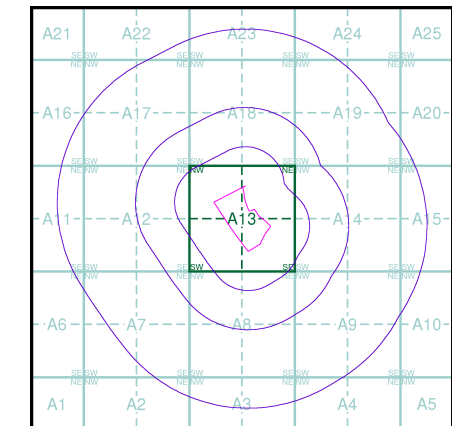
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Agency and Hydrological (Flood)

-  Extreme Flooding from Rivers or Sea without Defences (Zone 2)
-  Flooding from Rivers or Sea without Defences (Zone 3)
-  Area Benefiting from Flood Defence
-  Flood Water Storage Areas
-  Flood Defence

Flood Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000






Site Details

Site at 418090, 427110








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General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Map ID
-  Several of Type at Location

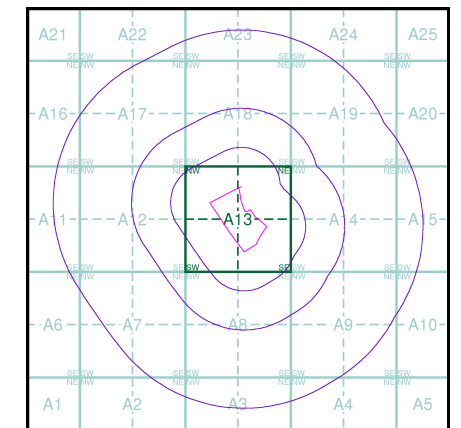
Agency and Hydrological (Boreholes)

-  BGS Borehole Depth 0 - 10m
-  BGS Borehole Depth 10 - 30m
-  BGS Borehole Depth 30m +
-  Confidential
-  Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

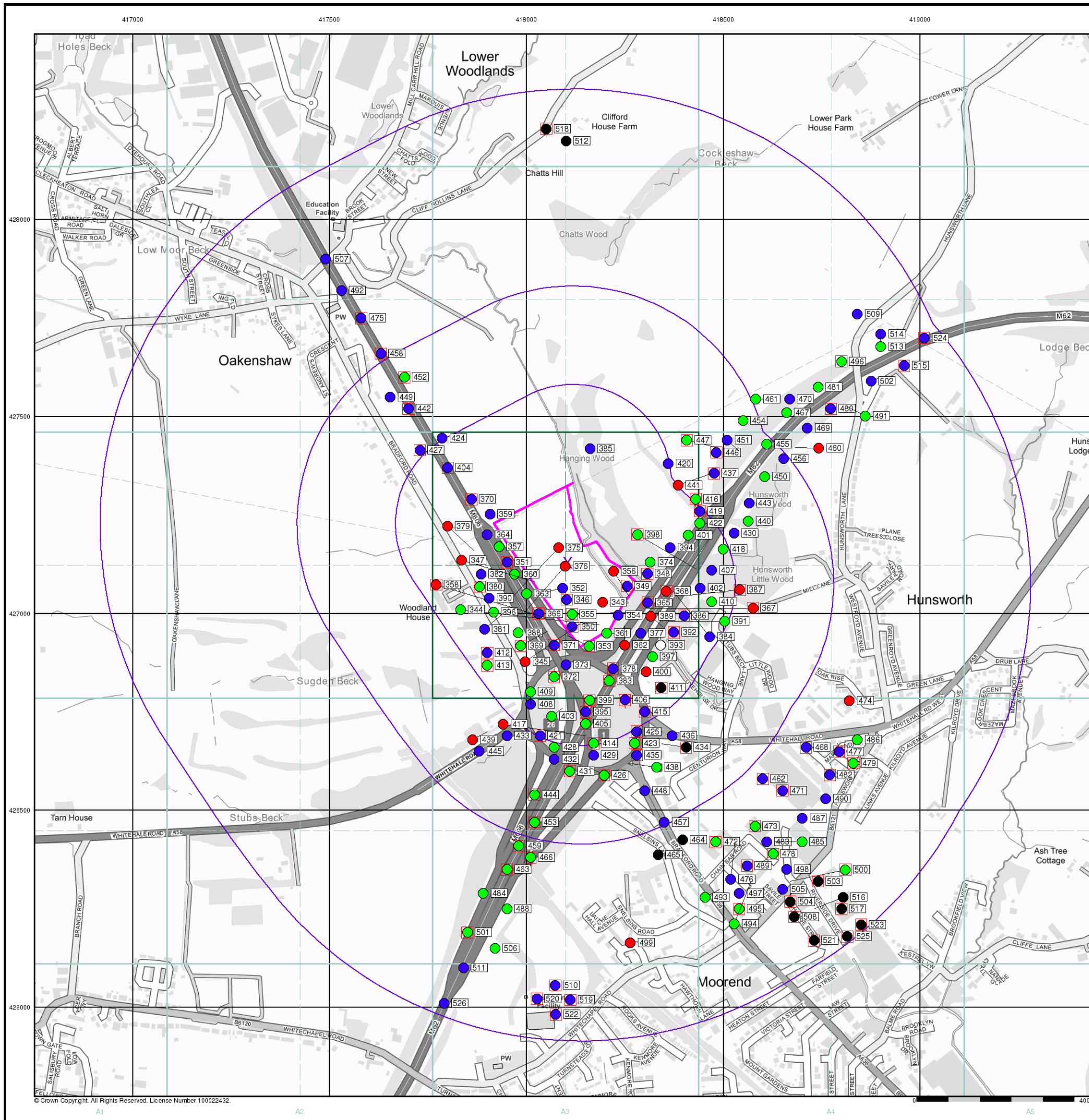


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

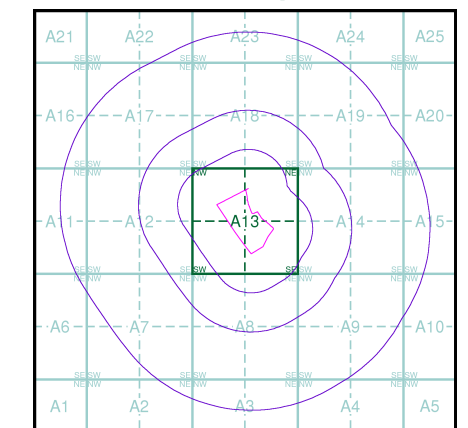
OS Water Network Data

- | | | | |
|--|--------------|--|-------------------------|
| | Canal | | Drain |
| | Reservoir | | Other |
| | Foresore | | Lake |
| | Marsh | | Transfer |
| | Tidal River | | Lock Or Flight Of Locks |
| | Inland River | | Sea |

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A

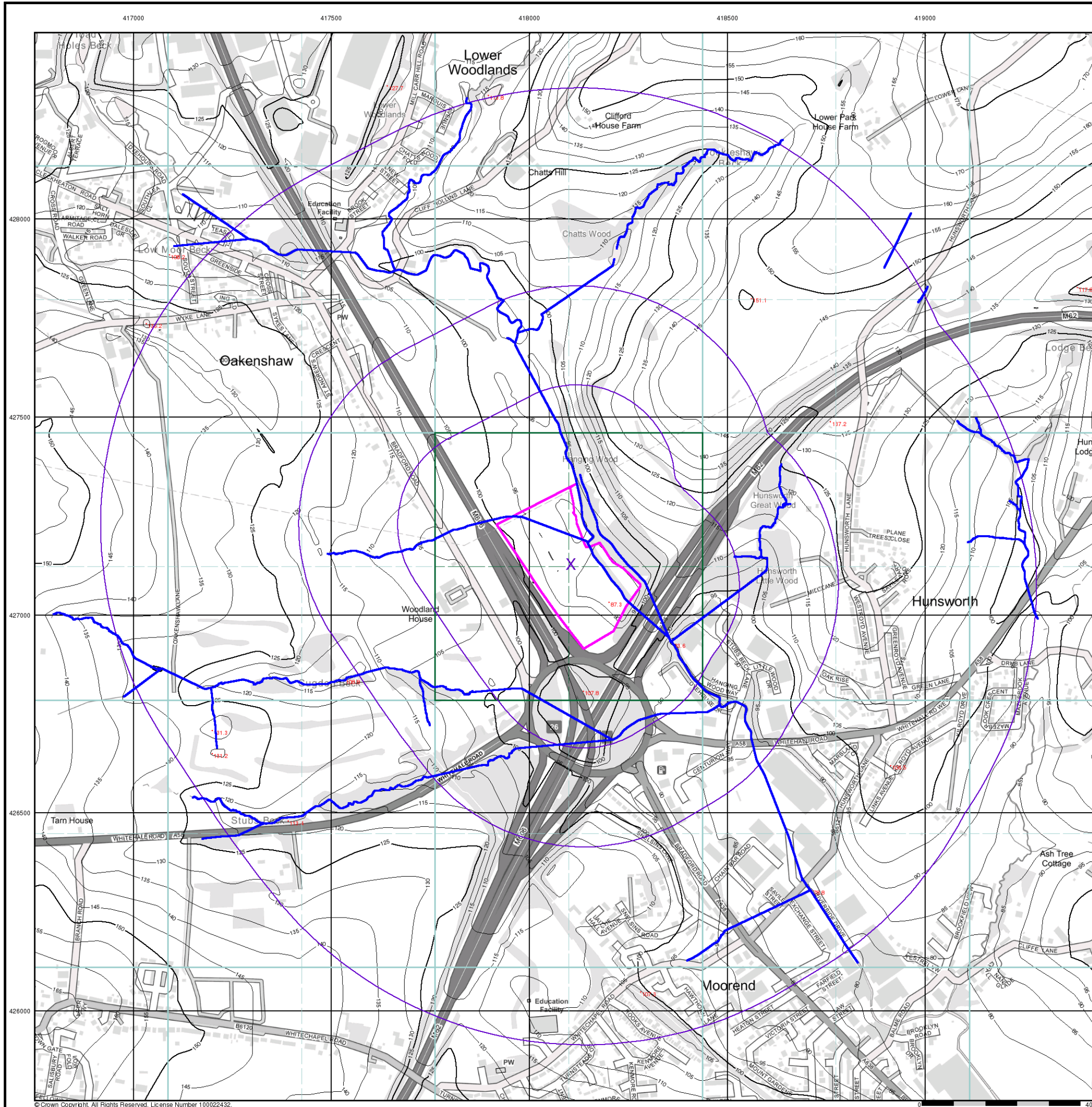


Order Details




Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

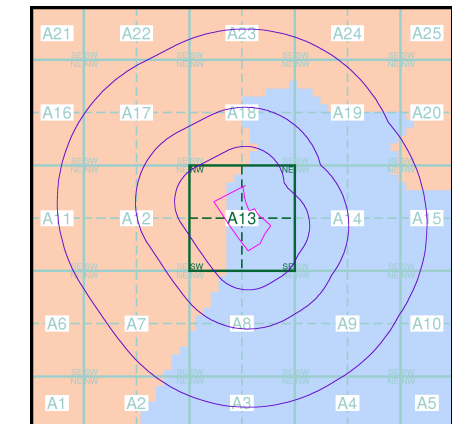
Risk of Flooding from Surface Water

-  High - 30 Year Return
-  Medium - 100 Year Return
-  Low - 1000 Year Return

Suitability

- See the suitability map below
-  National to county
 -  County to town
 -  Town to street
 -  Street to parcels of land
 -  Property

EANRW Suitability Map - Slice A

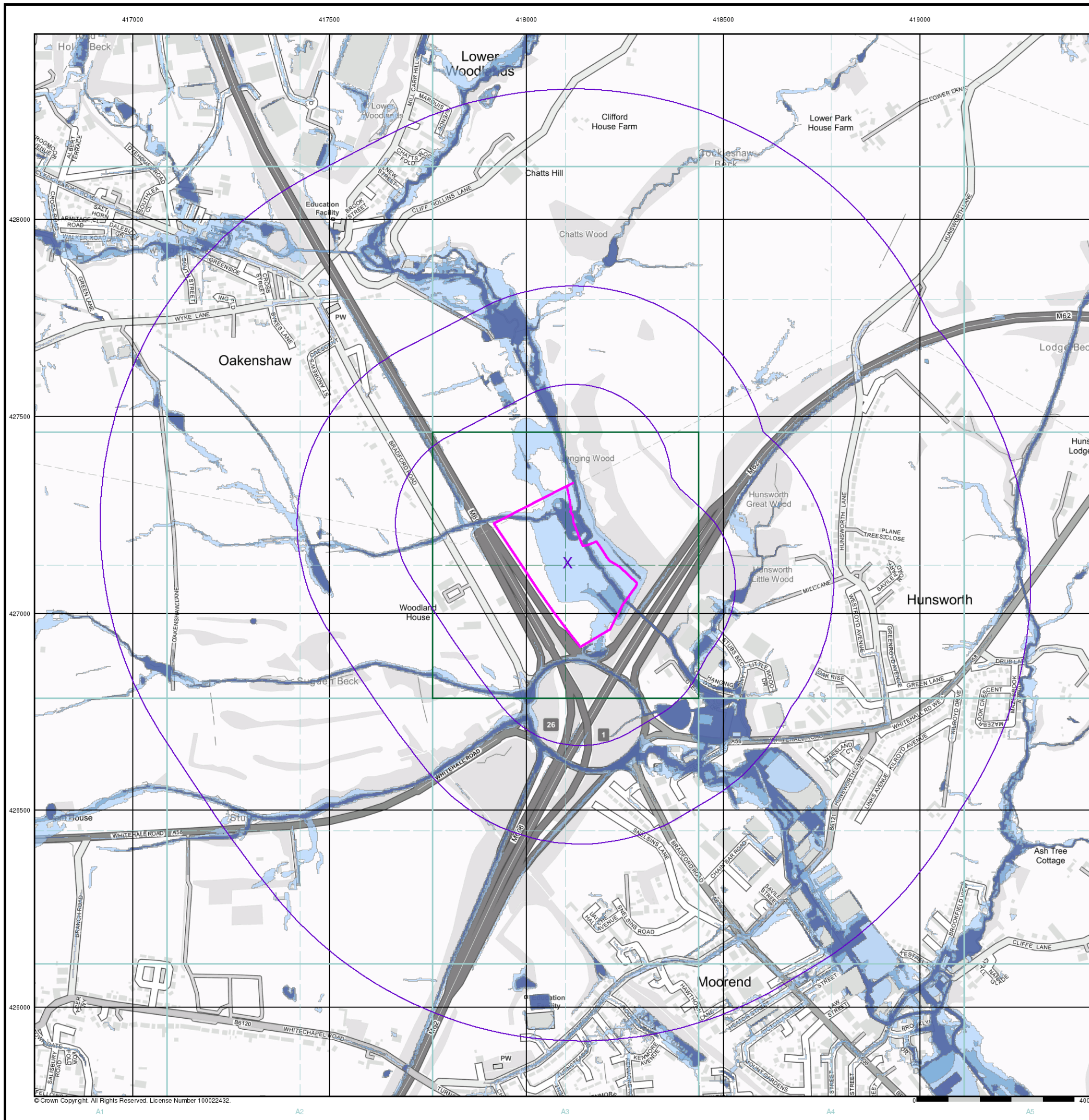


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

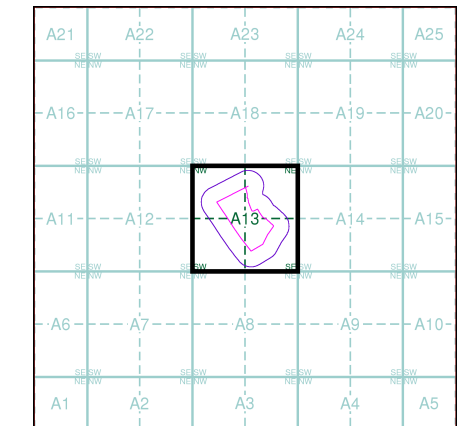
Site at 418090, 427110



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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
 - Pylon
 - Overhead Transmission Line
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Local Authority Recorded Landfill Site
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
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 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13

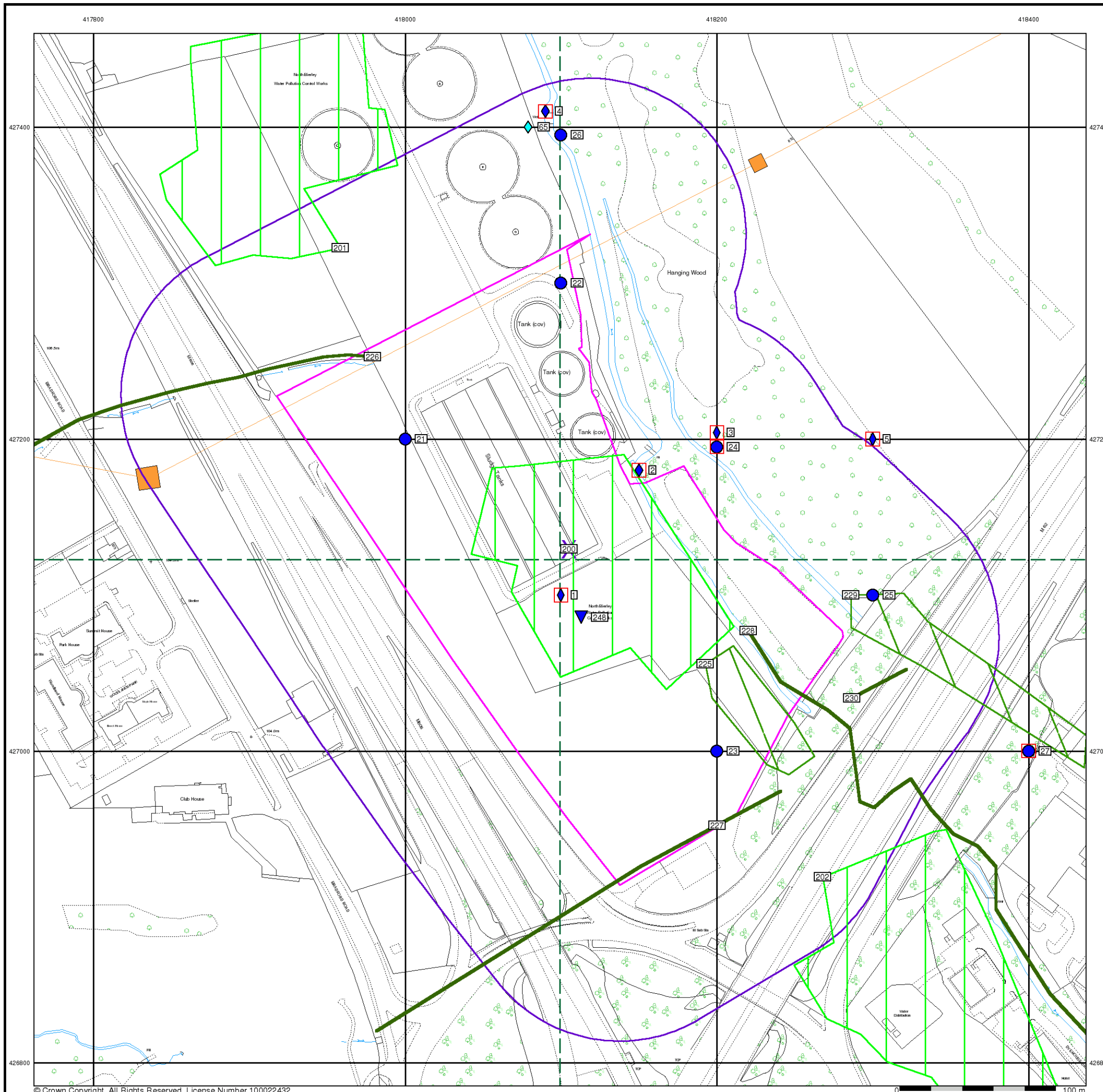


Order Details

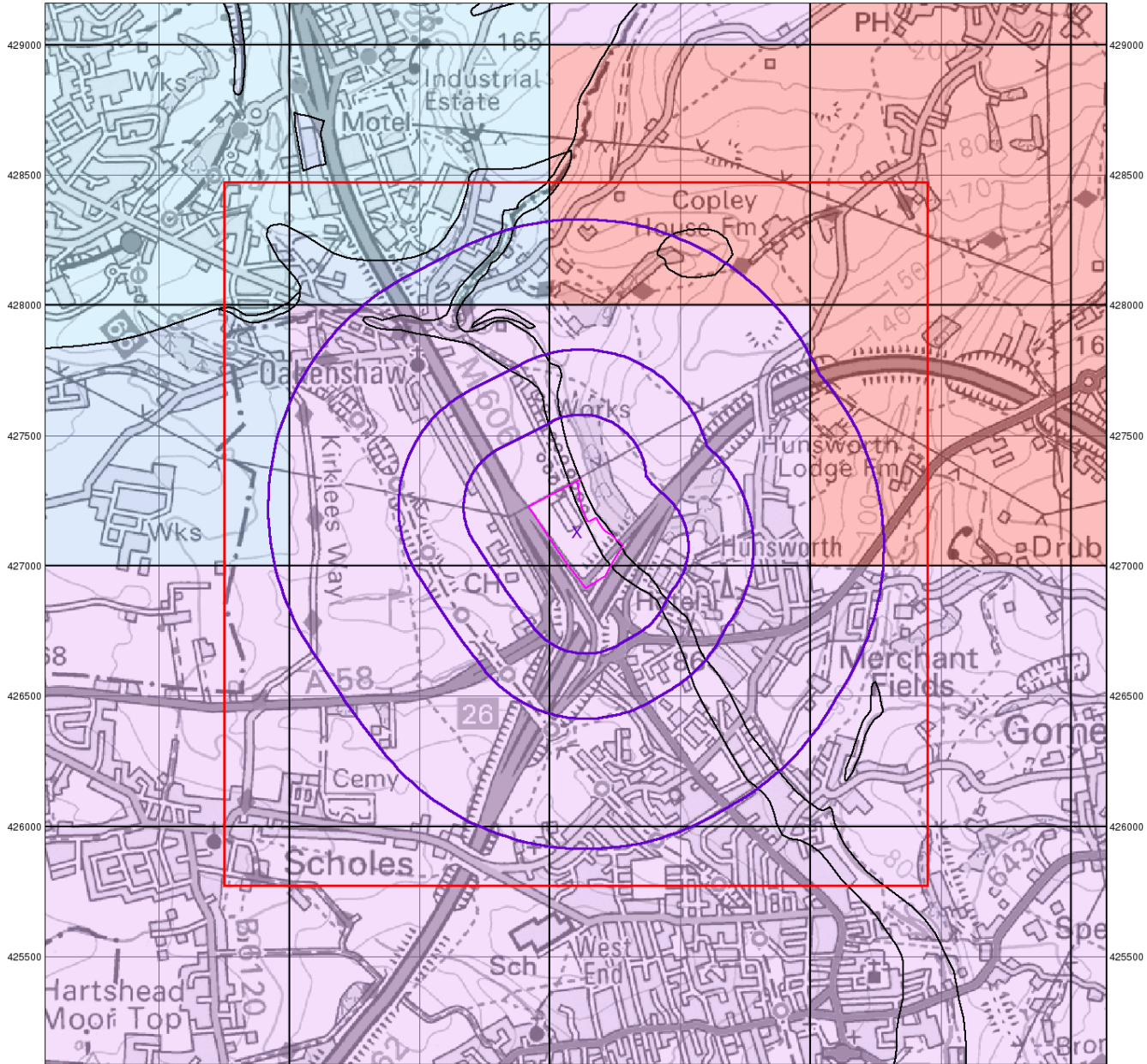
Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Plot Buffer (m): 100

Site Details

Site at 418090, 427110



416500 417000 417500 418000 418500 419000 419500 420000



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Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Bedrock Aquifers

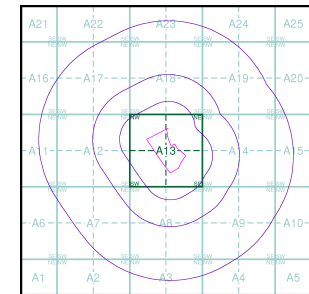
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

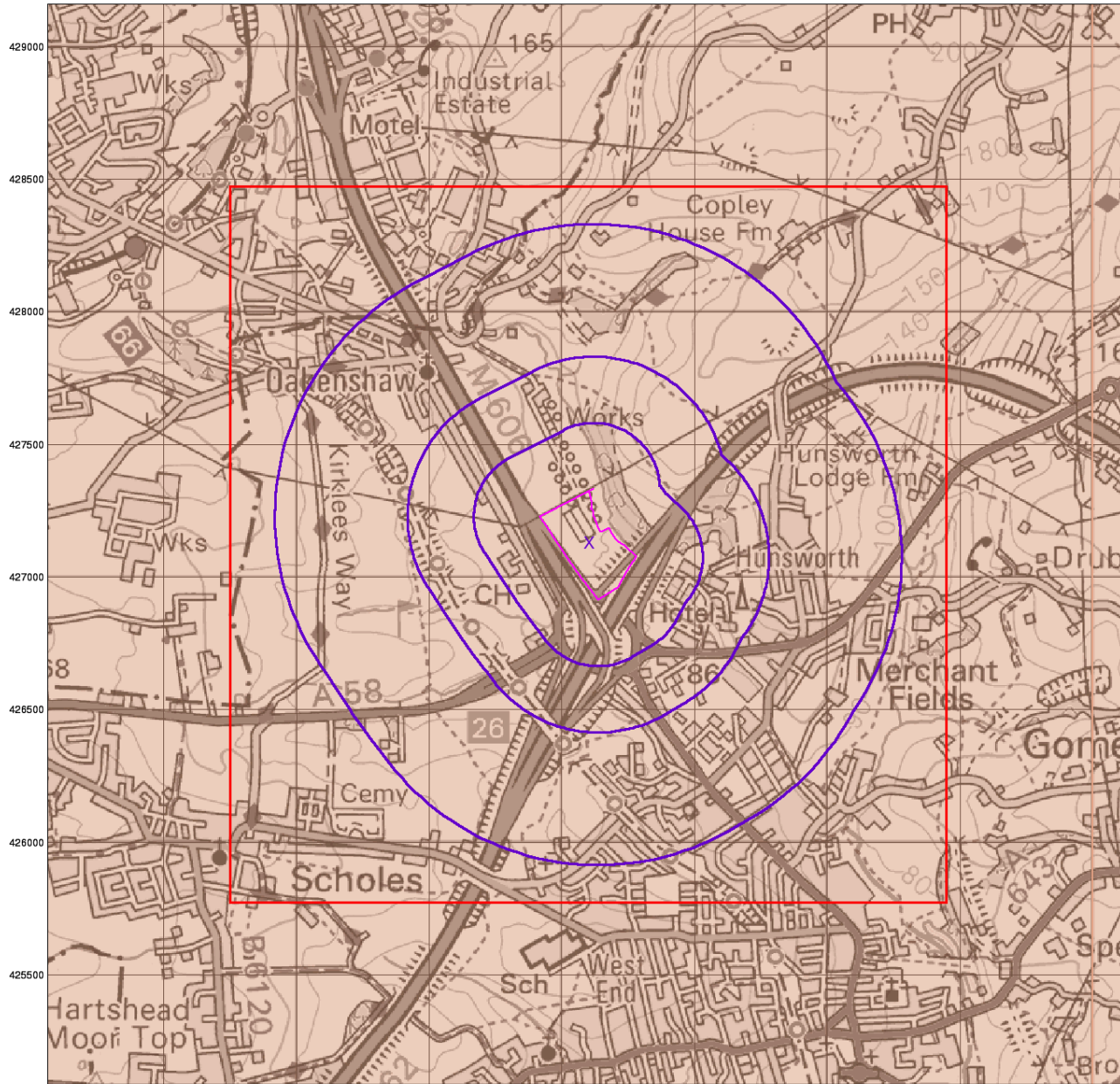
Site Details

Site at 418090, 427110



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

416500 417000 417500 418000 418500 419000 419500 420000



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0 1 km



Bedrock Aquifer Designation

General

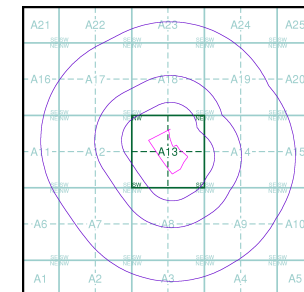
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

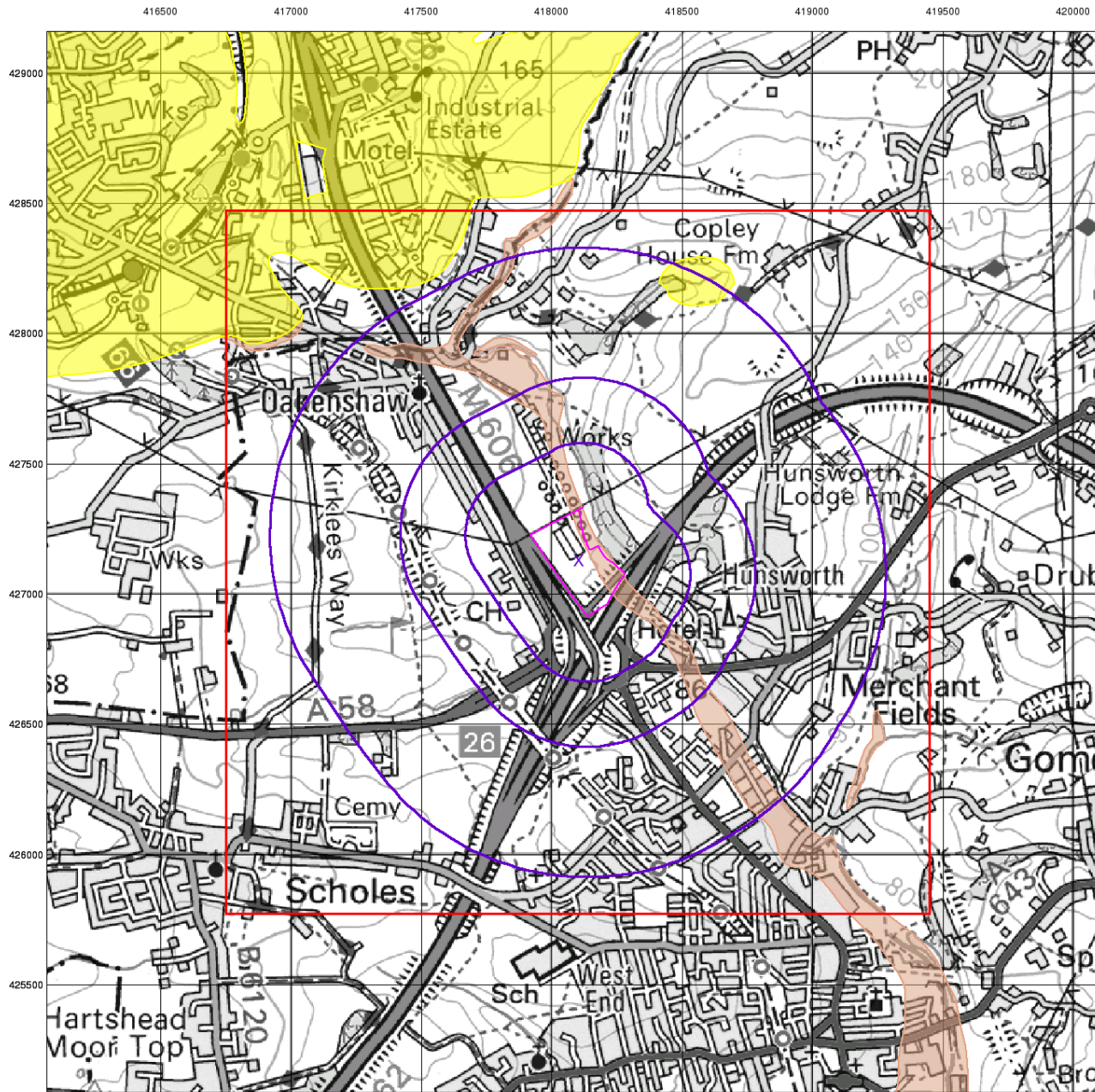
Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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Superficial Aquifer Designation

General

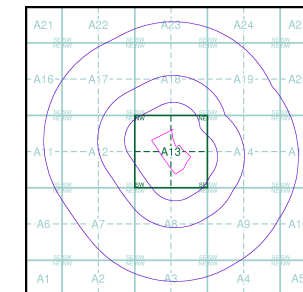
- ◆ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

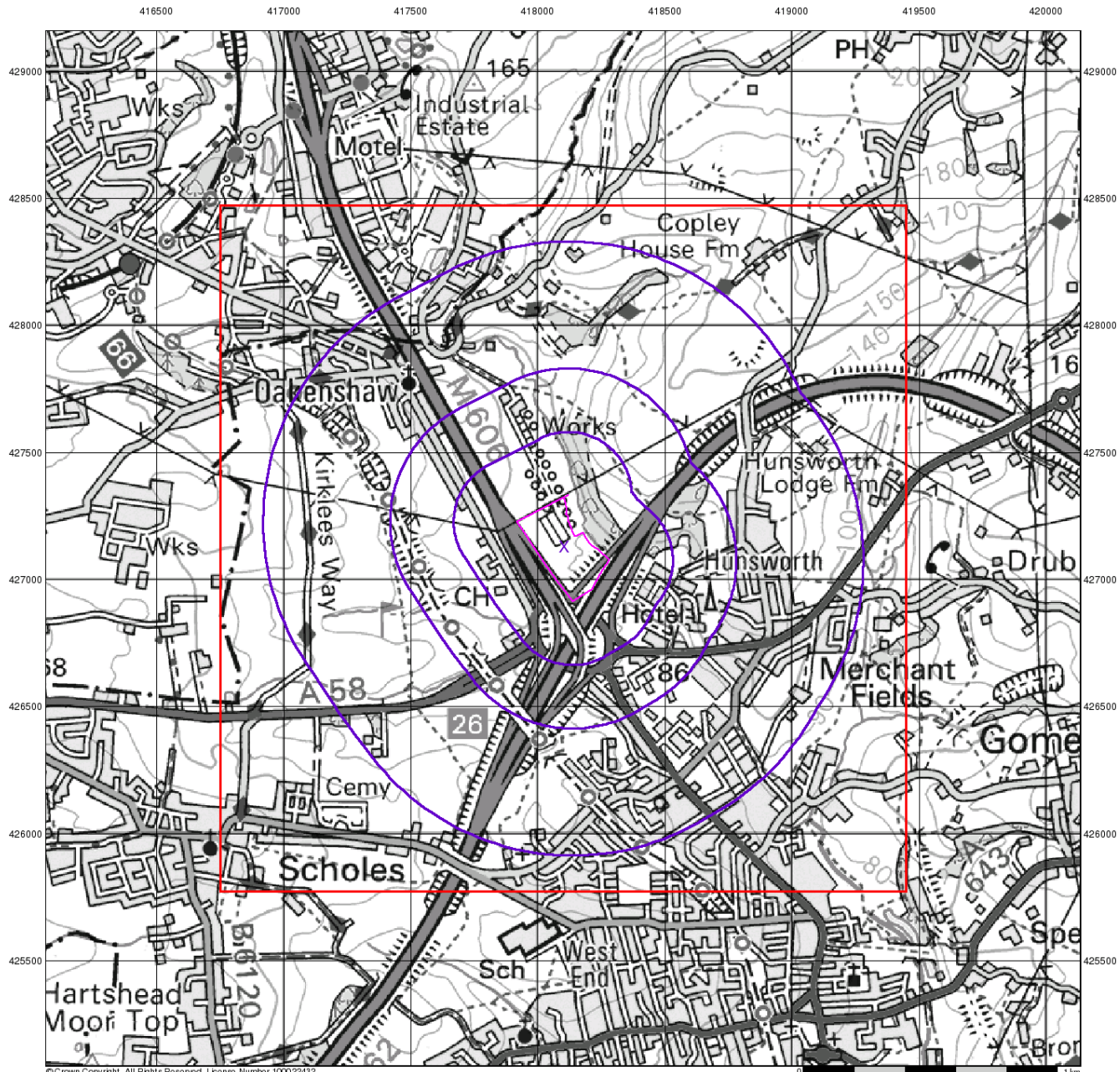
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 Customer Ref: LD10258
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 Slice: A
 Site Area (Ha): 6.82
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Source Protection Zones

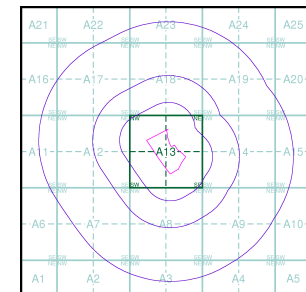
General

- ◆ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- Slice
- B Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

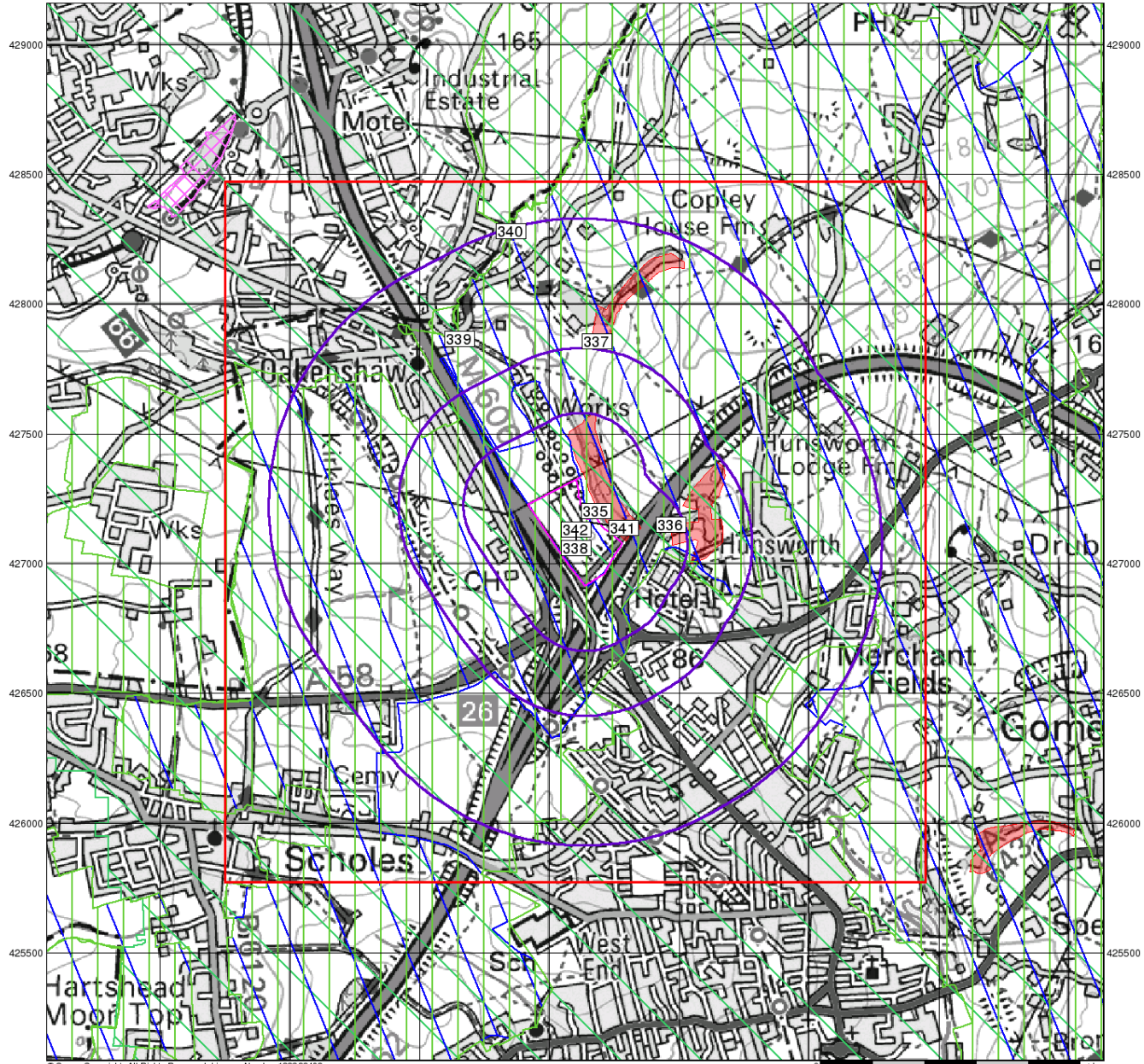
Site Details

Site at 418090, 427110



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416500 417000 417500 418000 418500 419000 419500 420000



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Sensitive Land Uses

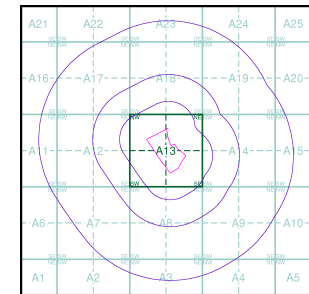
General

- ▭ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- ▭ Slice
- B Map ID

Sensitive Land Uses

- ▭ Ancient Woodland
- ▭ Area of Adopted Green Belt
- ▭ Area of Unadopted Green Belt
- ▭ Area of Outstanding Natural Beauty
- ▭ Environmentally Sensitive Area
- ▭ Forest Park
- ▭ Local Nature Reserve
- ▭ Marine Nature Reserve
- ▭ National Nature Reserve
- ▭ National Park
- ▭ Nitrate Sensitive Area
- ▭ Nitrate Vulnerable Zone
- ▭ Ramsar Site
- ▭ Site of Special Scientific Interest
- ▭ Special Area of Conservation
- ▭ Special Protection Area
- ▭ World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

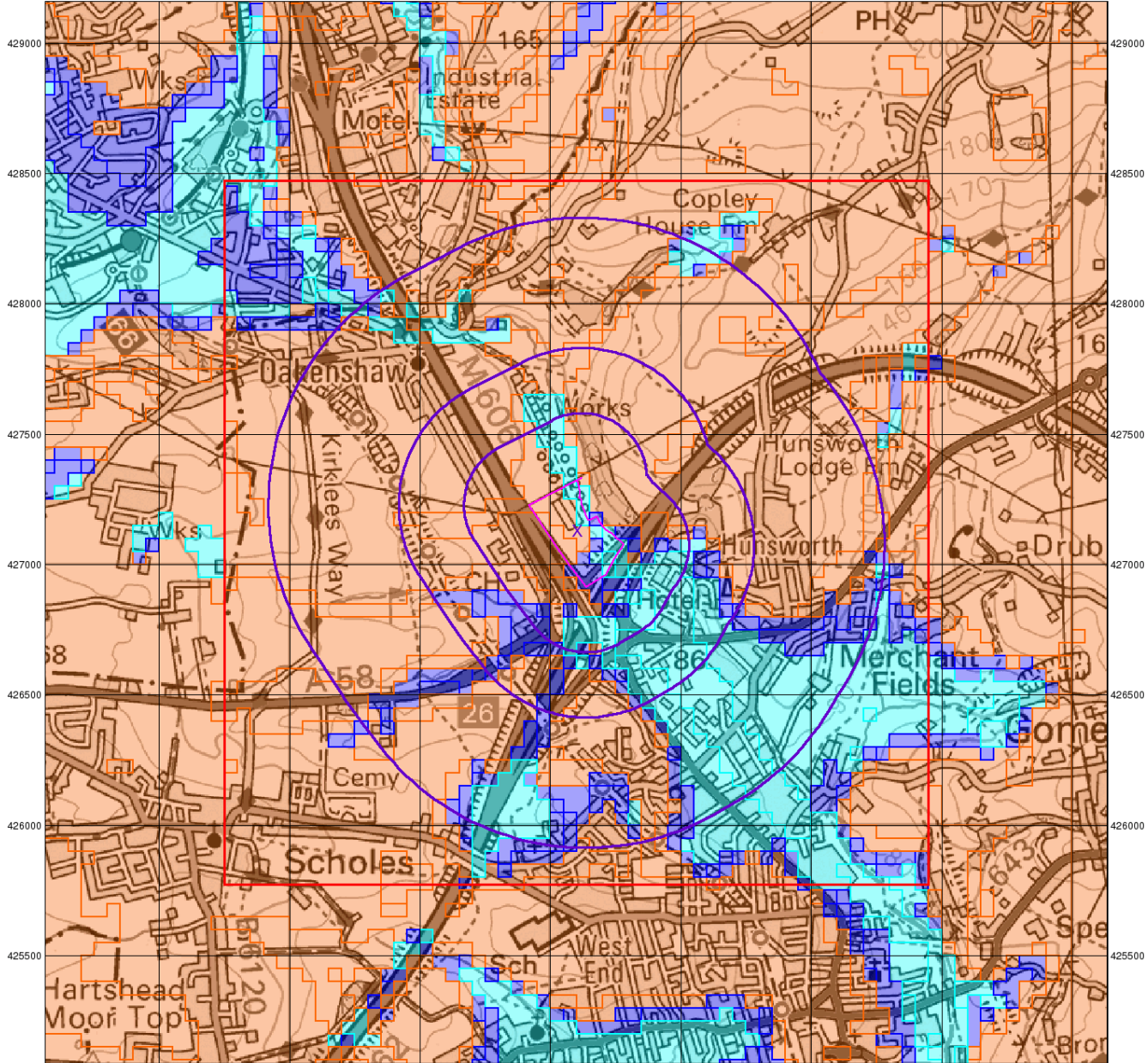
Site Details

Site at 418090, 427110



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416500 417000 417500 418000 418500 419000 419500 420000



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BGS Flood GFS Data

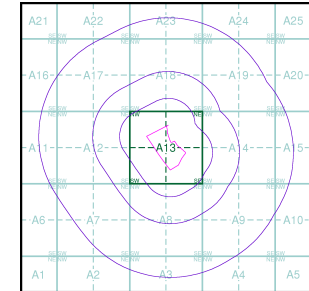
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000


Site Details

Site at 418090, 427110



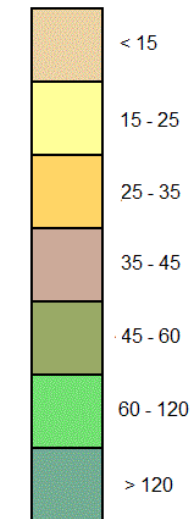
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

General

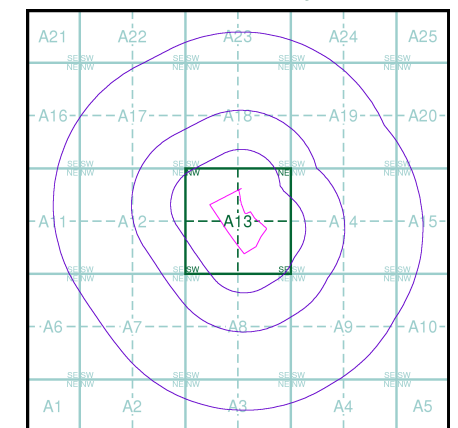
-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A

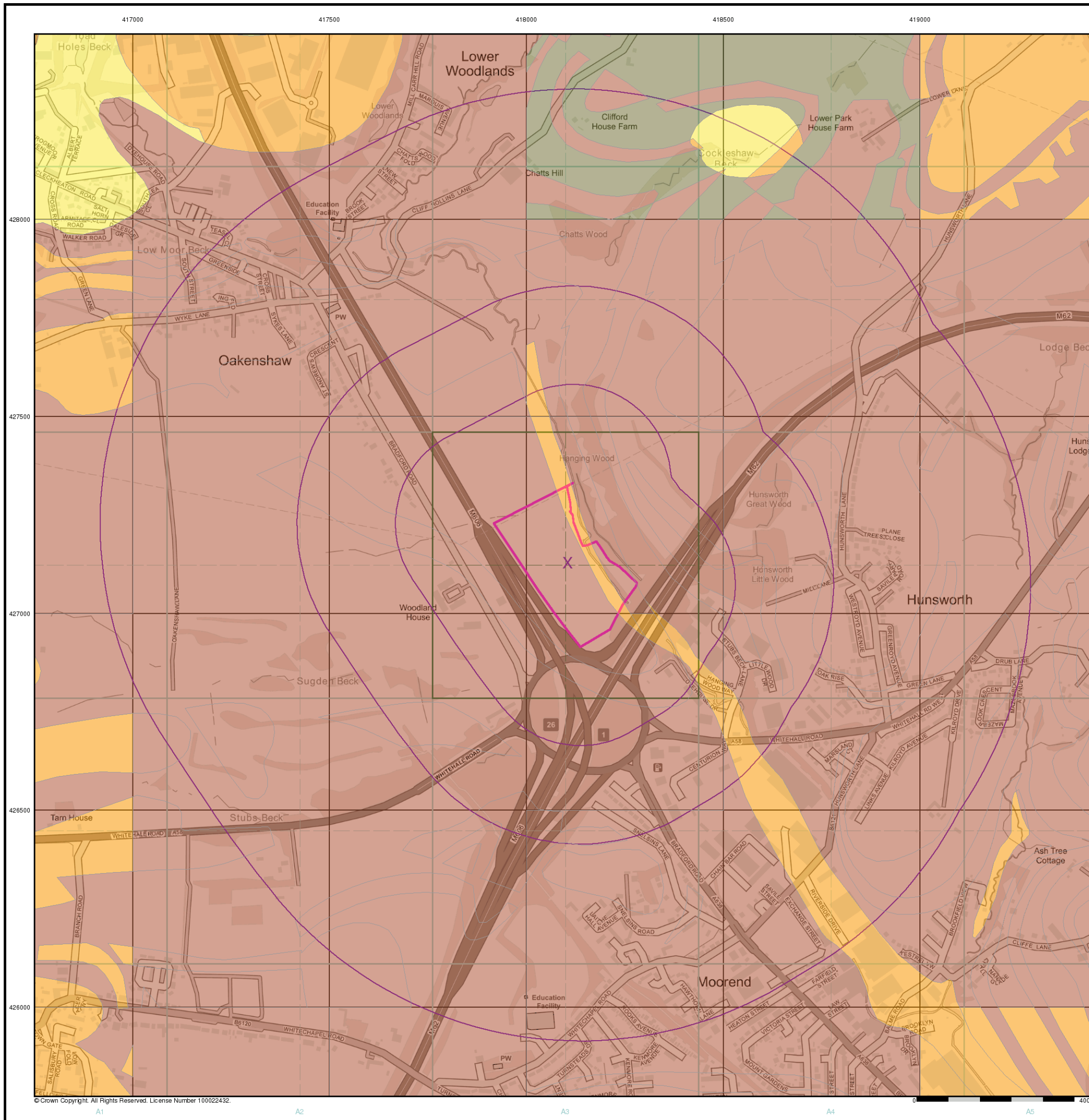


Order Details

Order Details: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



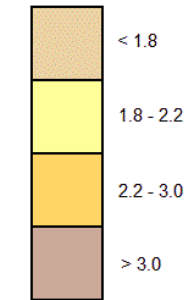
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General

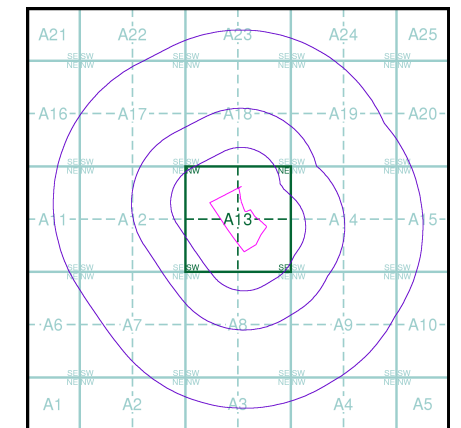
○ Specified Site
 ○ Specified Buffer(s)
 X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A

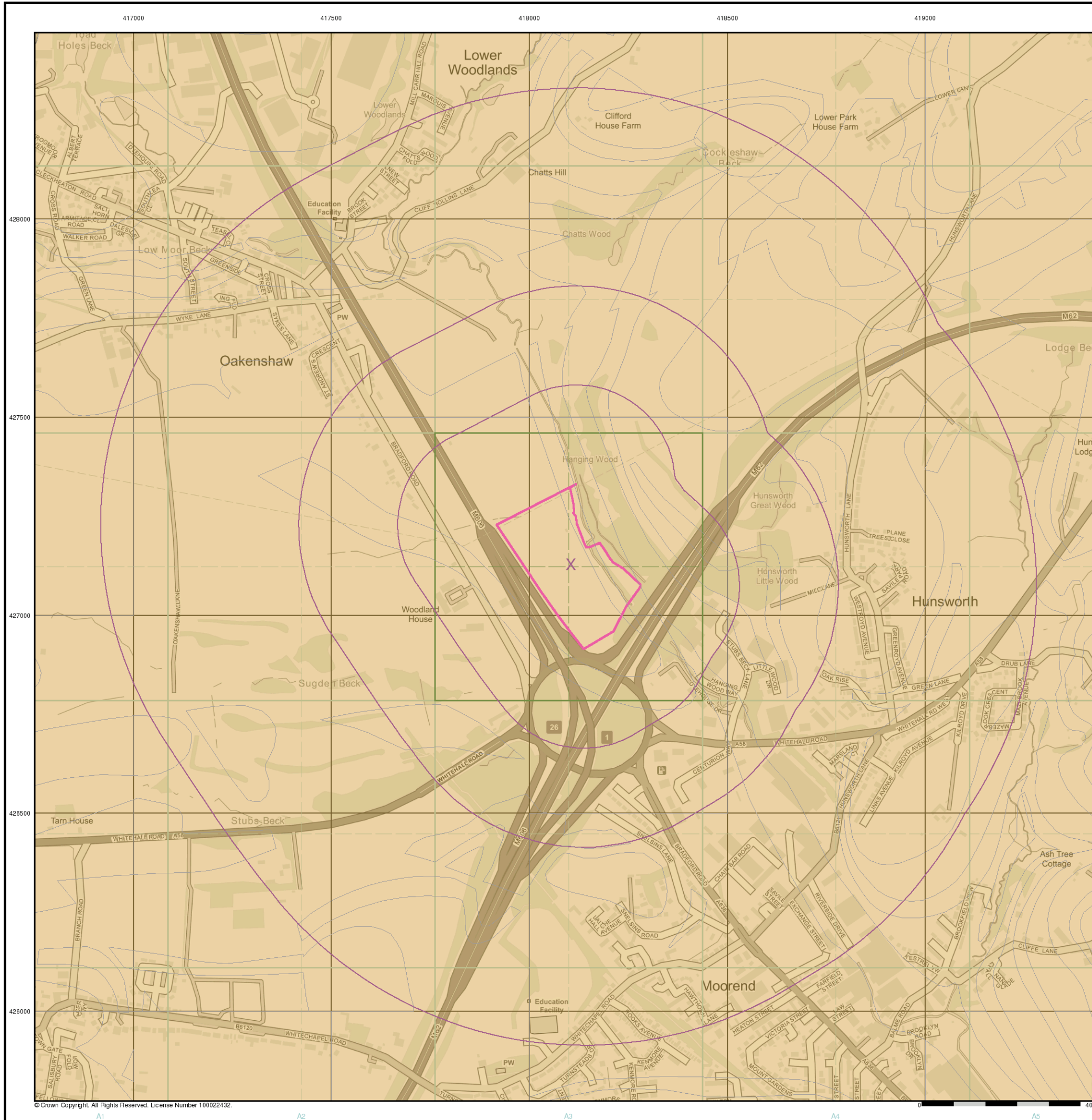


Order Details

Order Details: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110

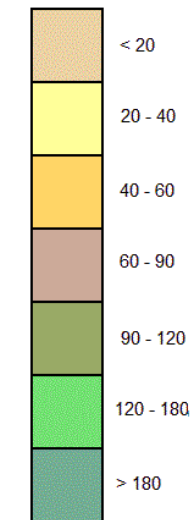


General

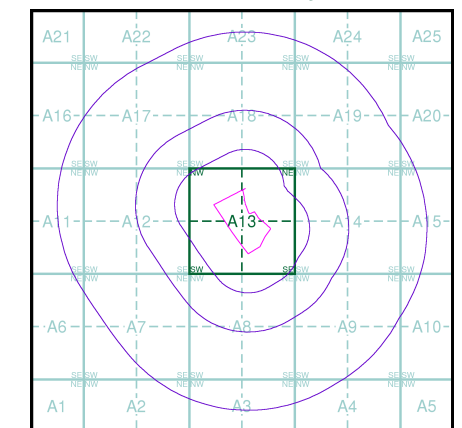
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A

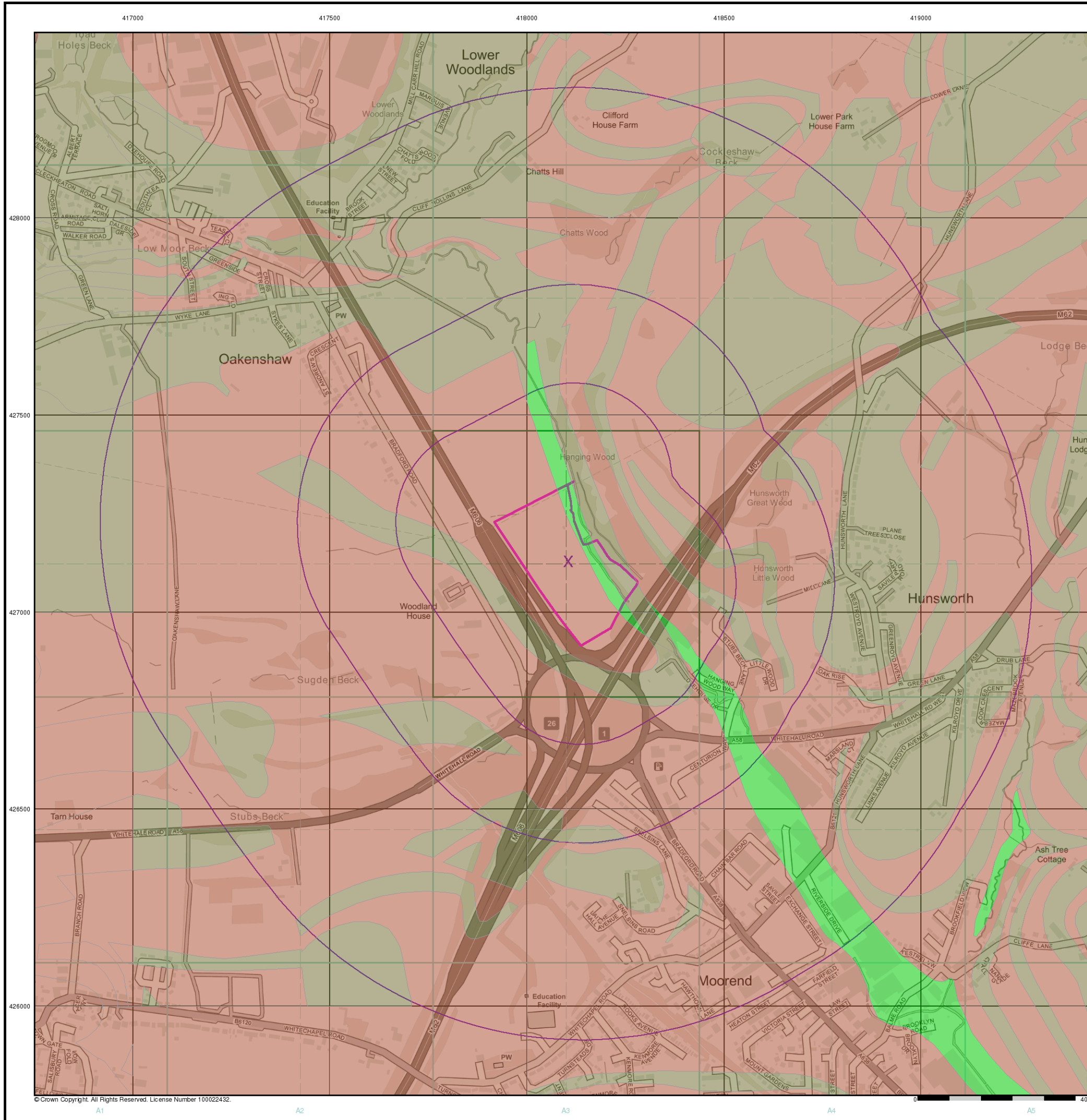


Order Details

Order Details: 278083497_1_1
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 National Grid Reference: 418110, 427130
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 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



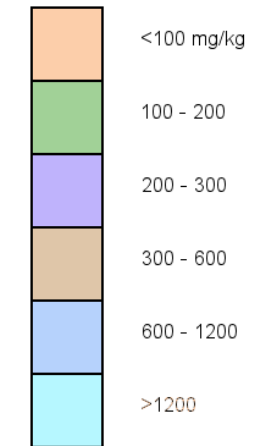
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General

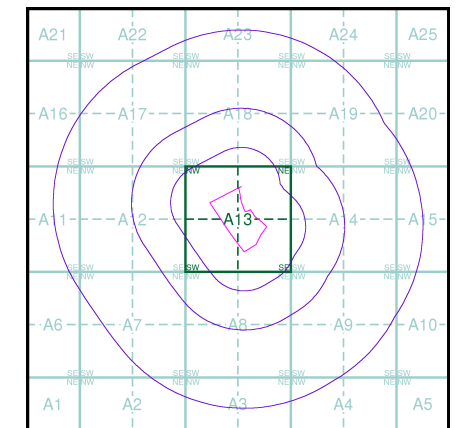
- ✱ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A

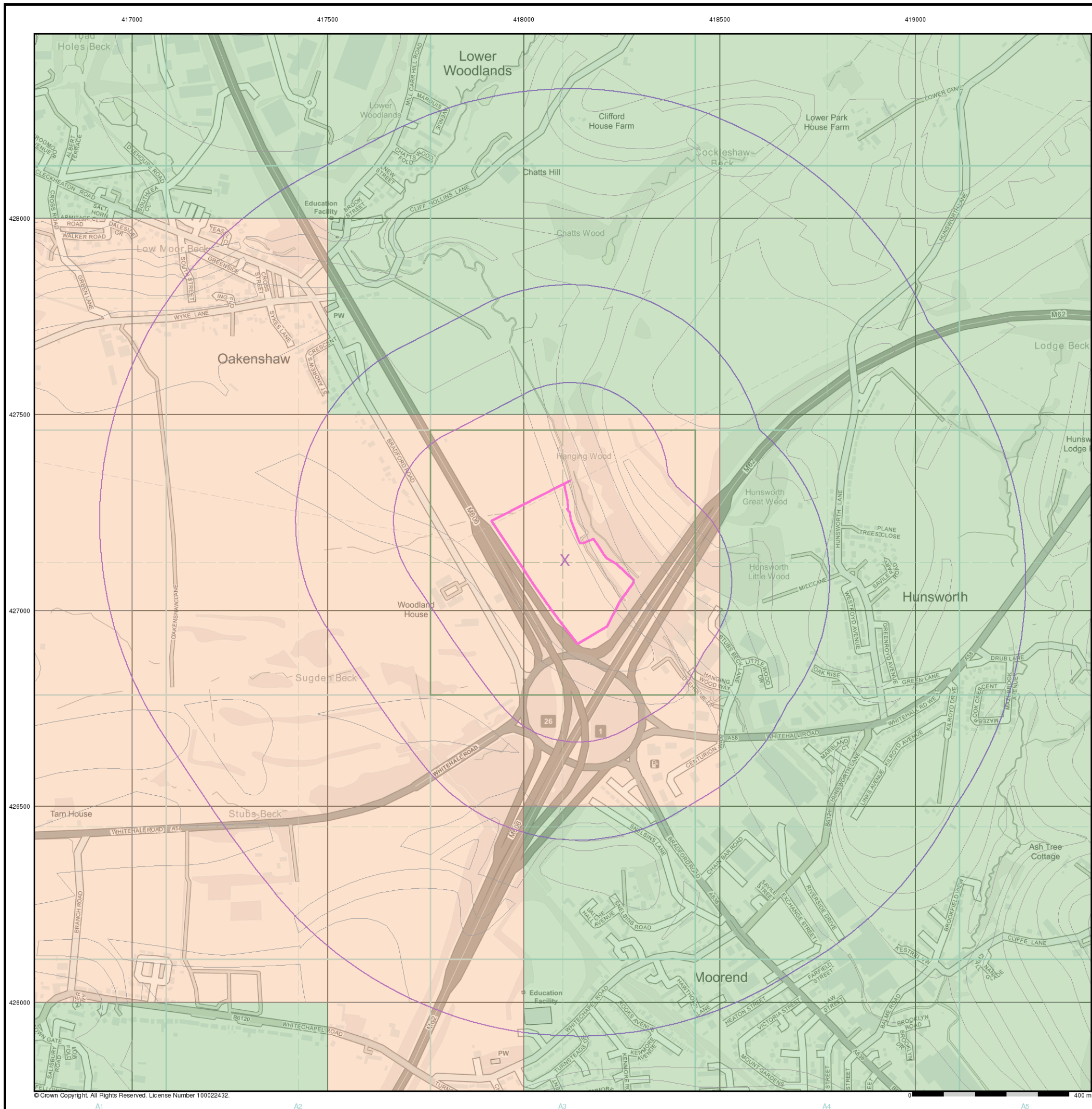


Order Details

Order Details: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



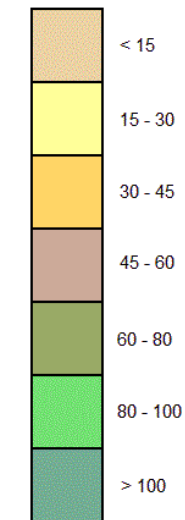
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General

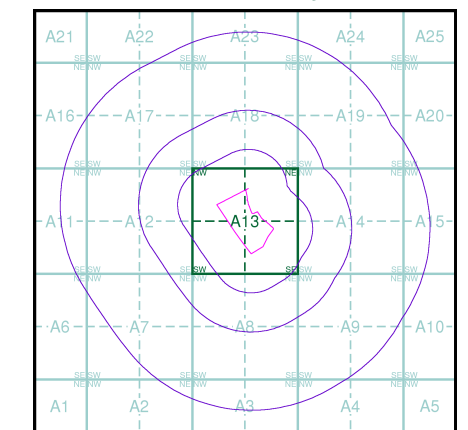
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A

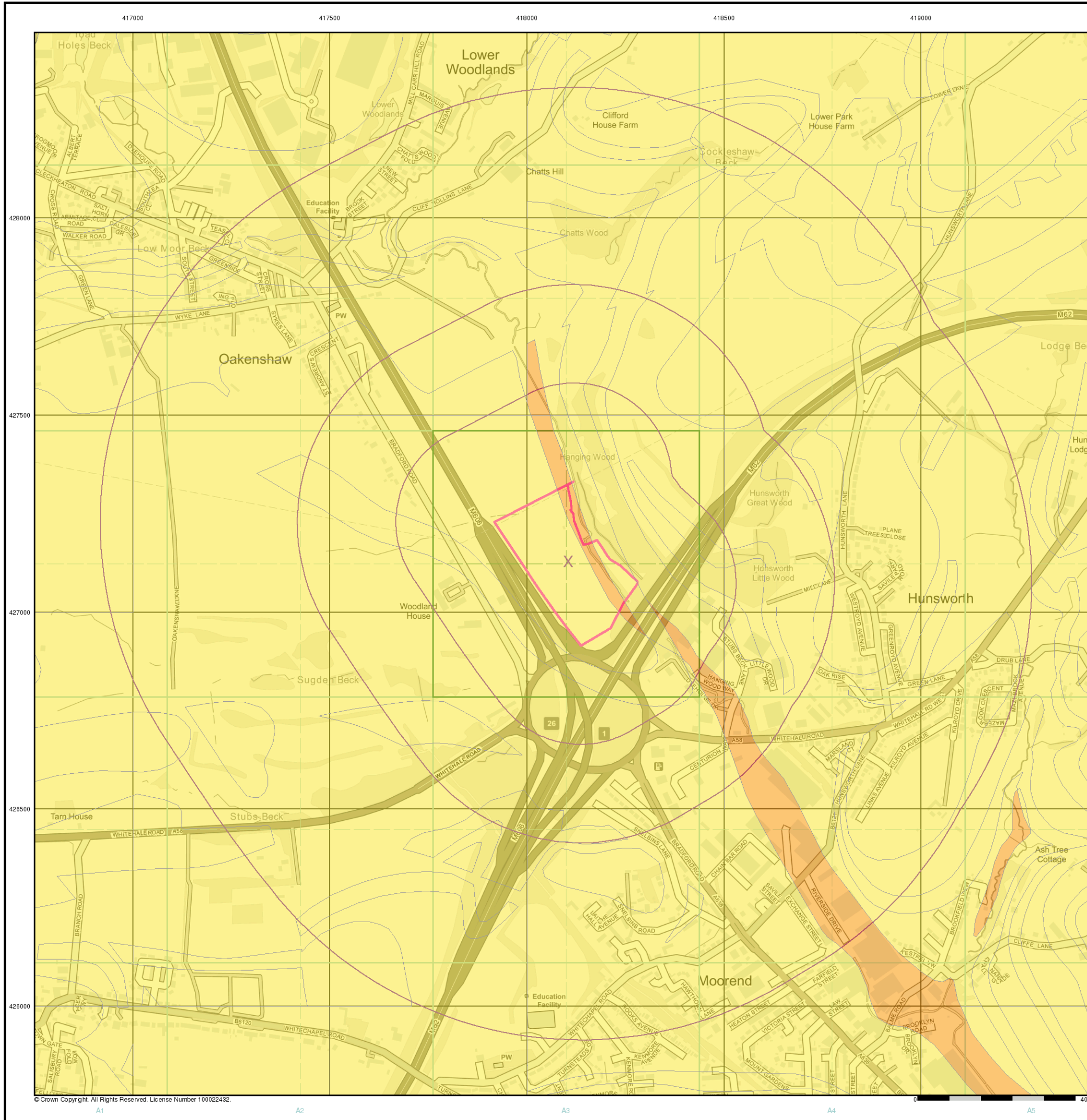


Order Details

Order Details: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr H Pars , Wardell Armstrong LLP, Unit 4, Newton Business Centre, Thornccliffe Park, Chapletown, Sheffield, S35 2PH

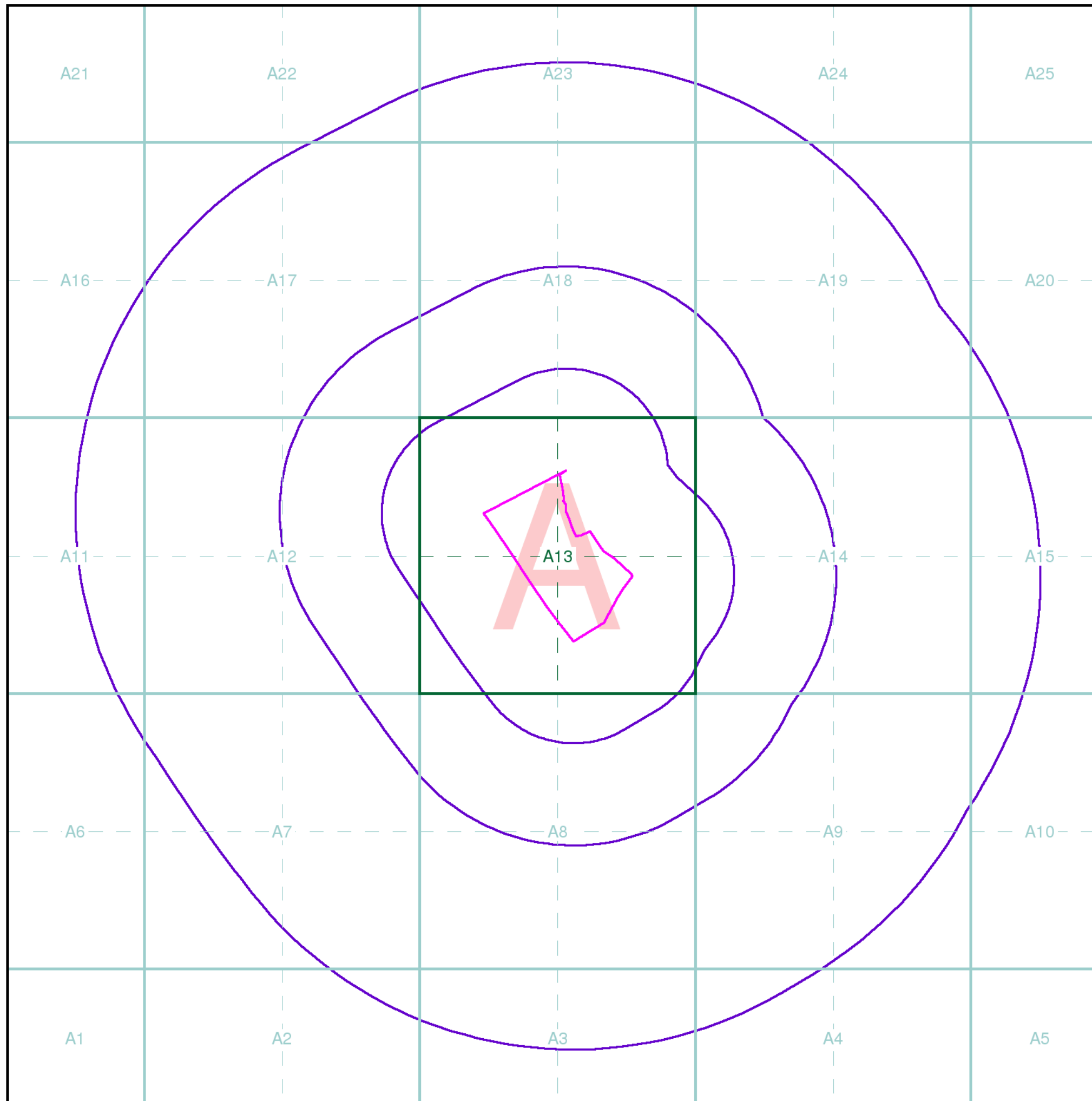
Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418100, 427120
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110

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<http://www.landmarkinfo.co.uk/Terms/Show/515>



Envirocheck[®] Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:

278083497_1_1

Customer Reference:

LD10258

National Grid Reference:

418110, 427130

Slice:

A

Site Area (Ha):

6.82

Search Buffer (m):

1000

Site Details:

Site at 418090, 427110

Client Details:

Mr H Pars
Wardell Armstrong LLP
Unit 4, Newton Business Centre
Thornccliffe Park
Chapletown
Sheffield
S35 2PH

Report Section and Details	Page Number
Summary	-
<p>The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected.</p> <p>For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).</p>	
Mining and Natural Cavities Data	1
<p>The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities.</p> <p>Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.</p>	
Historical Land Use Information (1:2,500)	31
<p>The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative.</p> <p>For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.</p>	
Historical Land Use Information (1:10,000)	36
<p>The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses.</p> <p>For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.</p>	
Ground Stability Data (1:50,000)	41
<p>The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.</p>	
Historical Map List	43
<p>The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.</p>	
Data Currency	44
Data Suppliers	45
Useful Contacts	46

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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1	1		2	21
Coal Mining Affected Areas	pg 5	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 5	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 5	Yes		n/a	n/a
Potential Mining Areas	pg 5	20	11	13	50
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)	pg 31	3	4	n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 31	5	4	n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 32	5	4	n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)	pg 33	10	5	n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 34		6	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying	pg 36		1		2
Heap, unknown constituents	pg 36				2
Mineral Railway	pg 36	2	1	4	8
Mining & quarrying general	pg 36			1	2
Mining of coal & lignite	pg 37	1	3	3	13
Quarrying of sand & clay, operation of sand & gravel pits	pg 38				1
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 38	1	3	4	17
Potentially Infilled Land (Water)	pg 39	4	5	2	5
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 41	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 41	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 41	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 41	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 41	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 42	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mineral Sites Site Name: Hunsworth Little Wood Location: Hunsworth, Cleckheaton, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73799 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SE (S)	0	1	418113 427087
2	BGS Recorded Mineral Sites Site Name: Rail Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73523 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	431	1	417608 427526
2	BGS Recorded Mineral Sites Site Name: Rail Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73523 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	431	1	417608 427526
3	BGS Recorded Mineral Sites Site Name: Mill Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72221 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	544	1	417664 427708
3	BGS Recorded Mineral Sites Site Name: Mill Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72221 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	544	1	417664 427708
3	BGS Recorded Mineral Sites Site Name: Oakenshaw Mill Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72223 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clifton Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	590	1	417649 427752

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Fern House Location: Hunsworth, Cleckheaton, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73787 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A14SE (SE)	566	1	418792 426831
5	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Newton Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73522 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	1	417472 427653
5	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Newton Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73522 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	617	1	417472 427653
6	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Bridge Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72224 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	626	1	417551 427734
6	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Bridge Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72224 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	626	1	417551 427734
7	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Oakenshaw Mill Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72222 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clifton Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A17SE (NW)	627	1	417592 427763

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Hunsworth Location: Hunsworth, Cleckheaton, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73707 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m</p>	A14NE (E)	720	1	418982 427235
9	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Merchant House Location: Merchant Fields, Batley, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73726 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	720	1	418766 426499
10	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Shigston Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73521 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	784	1	417250 427638
10	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Shigston Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73521 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	784	1	417250 427638
11	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Boyd Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73520 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	815	1	417144 427483
11	<p>BGS Recorded Mineral Sites</p> <p>Site Name: Boyd Colliery Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73520 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m</p>	A17SW (W)	815	1	417144 427483

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	BGS Recorded Mineral Sites Site Name: Booth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73517 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	900	1	417210 427783
12	BGS Recorded Mineral Sites Site Name: Booth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 73517 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	900	1	417210 427783
13	BGS Recorded Mineral Sites Site Name: Garth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72220 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A16SE (NW)	967	1	417030 427610
13	BGS Recorded Mineral Sites Site Name: Garth Pit Location: Oakenshaw, Bradford, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72220 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A16SE (NW)	967	1	417030 427610
14	BGS Recorded Mineral Sites Site Name: Chatts Hill Pit Location: Chatt'S Wood, Leeds, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72233 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Iron Ore - Ironstone Positional Accuracy: Located by supplier to within 10m	A22SE (N)	984	1	417709 428226
14	BGS Recorded Mineral Sites Site Name: Chatts Hill Pit Location: Chatt'S Wood, Leeds, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 72233 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A22SE (N)	984	1	417709 428226

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (SE)	0	2	418105 427130
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (SE)	0	3	418105 427130
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418171 427164
15	Potential Mining Areas Name: Bowling Ceased Operation: 1900 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: 6965 Alternate: Bedlam Name/Mine: Alternate: Butts Name/Mine: Alternate: Charles Name/Mine: Alternate: Cleckheaton Name/Mine: Alternate: Crosses Name/Mine: Alternate: Hill Name/Mine: Alternate: Holme Name/Mine: Alternate: Road Name/Mine: Alternate: Tong No. 1 Name/Mine: Alternate: Valley Name/Mine: Alternate: Wood Custodian: Not Supplied	A13NE (E)	0	4	418108 427130
16	Potential Mining Areas Name: Bridge Ceased Operation: 1903 Commodity: Coal and Ironstone; Black Bed Reference: 4520 Alternate: Not Supplied Name/Mine: Not Supplied Custodian: Not Supplied	A13NE (N)	0	4	418103 427310
17	Potential Mining Areas Name: Bridge Ceased Operation: 1853 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Not Supplied Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A13NE (N)	0	4	418103 427310
18	Potential Mining Areas Name: Bridge Ceased Operation: 1903 Commodity: Coal; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Not Supplied Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.	A13NE (N)	0	4	418103 427310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	<p>Potential Mining Areas</p> <p>Name: Oakenshaw Ceased Operation: 1904 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate: Arch Name/Mine: Alternate: Bateman Name/Mine: Alternate: Booth Name/Mine: Alternate: Bridge Name/Mine: Alternate: Briggs Name/Mine: Alternate: Brown Name/Mine: Alternate: Cross Name/Mine: Alternate: Fly Name/Mine: Alternate: Garth Name/Mine: Alternate: Haley Name/Mine: Alternate: Hill Name/Mine: Alternate: Ing Name/Mine: Alternate: Long Name/Mine: Alternate: Mill Name/Mine: Alternate: Rhodes Name/Mine: Alternate: Royd Name/Mine: Alternate: Sugdens Name/Mine: Alternate: Taylor Mills Name/Mine: Alternate: Tod Name/Mine: Alternate: Valley Name/Mine: Alternate: Wall Name/Mine: Alternate: Whitehall Name/Mine: Alternate: Woodside Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A13NE (SE)	0	4	418105 427130
20	<p>Potential Mining Areas</p> <p>Name: Cleckheaton Ceased Operation: 1892 Commodity: Coal and Ironstone; Black Bed Reference: 2795 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied</p>	A13NE (E)	0	4	418108 427130
21	<p>Potential Mining Areas</p> <p>Name: Cleckheaton Ceased Operation: 1893 Commodity: Coal Better Bed Reference: 2983 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied</p>	A13NE (E)	0	4	418108 427130
22	<p>Potential Mining Areas</p> <p>Name: Okenshaw Ceased Operation: Not Supplied Commodity: Coal; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A13NE (SE)	0	4	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	Potential Mining Areas Name: Hill Ceased Operation: Not Supplied Commodity: Coal; Blocking Bed; Better Bed; Black Bed Reference: Not Supplied Alternate: Valley Name/Mine: Custodian: Walter Rowley and Wilson, 20 Park Row, Leeds.	A13NE (N)	0	4	418105 427310
24	Potential Mining Areas Name: Oakenshaw Ceased Operation: 1894 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Arch Name/Mine: Alternate: Bateman Name/Mine: Alternate: Crook Royd Name/Mine: Alternate: Fly Name/Mine: Alternate: Hill Name/Mine: Alternate: Long Name/Mine: Alternate: Rail Name/Mine: Alternate: Rhodes Name/Mine: Alternate: Taylor's or Taylor Mills Name/Mine: Alternate: Valley Name/Mine: Alternate: Wall Name/Mine: Alternate: Waviell (Wavell) Name/Mine: Alternate: Woodside Name/Mine: Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.	A13NE (SE)	0	4	418105 427130
25	Potential Mining Areas Name: Oakenshaw Ceased Operation: 1891 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Arch Name/Mine: Alternate: Bateman Name/Mine: Alternate: Crook Royd Name/Mine: Alternate: Fly Name/Mine: Alternate: Hill Name/Mine: Alternate: Rail Name/Mine: Alternate: Rhodes Name/Mine: Alternate: Taylors Name/Mine: Alternate: Tod Name/Mine: Alternate: Valley Name/Mine: Alternate: Wavell Name/Mine: Alternate: Woodside Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.	A13NE (SE)	0	4	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	<p>Potential Mining Areas</p> <p>Name: Oakenshaw Ceased Operation: 1905 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate Arch Name/Mine: Alternate Bateman Name/Mine: Alternate Briggs Name/Mine: Alternate Butler Name/Mine: Alternate High Wyke Name/Mine: Alternate Hill Name/Mine: Alternate Hillam Name/Mine: Alternate Long Name/Mine: Alternate Rail Name/Mine: Alternate Rhodes Name/Mine: Alternate Stone or Wall Name/Mine: Alternate Taylors Name/Mine: Alternate Valley Name/Mine: Alternate Wavell Name/Mine: Alternate Whitehall Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.Thomas W. Ward Ltd., Savile Street, Sheffield.</p>	A13NE (SE)	0	4	418105 427130
27	<p>Potential Mining Areas</p> <p>Name: Oakenshaw Ceased Operation: 1905 Commodity: Ironstone Reference: Not Supplied Alternate Arch Name/Mine: Alternate Bateman Name/Mine: Alternate Bridge Name/Mine: Alternate Briggs Name/Mine: Alternate Fly Name/Mine: Alternate Hill Name/Mine: Alternate Hillam Name/Mine: Alternate Long Name/Mine: Alternate Rail Name/Mine: Alternate Rhodes Name/Mine: Alternate Taylor Mills Name/Mine: Alternate Valley Name/Mine: Alternate Wall Name/Mine: Alternate Waviell Name/Mine: Alternate Woodside Name/Mine: Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.</p>	A13NE (SE)	0	4	418105 427130
28	<p>Potential Mining Areas</p> <p>Name: Taylor Mills Ceased Operation: 1871 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A13NE (SE)	0	4	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<p>Potential Mining Areas</p> <p>Name: Low Moor Ceased Operation: Not Supplied Commodity: Coal; Better Bed; Black Bed Reference: Not Supplied Alternate Name/Mine: Balm Alternate Name/Mine: Bar Alternate Name/Mine: Bateman Alternate Name/Mine: Ben Ing Alternate Name/Mine: Benn Alternate Name/Mine: Bentley Alternate Name/Mine: Birkby Lane Alternate Name/Mine: Brakes (Breaks) Alternate Name/Mine: Bridge Alternate Name/Mine: Brigg Lane Alternate Name/Mine: Brigg Wood Alternate Name/Mine: Briggs Alternate Name/Mine: Broomhill Alternate Name/Mine: Cam Alternate Name/Mine: Cawthra Alternate Name/Mine: Chairbarrows Alternate Name/Mine: Charles Alternate Name/Mine: Coates Alternate Name/Mine: Cow Close Alternate Name/Mine: Crawshaw Alternate Name/Mine: Cross Lane Alternate Name/Mine: Crowd Hill Alternate Name/Mine: Cutler Heights Alternate Name/Mine: Dean Alternate Name/Mine: Doles Lane Alternate Name/Mine: Drake Alternate Name/Mine: Dunn's Alternate Name/Mine: Eight Day's Work Alternate Name/Mine: Firth Alternate Name/Mine: Flather Alternate Name/Mine: Flatts Alternate Name/Mine: Fly Alternate Name/Mine: Gallows Alternate Name/Mine: Green Lane Alternate Name/Mine: Hardy Alternate Name/Mine: Hartshead Alternate Name/Mine: Hawks Alternate Name/Mine: High Cross Alternate Name/Mine: High Moor Lane</p>	A13NE (SE)	0	4	418105 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Alternate Name/Mine: High Wood				
	Alternate Name/Mine: High Wyke				
	Alternate Name/Mine: Hill				
	Alternate Name/Mine: Hillam				
	Alternate Name/Mine: Hinchcliffe				
	Alternate Name/Mine: Holmfield				
	Alternate Name/Mine: Kaye				
	Alternate Name/Mine: Lift				
	Alternate Name/Mine: Long				
	Alternate Name/Mine: Low Wood				
	Alternate Name/Mine: Manor				
	Alternate Name/Mine: Middle				
	Alternate Name/Mine: Mill				
	Alternate Name/Mine: Naylor				
	Alternate Name/Mine: Oats				
	Alternate Name/Mine: Ox				
	Alternate Name/Mine: Pasture				
	Alternate Name/Mine: Pheasant				
	Alternate Name/Mine: Pickles				
	Alternate Name/Mine: Popplewell				
	Alternate Name/Mine: Priestley's				
	Alternate Name/Mine: Rail				
	Alternate Name/Mine: Rake Lands				
	Alternate Name/Mine: Rhodes				
	Alternate Name/Mine: Roger				
	Alternate Name/Mine: Rookes				
	Alternate Name/Mine: Scholes				
	Alternate Name/Mine: Shop				
	Alternate Name/Mine: Slack				
	Alternate Name/Mine: Slack End				
	Alternate Name/Mine: Spen				
	Alternate Name/Mine: Station				
	Alternate Name/Mine: Stone or Wall				
	Alternate Name/Mine: Storr Hill				
	Alternate Name/Mine: Strangeways				
	Alternate Name/Mine: Syke				
	Alternate Name/Mine: Taylor Mills				
	Alternate Name/Mine: Three Nuns				
	Alternate Name/Mine: Tommis				
	Alternate Name/Mine: Top				
	Alternate Name/Mine: Tunnel				
	Alternate Name/Mine: Valley				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Name/Mine: Victoria Alternate Name/Mine: Wavell (Waviell) Name/Mine: Westfield Alternate Name/Mine: Whitaker Name/Mine: White Gin Alternate Name/Mine: Whitehall Name/Mine: Wike (Wyke) Banks Alternate Name/Mine: Wike (Wyke) Lane Name/Mine: Wilson Alternate Name/Mine: Winney Hall Name/Mine: Woodside Alternate Name/Mine: Worthing Name/Mine: Thomas W. Ward Ltd., Savile Street, Sheffield.				
30	Potential Mining Areas Name: Hunsworth Ceased Operation: 1927 Commodity: Coal; Shertcliffe and Lousey Reference: 9011 Alternate Name/Mine: Hill Alternate Name/Mine: Lift Name/Mine: Valley Alternate Name/Mine: Wood Name/Mine: Not Supplied Custodian:	A13NE (E)	0	4	418108 427130
31	Potential Mining Areas Name: Hunsworth (District) Ceased Operation: 1893 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: A.E. Beacher and Son, Greasboro', Rotherham.	A13NE (E)	0	4	418108 427130
32	Potential Mining Areas Name: Valley Ceased Operation: 1900 Commodity: Coal and Ironstone; Black Bed Reference: 4056 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NE (SE)	0	4	418105 427130
33	Potential Mining Areas Name: Wood Ceased Operation: 1887 Commodity: Coal; Better Bed Reference: 2111 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NE (N)	0	4	418105 427310
34	Potential Mining Areas Name: Wood Ceased Operation: 1906 Commodity: Coal and Ironstone; Black Bed Reference: 5076 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NE (E)	0	4	418108 427130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	Potential Mining Areas Name: Taylor's Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate: and a Water Level Name/Mine: Custodian: Not Supplied	A13SE (S)	7	4	418108 426908
36	Potential Mining Areas Name: Rhodes Ceased Operation: 1901 Commodity: Coal; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.	A13SE (S)	26	4	418108 426908
37	Potential Mining Areas Name: Rhodes Ceased Operation: 1905 Commodity: Coal; Black Bed Reference: 4881 Alternate: Wall Name/Mine: Custodian: Not Supplied	A13SE (S)	26	4	418108 426908
38	Potential Mining Areas Name: Arch Ceased Operation: 1870 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (W)	214	4	417705 427124
39	Potential Mining Areas Name: Bierley Ceased Operation: 1852 Commodity: Coal; Top or Black Bed Reference: Not Supplied Alternate: Brow Name/Mine: Alternate: Fly Name/Mine: Alternate: Garth Name/Mine: Custodian: Divisional Engineer's Office, L.M.S. Railway Co. Ltd., Hunts Bank, Manchester.	A12NE (W)	214	4	417705 427124
40	Potential Mining Areas Name: Fly Ceased Operation: 1873 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (W)	214	4	417705 427124
41	Potential Mining Areas Name: Wall Ceased Operation: 1896 Commodity: Coal; Better Bed Reference: 3412A Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A12NE (W)	214	4	417705 427124
42	Potential Mining Areas Name: Wall Ceased Operation: 1870 Commodity: Coal; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (W)	214	4	417705 427124

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	Potential Mining Areas Name: Naylor Ceased Operation: 1850 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (NW)	228	4	417703 427305
44	Potential Mining Areas Name: Royd Ceased Operation: 1857 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (NW)	228	4	417703 427305
45	Potential Mining Areas Name: Rail Ceased Operation: 1865 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NE (NW)	228	4	417703 427305
46	Potential Mining Areas Name: Merchant Fields Ceased Operation: 1893 Commodity: Coal; Blocking Bed Reference: 2918 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A14SW (SE)	282	4	418513 426913
47	Potential Mining Areas Name: Valley Ceased Operation: 1893 Commodity: Coal; Black Bed; Ironstone; Shales Reference: 2985 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A14NW (NE)	329	4	418507 427315
48	Potential Mining Areas Name: Chairbarrows Ceased Operation: 1928 Commodity: Coal; Black Bed Reference: 9781 Alternate: Rhodes Name/Mine: Custodian: Not Supplied	A12SE (SW)	355	4	417708 426902
49	Potential Mining Areas Name: Bailiffe Bridge Ceased Operation: 1891 Commodity: Coal; Stone; Better Bed Reference: 2747 Alternate: Hill Name/Mine: Alternate: Lane Name/Mine: Alternate: Road Name/Mine: Alternate: Wavell Name/Mine: Custodian: Not Supplied	A12SE (SW)	355	4	417708 426902
50	Potential Mining Areas Name: Chatts Ceased Operation: 1925 Commodity: Coal; Shertcliffe Reference: 8265 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18SE (N)	381	4	418100 427712

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	Potential Mining Areas Name: Chatts Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18SW (N)	381	4	418098 427712
52	Potential Mining Areas Name: Bierley North Ceased Operation: Not Supplied Commodity: Coal; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18SW (N)	381	4	418098 427712
53	Potential Mining Areas Name: Roads Ceased Operation: 1907 Commodity: Coal and Ironstone; Black Bed Reference: 5069 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18SW (N)	381	4	418098 427712
54	Potential Mining Areas Name: Roads Ceased Operation: 1907 Commodity: Coal; Better Bed Reference: 5075 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18SW (N)	381	4	418098 427712

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	Potential Mining Areas Name: Bierley Ceased Operation: 1822 Commodity: Ironstone Reference: Not Supplied Alternate Name/Mine: Bar Alternate Name/Mine: Bark Alternate Name/Mine: Barn Alternate Name/Mine: Bower Alternate Name/Mine: Broom Alternate Name/Mine: Butler Alternate Name/Mine: Butler Upper Alternate Name/Mine: Corner Alternate Name/Mine: Croft Alternate Name/Mine: Crow Alternate Name/Mine: Day Alternate Name/Mine: Dyke Alternate Name/Mine: Elm Alternate Name/Mine: Hagg Alternate Name/Mine: Hagg Wood Alternate Name/Mine: Haigh Alternate Name/Mine: Hall Alternate Name/Mine: Hardy Alternate Name/Mine: Helen Alternate Name/Mine: Incline Alternate Name/Mine: Ing Alternate Name/Mine: Jordan Alternate Name/Mine: Kaye Alternate Name/Mine: Kellelts Alternate Name/Mine: Lane Alternate Name/Mine: Lane End Alternate Name/Mine: Ling Alternate Name/Mine: Mallison Alternate Name/Mine: Middle Alternate Name/Mine: Moor Alternate Name/Mine: Oak Alternate Name/Mine: Oats Alternate Name/Mine: Olive Alternate Name/Mine: Pasture Alternate Name/Mine: Peter Alternate Name/Mine: Pollard Alternate Name/Mine: Priestleys Alternate Name/Mine: Pump Alternate Name/Mine: Rock	A18SW (N)	381	4	418098 427712

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Alternate Name/Mine: Saddlers well Alternate Name/Mine: Seed Alternate Name/Mine: Settwood Alternate Name/Mine: Shop Alternate Name/Mine: Spring Alternate Name/Mine: Stocks Alternate Name/Mine: Tan Alternate Name/Mine: Taylors Alternate Name/Mine: Thorne Alternate Name/Mine: Waterloo Alternate Name/Mine: Weigh Alternate Name/Mine: Wilson Alternate Name/Mine: Wood Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.				
56	Potential Mining Areas Name: Chatts Ceased Operation: 1932 Commodity: Coal; Shertcliffe Reference: 10839 Alternate: No. 2 Name/Mine: Custodian: Not Supplied	A18SW (N)	381	4	418098 427712
57	Potential Mining Areas Name: Drighlington Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18SW (N)	381	4	418098 427712
58	Potential Mining Areas Name: Tofts Ceased Operation: Not Supplied Commodity: Coal; Blocking Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Walter Rowley and Wilson, 20 Park Row, Leeds.	A8NE (S)	409	4	418113 426505
59	Potential Mining Areas Name: Booth Ceased Operation: 1845 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17SE (NW)	527	4	417698 427707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	<p>Potential Mining Areas</p> <p>Name: Bierley Ceased Operation: 1857 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Elm Name/Mine: Alternate: Hagg Name/Mine: Alternate: Haigh Name/Mine: Alternate: Kaye Name/Mine: Alternate: Knowle Name/Mine: Alternate: Ling Name/Mine: Alternate: Pea Name/Mine: Alternate: Rock Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.</p>	A17SE (NW)	527	4	417698 427707
61	<p>Potential Mining Areas</p> <p>Name: Bierley Ceased Operation: Not Supplied Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A17SE (NW)	527	4	417698 427707
62	<p>Potential Mining Areas</p> <p>Name: Bierley Ceased Operation: 1862 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Bark Name/Mine: Alternate: Brook Name/Mine: Alternate: Corner Name/Mine: Alternate: Elm Name/Mine: Alternate: Hagg Name/Mine: Alternate: Hagg Wood Name/Mine: Alternate: Haigh Name/Mine: Alternate: Hazel Name/Mine: Alternate: Oats Name/Mine: Alternate: Pea Name/Mine: Alternate: Rock Name/Mine: Alternate: Seed Name/Mine: Alternate: Settwood Name/Mine: Alternate: Shop Name/Mine: Alternate: Station Name/Mine: Alternate: Tan Name/Mine: Alternate: Waterloo Name/Mine: Alternate: Wilson Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.</p>	A17SE (NW)	527	4	417698 427707
63	<p>Potential Mining Areas</p> <p>Name: Saddlers Well Ceased Operation: 1853 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A17SE (NW)	527	4	417698 427707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	Potential Mining Areas Name: Peter Ceased Operation: 1848 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17SE (NW)	527	4	417698 427707
65	Potential Mining Areas Name: Mill Ceased Operation: Not Supplied Commodity: Coal and Ironstone Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A17SE (NW)	527	4	417698 427707
66	Potential Mining Areas Name: Haley or Mill Ceased Operation: 1865 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17SE (NW)	527	4	417698 427707
67	Potential Mining Areas Name: Cross Ceased Operation: 1853 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17SE (NW)	527	4	417698 427707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	<p>Potential Mining Areas</p> <p>Name: Bierley Ceased Operation: 1898 Commodity: Coal; Better Bed Reference: Not Supplied Alternate Name/Mine: Bark Alternate Name/Mine: Bower Alternate Name/Mine: Bull Alternate Name/Mine: Bye Alternate Name/Mine: Dean Alternate Name/Mine: Elm Alternate Name/Mine: Hagg Alternate Name/Mine: Hagg Wood Alternate Name/Mine: Haigh Alternate Name/Mine: Hazel Alternate Name/Mine: Kaye Alternate Name/Mine: Knowle Alternate Name/Mine: Redding Engine Alternate Name/Mine: Rock Alternate Name/Mine: Salt Wood Alternate Name/Mine: Seed Alternate Name/Mine: Shop Alternate Name/Mine: Station Alternate Name/Mine: Tan Alternate Name/Mine: Waterloo Alternate Name/Mine: Wilson Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.</p>	A17SE (NW)	527	4	417698 427707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	<p>Potential Mining Areas</p> <p>Name: Wyke Ceased Operation: 1849 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate Name/Mine: Batin Alternate Name/Mine: Bentley Alternate Name/Mine: Butler Alternate Name/Mine: Bywaters Alternate Name/Mine: Carr Alternate Name/Mine: Cow Close Alternate Name/Mine: Cow Gill Alternate Name/Mine: Dean Alternate Name/Mine: Doncaster Alternate Name/Mine: Ellis Alternate Name/Mine: Garsides Alternate Name/Mine: High Fearnley Alternate Name/Mine: High Wyke Alternate Name/Mine: Hillam Alternate Name/Mine: Horners Alternate Name/Mine: Ing Alternate Name/Mine: Kellelts Alternate Name/Mine: Manor Alternate Name/Mine: Mortimer Alternate Name/Mine: Pasture Alternate Name/Mine: Pearsons Alternate Name/Mine: Pratts Alternate Name/Mine: Salthorn Alternate Name/Mine: Shaw Alternate Name/Mine: Sparlings Alternate Name/Mine: Station Alternate Name/Mine: Taylors Alternate Name/Mine: Whitehall Alternate Name/Mine: Worthings Alternate Name/Mine: Wyke Lower Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.</p>	A17SE (NW)	527	4	417698 427707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	<p>Potential Mining Areas</p> <p>Name: Wyke Ceased Operation: 1849 Commodity: Coal; Better Bed; Black Bed Reference: Not Supplied Alternate: Brigg Wood or Brigwood Name/Mine: Alternate: Bug Name/Mine: Alternate: Butler Name/Mine: Alternate: Carr Lower Name/Mine: Alternate: Cow Gill Name/Mine: Alternate: Dean Name/Mine: Alternate: Fearnley Name/Mine: Alternate: Hill Name/Mine: Alternate: Hilliam Name/Mine: Alternate: Holmfield Name/Mine: Alternate: Ing Name/Mine: Alternate: Lee Name/Mine: Alternate: Marsden Name/Mine: Alternate: Pasture Name/Mine: Alternate: Random Name/Mine: Alternate: Salthorn Name/Mine: Alternate: Scholes Name/Mine: Alternate: Smiths Name/Mine: Alternate: Station Name/Mine: Alternate: Strangeways Name/Mine: Alternate: Taylors Name/Mine: Alternate: Whitehall Name/Mine: Alternate: Wyke Lane Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.</p>	A17SE (NW)	527	4	417698 427707
71	<p>Potential Mining Areas</p> <p>Name: Wibsey Ceased Operation: Not Supplied Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A. Smith Denton and Co., Montgomery Chambers, Hartshead, Sheffield.</p>	A17SE (NW)	527	4	417698 427707
72	<p>Potential Mining Areas</p> <p>Name: Hunsworth Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied</p>	A9NW (SE)	543	4	418518 426511
73	<p>Potential Mining Areas</p> <p>Name: Hunsworth Ceased Operation: 1891 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A.E. Beacher and Son, Greasboro', Rotherham.</p>	A19SW (NE)	545	4	418502 427717

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	Potential Mining Areas Name: Whitehall Ceased Operation: 1907 Commodity: Coal; Shertcliffe Reference: 5060 Alternate Name/Mine: Chairbarrows Custodian: Not Supplied	A7NE (SW)	593	4	417714 426500
75	Potential Mining Areas Name: Wavell Ceased Operation: 1893 Commodity: Coal and Ironstone; Black Bed Reference: 2982 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A7NE (SW)	593	4	417714 426500
76	Potential Mining Areas Name: Westgate Ceased Operation: 1915 Commodity: Coal; Bottom; Shertcliffe Reference: 6343 Alternate Name/Mine: Chairbarrows Alternate Name/Mine: Whitehall Custodian: Not Supplied	A7NE (SW)	593	4	417714 426500
77	Potential Mining Areas Name: Long Ceased Operation: 1875 Commodity: Coal; Black Bed Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12SW (W)	616	4	417303 427119
78	Potential Mining Areas Name: Hillam Ceased Operation: 1875 Commodity: Coal and Ironstone; Better Bed; Black Bed Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12SW (W)	616	4	417303 427119
79	Potential Mining Areas Name: Hill Ceased Operation: 1892 Commodity: Coal; Black Bed Reference: 2765 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A12SW (W)	616	4	417303 427119

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	<p>Potential Mining Areas</p> <p>Name: Wike (Wyke) Ceased Operation: 1834-1911 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Apple Tree Name/Mine: Alternate: Bentley Name/Mine: Alternate: Brigg Wood Name/Mine: Alternate: Briggs Name/Mine: Alternate: Butler Name/Mine: Alternate: Bye Name/Mine: Alternate: Carr Name/Mine: Alternate: Cow Close Name/Mine: Alternate: Crowd Hill Name/Mine: Alternate: Doncaster Name/Mine: Alternate: Drake Name/Mine: Alternate: Engine Name/Mine: Alternate: Fearley Name/Mine: Alternate: Hanson Name/Mine: Alternate: High Fearley Name/Mine: Alternate: Hill Name/Mine: Alternate: Hillam Name/Mine: Alternate: Holmfield Name/Mine: Alternate: Marsden Name/Mine: Alternate: Mill Name/Mine: Alternate: Pasture Name/Mine: Alternate: Pickle Bridge Name/Mine: Alternate: Random Name/Mine: Alternate: Rookes Name/Mine: Alternate: Scholes Name/Mine: Alternate: Smith Name/Mine: Alternate: Storr Hill Name/Mine: Alternate: Strangeways Name/Mine: Alternate: Taylor's Name/Mine: Alternate: Weigh House Name/Mine: Alternate: Westfield Name/Mine: Alternate: Whitehall Name/Mine: Alternate: Wike (Wyke) Lane Name/Mine: Alternate: Worthing Name/Mine: Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.</p>	A12SW (W)	616	4	417303 427119
81	<p>Potential Mining Areas</p> <p>Name: Green Ceased Operation: 1854 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.</p>	A12NW (W)	621	4	417301 427299

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	Potential Mining Areas Name: Garth Ceased Operation: 1854 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12NW (W)	621	4	417301 427299
83	Potential Mining Areas Name: Brow Ceased Operation: 1857 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A12SW (W)	696	4	417306 426897
84	Potential Mining Areas Name: Ben Ing and Salthorn Ceased Operation: 1906 Commodity: Coal and Ironstone; Black Bed Reference: 4989 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A17SW (NW)	782	4	417296 427702
85	Potential Mining Areas Name: Ben Ing Ceased Operation: 1902 Commodity: Coal; Better Bed Reference: 4248 Alternate: Bottom Name/Mine: Alternate: Salthorn Name/Mine: Alternate: Station Name/Mine: Custodian: Not Supplied	A17SW (NW)	782	4	417296 427702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	<p>Potential Mining Areas</p> <p>Name: Low Moor Ceased Operation: 1850 Commodity: Coal and Ironstone; Better Bed; Black Bed Reference: Not Supplied Alternate: Barralough's Name/Mine: Alternate: Brayshaw Name/Mine: Alternate: Brigg Wood or Brigwood Name/Mine: Alternate: Carr Lower Name/Mine: Alternate: Crawshaw Name/Mine: Alternate: Fearnley Name/Mine: Alternate: Hardy Name/Mine: Alternate: High Wood Name/Mine: Alternate: Highfield Name/Mine: Alternate: Ing Name/Mine: Alternate: Laithe New Name/Mine: Alternate: Lee Name/Mine: Alternate: Lightowers Name/Mine: Alternate: Low Wood Name/Mine: Alternate: Northfield Name/Mine: Alternate: Odsall Wood Name/Mine: Alternate: Pickles Name/Mine: Alternate: Pollard Name/Mine: Alternate: Rough Little Name/Mine: Alternate: Salthorn Name/Mine: Alternate: Slack End Name/Mine: Alternate: Soldier Green Name/Mine: Alternate: Taylor's Name/Mine: Alternate: Tommis Name/Mine: Alternate: Westfield Name/Mine: Alternate: Wilson Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.</p>	A17SW (NW)	782	4	417296 427702
87	<p>Potential Mining Areas</p> <p>Name: Green Lane Ceased Operation: Not Supplied Commodity: Coal and Ironstone Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied</p>	A17SW (NW)	782	4	417296 427702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	<p>Potential Mining Areas</p> <p>Name: Bierley North Ceased Operation: 1829-1889 Commodity: Coal; Better Bed Reference: Not Supplied Alternate Acre Name/Mine: Alternate Barraclough's Name/Mine: Alternate Bates Name/Mine: Alternate Brayshaw Name/Mine: Alternate Brigg Wood Name/Mine: Alternate Carr Lower Name/Mine: Alternate Chapel Name/Mine: Alternate Clarkson Name/Mine: Alternate Common Name/Mine: Alternate Crawshaw Name/Mine: Alternate Dean Name/Mine: Alternate Delf Name/Mine: Alternate Edmondson Name/Mine: Alternate Eight Days Work Name/Mine: Alternate Engine New Name/Mine: Alternate Fearnley Name/Mine: Alternate Forge Name/Mine: Alternate Garden Name/Mine: Alternate Green Name/Mine: Alternate Hardy Name/Mine: Alternate Harrison Name/Mine: Alternate High Park Name/Mine: Alternate High Wood Name/Mine: Alternate Highfield Name/Mine: Alternate Holly Hall Name/Mine: Alternate Junction Name/Mine: Alternate Laith New Name/Mine: Alternate Lee Name/Mine: Alternate Lightowlers Name/Mine: Alternate Little Rough Name/Mine: Alternate Low Wood Name/Mine: Alternate Mine Name/Mine: Alternate Nancy Holmes Name/Mine: Alternate New Name/Mine: Alternate Noble Name/Mine: Alternate Northfield Name/Mine: Alternate Park Leys Name/Mine: Alternate Pickles Name/Mine: Alternate Pollard Name/Mine:</p>	A17SW (NW)	782	4	417296 427702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Alternate Name/Mine: Raws Alternate Name/Mine: Red Engine Alternate Name/Mine: Red Gin Alternate Name/Mine: Salthorn Alternate Name/Mine: Sampson Alternate Name/Mine: Seed Alternate Name/Mine: Shaw Alternate Name/Mine: Slack Alternate Name/Mine: Slack Dam Alternate Name/Mine: Slack End Alternate Name/Mine: Slack Side Alternate Name/Mine: Soldier Green Alternate Name/Mine: Stone park Alternate Name/Mine: Street Alternate Name/Mine: Syke Alternate Name/Mine: Tommis Alternate Name/Mine: Tordoff's Alternate Name/Mine: Westfield Alternate Name/Mine: Wilkinson's Alternate Name/Mine: Wilson Alternate Name/Mine: Wood Royd Alternate Name/Mine: Wooler Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.				
89	Potential Mining Areas Name: Bowling Ceased Operation: 1913 Commodity: Coal; Shertcliffe Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: A.E. Beacher and Son, Greasboro', Rotherham.	A18NW (N)	783	4	418093 428114
90	Potential Mining Areas Name: Toftshaw Bottoms Ceased Operation: 1914 Commodity: Coal; Shertcliffe Reference: 6265 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18NW (N)	783	4	418095 428114
91	Potential Mining Areas Name: Brook Ceased Operation: 1872 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114
92	Potential Mining Areas Name: Olive Ceased Operation: 1854 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	Potential Mining Areas Name: Oats Ceased Operation: 1850 Commodity: Coal; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114
94	Potential Mining Areas Name: Pea Ceased Operation: 1873 Commodity: Coal and Ironstone; Better Bed; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114
95	Potential Mining Areas Name: Egg Ceased Operation: 1872 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114
96	Potential Mining Areas Name: Croft Ceased Operation: 1852 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A18NW (N)	784	4	418093 428114

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	<p>Potential Mining Areas</p> <p>Name: Bierley Ceased Operation: 1886 Commodity: Coal Black Bed Reference: Not Supplied Alternate Bar Name/Mine: Alternate Bark Name/Mine: Alternate Brook Name/Mine: Alternate Broom Name/Mine: Alternate Butler Upper Name/Mine: Alternate Bye Name/Mine: Alternate Calf Knowle Name/Mine: Alternate Dyke Name/Mine: Alternate Elm Name/Mine: Alternate Far Jordan Name/Mine: Alternate Hagg Name/Mine: Alternate Jordan Upper Name/Mine: Alternate Kaye Name/Mine: Alternate Knowle Name/Mine: Alternate Lane End Name/Mine: Alternate Ling Name/Mine: Alternate Low Pollard Name/Mine: Alternate Oak Name/Mine: Alternate Oats Name/Mine: Alternate Pasture Name/Mine: Alternate Pea Name/Mine: Alternate Redding Old Engine Name/Mine: Alternate Rock Name/Mine: Alternate Seed Name/Mine: Alternate Stocks Name/Mine: Alternate Tan Name/Mine: Alternate Tunnel Name/Mine: Alternate Waterloo Name/Mine: Custodian: Thomas W. Ward Ltd., Savile Street, Sheffield.</p>	A18NW (N)	784	4	418093 428114
98	<p>Potential Mining Areas</p> <p>Name: North Bierley Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Not Supplied Name/Mine: Custodian: Not Supplied</p>	A18NW (N)	784	4	418093 428114
99	<p>Potential Mining Areas</p> <p>Name: Rhodes Ceased Operation: 1830 Commodity: Coal; Seam unnamed Reference: Not Supplied Alternate Not Supplied Name/Mine: Custodian: Lord Allendale, Estate Office, Bretton, Wakefield.</p>	A3NE (S)	811	4	418119 426103

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	Potential Mining Areas Name: Barn Ceased Operation: 1847 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17NE (NW)	887	4	417693 428109
101	Potential Mining Areas Name: Corner Ceased Operation: 1865 Commodity: Coal and Ironstone; Black Bed; Better Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17NE (NW)	887	4	417693 428109
102	Potential Mining Areas Name: France Ceased Operation: Not Supplied Commodity: Coal and Ironstone Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A17NE (NW)	887	4	417693 428109
103	Potential Mining Areas Name: Wilson Ceased Operation: 1898 Commodity: Coal; Better Bed Reference: 3765 Alternate: Dean Name/Mine: Alternate: Shop Name/Mine: Custodian: Not Supplied	A17NE (NW)	887	4	417693 428109
104	Potential Mining Areas Name: Taylor's Ceased Operation: 1853 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17NE (NW)	887	4	417693 428109
105	Potential Mining Areas Name: Thorn Ceased Operation: 1851 Commodity: Coal and Ironstone; Black Bed Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Childe and Rowand, 59 Westgate, Wakefield.	A17NE (NW)	887	4	417693 428109
106	Potential Mining Areas Name: Scholes Ceased Operation: 1902 Commodity: Coal and Ironstone; Black Bed Reference: 6394 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A7NW (SW)	913	4	417311 426495
107	Potential Mining Areas Name: Scholes and Chairbarrows Ceased Operation: 1929 Commodity: Coal; Better Bed Reference: 9782 Alternate: including portion of Crosslands workings Name/Mine: Custodian: Not Supplied	A7NW (SW)	913	4	417311 426495
108	Potential Mining Areas Name: Whitehall Ceased Operation: 1897 Commodity: Coal; Shertcliffe Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Robert Heath and Low Moor Ltd., Low Moor Ironworks, Bradford.	A7NW (SW)	913	4	417311 426495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Deposited Material First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13NE (SE)	0	-	418105 427130
110	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Deposited Material First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SW (S)	0	-	418098 427111
111	Extractive Industries or Potential Excavations from 1855-1909 Use: Old Coal Pit First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13NE (SE)	0	-	418105 427130
112	Extractive Industries or Potential Excavations from 1855-1909 Use: Mill Ponds First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SE (E)	23	-	418293 427096
113	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Deposited Material First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13NW (NW)	65	-	417959 427321
114	Extractive Industries or Potential Excavations from 1855-1909 Use: Valley Pit (Coal & Ironstone) First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13NW (NW)	65	-	417959 427321
115	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Deposited Material First Map Published 1893 Date: Last Map Published 1894 Date:	A13SE (SE)	85	-	418295 426929
116	Extractive Industries or Potential Excavations from 1893-1915 Use: Sewage Works (Bradford Corporation) First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13NE (NE)	0	-	418134 427144
117	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13NE (NE)	0	-	418110 427134
118	Extractive Industries or Potential Excavations from 1893-1915 Use: Old Coal Pit First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13NE (SE)	0	-	418105 427130
119	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13SE (E)	0	-	418166 427117

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
120	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418106 427110
121	Extractive Industries or Potential Excavations from 1893-1915 Use: Mill Ponds First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13SE (E)	25	-	418296 427097
122	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13NW (NW)	64	-	417954 427317
123	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1907 Date: Last Map Published 1908 Date:	A13SE (SE)	76	-	418277 426920
124	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1908 Date: Last Map Published Not Applicable Date:	A13NW (NW)	87	-	417998 427367
125	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418104 427108
126	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13NE (NE)	0	-	418110 427136
127	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13SE (SE)	0	-	418134 427110
128	Extractive Industries or Potential Excavations from 1906-1937 Use: Sewage Works (Spenborough U.D. Council) First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418129 427057
129	Extractive Industries or Potential Excavations from 1906-1937 Use: Sewage Works (Bradford Corporation) First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13NE (NE)	0	-	418125 427139
130	Extractive Industries or Potential Excavations from 1906-1937 Use: Reservoirs First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13SE (E)	21	-	418293 427095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1922 Date: Last Map Published Not Applicable Date:	A13NW (NW)	67	-	417949 427320
132	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Mining First Map Published 1922 Date: Last Map Published 1922 Date:	A13SE (SE)	72	-	418272 426919
133	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1922 Date: Last Map Published 1922 Date:	A13SE (SE)	83	-	418295 426930
134	Extractive Industries or Potential Excavations from 1924-1949 Use: Sewage Works (Spenborough U.D. Council) First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418130 427056
135	Extractive Industries or Potential Excavations from 1924-1949 Use: Filter Beds First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NE (N)	0	-	418111 427184
136	Extractive Industries or Potential Excavations from 1924-1949 Use: Sewage Works (Bradford Corporation) First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NE (SE)	0	-	418105 427130
137	Extractive Industries or Potential Excavations from 1924-1949 Use: Filter Bed First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (SE)	0	-	418144 427042
138	Extractive Industries or Potential Excavations from 1924-1949 Use: Filter Beds First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NE (SE)	0	-	418105 427130
139	Extractive Industries or Potential Excavations from 1924-1949 Use: Sludge Beds First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (SE)	0	-	418177 427052
140	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NW (NW)	0	-	417978 427249
141	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SW (S)	0	-	418094 427087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
142	Extractive Industries or Potential Excavations from 1924-1949 Use: Settling Tanks First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418103 427020
143	Extractive Industries or Potential Excavations from 1924-1949 Use: Septic Tank First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (S)	0	-	418113 426974
144	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (SE)	19	-	418271 427026
145	Extractive Industries or Potential Excavations from 1924-1949 Use: Reservoirs First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13SE (E)	19	-	418293 427094
146	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NW (NW)	64	-	417948 427315
147	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published 1938 Date:	A13SE (SE)	74	-	418273 426919
148	Extractive Industries or Potential Excavations from 1924-1949 Use: Unspecified Deposited Material First Map Published 1938 Date: Last Map Published Not Applicable Date:	A13NW (NW)	99	-	417970 427365
149	Extractive Industries or Potential Excavations from 1950-1980 Use: Filter Beds First Map Published 1956 Date: Last Map Published 1956 Date:	A13NW (N)	16	-	418045 427311
150	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1957 Date: Last Map Published 1958 Date:	A13SE (SE)	31	-	418284 427024
151	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1956 Date: Last Map Published N/A Date:	A13NW (NW)	70	-	417942 427320
152	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1957 Date: Last Map Published N/A Date:	A13SE (SE)	77	-	418274 426914

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1957 Date: Last Map Published N/A Date:	A13SE (SE)	89	-	418319 426971
154	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1956 Date: Last Map Published N/A Date:	A13NW (NW)	91	-	417989 427367

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
155	General Quarrying Use: Not Supplied Date of Mapping: 1991	A8NE (SE)	210	-	418307 426771
156	General Quarrying Use: Not Supplied Date of Mapping: 1854	A14NE (E)	725	-	418986 427239
157	General Quarrying Use: Not Supplied Date of Mapping: 1854	A17NE (NW)	951	-	417436 428047
158	Heap, unknown constituents Use: Not Supplied Date of Mapping: 1854	A17NE (NW)	826	-	417527 427958
159	Heap, unknown constituents Use: Not Supplied Date of Mapping: 1938	A17NW (NW)	879	-	417377 427921
160	Mineral Railway Use: Not Supplied Date of Mapping: 1894 - 1908	A13NE (SW)	0	-	418101 427126
161	Mineral Railway Use: Not Supplied Date of Mapping: 1894 - 1908	A13NW (W)	0	-	418040 427155
162	Mineral Railway Use: Not Supplied Date of Mapping: 1908	A13SW (SW)	154	-	417936 426924
163	Mineral Railway Use: Not Supplied Date of Mapping: 1894 - 1908	A13SW (SW)	251	-	417909 426800
164	Mineral Railway Use: Not Supplied Date of Mapping: 1894	A12NE (NW)	298	-	417659 427375
165	Mineral Railway Use: Not Supplied Date of Mapping: 1894 - 1908	A14SW (E)	402	-	418675 426995
166	Mineral Railway Use: Not Supplied Date of Mapping: 1894	A12NE (W)	474	-	417447 427185
167	Mineral Railway Use: Not Supplied Date of Mapping: 1852 - 1908	A17SE (NW)	508	-	417696 427685
168	Mineral Railway Use: Not Supplied Date of Mapping: 1894 - 1908	A19SW (NE)	754	-	418751 427741
169	Mineral Railway Use: Not Supplied Date of Mapping: 1854	A17NW (NW)	831	-	417395 427873
170	Mineral Railway Use: Not Supplied Date of Mapping: 1854	A17NE (NW)	868	-	417542 428010
171	Mineral Railway Use: Not Supplied Date of Mapping: 1894	A23SW (N)	889	-	418036 428216
172	Mineral Railway Use: Not Supplied Date of Mapping: 1894	A11SE (W)	957	-	417056 426811
173	Mineral Railway Use: Not Supplied Date of Mapping: 1854	A17NW (NW)	961	-	417292 427957
174	Mineral Railway Use: Not Supplied Date of Mapping: 1852	A17NW (NW)	989	-	417375 428059
175	Mining & quarrying general Use: Not Supplied Date of Mapping: 1894 - 1908	A7NE (SW)	474	-	417708 426696

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
176	Mining & quarrying general Use: Not Supplied Date of Mapping: 1894	A12SE (W)	507	-	417445 427047
177	Mining & quarrying general Use: Not Supplied Date of Mapping: 1894	A12NW (W)	613	-	417308 427290
178	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A13NE (SE)	0	-	418105 427130
179	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A13NW (NW)	66	-	417959 427323
180	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894 - 1908	A13SE (SE)	69	-	418268 426919
181	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A13SW (SW)	156	-	417927 426935
182	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A13NE (NE)	297	-	418427 427356
183	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894 - 1938	A14SW (SE)	358	-	418536 426807
184	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SE (NW)	427	-	417619 427532
185	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SE (NW)	526	-	417682 427698
186	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SE (NW)	617	-	417478 427660
187	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SW (NW)	637	-	417419 427622
188	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1938 - 1955	A18NW (N)	700	-	417954 428011
189	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A18NW (N)	701	-	417976 428017
190	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SW (W)	805	-	417155 427485
191	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894	A19SE (NE)	809	-	418798 427785
192	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17SW (NW)	844	-	417278 427776
193	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894 - 1908	A7NW (SW)	854	-	417415 426454
194	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A16SE (NW)	957	-	417047 427624
195	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A22SE (N)	992	-	417666 428213
196	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A22SE (N)	993	-	417700 428231

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A17NW (NW)	997	-	417393 428077
198	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1854	A9NE (SE)	798	-	418834 426460
199	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NE (SE)	0	-	418105 427130
200	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NW (NW)	66	-	417959 427323
201	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13SE (SE)	69	-	418268 426919
202	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13SW (SW)	156	-	417927 426935
203	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A13NE (NE)	297	-	418427 427356
204	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14SW (SE)	358	-	418536 426807
205	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	427	-	417619 427532
206	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A7NE (SW)	478	-	417671 426725
207	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A12SE (W)	507	-	417445 427047
208	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	526	-	417682 427698
209	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A12NW (W)	613	-	417308 427290
210	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SE (NW)	617	-	417478 427660
211	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (NW)	637	-	417419 427622
212	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A18NW (N)	700	-	417954 428011
213	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A14NE (E)	725	-	418986 427239
214	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A9NE (SE)	798	-	418834 426460
215	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (W)	805	-	417155 427485
216	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A19SE (NE)	809	-	418798 427785
217	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17SW (NW)	844	-	417278 427776

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
218	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A7NW (SW)	863	-	417404 426452
219	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17NE (NW)	951	-	417436 428047
220	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A16SE (NW)	957	-	417047 427624
221	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A22SE (N)	992	-	417666 428213
222	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A22SE (N)	993	-	417700 428231
223	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1991	A17NW (NW)	997	-	417393 428077
224	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A13SE (SE)	0	-	418193 427056
225	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13NW (NW)	0	-	417979 427253
226	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	0	-	418200 426952
227	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	0	-	418220 427077
228	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (E)	6	-	418286 427100
229	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	28	-	418286 427034
230	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A13SE (SE)	134	-	418361 426955
231	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (S)	207	-	418077 426713
232	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (SE)	238	-	418327 426750
233	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1908	A8NW (S)	283	-	417995 426670
234	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	456	-	418553 426657
235	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	516	-	418598 426616
236	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1854	A17SE (NW)	562	-	417561 427662
237	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1908	A17NE (NW)	677	-	417642 427846
238	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A17NW (NW)	909	-	417336 427926

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)</p> <p>Date of Mapping: 1955</p>	A17NW (NW)	993	-	417250 427962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
240	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150
241	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150
242	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418130 427165
243	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
244	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
245	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	418201 427030
246	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	0	1	418023 427089
247	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	8	1	418230 427178
248	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	48	1	418181 427302
249	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	133	1	418290 427258
250	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	140	1	418321 427317
251	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	156	1	418434 427099
252	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	196	1	418095 427525
253	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
254	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418146 427150
255	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418130 427165

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
256	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A18SW (N)	206	1	418052 427526
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418179 427196
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
257	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (SE)	0	1	418105 427130
258	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	6	1	418230 427178
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	418179 427196
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	0	1	418132 427044
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	143	1	418313 427280

The following mapping has been analysed for Historical Land Use Information (1:2,500):








1:2,500	Mapsheets	Published Date
Yorkshire	232_01	1893
Yorkshire	232_05	1894
Yorkshire	232_05	1907
Yorkshire	232_01	1908
Yorkshire	232_01	1922
Yorkshire	232_05	1922
Yorkshire	232_01	1938
Yorkshire	232_05	1938
Ordnance Survey Plan	SE1827	1958

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheets	Published Date
Yorkshire	231_00	1854
Yorkshire	232_00	1854
Yorkshire	231_NE	1894
Yorkshire	232_NW	1894
Yorkshire	231_NE	1908
Yorkshire	232_NW	1908
Yorkshire	231_NE	1938
Yorkshire	232_NW	1938
Ordnance Survey Plan	SE12NE	1955
1:10,000	Mapsheets	Published Date
Ordnance Survey Plan	SE12NE	1991

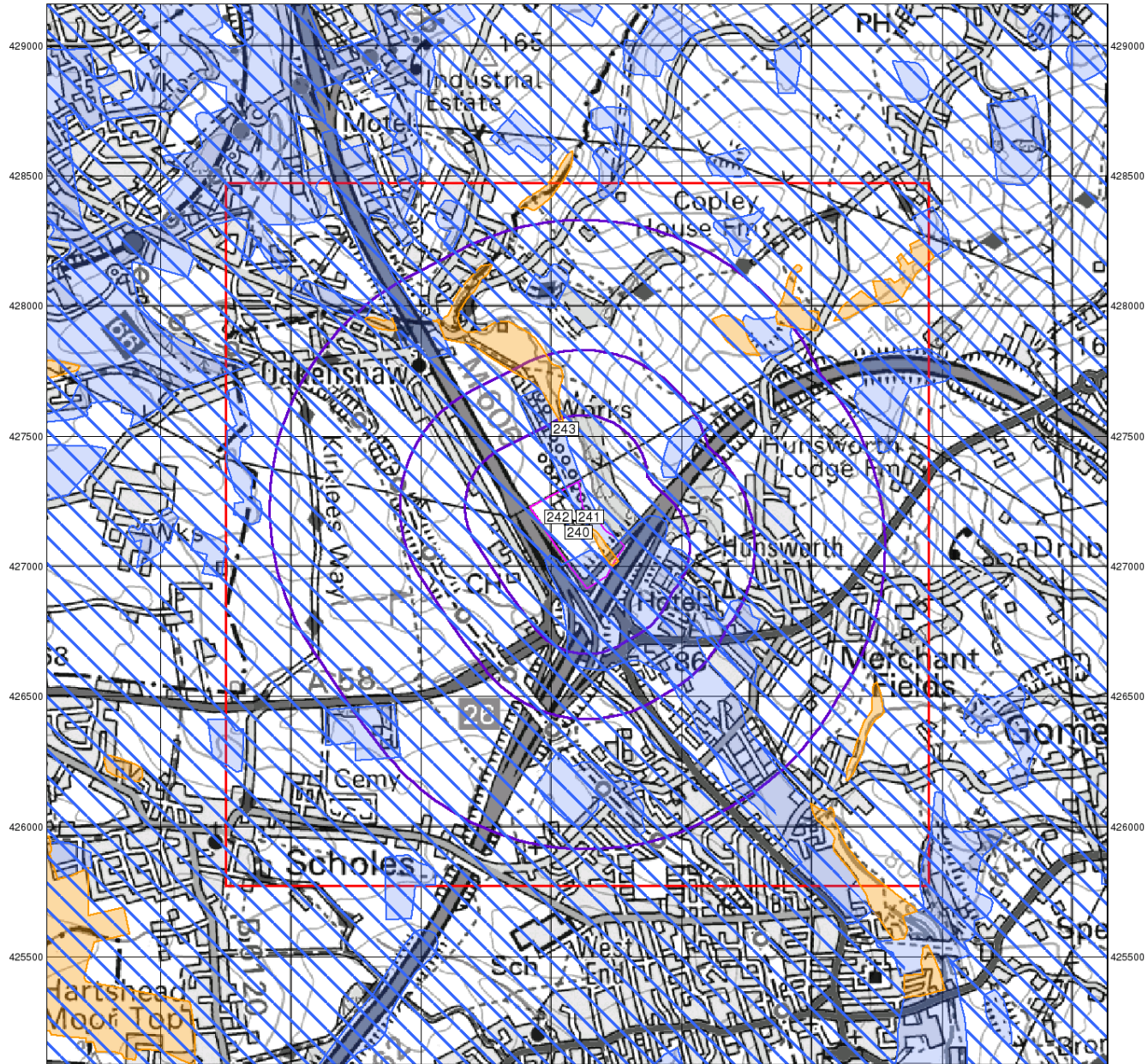
Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	November 2020	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Stantec UK Ltd	November 2020	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	Version	Update Cycle
Subterranean Features Landmark Information Group Limited	February 2020	Bi-Annually
Ground Stability Data (1:50,000)	Version	Update Cycle
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	Annual Rolling Update

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
The Coal Authority	
Ove Arup	
Stantec UK Ltd	
Wardell Armstrong	
Johnson Poole & Bloomer	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
3	Ove Arup & Partners Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	Telephone: 0191 261 6080 Fax: 0191 261 7879
4	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9960 Fax: 0844 844 9951 Email: customerservice@promap.co.uk Website: www.landmarkinfo.co.uk
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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Ground Stability Data (1:50,000)

General

- ◆ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- 1 Map ID

Potential for Compressible Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Collapsible Ground Stability Hazards

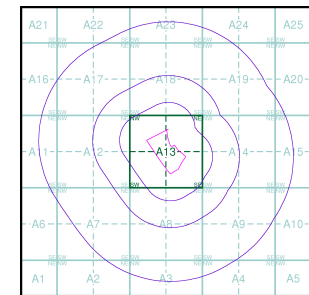
- High
- Moderate
- Low
- Very Low

Brine Pumping and Salt Mining

- Brine Pumping Related Feature
- Salt Mining Related Feature

- | Point | Polygon |
|--------------------------------------|--|
| ▲ | |
| ▲ | |

Mining and Ground Stability - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

- ◆ Specified Site
- Specified Buffer(s)
- ✕ Bearing Reference Point
- Slice
- B Map ID

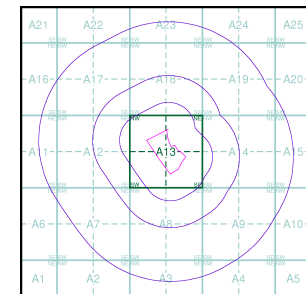
Potential for Landslide Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Ground Dissolution Stability Hazards

- High
- Moderate
- Low
- Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

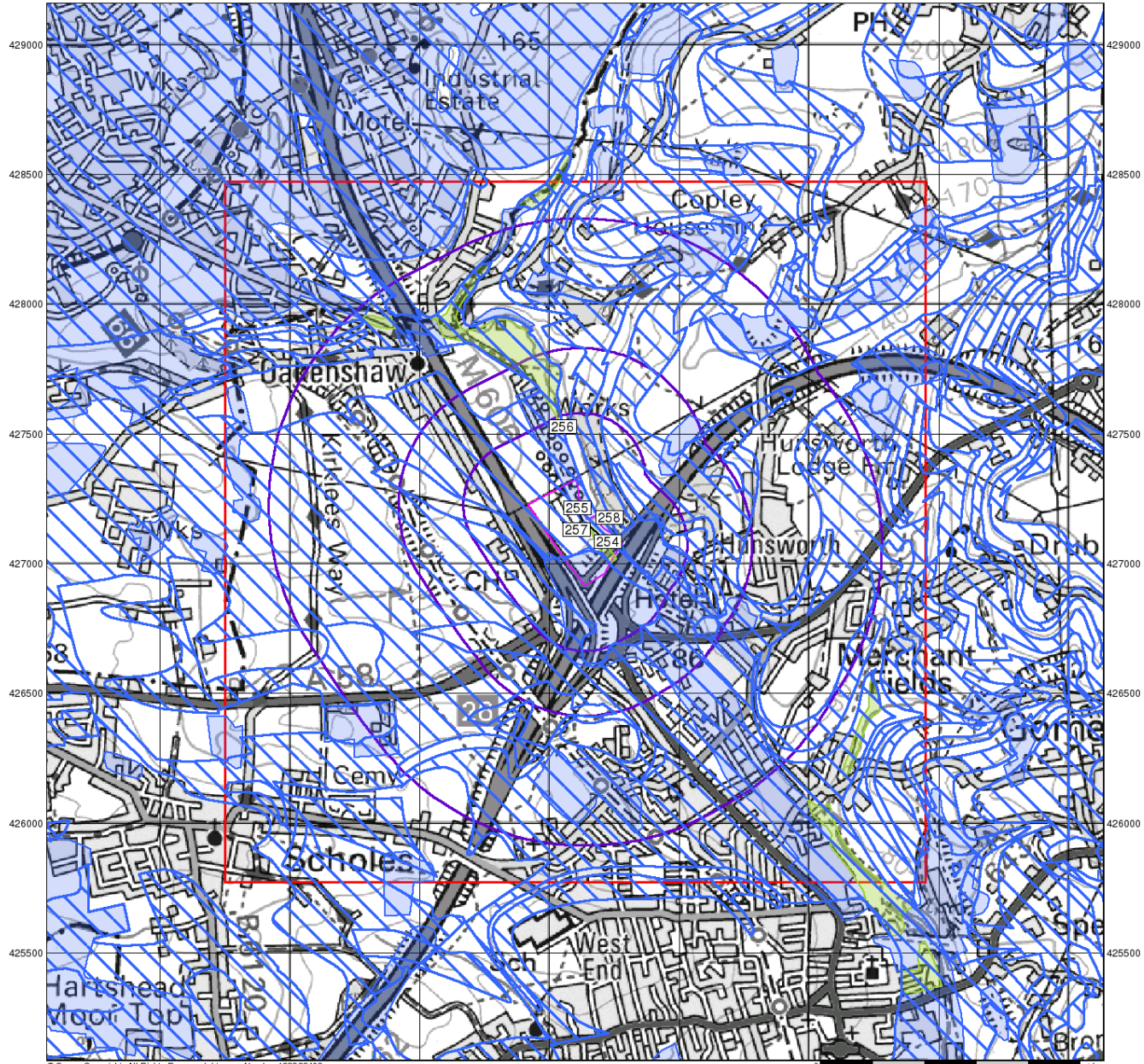
Site Details

Site at 418090, 427110



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416500 417000 417500 418000 418500 419000 419500 420000



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Ground Stability Data (1:50,000)

General

- ◇ Specified Site
- ◇ Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

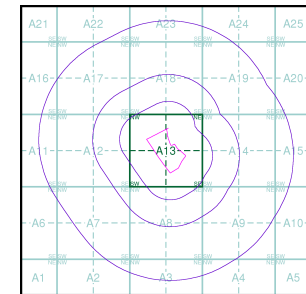
Potential for Running Sand Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

- ▨ High
- ▨ Moderate
- ▨ Low
- ▨ Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000






Site Details

Site at 418090, 427110











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General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Map ID
-  Several of Type at Location



Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

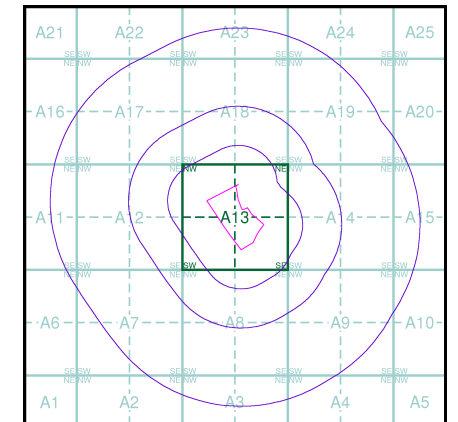
Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

-  Potential Mining Area
-  BGS Recorded Mineral Site

Mining and Ground Stability - Slice A

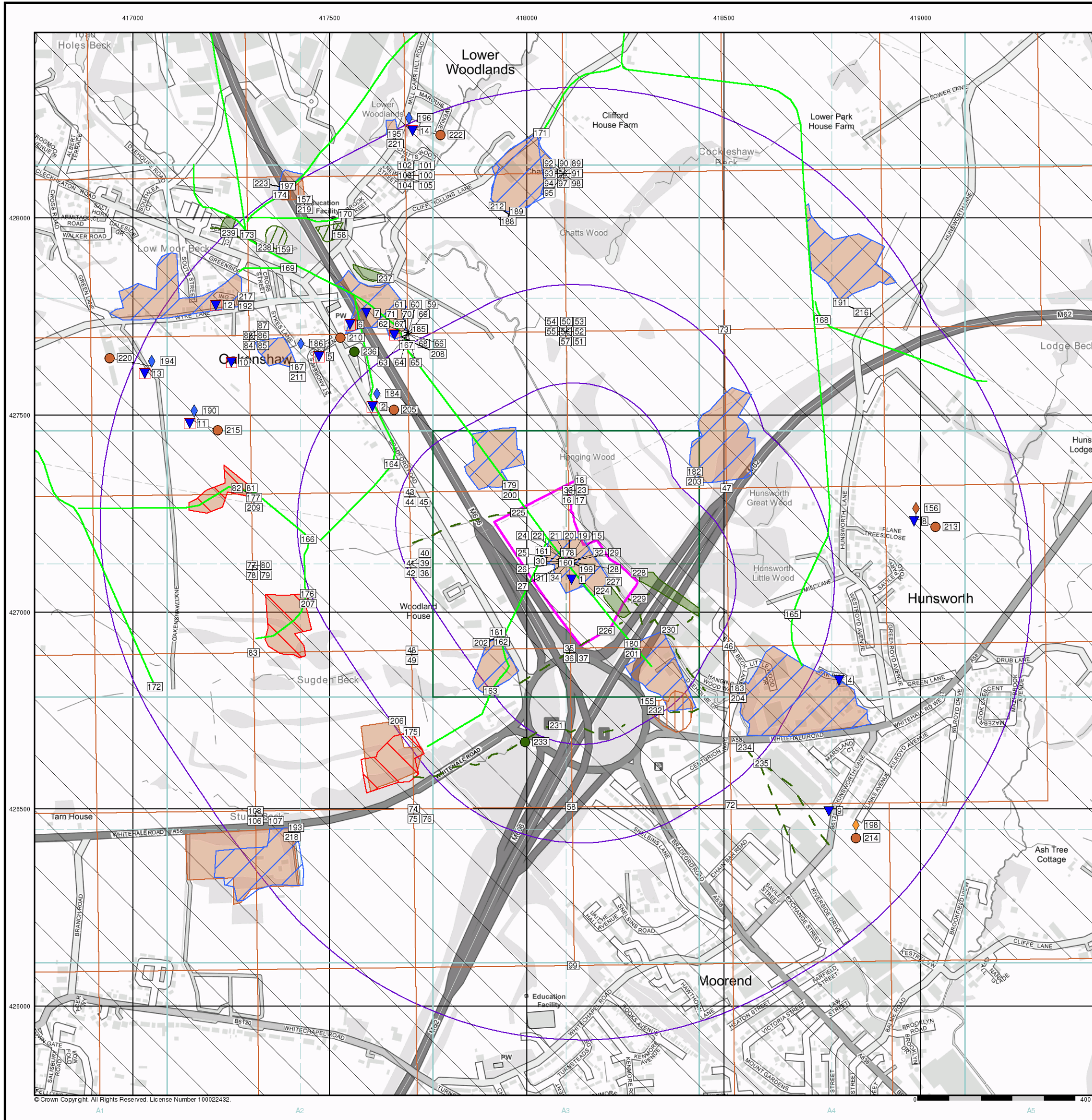


Order Details

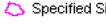



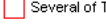
Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details
















Site at 418090, 427110



General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Map ID
-  Several of Type at Location

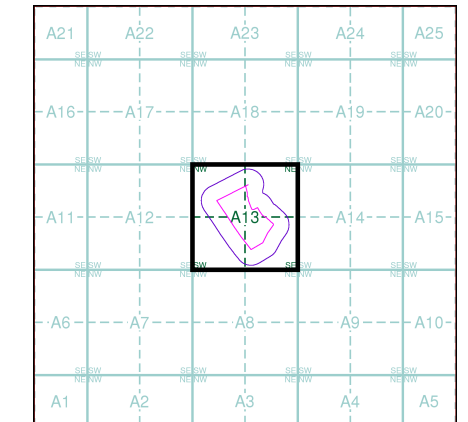
**Potentially Contaminative Industrial Uses
(Extractive Industries Activity)**

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909			
Extractive Industries Activity from 1893 - 1915			
Extractive Industries Activity from 1906 - 1937			
Extractive Industries Activity from 1924 - 1949			
Extractive Industries Activity from 1950 - 1980			

Subterranean Features

	Point	Line	Polygon
Subterranean Features			

Mining and Ground Stability - Segment A13

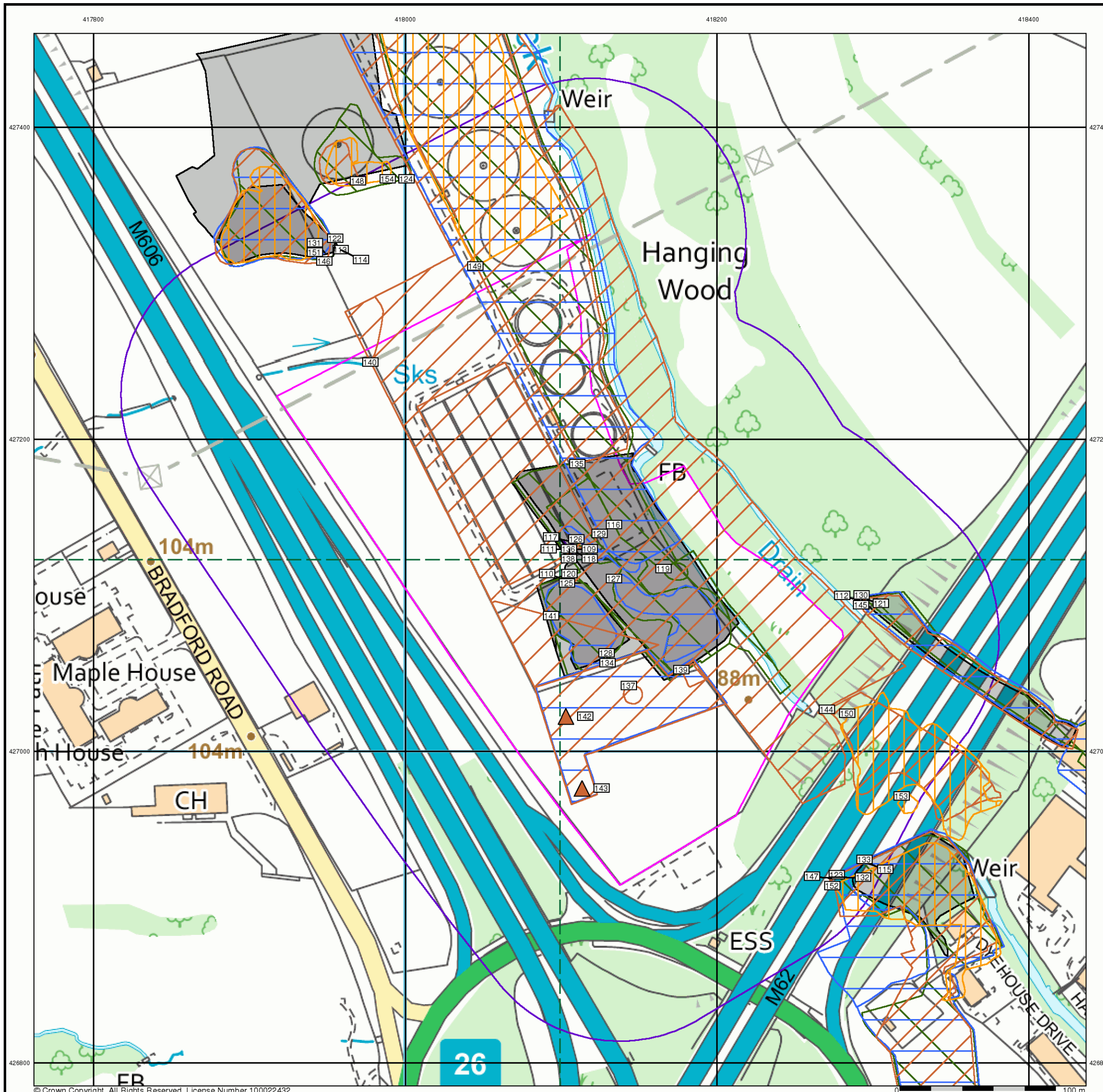


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Plot Buffer (m): 100





Site Details

Site at 418090, 427110






Geology 1:10,000 Maps Legends







Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Holocene - Holocene
	LSGR	Landscaped Ground (Undivided)	Unknown/Unclassified Entry	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Devensian - Ipswichian
	TILLD	Till, Devensian	Diamicton	Devensian - Ipswichian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Langsettian - Langsettian
	CLRK	Clifton Rock	Sandstone	Langsettian - Langsettian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Langsettian - Langsettian
	FHR	Falhouse Rock	Sandstone	Langsettian - Langsettian
	Rock			
	Fault			



Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

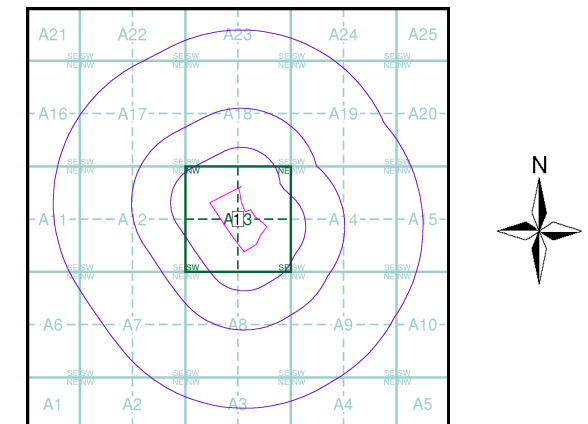
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1
Map Name:	SE12NE
Map Date:	1999
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Available
Landslip:	Available
Rock Segments:	Available

Geology 1:10,000 Maps - Slice A



Order Details

Order Number:	278083497_1_1
Customer Ref:	LD10258
National Grid Reference:	418110, 427130
Slice:	A
Site Area (Ha):	6.82
Search Buffer (m):	1000

Site Details

Site at 418090, 427110

Artificial Ground and Landslip

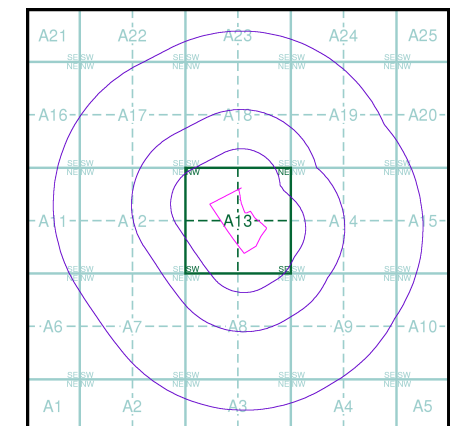
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- In-filled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A

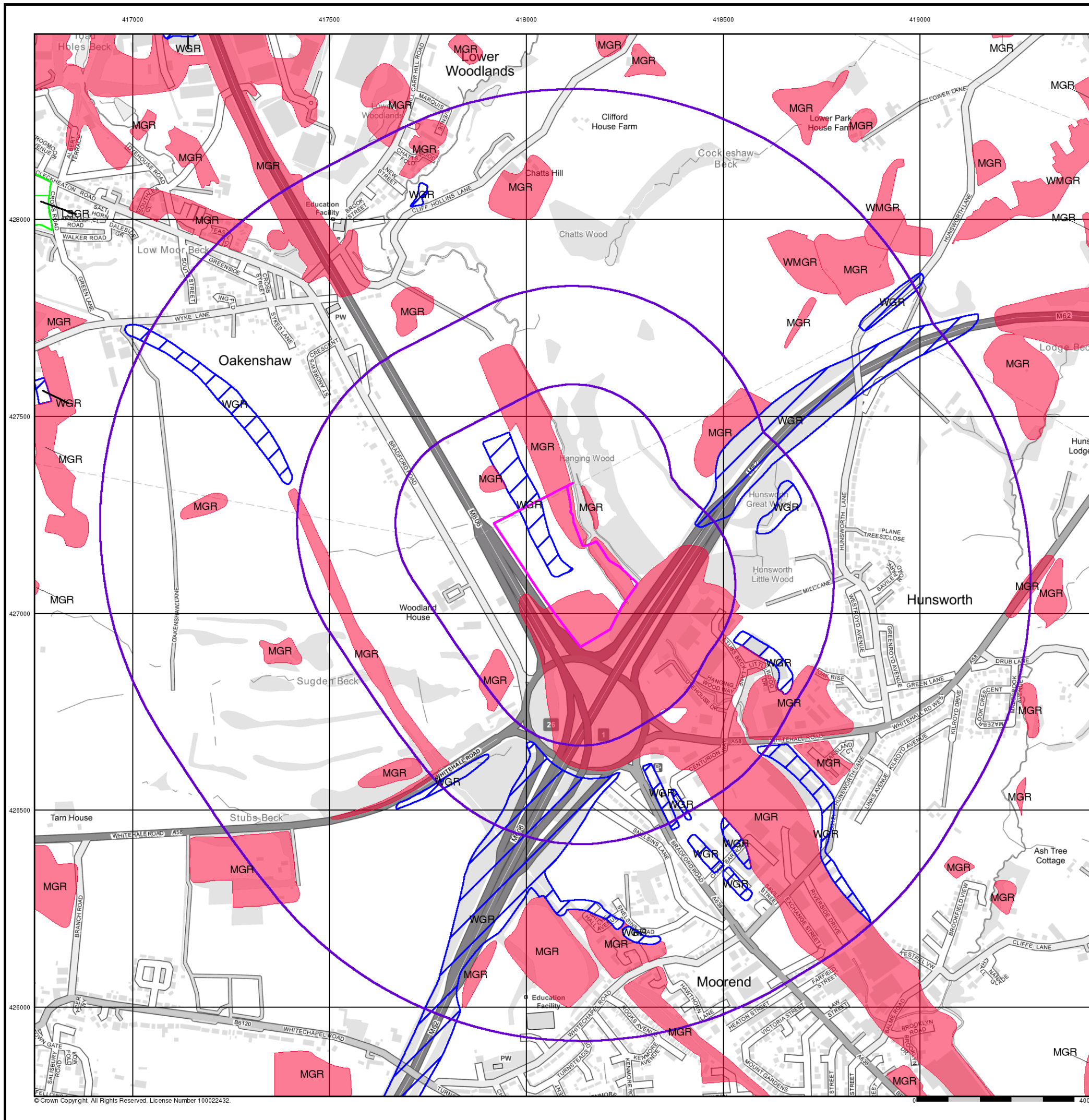


Order Details

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 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
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 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



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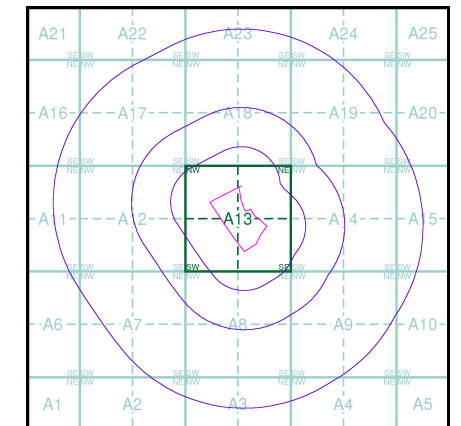
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



Bedrock and Faults

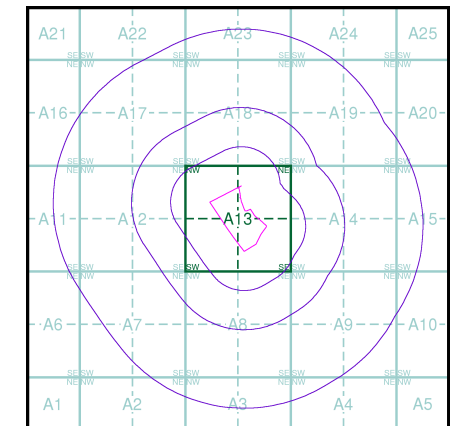
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice A

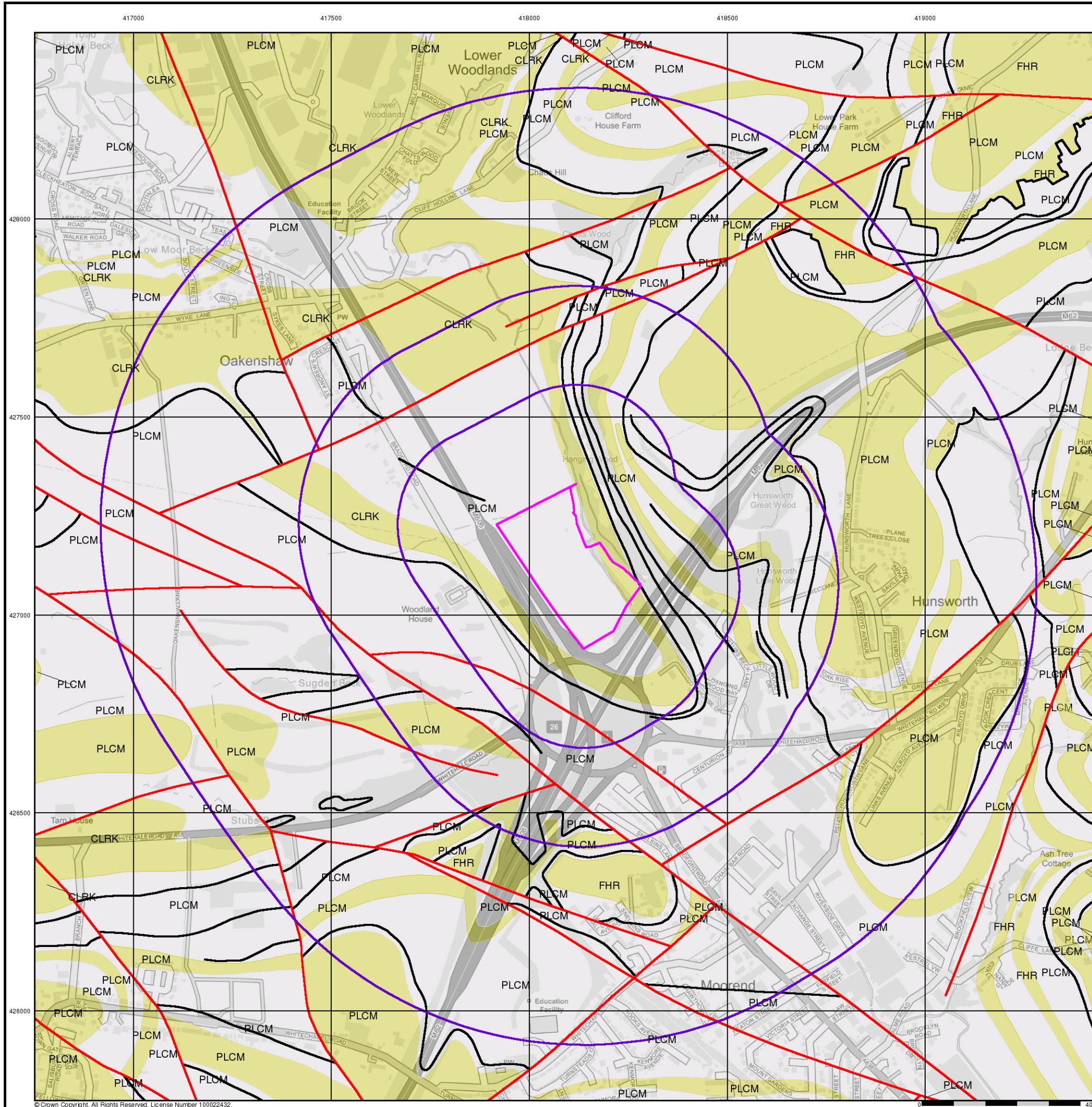


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000




Site Details

Site at 418090, 427110






Geology 1:50,000 Maps Legends








Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	CLRK	Clifton Rock	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	FHR	Falhouse Rock	Sandstone	Not Supplied - Westphalian
	LPE	Lepton Edge Rock	Sandstone	Not Supplied - Westphalian
		Rock Segments		
		Faults		



Geology 1:50,000 Maps

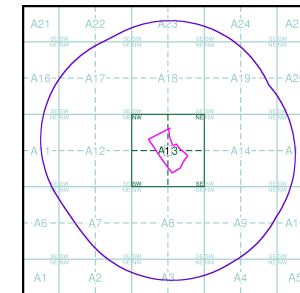
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	077
Map Name:	Huddersfield
Map Date:	2003
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

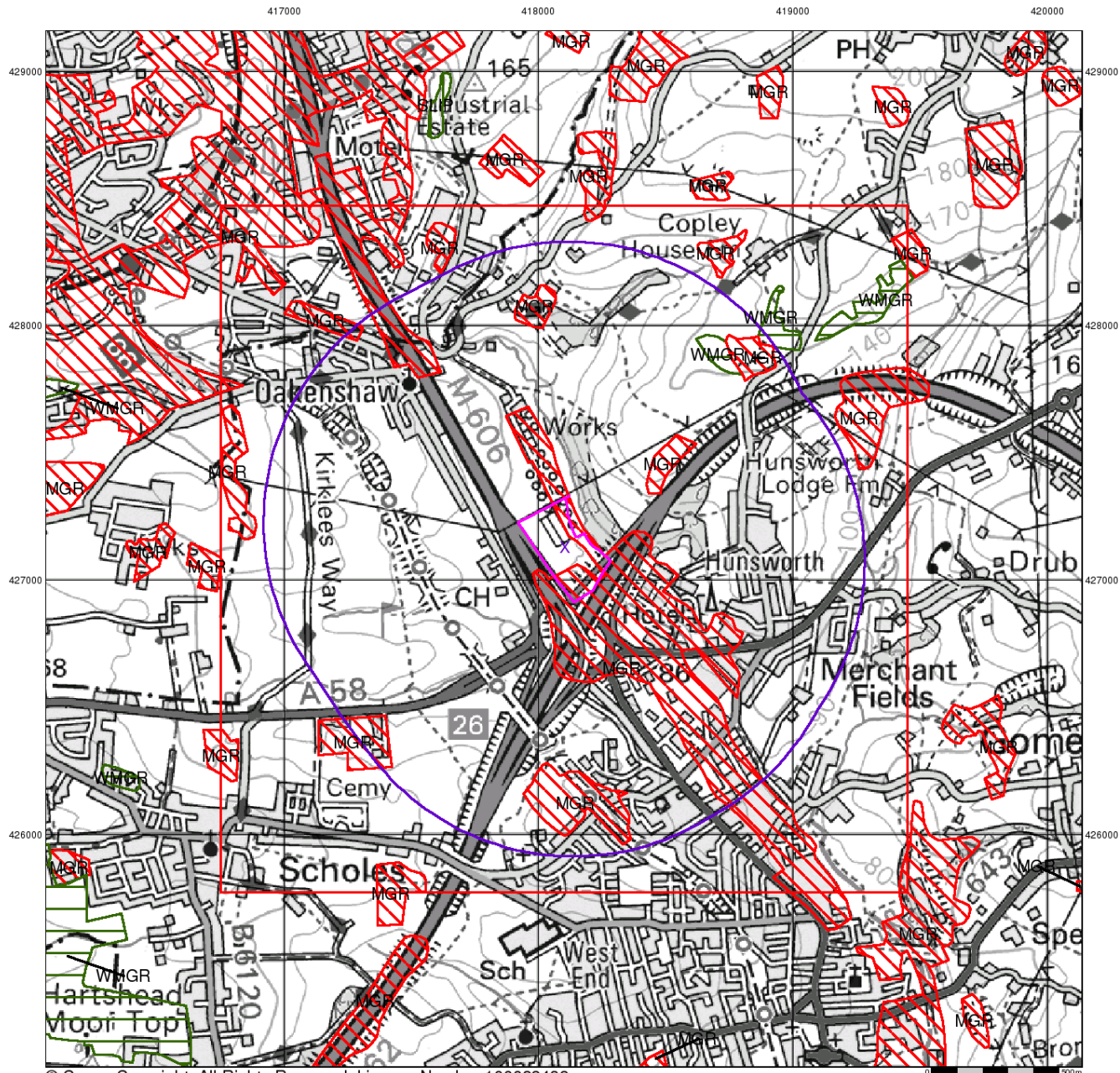


Order Details:

Order Number:	278083497_1_1
Customer Reference:	LD10258
National Grid Reference:	418110, 427130
Slice:	A
Site Area (Ha):	6.82
Search Buffer (m):	1000

Site Details:

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Artificial Ground and Landslip

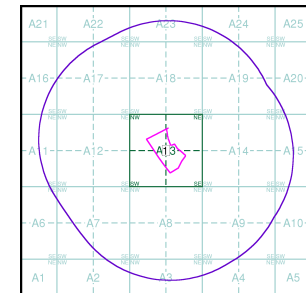
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Artificial Ground and Landslip Map - Slice A



Order Details:

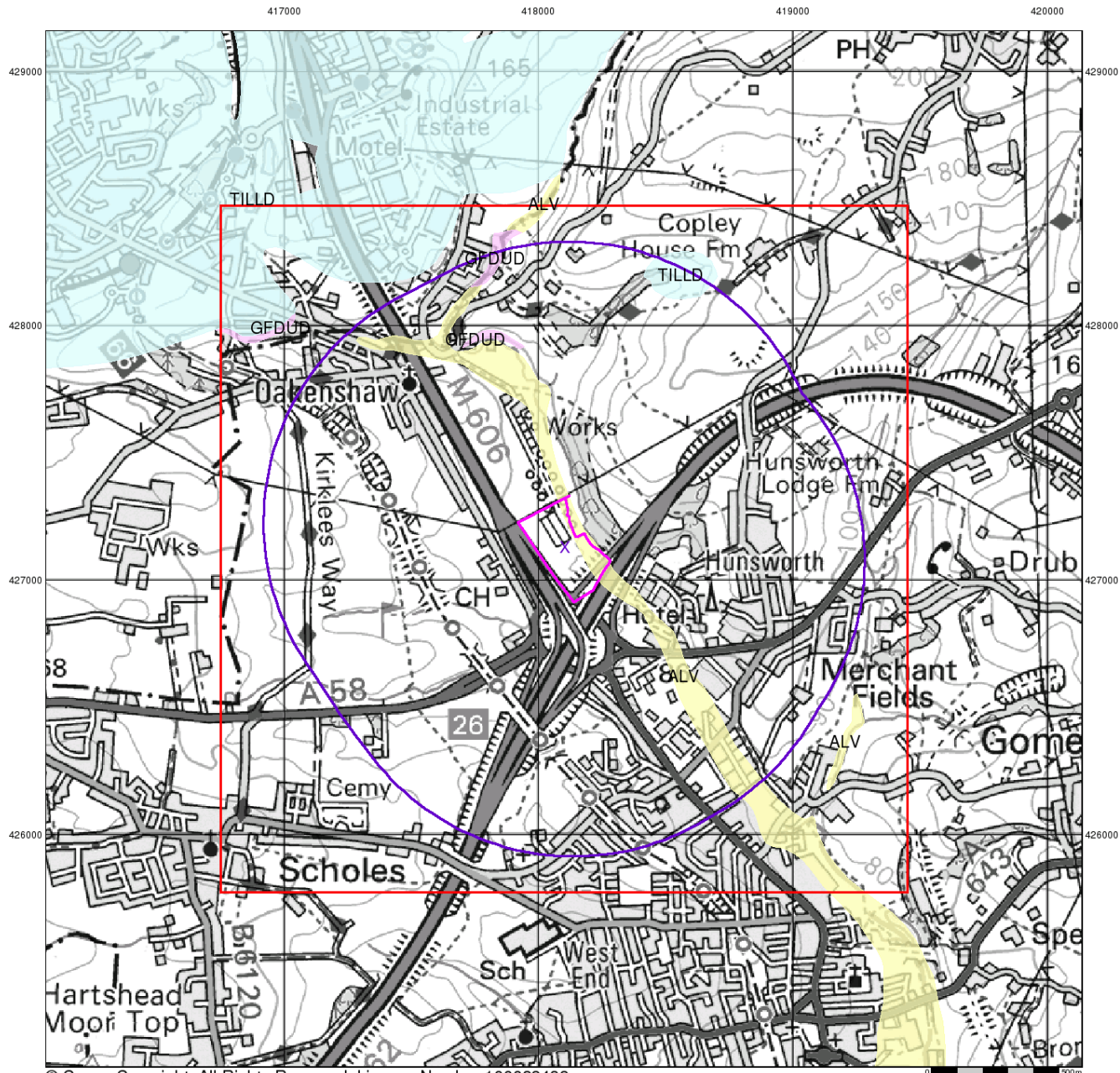
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 Customer Reference: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
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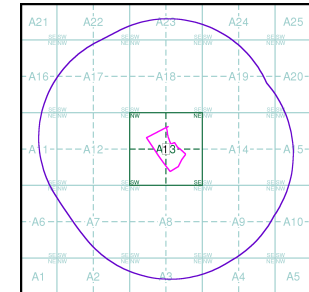
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

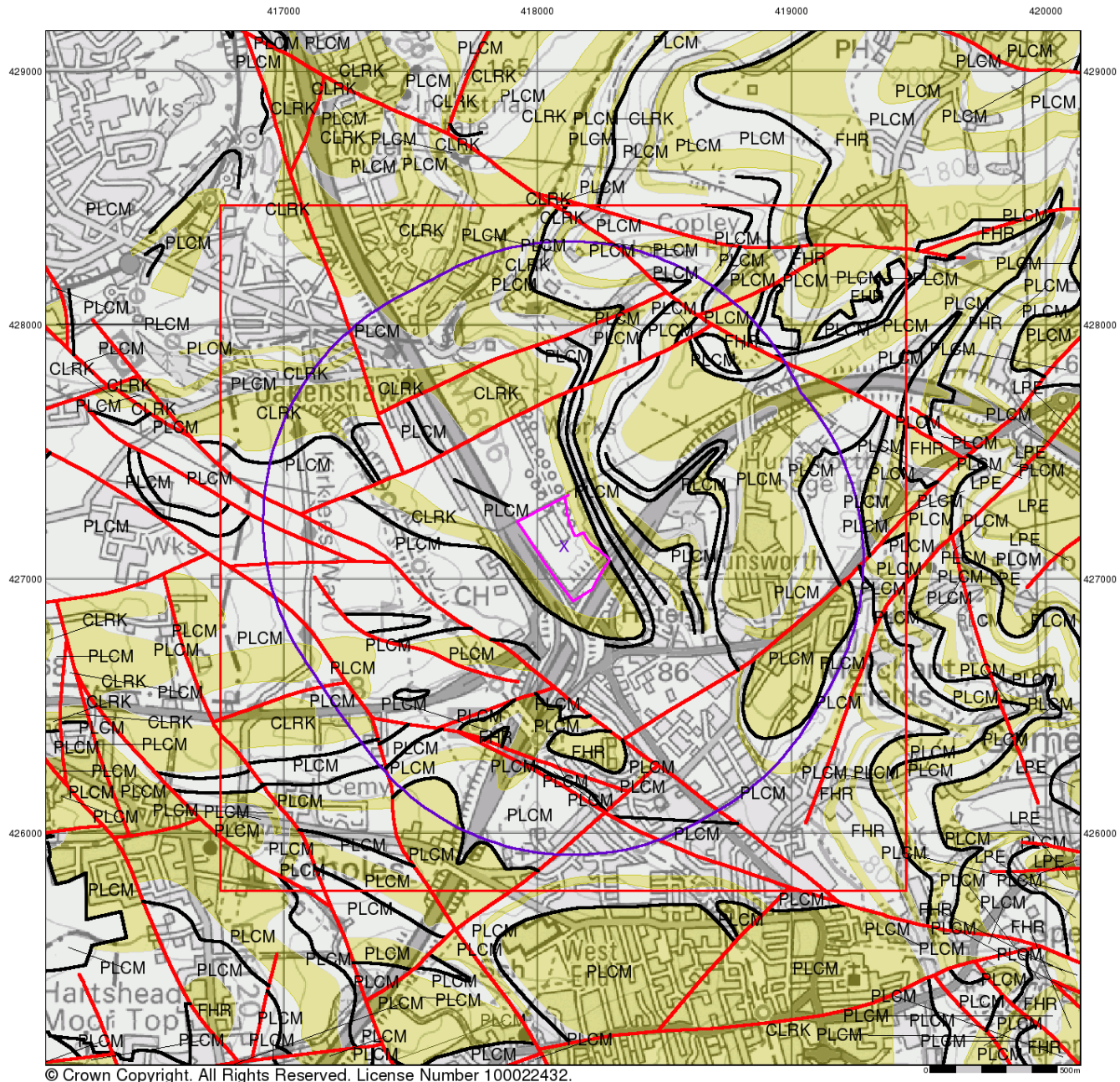
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 Customer Reference: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
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Bedrock and Faults

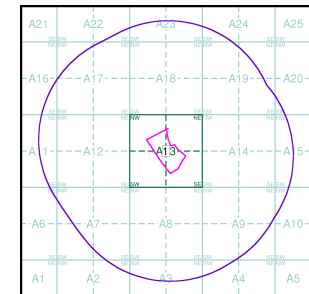
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

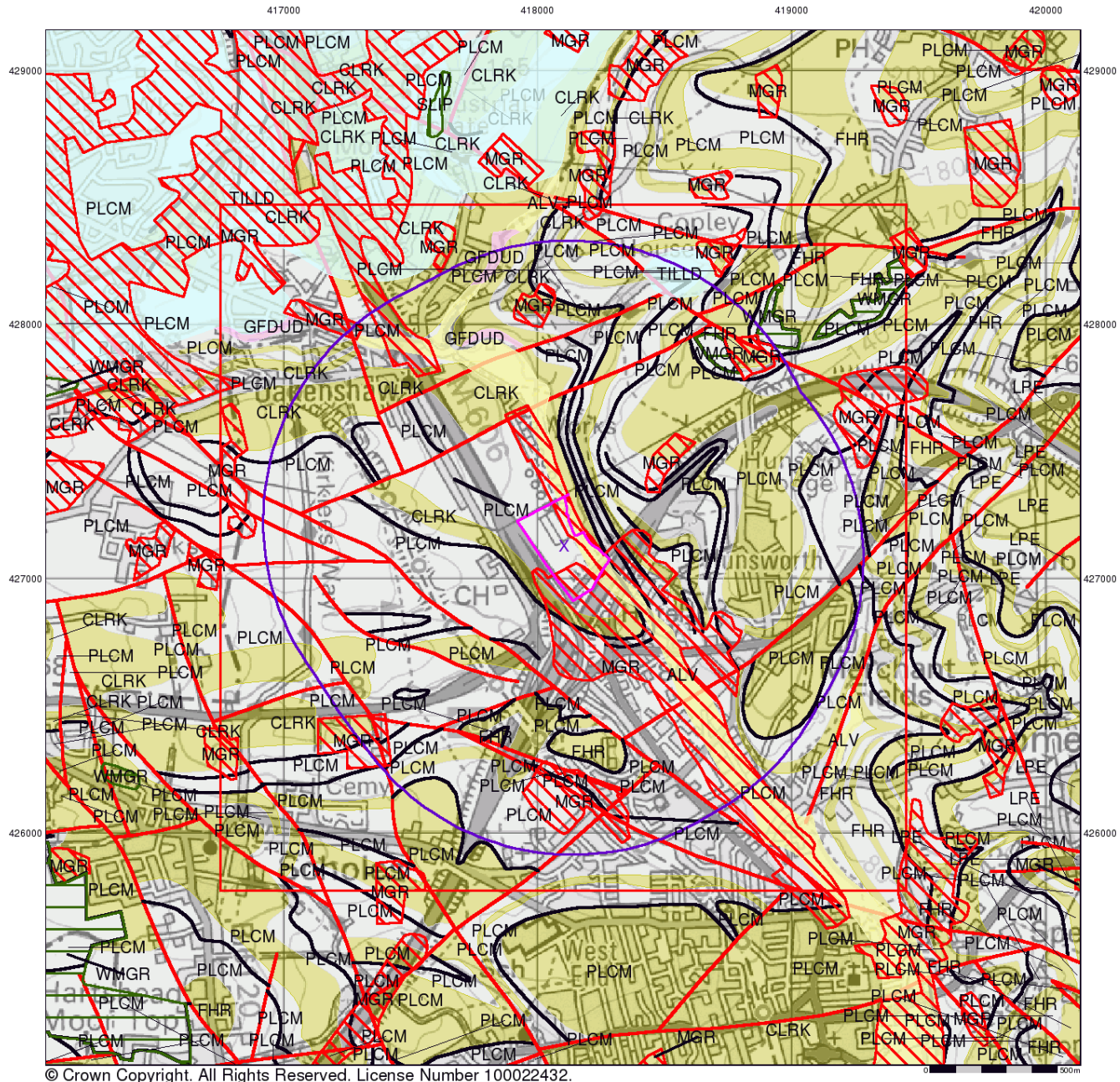
Order Number: 278083497_1_1
 Customer Reference: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

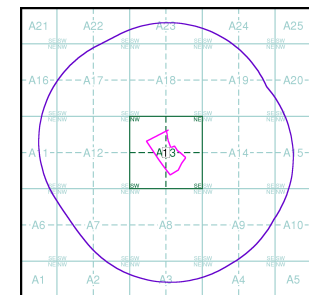
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
 Kingsley Dunham Centre
 Keyworth
 Nottingham
 NG12 5GG
 Telephone: 0115 936 3143
 Fax: 0115 936 3276
 email: enquiries@bgs.ac.uk
 website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

Order Number: 278083497_1_1
 Customer Reference: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details:

Site at 418090, 427110



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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

- Gravel Pit
- Sand Pit
- Other Pits
- Quarry
- Shingle
- Orchard
- Osiers
- Reeds
- Marsh
- Mixed Wood
- Deciduous
- Brushwood
- Fir
- Furze
- Rough Pasture
- Arrow denotes flow of water
- Trigonometrical Station
- Site of Antiquities
- Bench Mark
- Pump, Guide Post, Signal Post
- Well, Spring, Boundary Post
- 285** Surface Level
- Sketched Contour
- Instrumental Contour
- Main Roads
- Minor Roads
- Sunken Road
- Raised Road
- Road over Railway
- Railway over River
- Railway over Road
- Level Crossing
- Road over River or Canal
- Road over Stream
- Road over Stream
- County Boundary (Geographical)
- County & Civil Parish Boundary
- Administrative County & Civil Parish Boundary
- Co. Boro. Bdy. County Borough Boundary (England)
- Co. Burgh Bdy. County Burgh Boundary (Scotland)
- R.D. Bdy. Rural District Boundary
- Civil Parish Boundary

Ordnance Survey Plan 1:10,000

- Chalk Pit, Clay Pit or Quarry
- Gravel Pit
- Sand Pit
- Disused Pit or Quarry
- Refuse or Slag Heap
- Lake, Loch or Pond
- Dunes
- Boulders
- Coniferous Trees
- Non-Coniferous Trees
- Orchard
- Scrub
- Coppice
- Bracken
- Heath
- Rough Grassland
- Marsh
- Reeds
- Saltings
- Building
- Glasshouse
- Sloping Masonry
- Pylon
- Electricity Transmission Line
- Pole
- Cutting
- Embankment
- Standard Gauge Multiple Track
- Standard Gauge Single Track
- Siding, Tramway or Mineral Line
- Narrow Gauge
- Geographical County
- Administrative County, County Borough or County of City
- Municipal Borough, Urban or Rural District, Burgh or District Council
- Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
- Civil Parish
Shown alternately when coincidence of boundaries occurs
- BP, BS Boundary Post or Stone
- Ch Church
- CH Club House
- F E Sta Fire Engine Station
- FB Foot Bridge
- Fn Fountain
- GP Guide Post
- MP Mile Post
- MS Mile Stone
- Pol Sta Police Station
- PO Post Office
- PC Public Convenience
- PH Public House
- SB Signal Box
- Spr Spring
- TCB Telephone Call Box
- TCP Telephone Call Post
- W Well

1:10,000 Raster Mapping

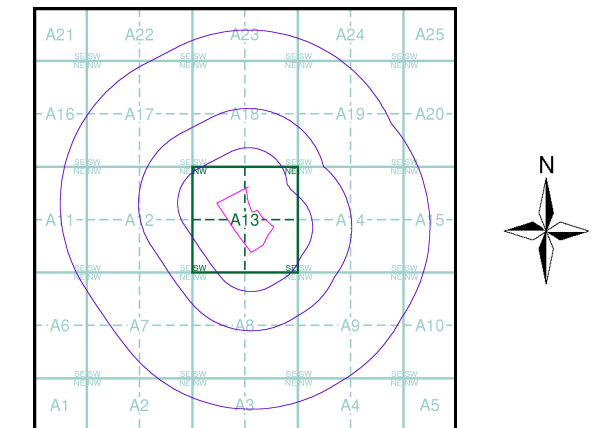
- Gravel Pit
- Rock
- Boulders
- Shingle
- Sand
- Slopes
- General detail
- Overhead detail
- Multi-track railway
- County boundary (England only)
- District, Unitary, Metropolitan, London Borough boundary
- Area of wooded vegetation
- Non-coniferous trees (scattered)
- Coniferous trees (scattered)
- Orchard
- Rough Grassland
- Scrub
- Water feature
- MHW(S) Mean high water (springs)
- Telephone line (where shown)
- Bench mark (where shown)
- Point feature (e.g. Guide Post or Mile Stone)
- Site of (antiquity)
- General Building
- Refuse tip or slag heap
- Rock (scattered)
- Boulders (scattered)
- Mud
- Sand Pit
- Top of cliff
- Underground detail
- Narrow gauge railway
- Single track railway
- Civil, parish or community boundary
- Constituency boundary
- Non-coniferous trees
- Coniferous trees
- Positioned tree
- Coppice or Osiers
- Heath
- Marsh, Salt Marsh or Reeds
- Flow arrows
- MLW(S) Mean low water (springs)
- Electricity transmission line (with poles)
- Triangulation station
- Pylon, flare stack or lighting tower
- Glasshouse
- Important Building



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1854	3
Yorkshire	1:10,560	1894	4
Yorkshire	1:10,560	1908	5
Yorkshire	1:10,560	1932	6
Yorkshire	1:10,560	1938	7
Yorkshire	1:10,560	1948	8
Ordnance Survey Plan	1:10,000	1955	9
Ordnance Survey Plan	1:10,000	1967	10
Leeds	1:10,000	1972	11
Ordnance Survey Plan	1:10,000	1976	12
Batley	1:10,000	1983	13
Ordnance Survey Plan	1:10,000	1984	14
Bradford	1:10,000	1990	15
Ordnance Survey Plan	1:10,000	1991	16
10K Raster Mapping	1:10,000	2000	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2021	19

Historical Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



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 Fax: 0844 844 9951
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Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Fireproof Building		Prominent Fireproof Building
	Non-fireproof Building		Non-fireproof Building (non-dwelling)
	Factory, mill, and flour mill, with chimneys		Factory, mill, and flour mill, without chimneys
	Power Station, drawn to scale		Hydroelectric Power Station
	Radio Station, drawn to scale		Telephone Station, drawn to scale
	Abandoned Open-pit Mine or Quarry		Open-pit Salt Mine
	Pit		Oil Deposit or Well
	Oil Seepage		Natural Gas Tank
	Tailings Pile		Fuel Storage Tanks
	Bench Mark		Drill Hole
	Burial Mound		Triangulation Point on Burial Mound
	Single-track Railroad		Double-track Railroad
	Railroad and Station Building		Small Bridge
	Tunnel		Pipe (Culvert)
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Lawns
	Citrus Orchard		Wet Ground
	Scattered Vegetation		

243,8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0,2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings Predominant		Built-Up Area with Non-Fireproof Buildings Predominant
	Individual Fireproof Building		Prominent Industrial Building
	Individual Dwelling, Fireproof		Ruins of an Individual Dwelling
	Factory or Mill Chimney		Factory or Mill with Chimney
	Factory or Mill without Chimney		Mine or Open Pit Mine
	Operating Shaft or Mine		Non-Operating Shaft or Mine
	Salt Mine		Tailings Pile
	Pit		Stone Quarry
	Gas Pump or Service Station		Fuel Storage or Natural Gas Tank
	Oil or Natural Gas Derrick		Small Hydroelectric Power Station
	Power Station		Transformer Station
	Cemetery		Burial Mound (height in metres)
	Triangulation Point on Burial Mound		Triangulation Point
	Bench Mark		Telegraph Office
	Telephone Station		Radio Station
	Radio Tower		Airfield or Seaplane Base
	Landing Strip		Cut
	Fill		Km Post
	Plantings		Width of Road
	Steep Grade		Telegraph/Telephone Lines
	Main Highway		Highway under Construction
	Improved Dirt Road (former truck road)		Small Bridge
	Pipe (Culvert)		Tunnel
	Dismantled Railroad		Double-track Railroad with First Class Station
	Railroad Under Construction		Shore Embankment
	River or Ditch with Embankment		Water Gauge
	Direction and velocity of current		Water Level Mark
	Well		Water Reservoir or Rain Water Pit
	Spring		Isobath with value
	Heavy (Index) Contour Line		Contour Line and Value
	Half Contour Line		Spot Elevation Value
	Coniferous		Deciduous
	Mixed		Scrub

Key to Numbers on Mapping

SE12NE_Batley

No.	Description
1	Industrial Buildings (Use Unknown)
15	Factory (Machinery)
56	Factory (Use Unknown)

SE12NE_Bradford

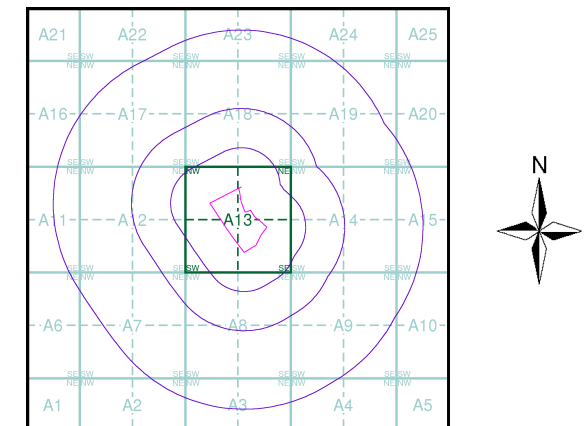
No.	Description
4	Factories (Including Machinery, Appliances, Assemblies And Car Parts)
19	Factory (Gas)
38	Chemical Plant
58	Post Office
81	Sewage Works



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1854	3
Yorkshire	1:10,560	1894	4
Yorkshire	1:10,560	1908	5
Yorkshire	1:10,560	1932	6
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10K Raster Mapping	1:10,000	2000	17
10K Raster Mapping	1:10,000	2006	18
VectorMap Local	1:10,000	2021	19

Russian Map - Slice A



Order Details

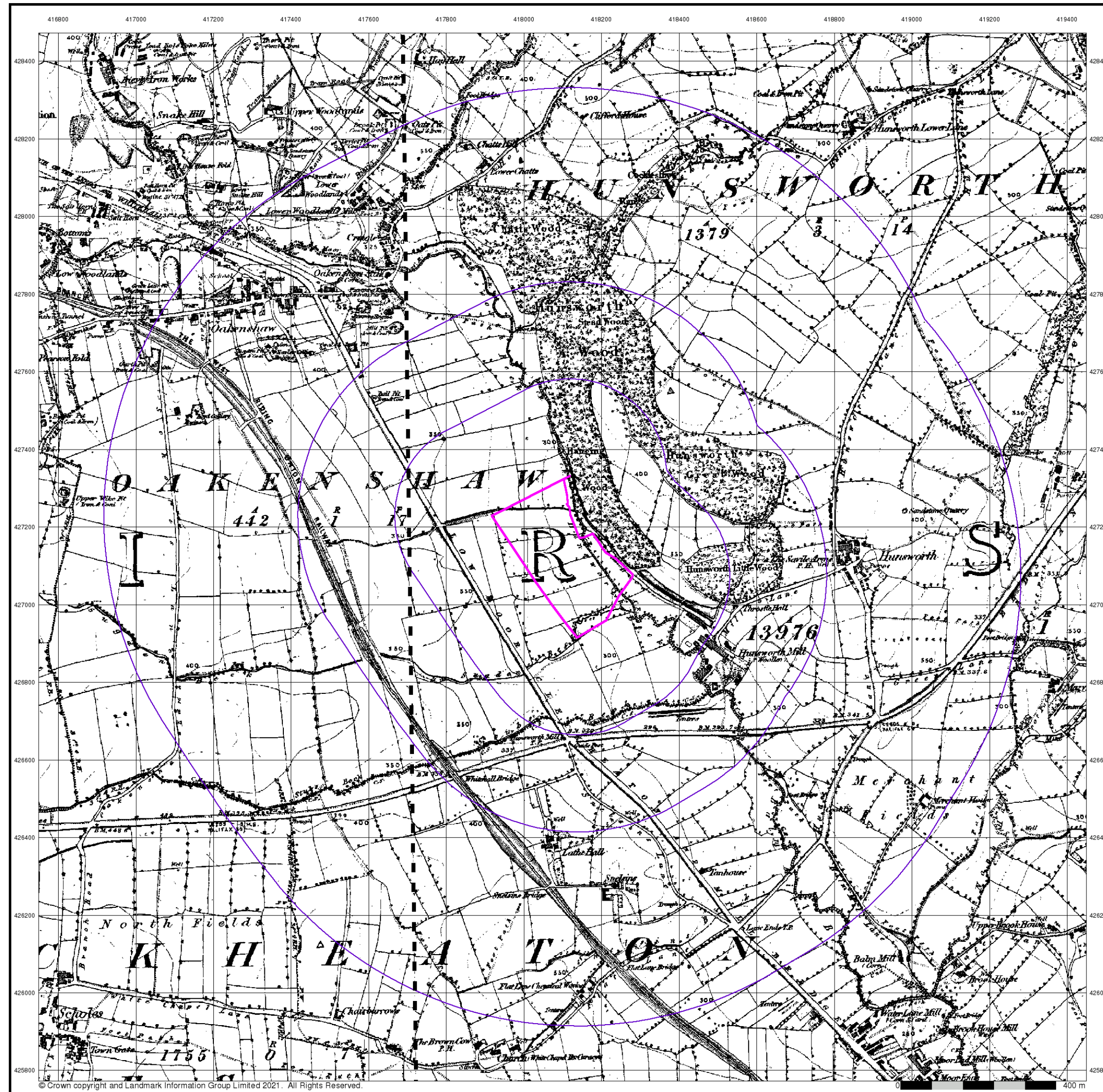
Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



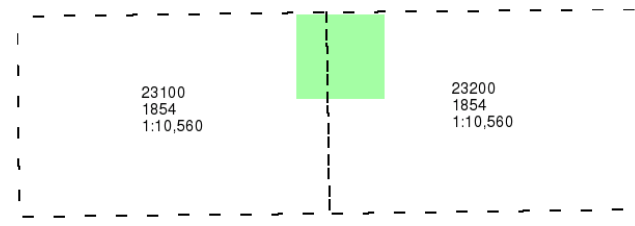
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



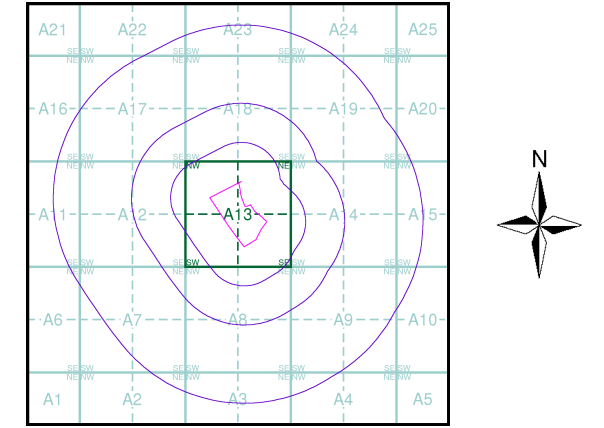
Yorkshire
Published 1854
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



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Site Details
 Site at 418090, 427110

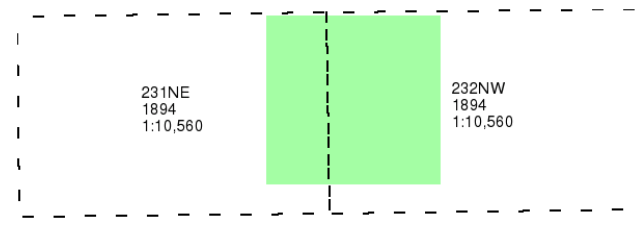




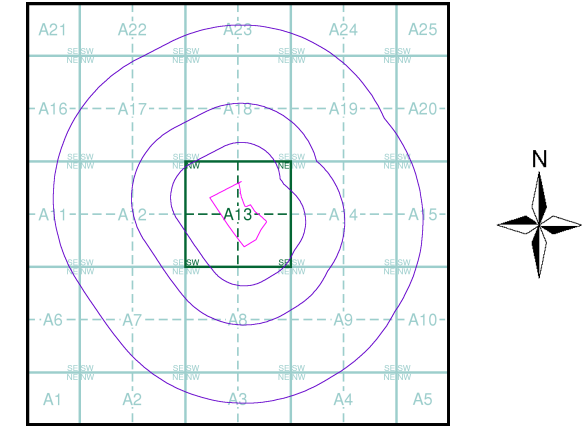
Yorkshire
Published 1894
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details
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 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

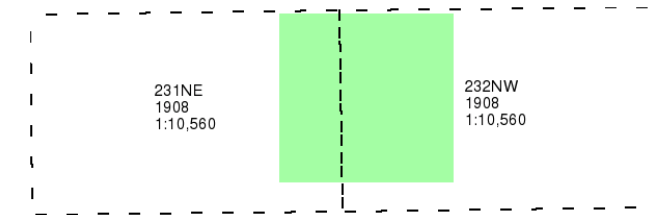
Site Details
 Site at 418090, 427110

Landmark
 INFORMATION GROUP

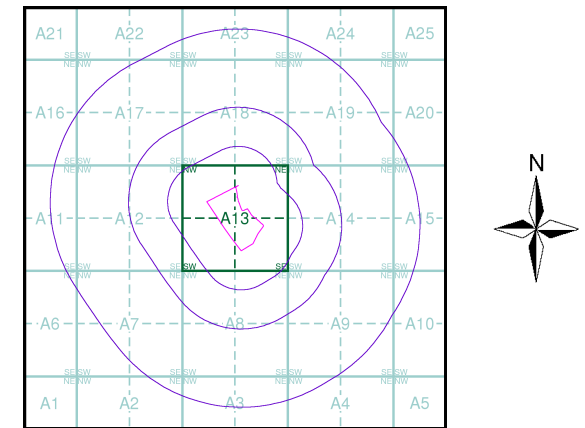
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Map Name(s) and Date(s)



Historical Map - Slice A

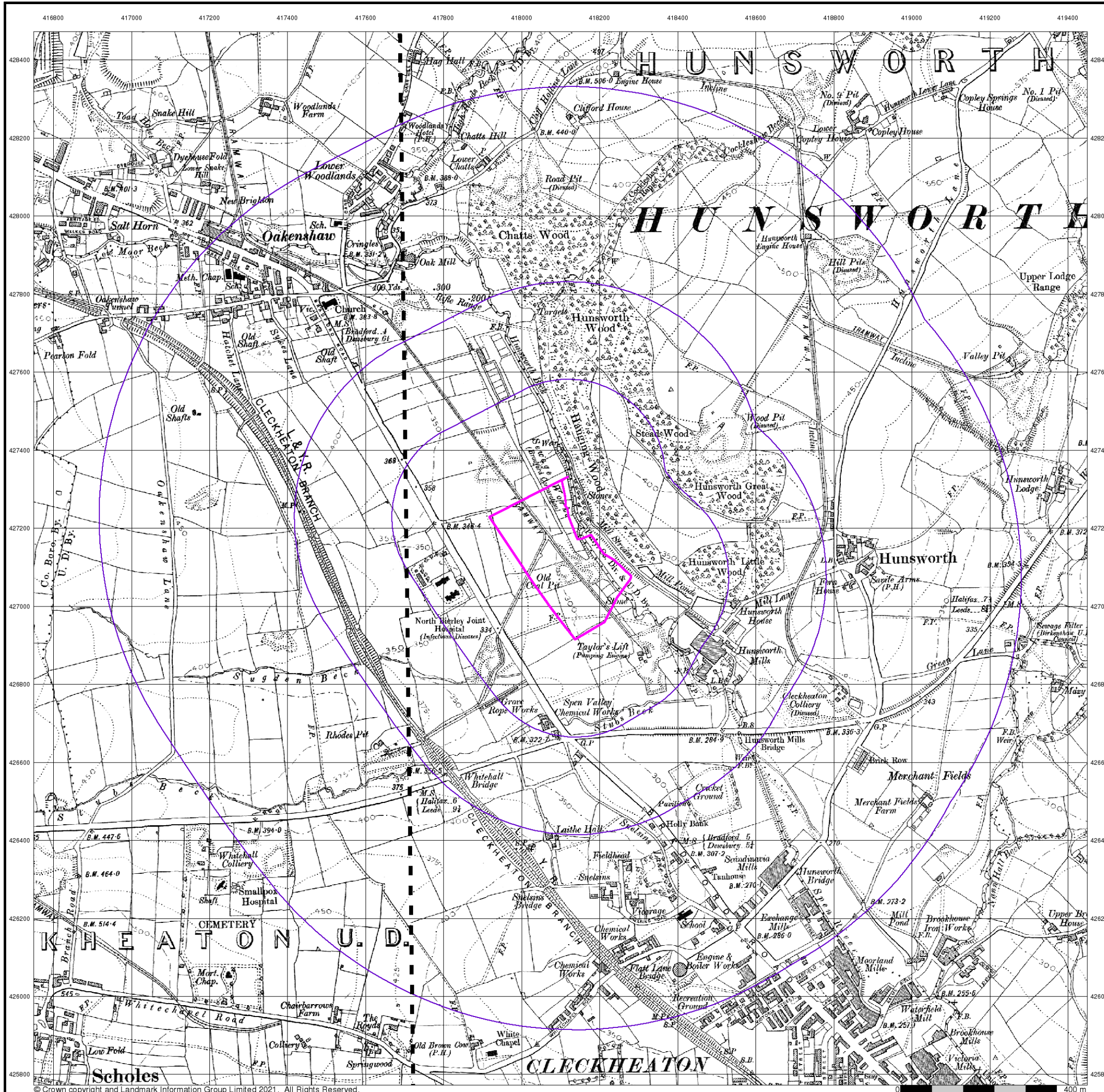


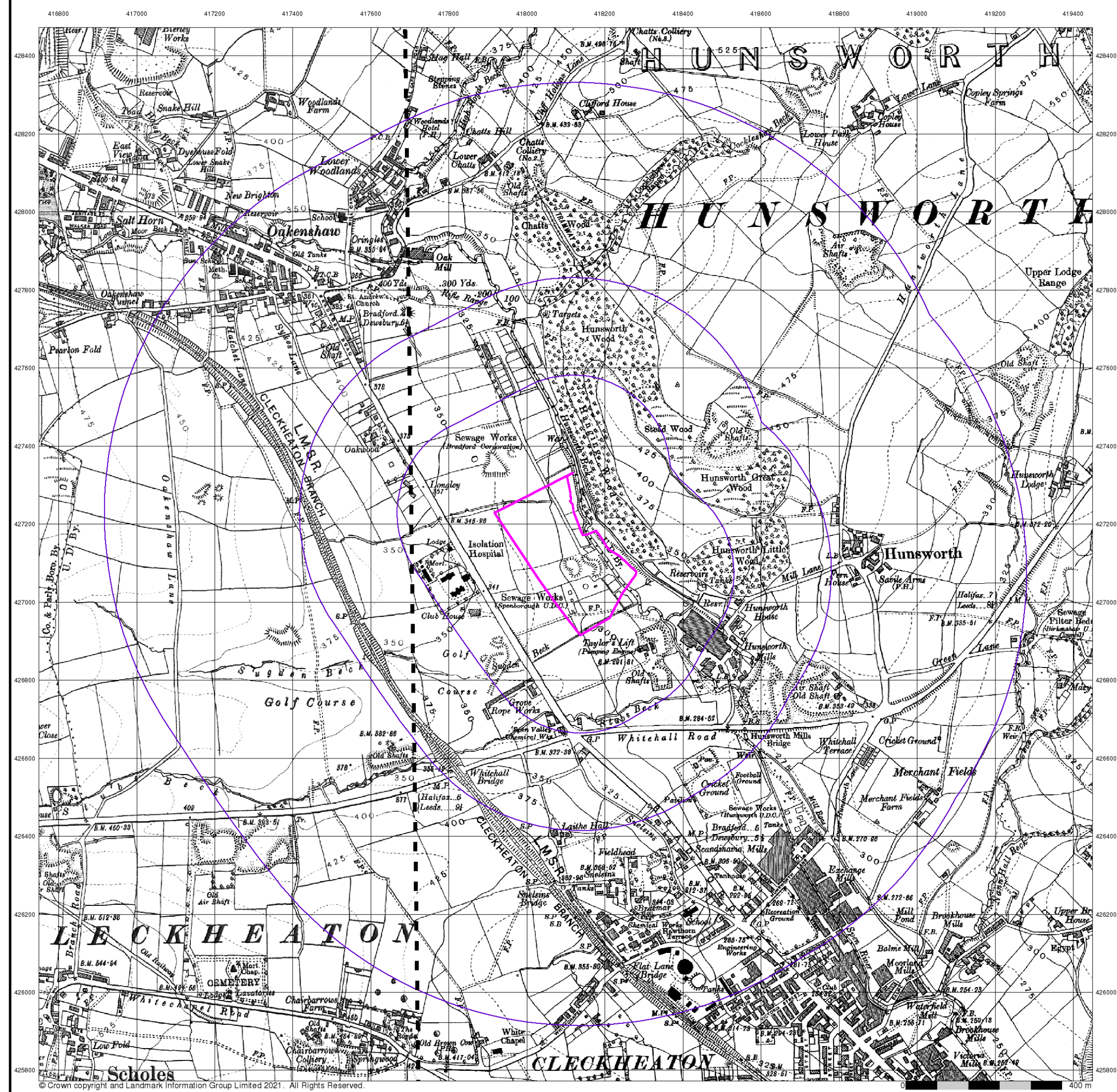
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Site Details

Site at 418090, 427110





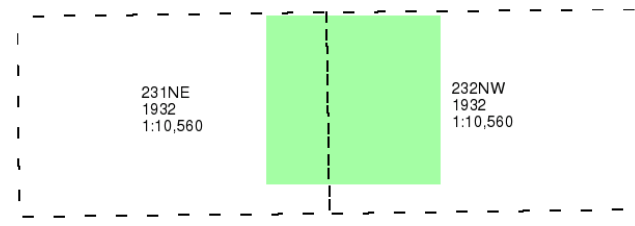
Yorkshire

Published 1932

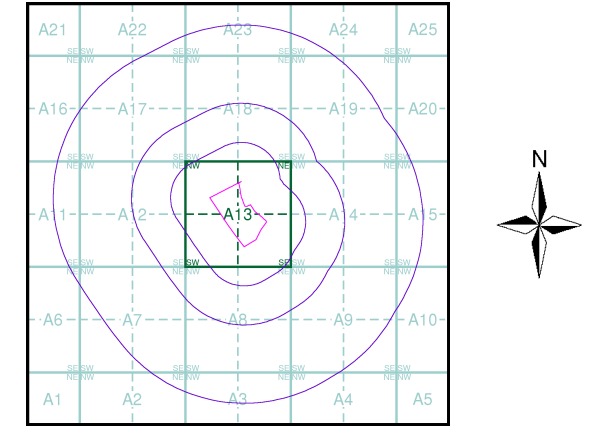
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overlaid with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

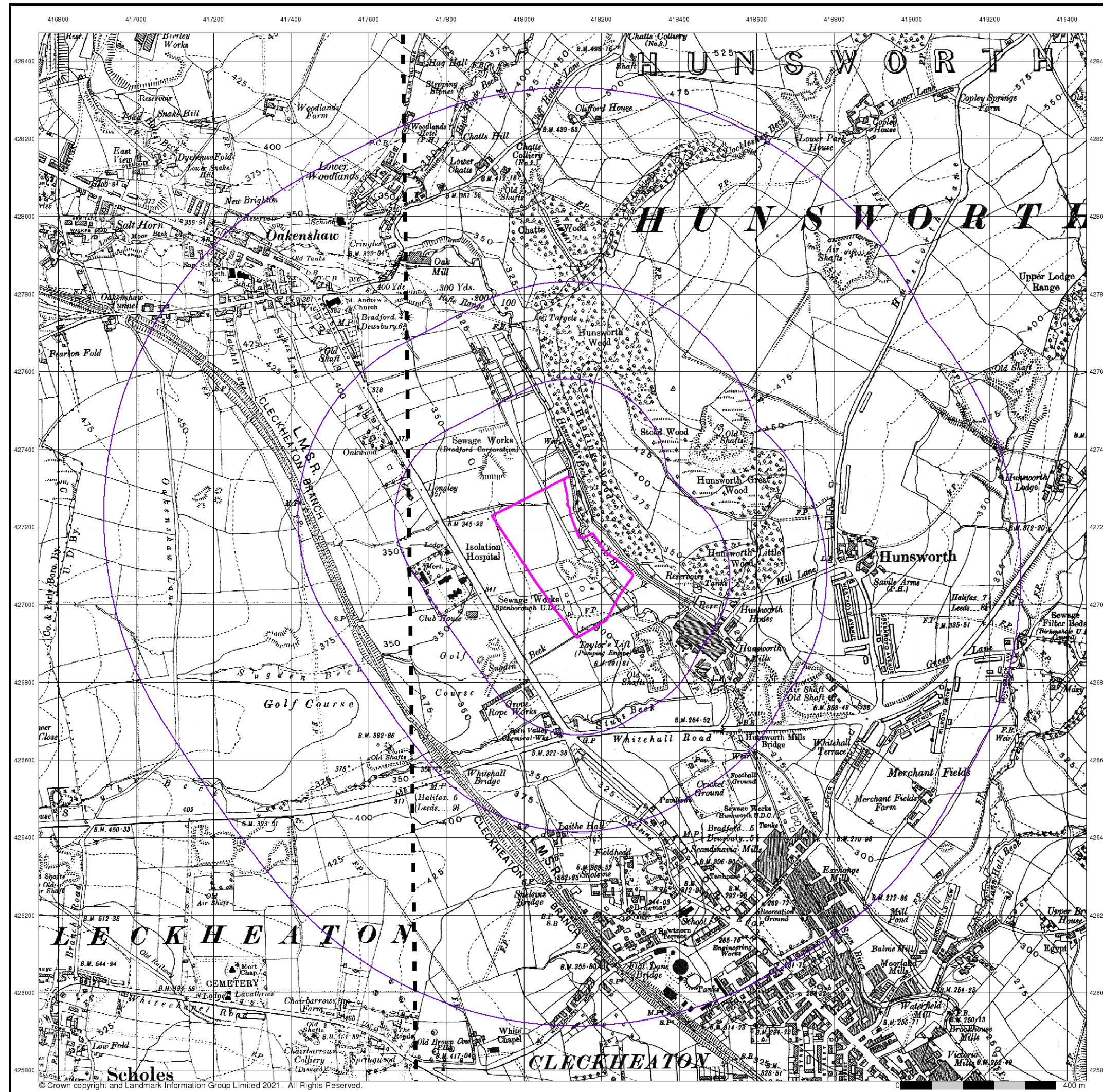
Order Number: 278083497_1_1
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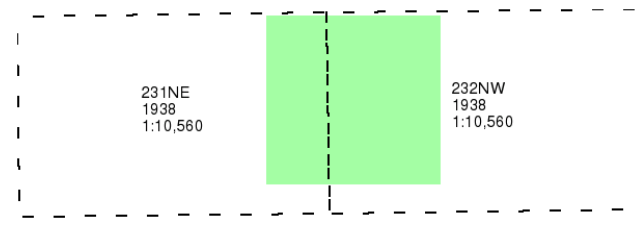
Yorkshire

Published 1938

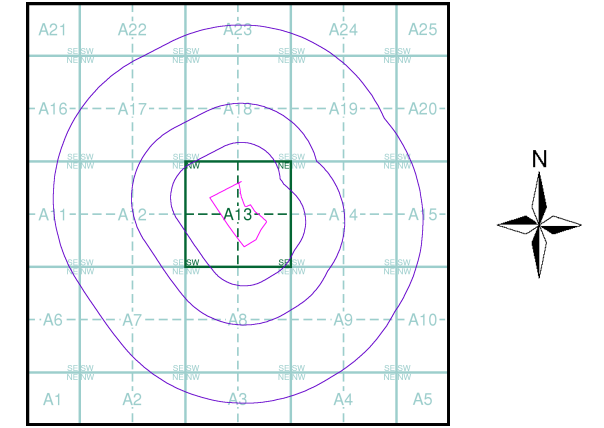
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

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Site Details

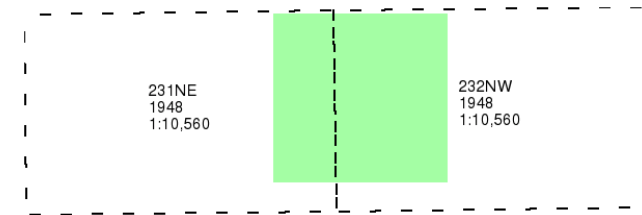
Site at 418090, 427110



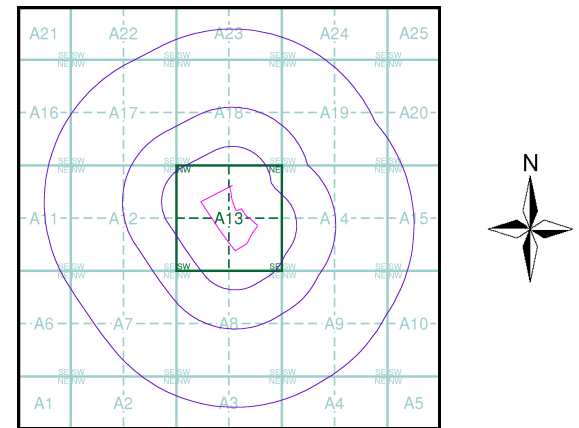
Tel: 0844 844 9952
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Map Name(s) and Date(s)



Historical Map - Slice A

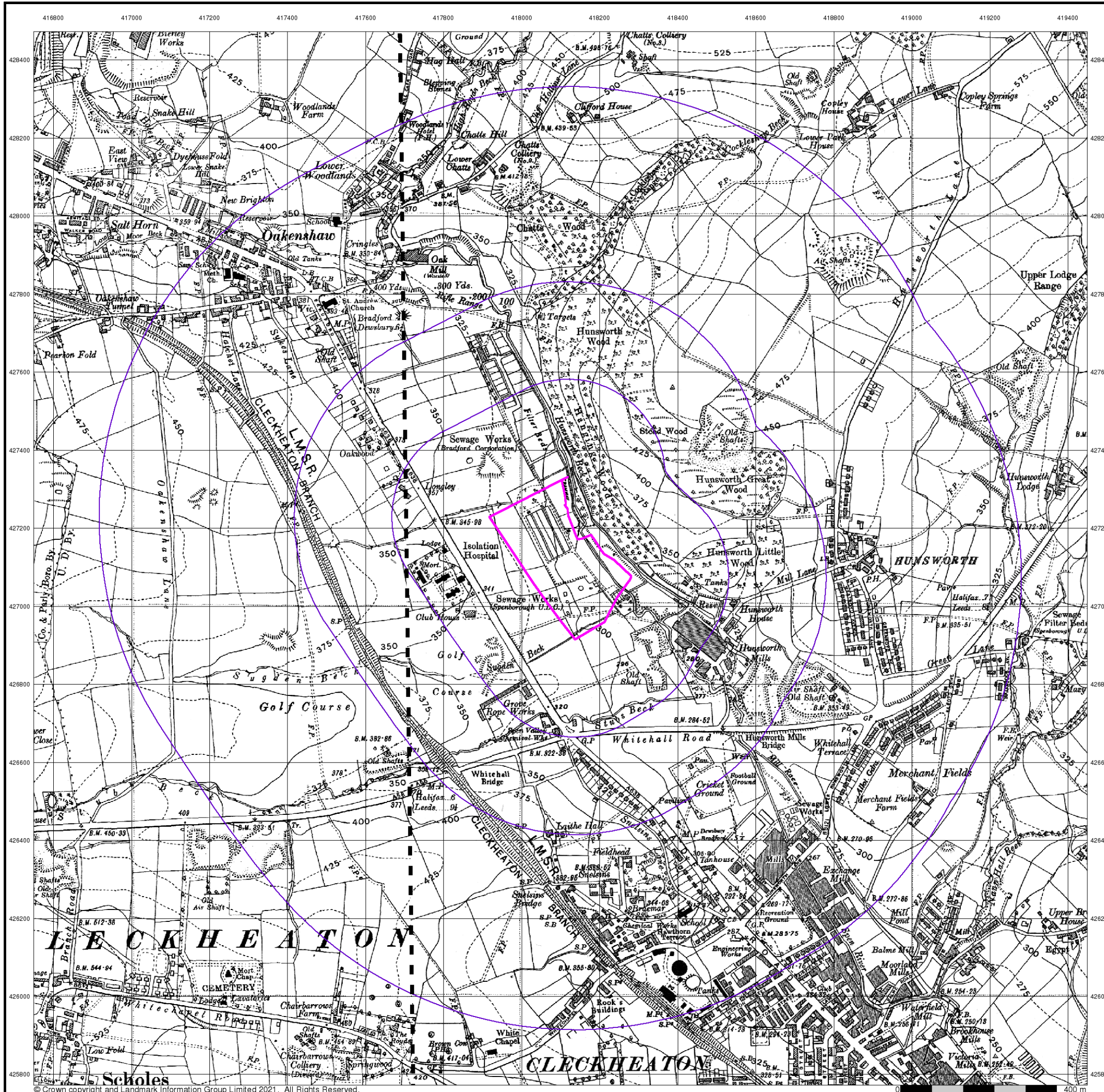


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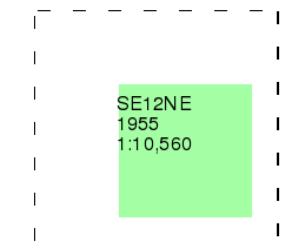
Ordnance Survey Plan

Published 1955

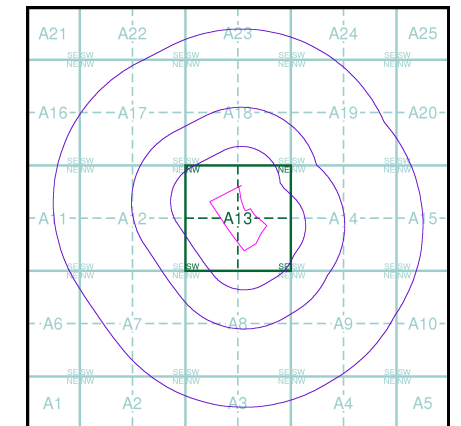
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

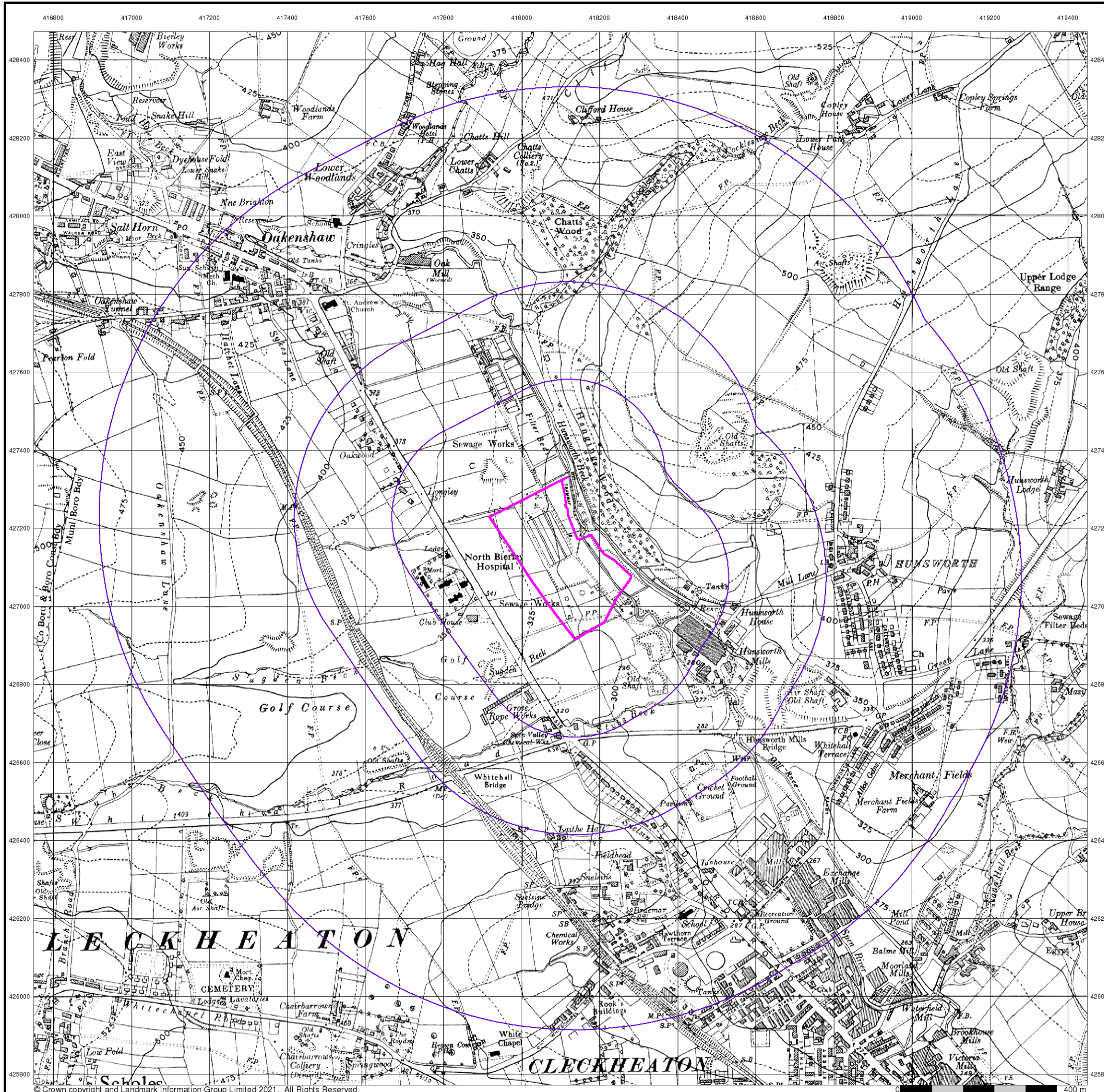


Order Details

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 National Grid Reference: 418110, 427130
 Slice: A
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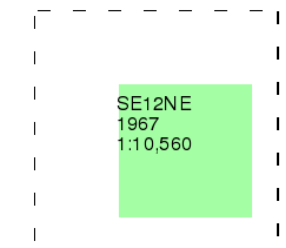
Site Details

Site at 418090, 427110

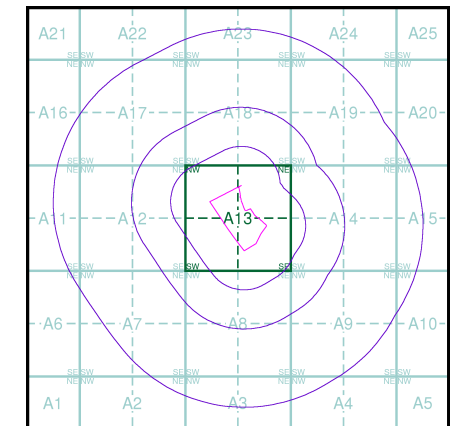


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Map Name(s) and Date(s)



Historical Map - Slice A

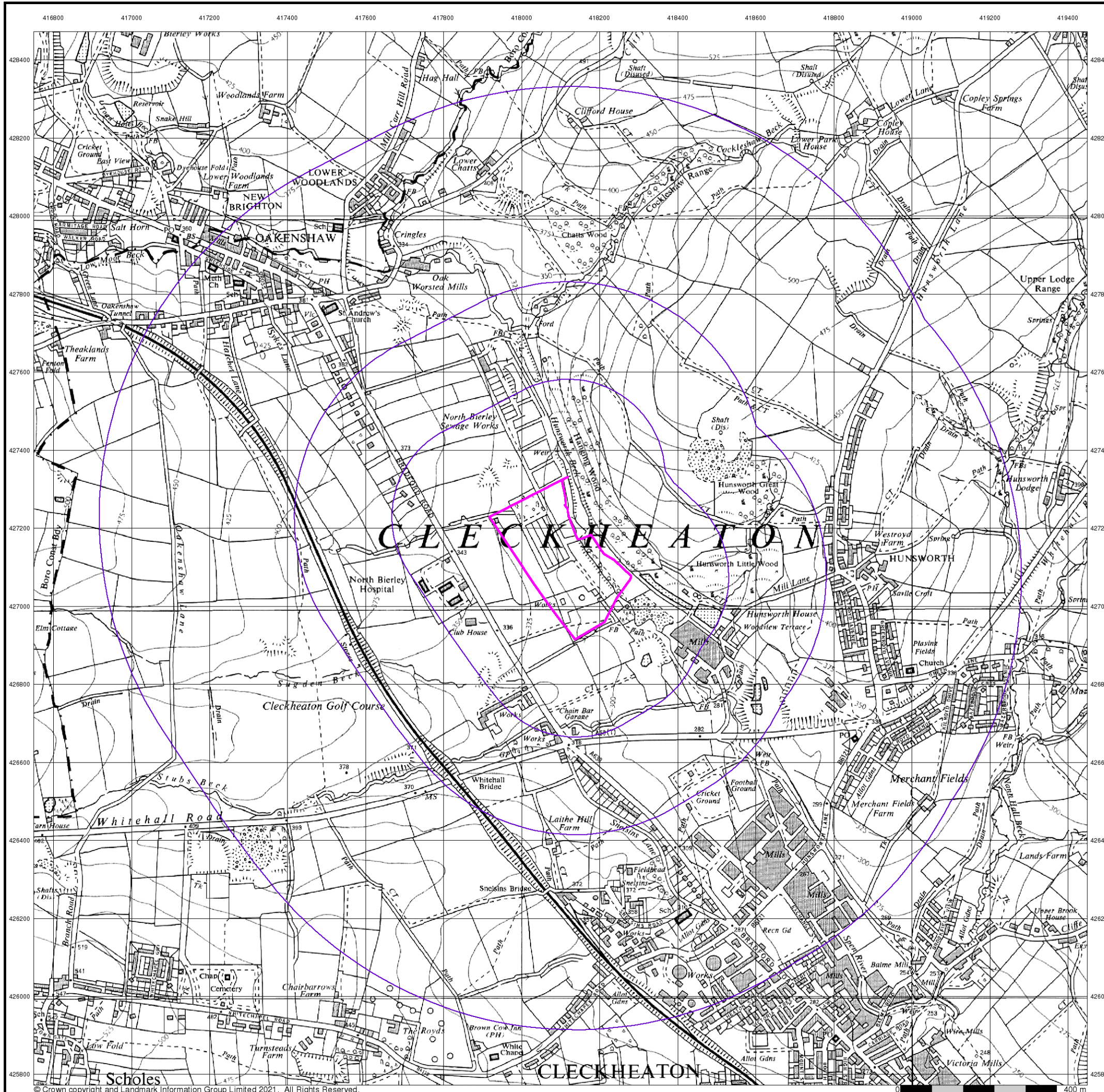


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



Leeds

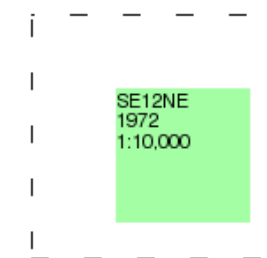
Published 1972

Source map scale - 1:10,000

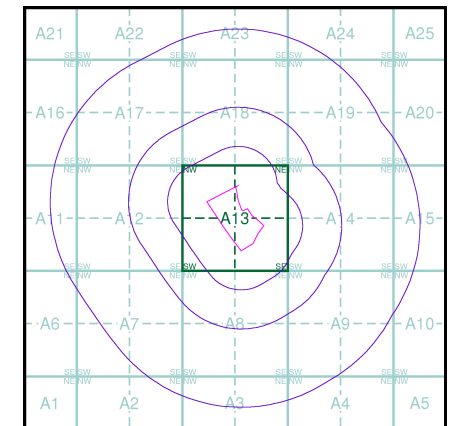
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A

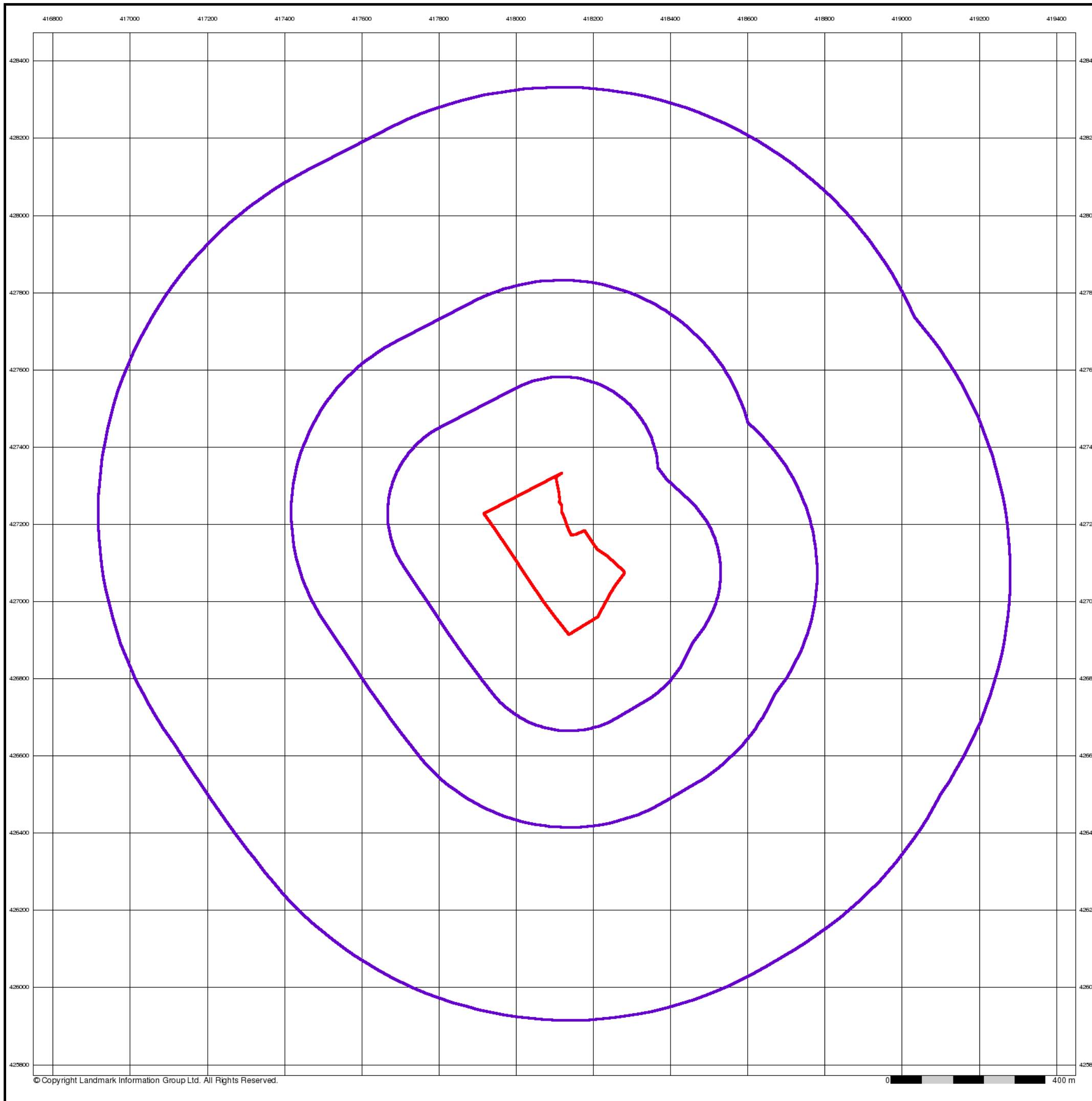


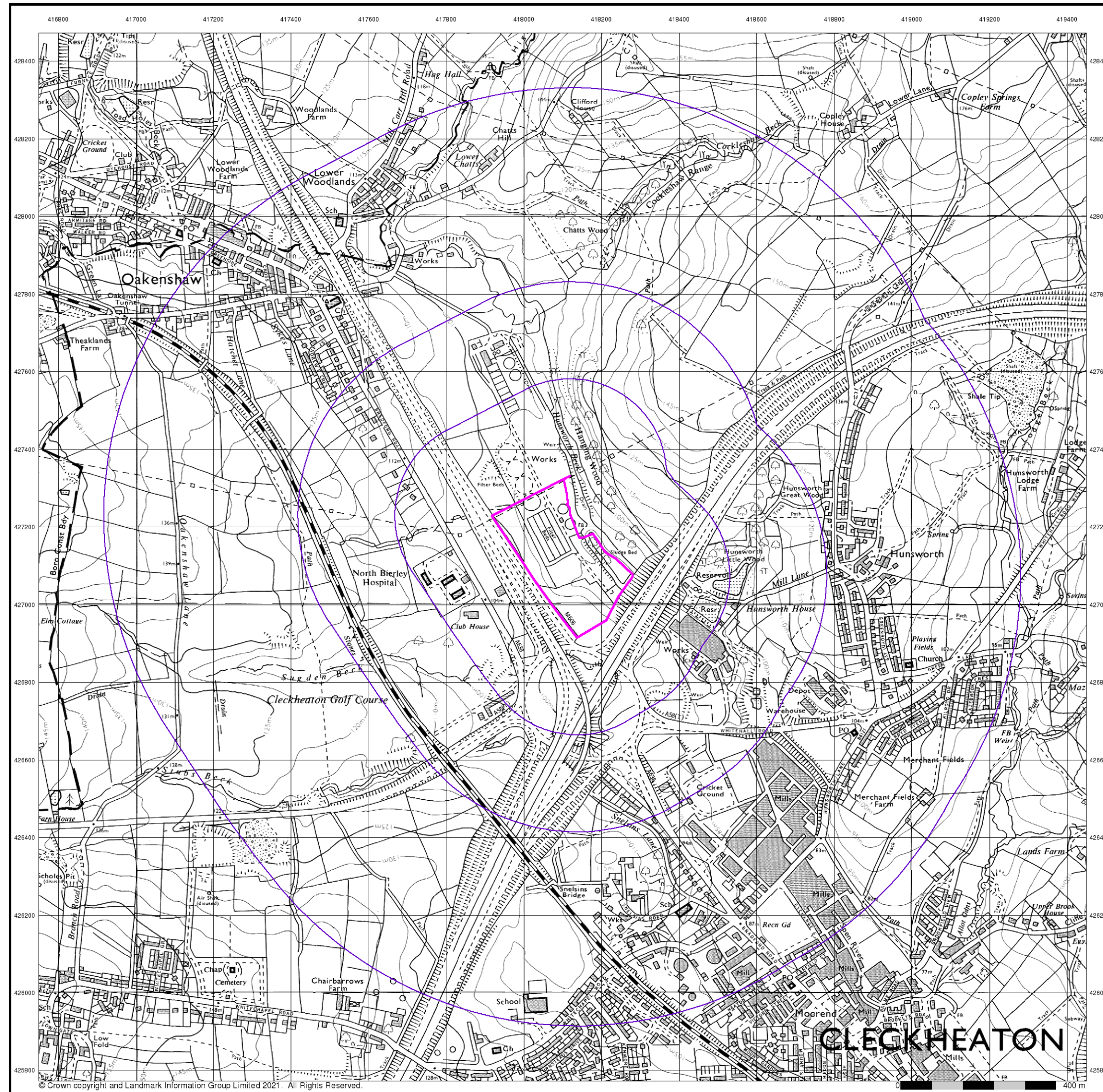
Order Details

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Site Details

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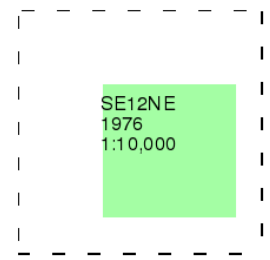




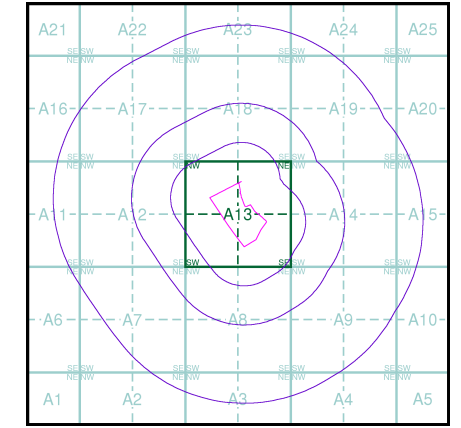
Ordnance Survey Plan
Published 1976
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

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Site Details
 Site at 418090, 427110



Batley

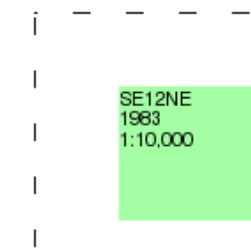
Published 1983

Source map scale - 1:10,000

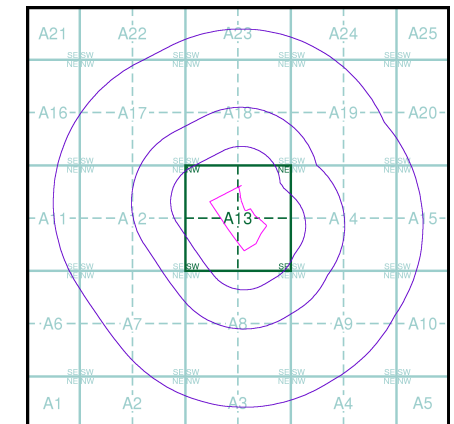
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



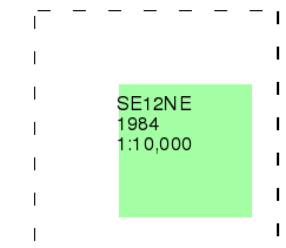
Ordnance Survey Plan

Published 1984

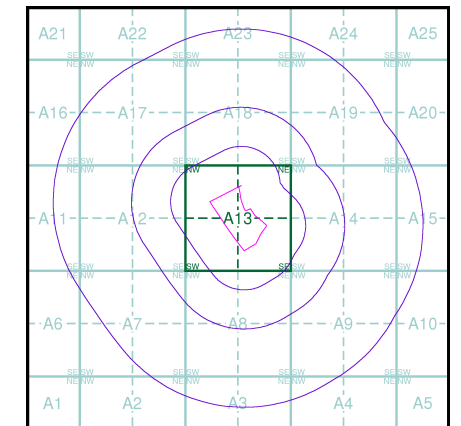
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

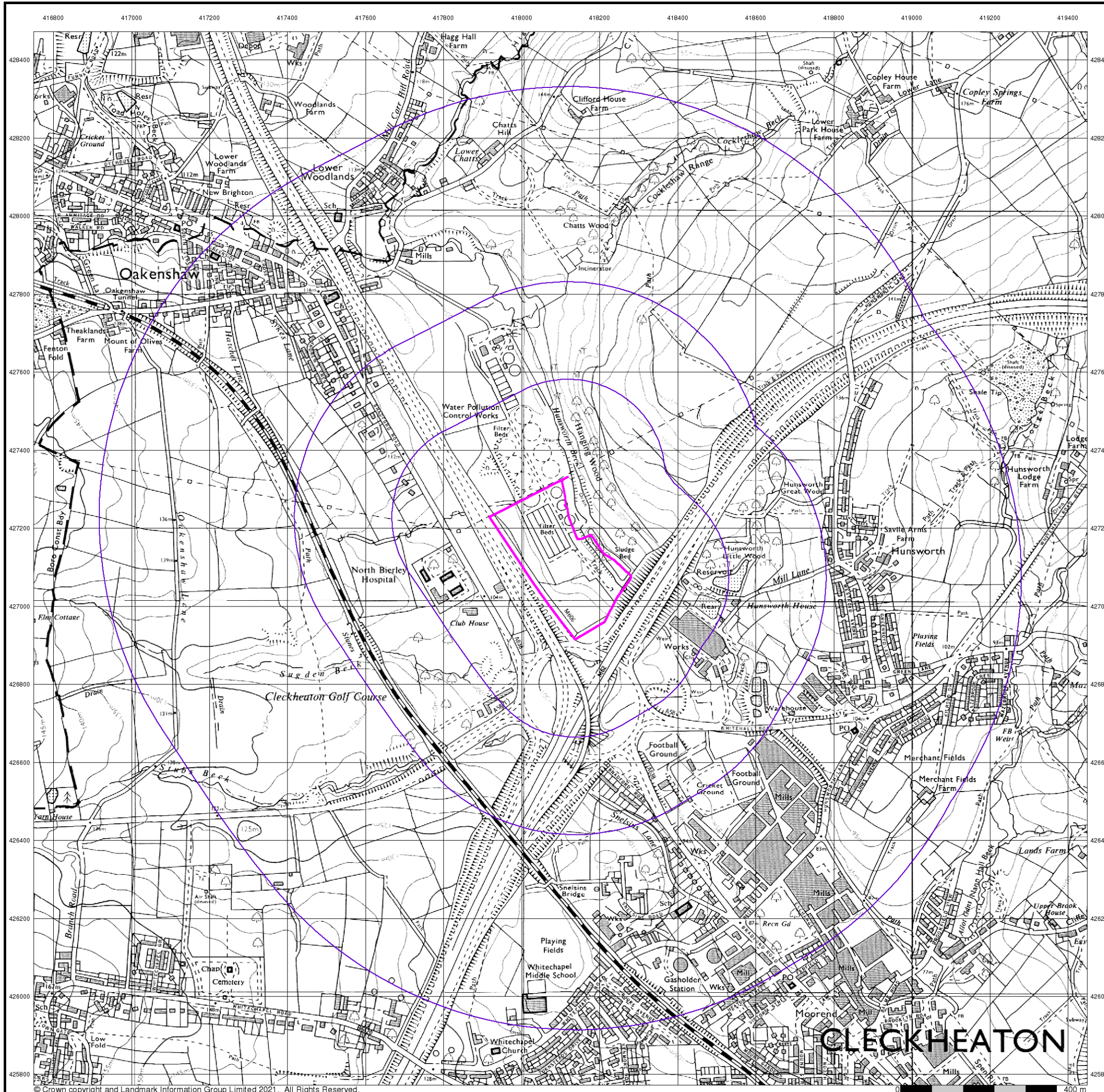


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



Bradford

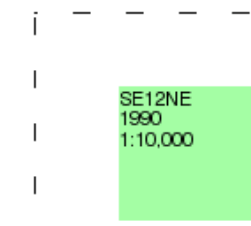
Published 1990

Source map scale - 1:10,000

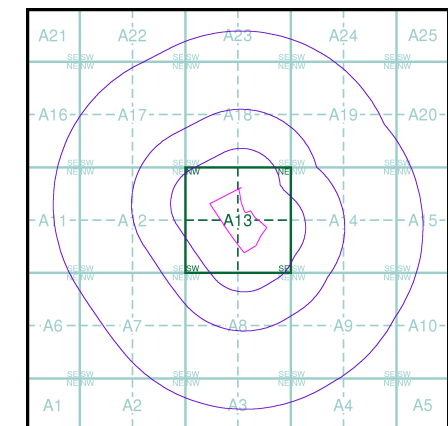
These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A

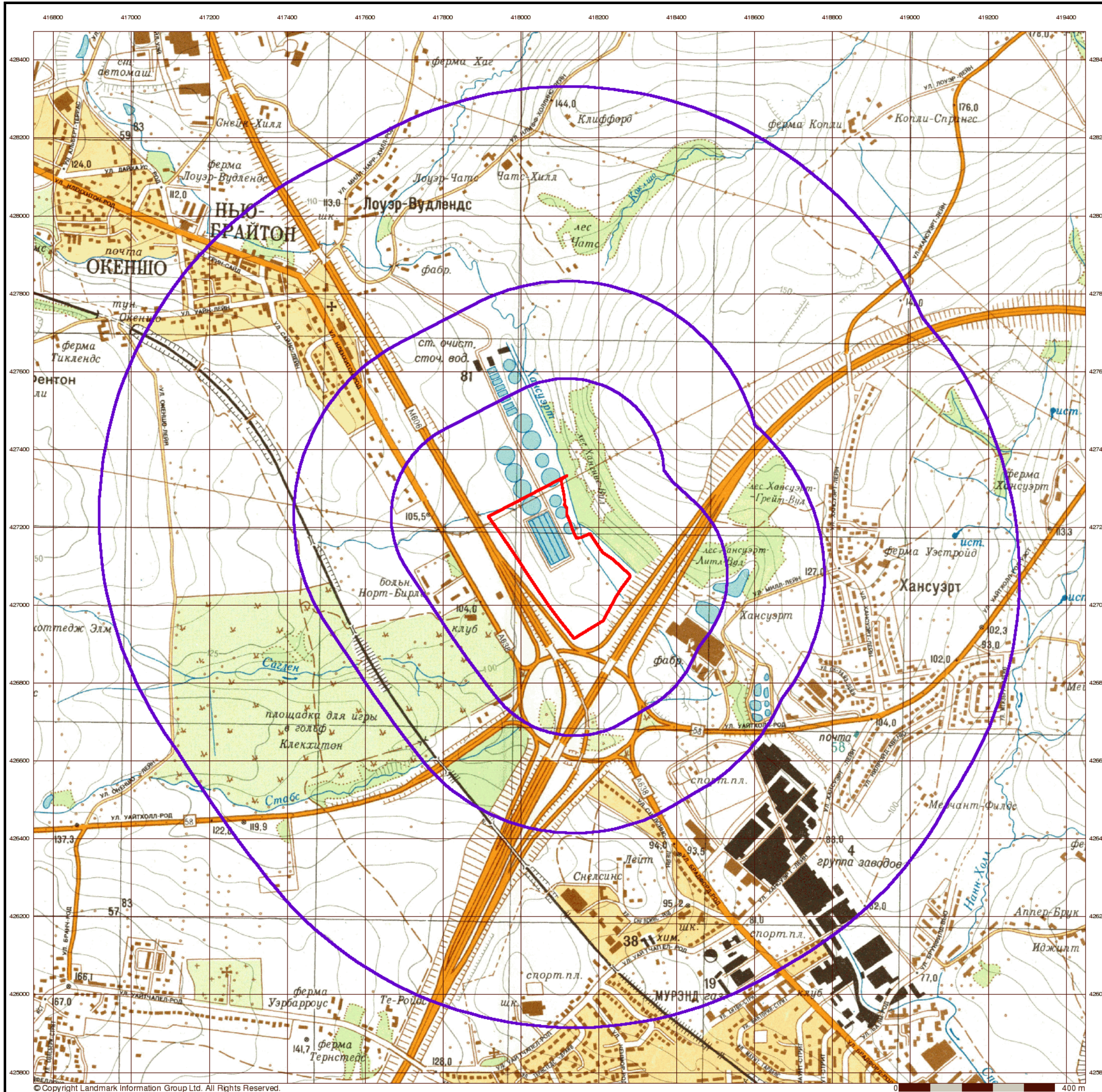


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



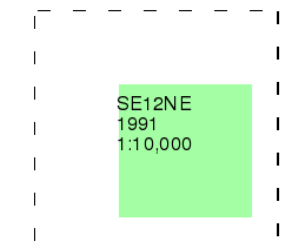
Ordnance Survey Plan

Published 1991

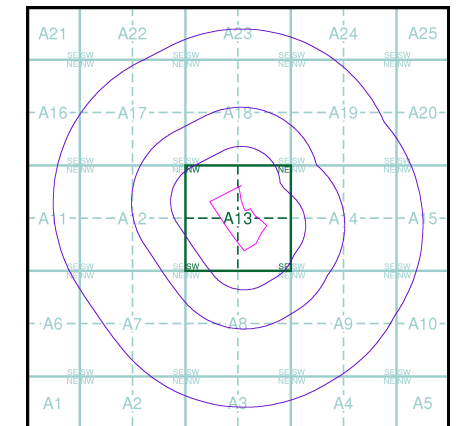
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A

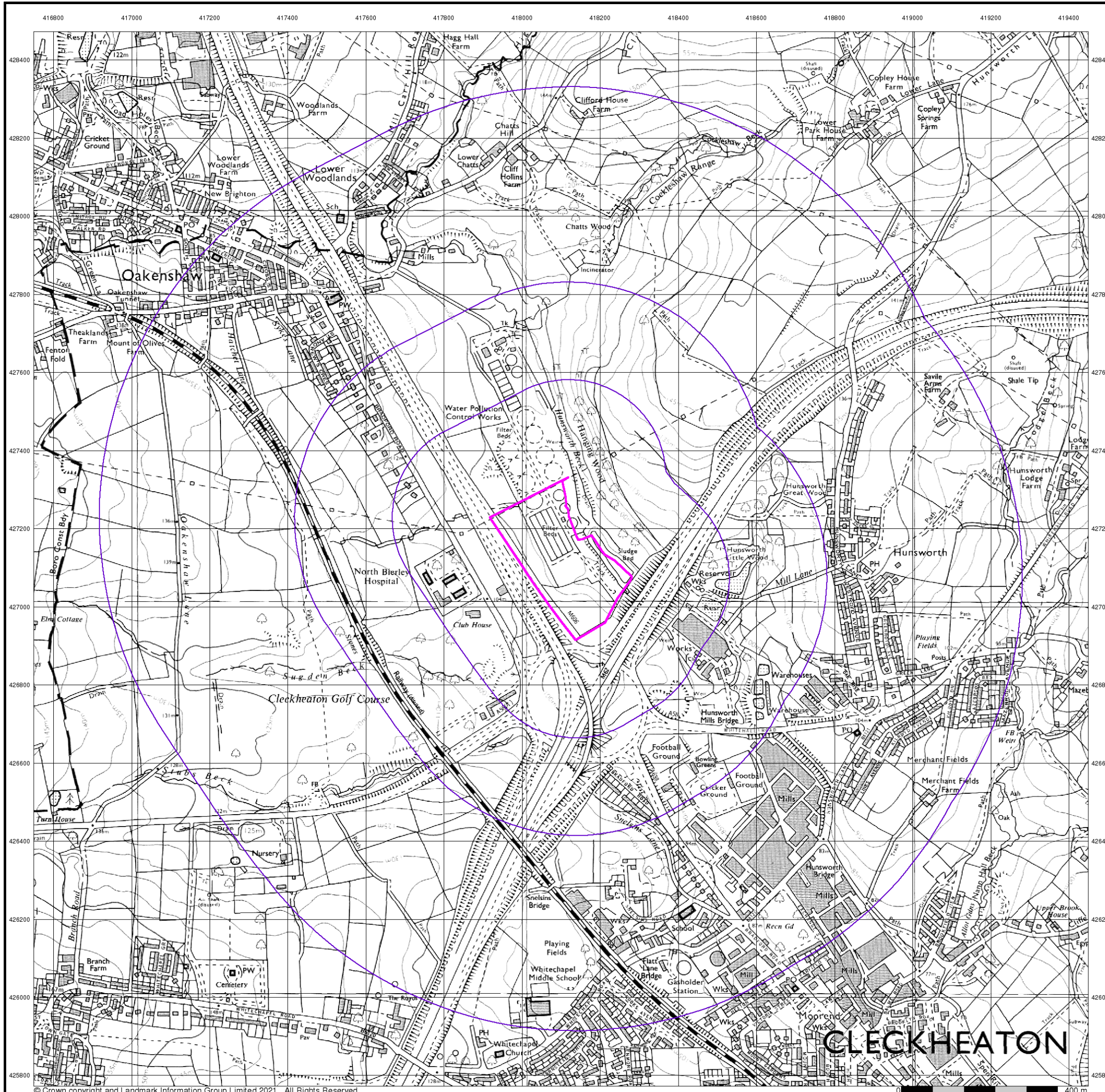


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

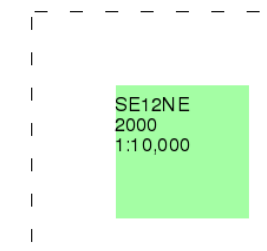
Site Details

Site at 418090, 427110

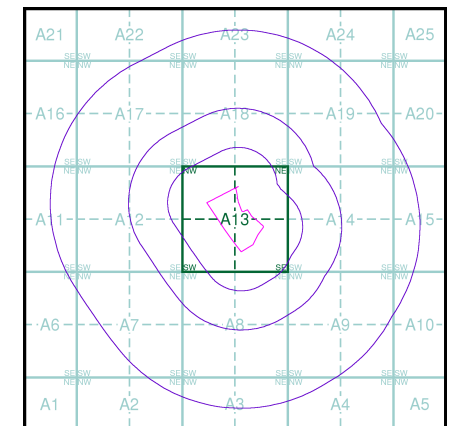


The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A

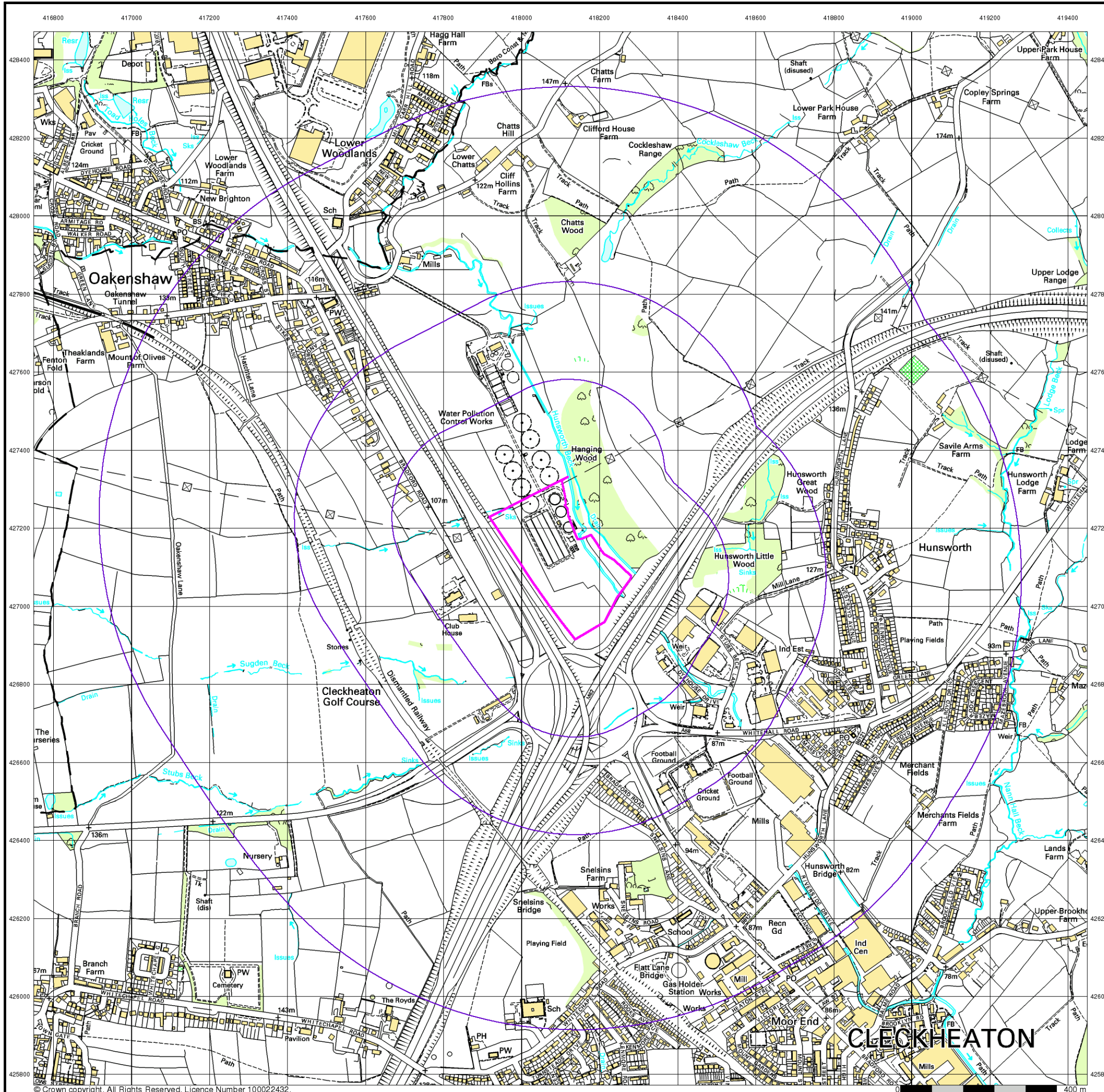


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

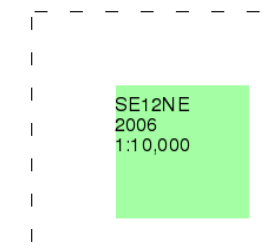
Site Details

Site at 418090, 427110

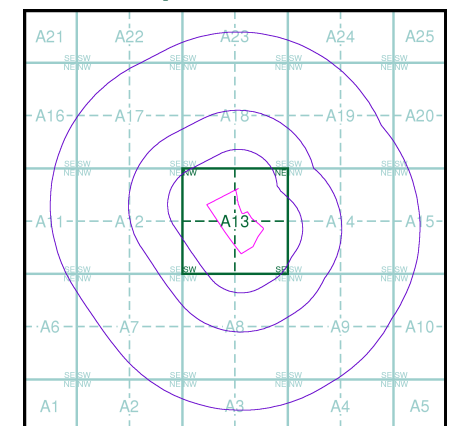


The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A

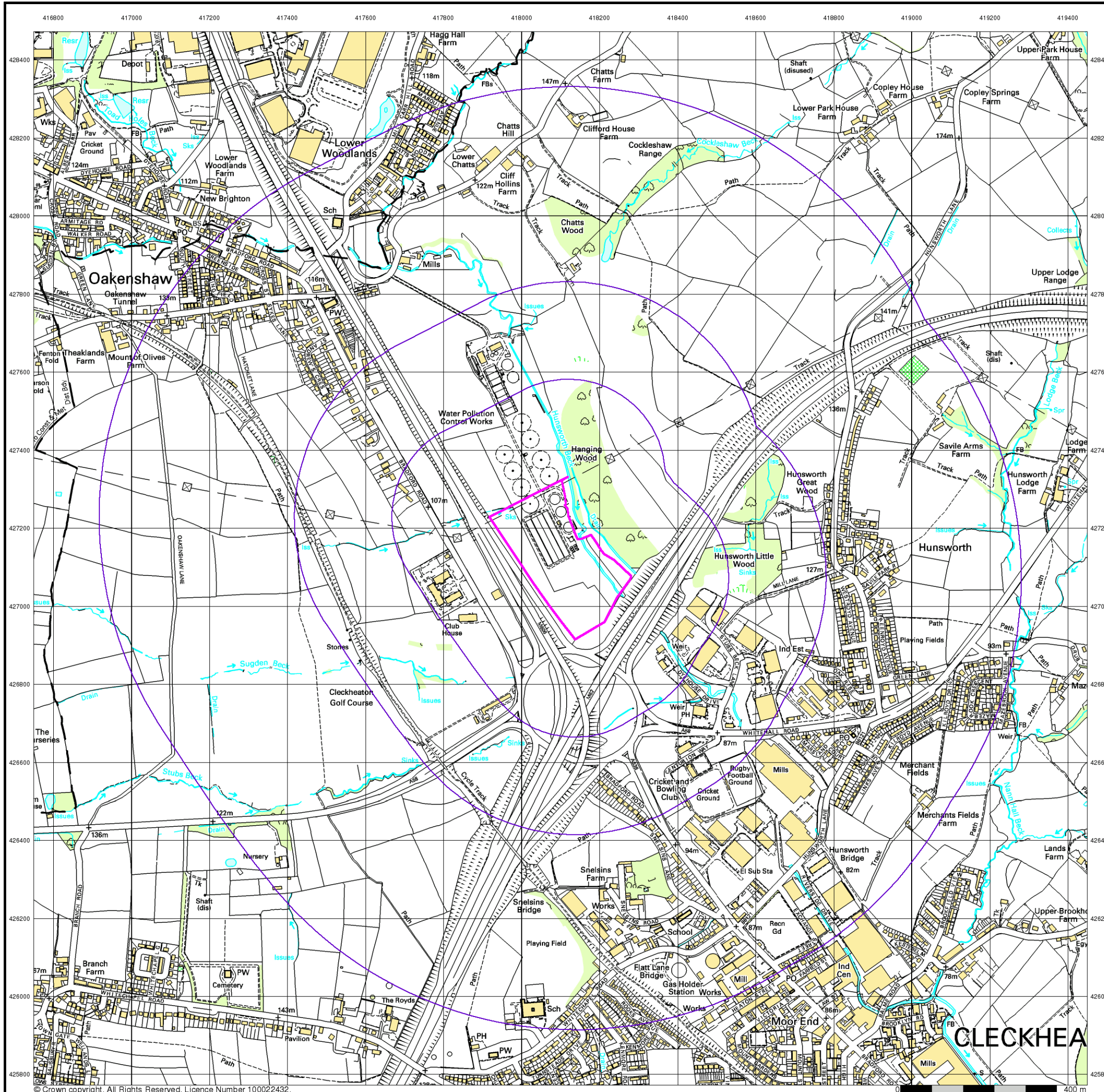


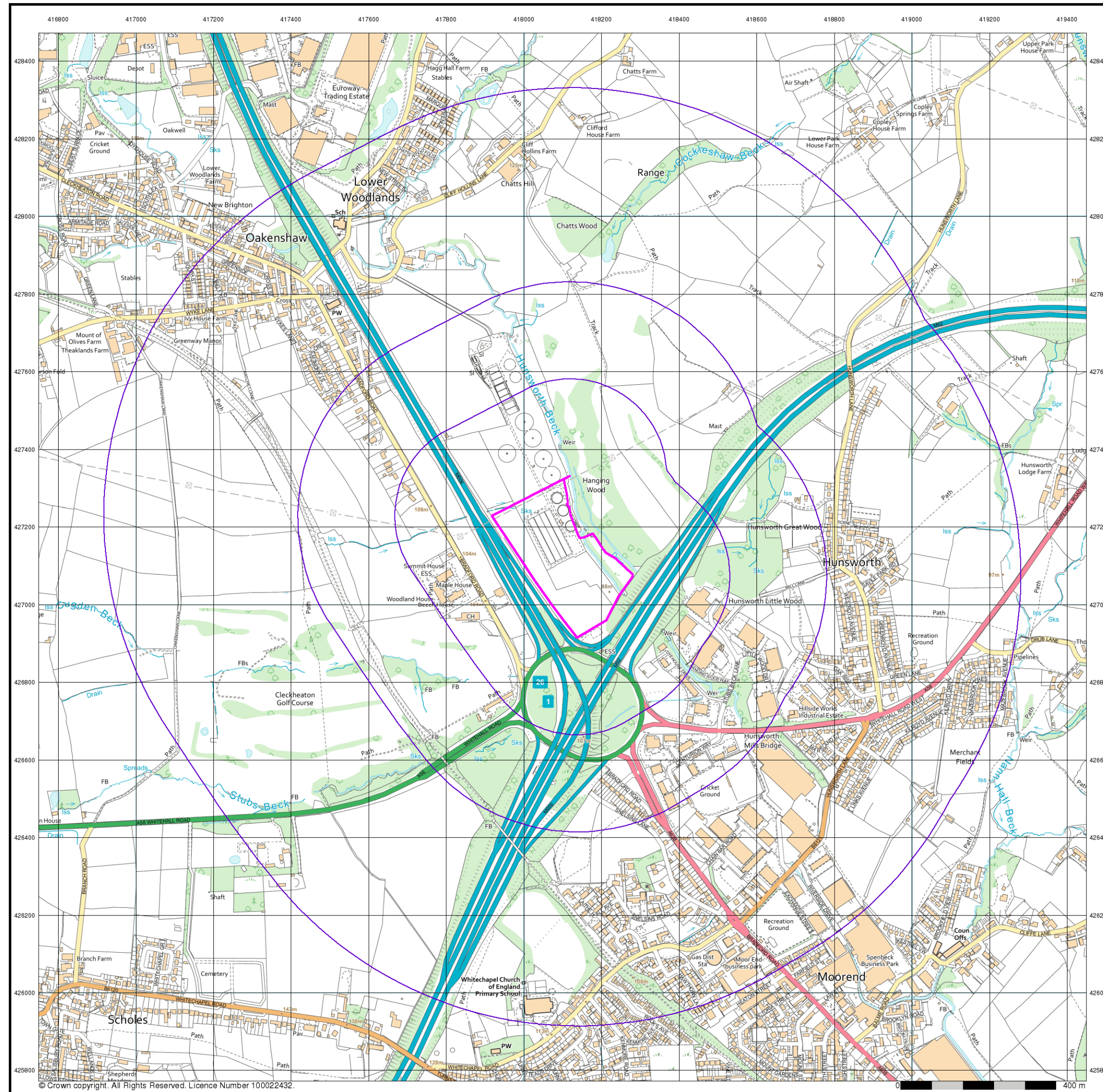
Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110

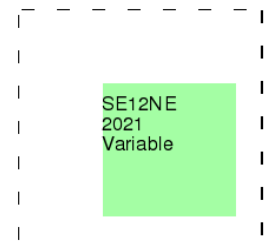




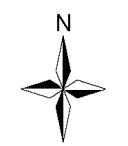
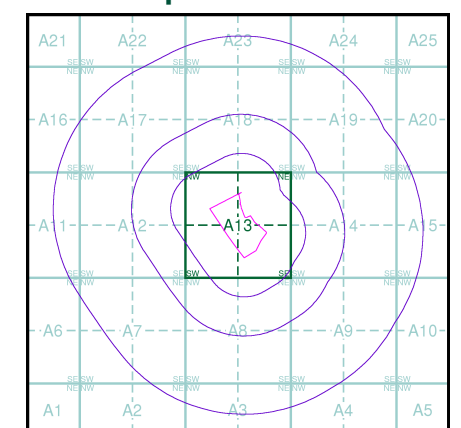
VectorMap Local
Published 2021
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 1000

Site Details

Site at 418090, 427110



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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Quarry **Gravel Pit** **Sand Pit**
Clay Pit **Shingle** **Refuse Heap**
Sloping Masonry **Flat Rock**
Marsh **Reeds** **Osiers**
Rough Pasture **Furze** **Wood**
Mixed Wood **Brushwood** **Orchard**
Fir **Ford** **Stepping Stones**
Ferry **Waterfall** **Lock**
Trig. Station **Altitude at Trig. Station**
B.M. 325.9 **Bench Mark** **Surface Level**
Arrow denotes flow of water **Antiquities (site of)**
Cutting **Embankment**
Railway crossing Road **Level Crossing** **Road crossing Railway**
Railway crossing River or Canal **Road over single stream** **Road over River or Canal**
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Co. Boro. Bdy.
Co. Burgh Bdy.
BP BS Boundary Post or Stone **P.C.B** Police Call Box
B.R. Bridle Road **P** Pump
E.P Electricity Pylon **S.P** Signal Post
F.B. Foot Bridge **Sl** Sluice
F.P. Foot Path **Sp.** Spring
G.P Guide Post or Board **T.C.B** Telephone Call Box
M.S Mile Stone **Tr.** Trough
M.P M.R Mooring Post or Ring **W** Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

Inactive Quarry, Chalk Pit or Clay Pit **Active Quarry, Chalk Pit or Clay Pit**
Rock **Boulders**
Cliff **Slopes** **Top**
Roofed Building **Glazed Roof Building**
Sloping Masonry **Archway**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Bench Mark** **Antiquity (site of)**
Cave Entrance **Triangulation Station** **Electricity Pylon**
Electricity Transmission Line
County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
London Borough Boundary
Symbol marking point where boundary mereing changes
BH Beer House **P** Pillar, Pole or Post
BP, BS Boundary Post or Stone **PO** Post Office
Cn, C Capstan, Crane **PC** Public Convenience
Chy Chimney **PH** Public House
D Fn Drinking Fountain **Pp** Pump
EI P Electricity Pillar or Post **SB, S Br** Signal Box or Bridge
FAP Fire Alarm Pillar **SP, SL** Signal Post or Light
FB Foot Bridge **Spr** Spring
GP Guide Post **Tk** Tank or Track
H Hydrant or Hydraulic **TCB** Telephone Call Box
LC Level Crossing **TCP** Telephone Call Post
MH Manhole **Tr** Trough
MP Mile Post or Mooring Post **Wr Pt, Wr T** Water Point, Water Tap
MS Mile Stone **W** Well
NTL Normal Tidal Limit **Wd Pp** Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

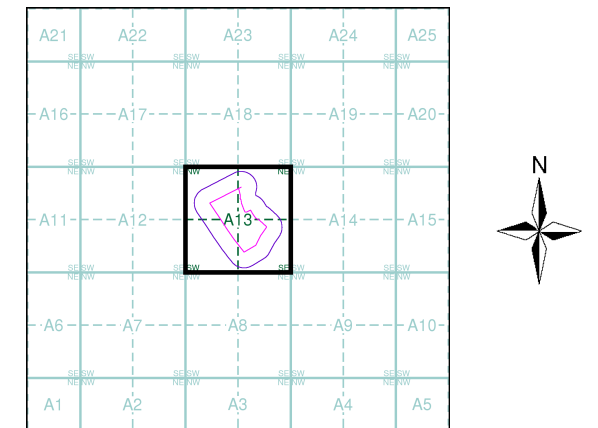
Cliff **Slopes** **Top**
Rock **Rock (scattered)**
Boulders **Boulders (scattered)**
Positioned Boulder **Scree**
Non-Coniferous Tree (surveyed) **Coniferous Tree (surveyed)**
Non-Coniferous Trees (not surveyed) **Coniferous Trees (not surveyed)**
Orchard Tree **Scrub** **Bracken**
Coppice, Osier **Reeds** **Marsh, Saltings**
Rough Grassland **Heath** **Culvert**
Direction of water flow **Triangulation Station** **Antiquity (site of)**
Electricity Transmission Line **Electricity Pylon**
B.M. 231.60m Bench Mark **Buildings with Building Seed**
Roofed Building **Glazed Roof Building**
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)
Bks Barracks **P** Pillar, Pole or Post
Bty Battery **PO** Post Office
Cemy Cemetery **PC** Public Convenience
Chy Chimney **Pp** Pump
Cis Cistern **Ppg Sta** Pumping Station
Dismtd Rly Dismantled Railway **PW** Place of Worship
EI Gen Sta Electricity Generating Station **Sewage Ppg Sta** Sewage Pumping Station
EI P Electricity Pole, Pillar **SB, S Br** Signal Box or Bridge
EI Sub Sta Electricity Sub Station **SP, SL** Signal Post or Light
FB Filter Bed **Spr** Spring
Fn / D Fn Fountain / Drinking Ftn. **Tk** Tank or Track
Gas Gov Gas Valve Compound **Tr** Trough
GVC Gas Governor **Wd Pp** Wind Pump
GP Guide Post **Wr Pt, Wr T** Water Point, Water Tap
MH Manhole **Wks** Works (building or area)
MP, MS Mile Post or Mile Stone **W** Well



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1893 - 1894	2
Yorkshire	1:2,500	1907 - 1908	3
Yorkshire	1:2,500	1922	4
Yorkshire	1:2,500	1938	5
Ordnance Survey Plan	1:1,250	1956 - 1957	6
Ordnance Survey Plan	1:2,500	1957 - 1958	7
Ordnance Survey Plan	1:1,250	1973 - 1974	8
Ordnance Survey Plan	1:2,500	1974	9
Large-Scale National Grid Data	1:1,250	1992	10
Large-Scale National Grid Data	1:1,250	1995	11
Large-Scale National Grid Data	1:1,250	1996	12
Large-Scale National Grid Data	1:1,250	1996	13
Historical Aerial Photography	1:2,500	1999	14

Historical Map - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



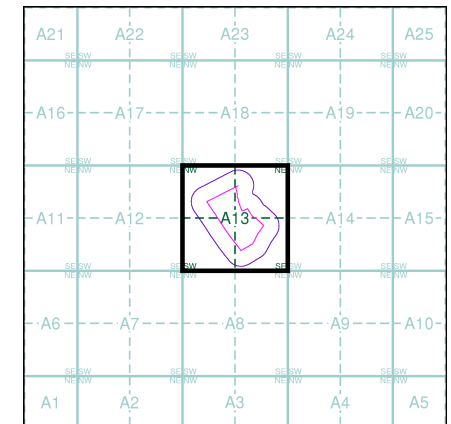
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

232_01	1893	1:2,500
232_05	1894	1:2,500

Historical Map - Segment A13

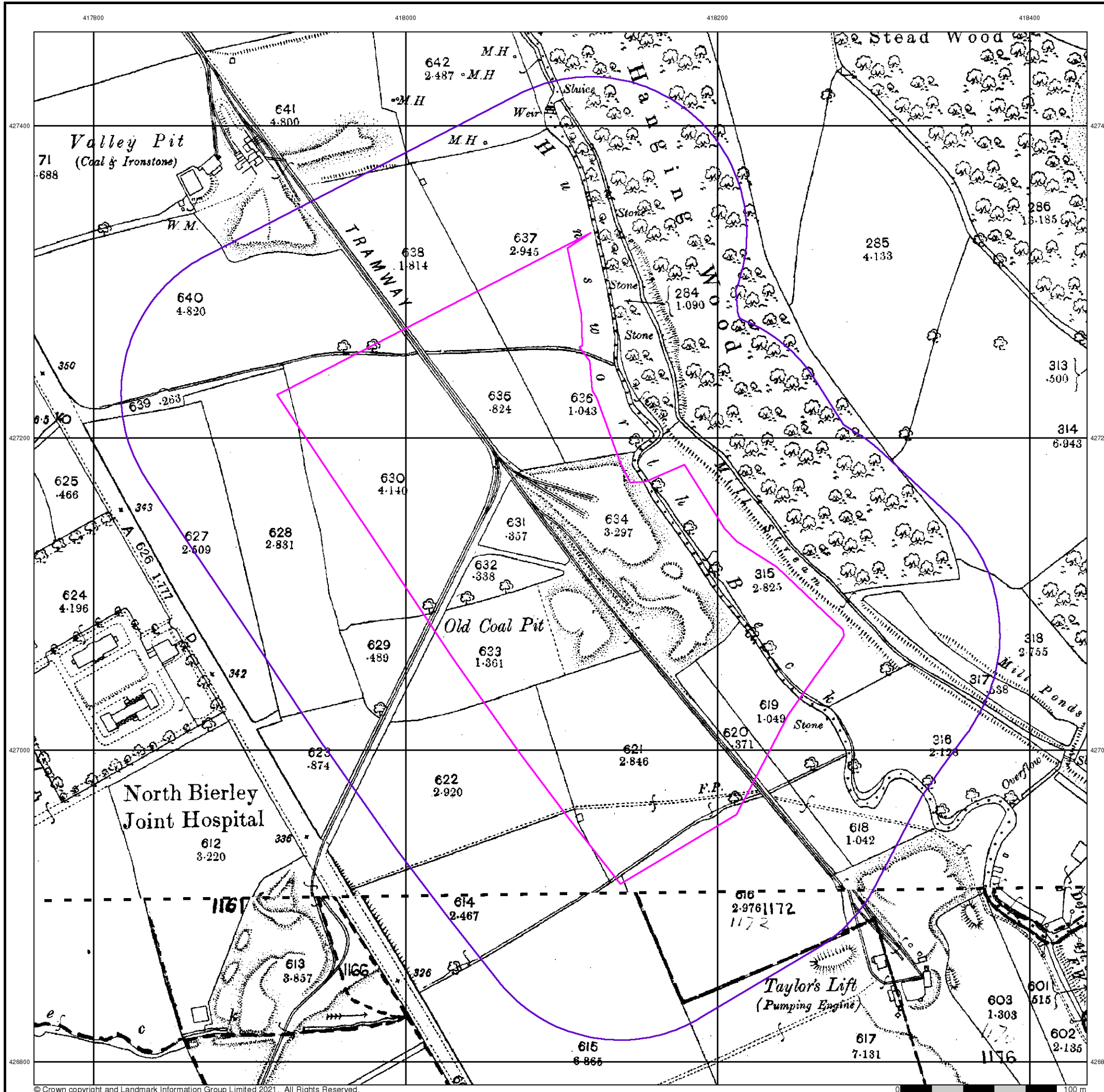


Order Details

Order Number: 278083497_1_1
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 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110

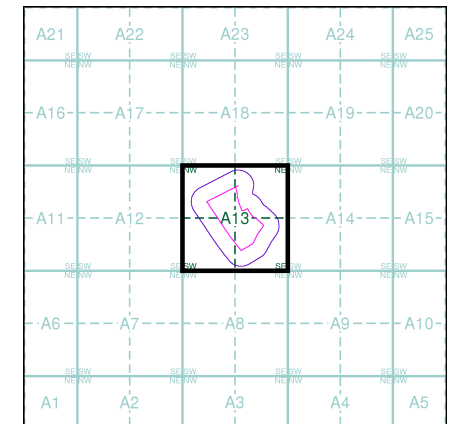


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

232_01	1908	1:2,500
232_05	1907	1:2,500

Historical Map - Segment A13

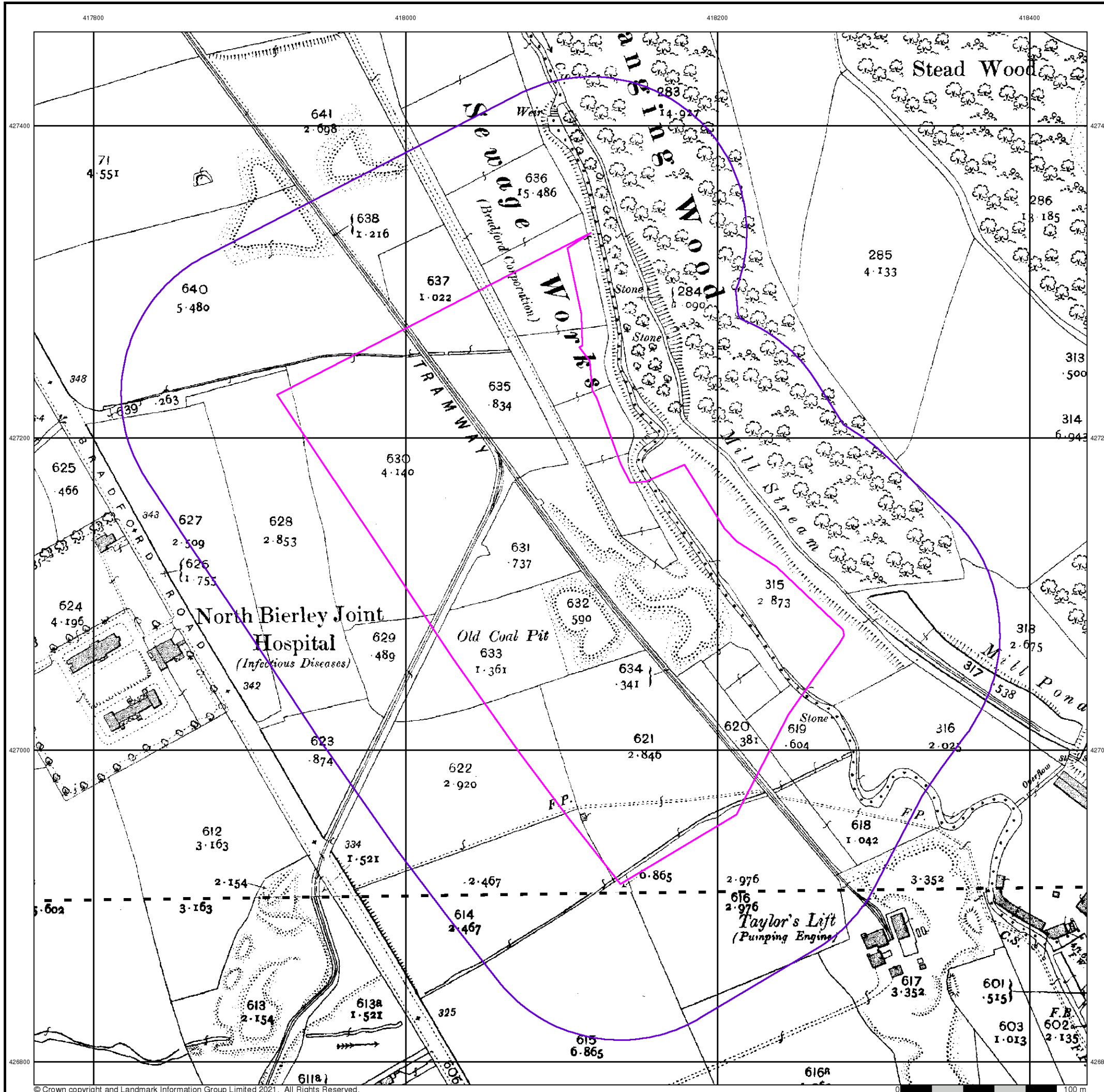


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110

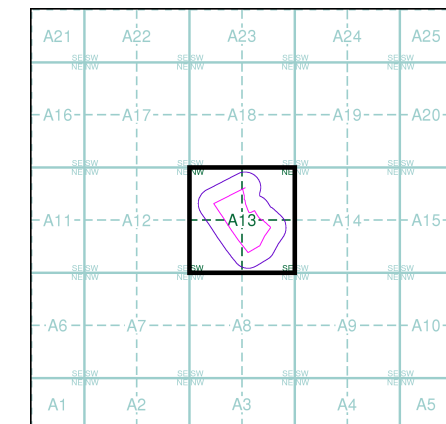


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

232_01	1922	1:2,500
232_05	1922	1:2,500

Historical Map - Segment A13

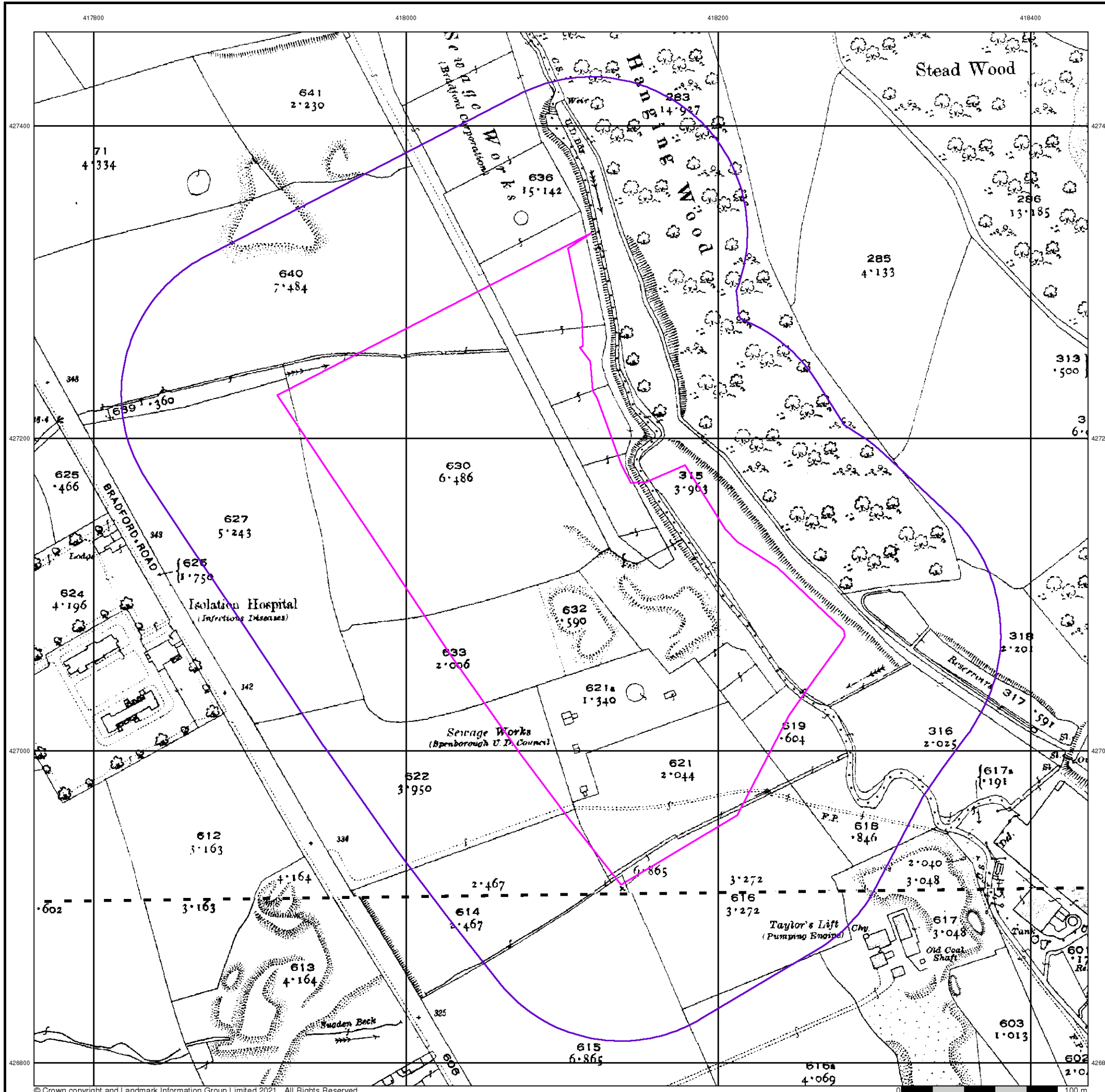


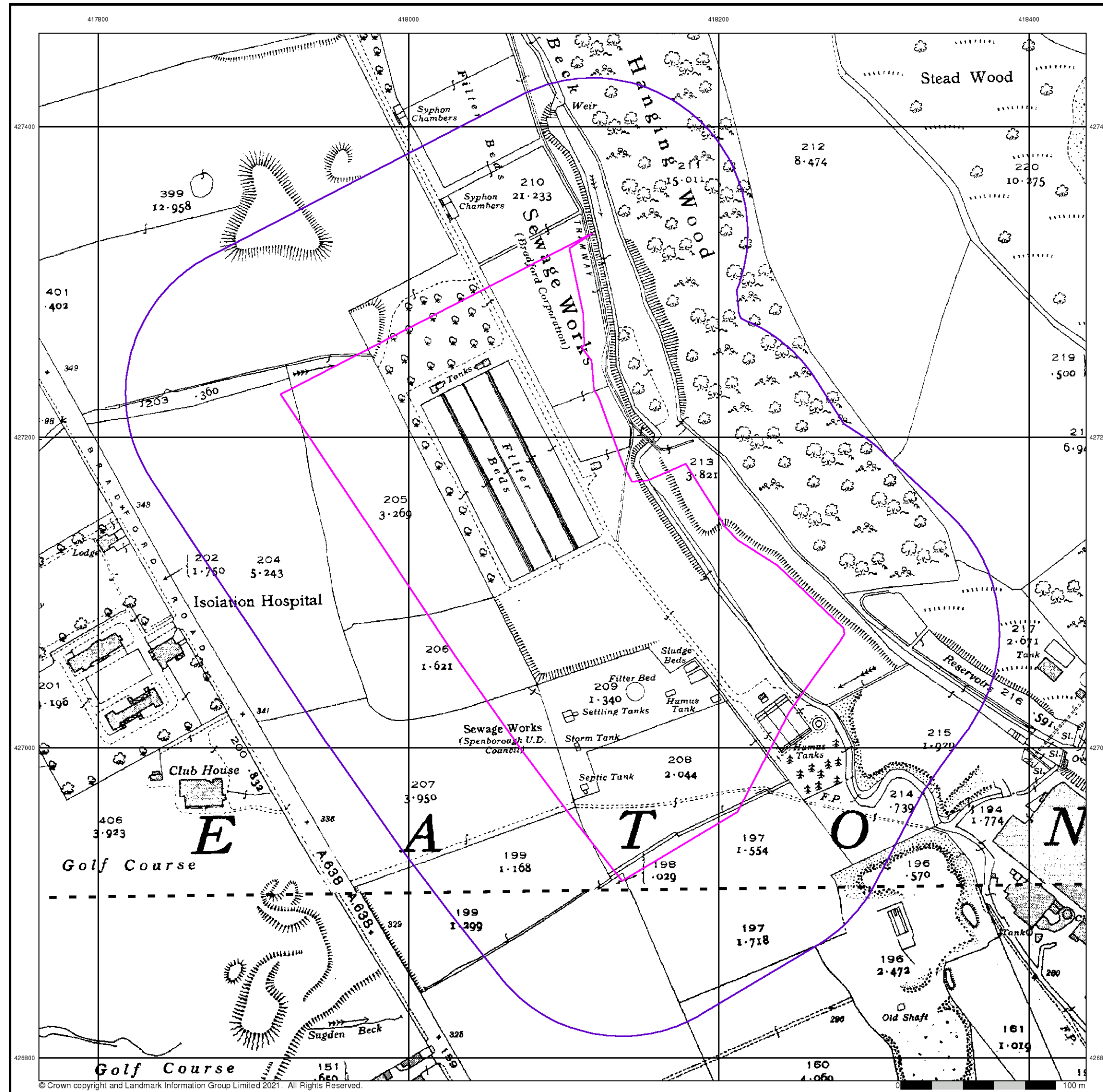
Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
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 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110





Yorkshire

Published 1938

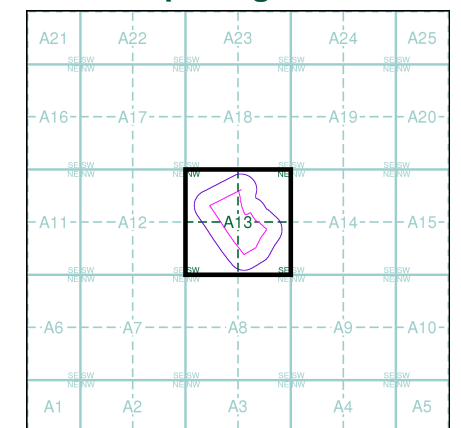
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

232_01	1938	1:2,500
232_05	1938	1:2,500

Historical Map - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



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 Web: www.envirocheck.co.uk

Ordnance Survey Plan

Published 1956 - 1957

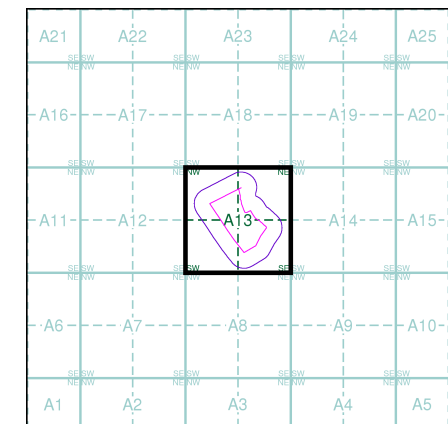
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SE 1727SE	1956	1:1,250
SE 1726NE	1956	1:1,250
SE 1826NW	1957	1:1,250

Historical Map - Segment A13

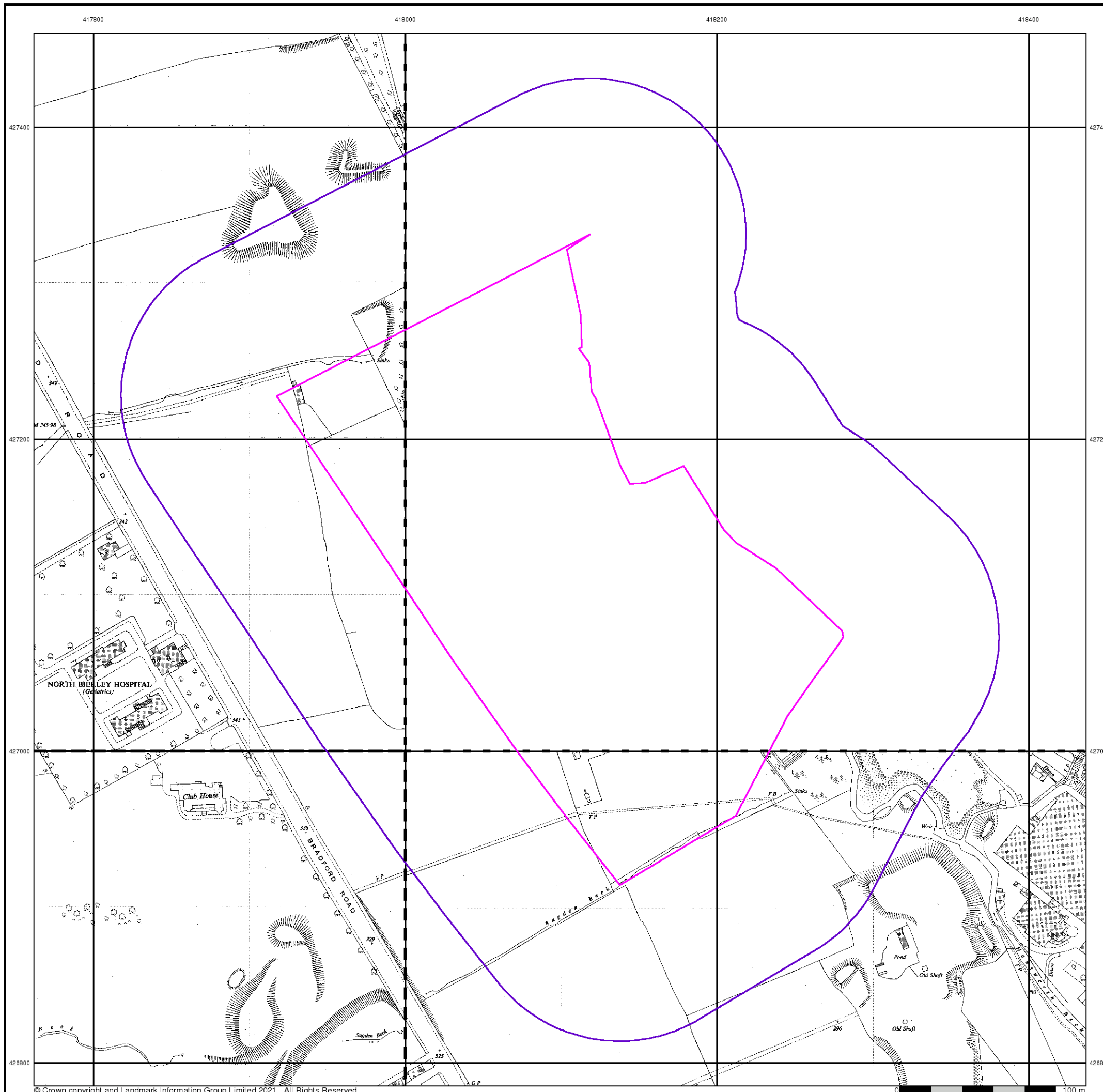


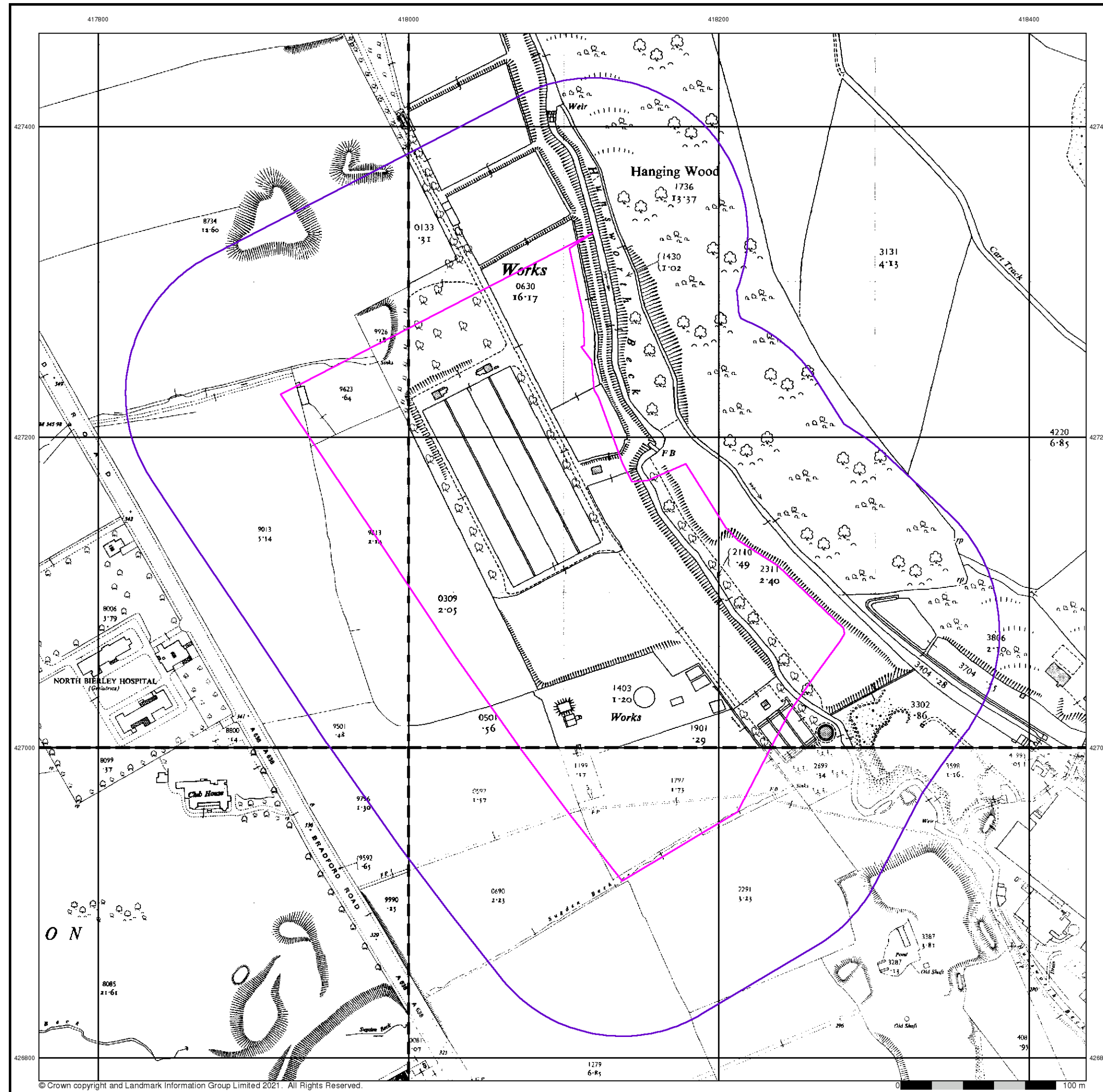
Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110





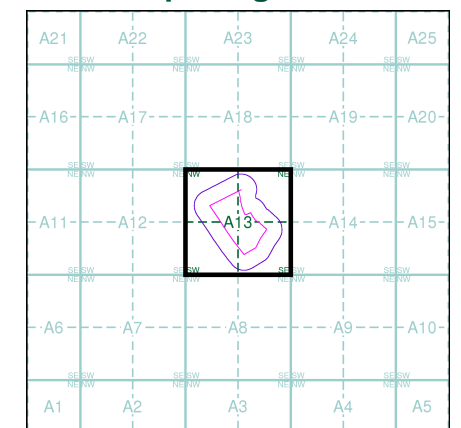
Ordnance Survey Plan
Published 1957 - 1958
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SE 1727 1957 1:2,500	SE 1827 1958 1:2,500
SE 1726 1957 1:2,500	SE 1826 1958 1:2,500

Historical Map - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



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Ordnance Survey Plan

Published 1973 - 1974

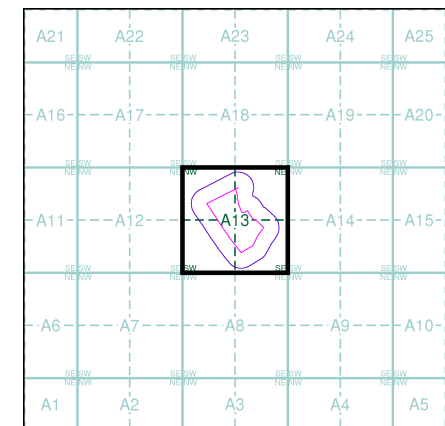
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SE 1727SE	1973	1:1,250
SE 1726NE	1974	1:1,250
SE 1826NW	1973	1:1,250

Historical Map - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



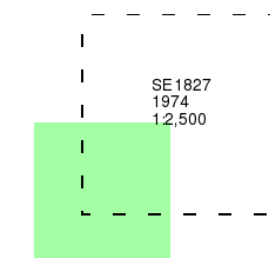
Ordnance Survey Plan

Published 1974

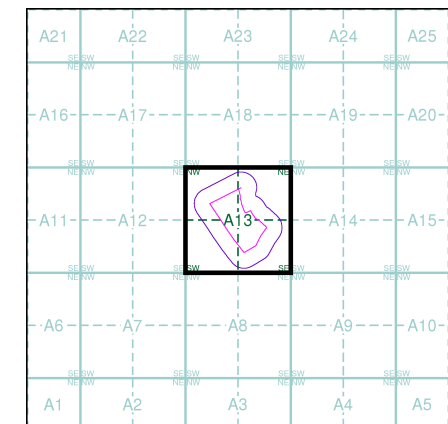
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110

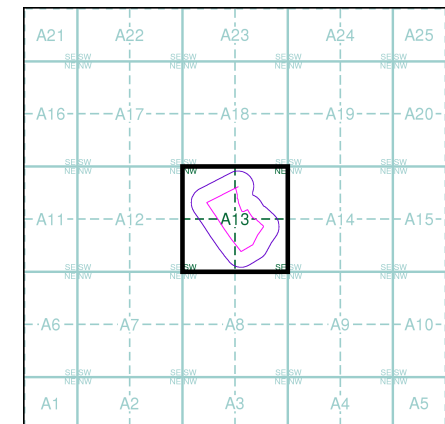


'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SE 1727SE 1992 1:1,250	SE 1827SW 1992 1:1,250
SE 1726NE 1992 1:1,250	SE 1826NW 1992 1:1,250

Historical Map - Segment A13

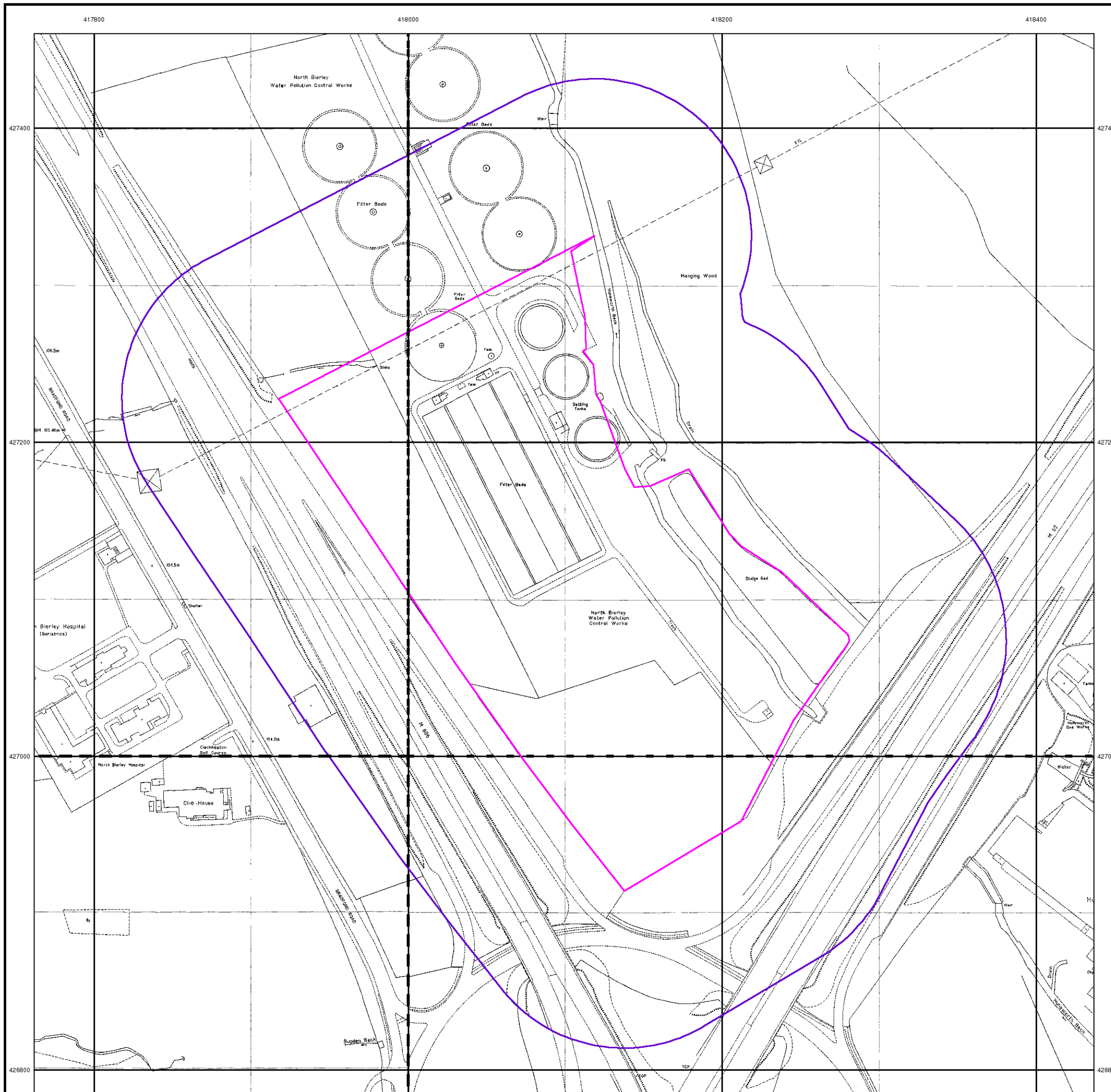


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

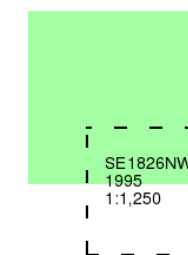
Site Details

Site at 418090, 427110

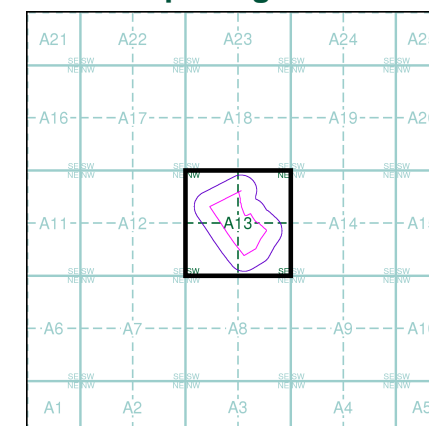


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Map Name(s) and Date(s)



Historical Map - Segment A13

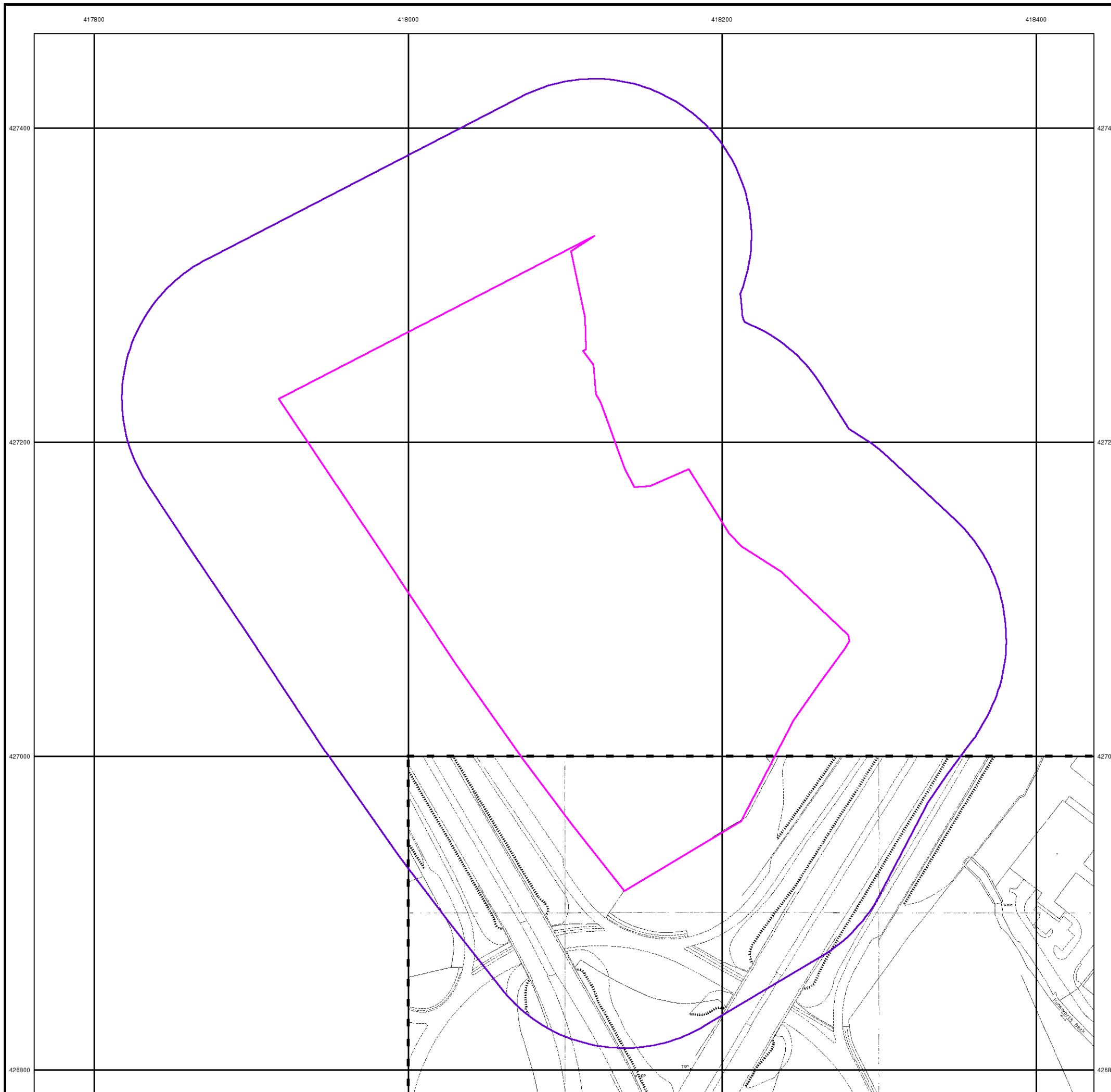


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

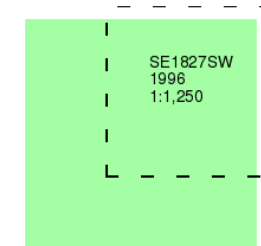
Site Details

Site at 418090, 427110

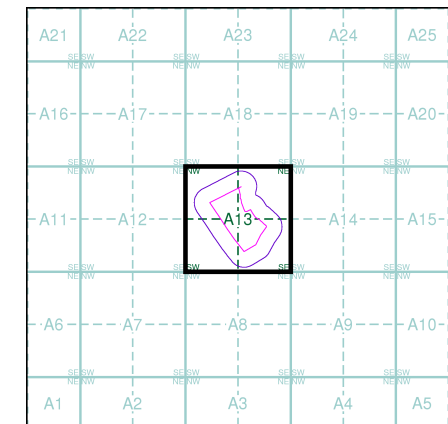


'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

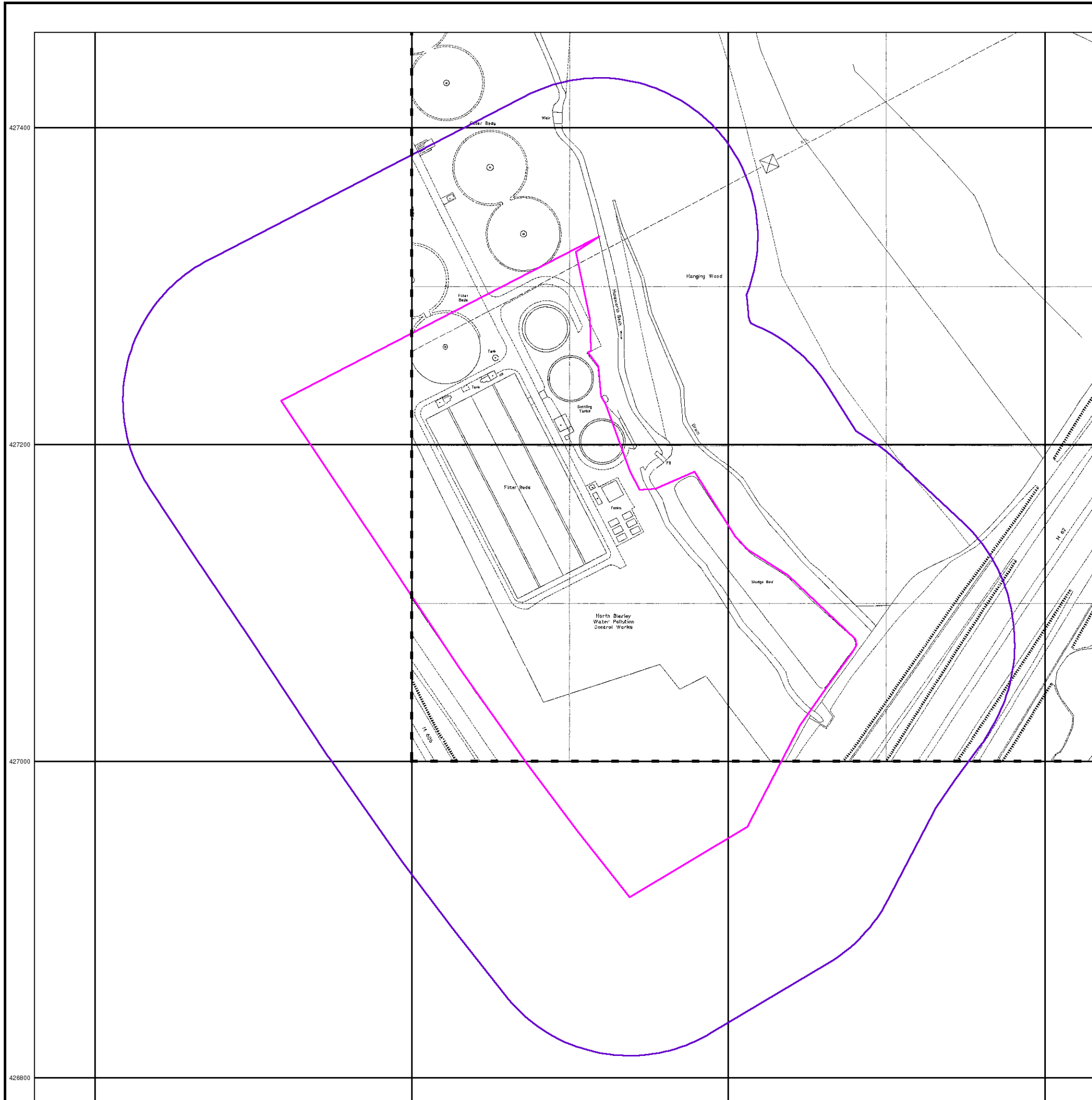


Order Details

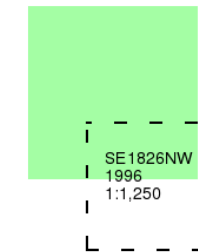
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 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

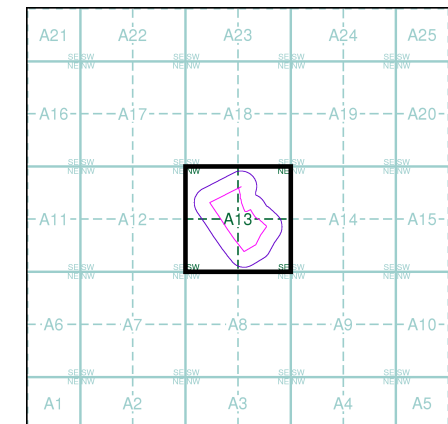
Site at 418090, 427110



Map Name(s) and Date(s)



Historical Map - Segment A13

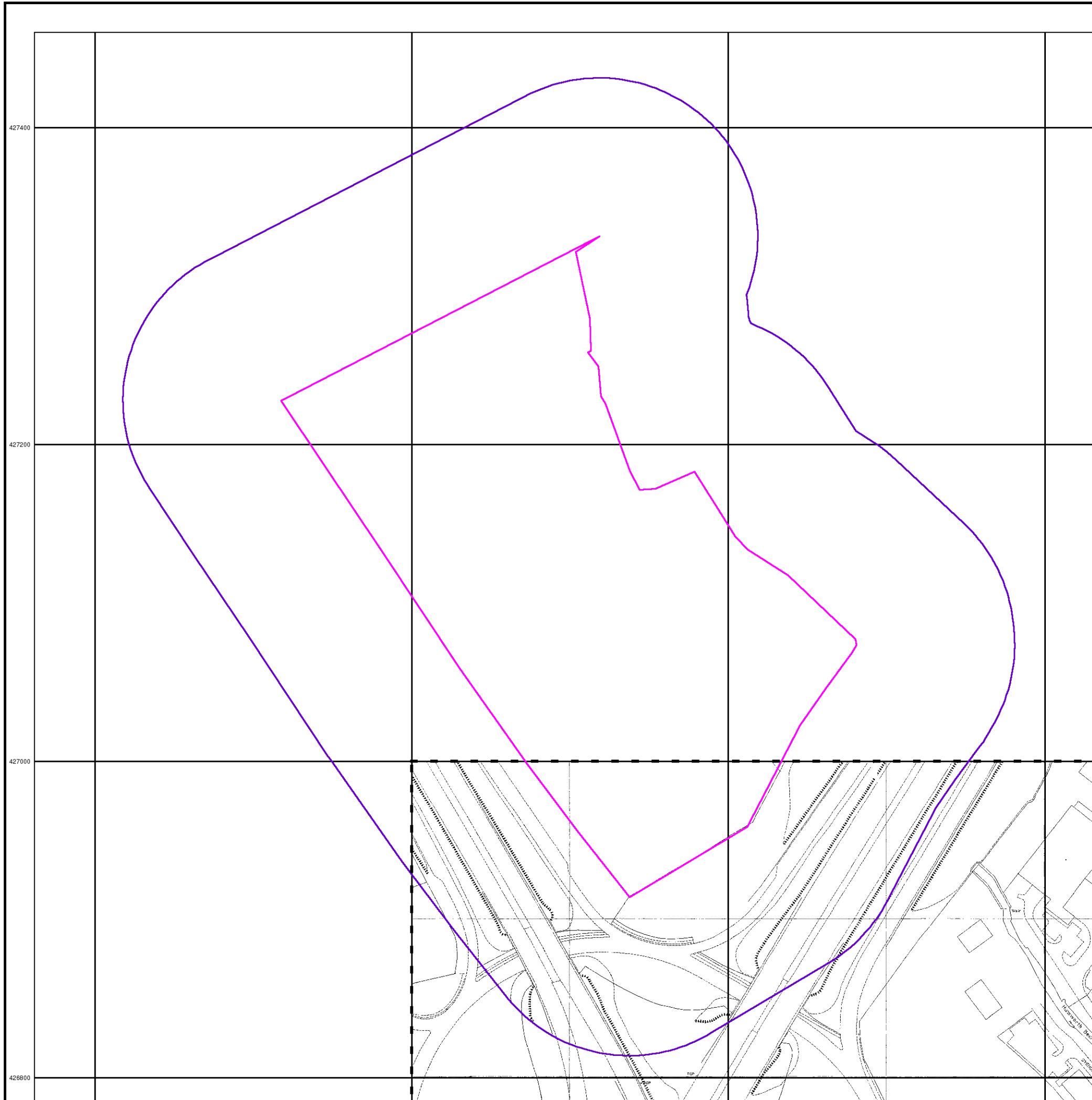


Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



417800

418000

418200

418400

427400

427400

427200

427200

427000

427000

426800

426800



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0 100 m

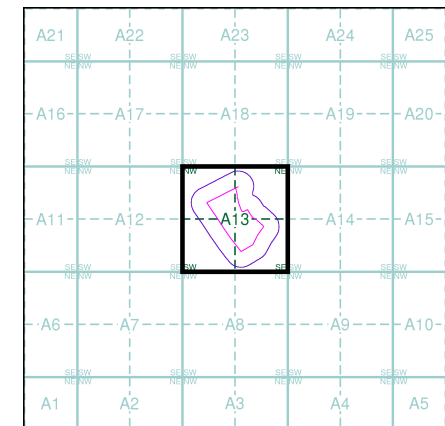


Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number: 278083497_1_1
 Customer Ref: LD10258
 National Grid Reference: 418110, 427130
 Slice: A
 Site Area (Ha): 6.82
 Search Buffer (m): 100

Site Details

Site at 418090, 427110



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APPENDIX B

BGS Borehole Records

Works: *West Riding C.C.M 62 Contract F.* Borehole no. *F132*
 Contractor: *Wm. Coulson Ltd.* Sheet no. *1 of 1*
 Site: *Chapinor. Fill* Chainage *3240*
 Type of boring *Shell and Auger to 8'-0"* Offset from C/L (ft) *10 East*
Rotary Air to 36'-0" B.M. Level (O.D.) *327.25*
 Lining Tubes *not used* Date of boring *20-1-67 (S & A)*
28/30-1-67 (Rotary)

Samples & Core Recovery. Change of Strata						
No.	Depth	Type or %	Key	Depth	Level	Description of Strata
	1'-0"			1'-0"	326.25	TOP SOIL.
	2'-6"	(82)				Soft grey and brown sandy CLAY with SANDSTONE BOULDERS.
	3'-8"	J.B.				
	4'-0"					
	6'-0"	(237)				
4-12	7'-6"	J.		8'-0"	319.25	Very light grey fine grained SANDSTONE, brown stained and fragmentary, weathered to CLAY in parts.
	8'-0"					
		90%		10'-6"	316.75	Dark grey micaceous SILTSTONE, very fragmentary and weathered.
	12'-0"			12'-0"	315.25	
						Little or no recovery from 12'-0" to 33'-0", Grey SILTSTONE, weathered and brown stained, Old workings of the Shertcliffe Bed.
	22'-0"					
		90%				
	26'-0"					
						Alternations of grey SILTSTONE and grey MUDSTONE, some ironstone nodules, a few plant remains, fragmentary, brown stained, and weathered in parts.
	33'-0"			33'-0"	294.25	
		90%				
	36'-0"			36'-0"	291.25	Borehole Completed.
Remarks (Observations on ground water, etc)						
Water first encountered at 10'-0"						
Weather - showery.						

Works: *West Riding C.C. M62 Contract F* SEIDNE 410 1797-2710
 Contractor: *Wm. Coulson Ltd.* Borehole no. *F 133 A.*
 Site: *Langley Cut* Sheet no. *1 of 2*
 Chainage *3070*
 Type of boring *Rotary Air to 45'-0"* Offset from C/L (ft.) *0*
 B.H. Level (O.D.) *J.R.R.: 5*
 Date(s) of boring *22.1.23 - 3 - 97*
 Lining Tubes *not used*

Samples & Core Recovery. Change of Strata


No.	Depth	Type or %	Key	Depth	Level	Description of Strata
						OPEN HOLE.
5-5	13'-0"			13'-0"	315.5	
	20'-0"	0%				No recovery. Workings of the Shertcliffe Bed.
	25'-0"	0%				
	30'-0"	0%				
	35'-0"	0%				
	38'-0"	100%	X	38'-0"	295.5	Grey SILTSTONE with plant remains, some dark grey MUDSTONE bands, fragmentary, fractured in places, sometimes weathered to CLAY.
	40'-0"		X			Borehole Continued.

Remarks: (Observations on ground water, etc)
 Water first encountered at 9'-0".
 Weather - wet.

This is an extra hole to investigate the extent of workings of the Shertcliffe Bed.

SE12NE 410
 Works: *West Riding C.C. M62 Contract F* Borehole no. *F 133 A*
 Contractor: *Wm. Coulson Ltd.* Sheet no. *2 of 2*
 Site: *Longley Cut* Chainage *29.79*
 Fill (ft) *15* Offset from C/L (ft) *0*
 Type of boring *Rotary Air 10* B.M. Level (O.D.) *229.5*
 Date of boring *22.1.23.3.97*
 Lining Tubes *not used*

Samples & Core Recovery. Change of Strata

No.	Depth	Type or %	Key	Depth	Level	Description of Strata
	45'-0"		X X X	45'-0"	283.5	Grey SILTSTONE with plant remains, some dark grey MUDSTONE bands, fragmentary, fractured in places, sometimes weathered to CLAY.
<i>Borehole Completed</i>						

Remarks (Observations on ground water etc)

Works: *West Riding C.C. M 62 Contract F...* Borehole no. *F133 B*
 Contractor: *Wm. Coulson Ltd.* Sheet no. *1 of 1*
 Site: *Langley Cut* Chainage *29.00*
 (Pit) (ft) *3* Offset from C/A (ft.) *5 East*
 Type of boring *Rotary Air. 10:0* B.M. Level (O.D.) *321.0*
 Lining Tubes *not used* Details of boring *29-7-67*

Samples & Core Recovery. Change of Strata						
No.	Depth	Type or %	Key	Depth	Level	Description of Strata
						<i>OPEN HOLE.</i>
<i>4-12</i>	<i>14'-0"</i>			<i>14'-0"</i>	<i>312.0</i>	
		<i>0%</i>				<i>No recovery. Workings of the Shertcliffe Bed.</i>
	<i>24'-0"</i>					
		<i>0%</i>				
	<i>30'-0"</i>			<i>29'-0"</i>	<i>297.0</i>	
		<i>100%</i>	X			<i>Dark grey SILTSTONE with plant remains, slightly micaceous, fragmentary, fractured in places.</i>
			X			
		<i>100%</i>	X X			
			X			
	<i>40'-0"</i>		X X	<i>40'-0"</i>	<i>286.0</i>	<i>Borehole Completed.</i>
Remarks (Observations on ground water, etc) <i>No water encountered. Weather - stormy. This is an extra hole to investigate the extent of workings of the Shertcliffe Bed.</i>						



18262 27042

Equipment & Methods
Cable tool boring, 150mm diameter to 7.95m. Cased to 7.50m.
Rotary coring, 92mm diameter using Edeco 40, air/mist flush

Location No. 7808
Location

M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level
89.54 m A.O.D.

Coordinates
8267.85m E
7039.47m N

Date
03.01.93
to 03.03.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records	
				Depth	Sample			Test
					Type	No.		
TOPSOIL	89.54 89.29		(0.25) 0.25					
Firm to stiff brown grey very sandy CLAY, with a little to some angular gravel of moderately weak to moderately strong mudstone and occasional plant matter				0.40 - 0.85	U	1	50 blows 0.45m recovery	
			(1.55)	0.90	D	2		
				1.30	D	3		
BOULDERS slightly orange brown angular fine to coarse gravel of moderately strong to very strong sandstone	87.74		1.80	1.50 - 1.80	U	4	100 blows No recovery	
				1.80	D	5		
Firm light brown very sandy CLAY	86.04		3.50	2.50 - 2.95	D	6	2,2/25,22,6,6	
				2.50 - 2.95	B	7		
Brown angular to rounded fine to coarse GRAVEL of strong to very strong sandstone with a little sandy clay. <i>Locally clayey</i>	85.24		4.30	3.50 - 3.95	D	8	1,2/2,2,2,4	
				3.50 - 3.95	B	9		
Grey highly weathered MUDSTONE, very weak recovered as angular fine to medium slightly clayey gravel. <i>Locally slightly clayey</i>	83.04		6.50	4.30	D	10	10,7/8,7,6,11	
				4.30	W	12		
Grey thinly laminated highly weathered SILTSTONE, recovered as clay with much fine to coarse gravel of weak siltstone, and very strong ironstone. <i>Thinly laminated very closely spaced fractured siltstone.</i>	81.59 81.24		7.95 (0.35)	4.50 - 4.95	D	11	10,9/7,11,25,33	
				4.50 - 4.95	B	13		
Grey thinly laminated highly weathered SILTSTONE, recovered as clay with some to much angular fine to coarse gravel of siltstone. Discontinuities: 1. 80-90 deg vertical planar, smooth.			(4.40)	5.50 - 5.95	D	14	8,16/16,13,17,20	
				5.50 - 6.50	B	15		
Grey thinly laminated highly weathered SILTSTONE, recovered as clay with some to much angular fine to coarse gravel of siltstone. Discontinuities: 1. 80-90 deg vertical planar, smooth.				6.50 - 7.00	B	16	7,16/11,12,14,17	
				7.00 - 7.45	D	17		
Grey thinly laminated highly weathered SILTSTONE, recovered as clay with some to much angular fine to coarse gravel of siltstone. Discontinuities: 1. 80-90 deg vertical planar, smooth.				7.00 - 7.45	B	18	NI	
				7.50 - 7.95	D	19		
Grey thinly laminated highly weathered SILTSTONE, recovered as clay with some to much angular fine to coarse gravel of siltstone. Discontinuities: 1. 80-90 deg vertical planar, smooth.				7.50 - 7.95	B	20	NI NI 20 (>25)	
				7.95 - 10.10	W	25		71

Remarks
1. Chiselling from 3.10 to 3.40m, 1 hour; 5.90 to 6.50m, 1 hour 30 mins.
2. Poor recovery from 5.50 to 6.50m due to pushing boulder.
3. Borehole backfilled with grout on completion.

Notes:
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by
AJQ
Scale
1:50
Fig.
31



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
-----------------------------------	---

Carried out for Department of Transport	Ground Level Coordinates Date As sheet 1
--	---

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	If	
SILTSTONE (As sheet 1)		xxx	7.95 - 10.10			71	21	0		
		xxx	10.10 - 11.70	25		66	14	0		
Grey thinly laminated highly weathered SILTSTONE, very weak, extremely closely fractured. Discontinuities: PL, SM.		xxx (4.40)							NI NI (>25)	
Dark grey thinly laminated moderately weathered carbonaceous MUDSTONE, weak, extremely closely fractured. Discontinuities: PL - SM.		xxx	11.70 - 12.40			94	20	0		
Dark grey thinly laminated highly to moderately weathered COAL, very weak, extremely closely fractured.		xxx	12.40 - 12.70			100	23	0		CRF 0.03m
Dark grey thinly laminated highly to moderately weathered COAL, very weak, extremely closely fractured.		xxx (1.40)							NI	
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx	12.70 - 15.35			100	37	21		NI
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (0.05)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (0.10)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (0.82)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (10)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (15.07)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (2.08)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (11)								Gas test at 15.35m 2% LEL
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (15.35 - 18.30)				98	83	42		
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (17.15)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (13.85)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (8)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (18)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (33)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (68)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (8)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (33)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (68)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (8)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (33)								
Dark grey-thinly laminated highly to moderately weathered coal, very weak.		xxx (68)								

Remarks	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 31



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
-----------------------------------	---

Carried out for Department of Transport	Ground Level	Coordinates	Date
	As sheet 1		

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	If	
Grey fine to medium grained thinly laminated slightly weathered SANDSTONE, strong to very strong, closely to medium fractured, exhibiting involutions and cross bedding structures. Occasional very closely to medium spaced thin laminae of dark grey siltstone. Below 22.00m, light grey Discontinuities: 1. 0 deg horizontal planar smooth with occasional clay smear. 2. 45 deg inclined planar, rough. 3. 90 deg vertical planar, rough iron stained.			19.30 - 20.70			99	99	68		
			20.70 - 21.95			100	100	69		
			21.95 - 24.95			100	100	52		
	(13.85)				100					N1 120 360 (8)
			24.95 - 28.00			98	98	76		
			28.00 - 31.00			100	100	66		Gas test at 31.00m 2% LEL

Remarks	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 31



Equipment & Methods

As sheet 1

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level

Coordinates

Date

As sheet 1

Description

Reduced Level

Legend

Depth (Thick)

Drilling Records

Mechanical core log

Field Records and Test Results

Depth

W

TCR

SCR

RQD

If

Iron rich sandstone, very strong.
With many thin dark grey carbonaceous laminations
SANDSTONE (As sheet 3)

•••••
•••••
•••••
•••••

(13.85 pen)

28.00 - 31.00

100

100

100

66

NI

120

360

(8)

Gas test at 31.00m 2% LEL

BOREHOLE ENDS AT 31.00 m.

58.54

31.00

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
03.01	-	4.30	-	4.30	Water strike
03.01	-	4.30	-	3.90	After 5 mins
03.01	-	4.30	-	3.80	After 10 mins
03.01	-	4.30	-	3.80	After 15 mins
03.01	-	4.30	-	3.80	After 20 mins
03.01	-	4.70	-	-	Sealed, damp
04.01	-	7.50	-	6.80	End of borehole
25.02	0700	7.95	7.95	3.45	
25.02	1800	11.70	11.70	7.60	End of shift
26.02	0700	11.70	11.70	-	Start of shift
26.02	1800	15.35	12.70	9.75	End of shift
01.03	0700	15.35	12.70	3.30	Start of shift
01.03	1800	19.30	14.30	3.60	End of shift
02.03	0700	19.30	14.30	3.30	Start of shift
02.03	1800	31.00	14.30	5.60	End of borehole

Remarks

Logged by

AJQ

Scale

1:50

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

05.07.93/14.48 (Ver 4.1.27)

Fig. 31



Equipment & Methods
Hand excavated inspection pit to 1.00m. Cable tool boring, 150mm diameter to 7.30m. Rotary core drilling, 92mm diameter using Edeco H40, air/mist flush.

Location No. 7808
Location M62 (EAST)/M606 LINK ROADS
18239 27007

Carried out for
Department of Transport

Ground Level 87.63 m A.O.D.
Coordinates 8244.38m E, 7004.64m N
Date 02.02.93 to 11.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records	
				Depth	Sample			Test
					Type	No.		
TOPSOIL	87.63 87.48		(0.15) 0.15 (0.35) 0.50	0.15 - 0.50	B	1		
Firm dark brown slightly sandy very silty CLAY with occasional fibrous plant matter	87.13			0.50 - 1.00	B	2		
Medium dense light brown angular fine to coarse GRAVEL of strong sandstone with some, becoming much below 1.20m clayey sand			(1.60)	1.00 - 1.20	D	3	S N=15	6,5/3,5,3,4
				1.20 - 1.65	D	4		
				1.20 - 1.70	B	5		
Stiff brown sandy CLAY with some angular fine to coarse gravel of strong sandstone	85.53		2.10	2.10 - 2.55			C N=27	5,3/9,9,5,4
				2.10 - 2.60	B	7		
Dense brown angular to subangular fine to coarse GRAVEL of strong sandstone with a little sandy clay.	84.93		2.70	2.70	D	8	C N=34	6,5/7,8,9,10
				2.70	W	14		
Dense dark grey angular to subrounded fine to coarse GRAVEL and COBBLES of strong sandstone with some sandy clay.	84.13		3.50	3.00 - 3.45	B	9	C N=38	7,11/11,10,8,9
				3.00 - 3.50	B	9		
Very dense dark grey angular to subrounded generally fine to medium GRAVEL of strong sandstone Foreman reports occasional boulders.	82.23		(1.90)	4.00 - 4.45			C N=38	120 blows No recovery
				4.00 - 4.50	B	10		
				4.70	D	11		
Angular to rounded gravel with a little sandy clay				5.00 - 5.40	U	-	C N=50	12,27/50 for 50mm K=5x10-6 m/sec
				5.00 - 5.40	B	12		
Grey highly weathered MUDSTONE, very weak to weak recovered as fine to coarse angular to subangular gravel with a little clay.	81.63		(0.60)	5.40	B	13	C N=50	11,14/17,17,14 for 50mm
				5.40 - 5.70	B	13		
				6.00	D	15		
Assumed zone of core loss	80.33		(4.80)	6.00 - 6.50	B	16	C N=50	9,16/21,29 for 60mm
				6.50 - 6.90	D	17		
				6.50 - 7.00	B	18		
Grey highly weathered MUDSTONE, very weak to weak, extremely to very closely fractured, predominantly non-intact, recovered as grey flat slightly clayey gravel size fragments. Discontinuities: 1. Non-intact, randomly orientated, planar to irregular and smooth.				7.00 - 7.30	D	19	C N=50	CRF 0.22m
				7.90 - 10.00				

Remarks
 1. Chiselling from 5.40 to 5.60m, 1 hour 15 mins; 5.60 to 5.70m, 30 mins; 5.70 to 6.00m, 45 mins; 6.10 to 6.50m, 1 hour and 6.50 to 7.00m, 45 mins
 2. Rising head carried out at 5.60m.

Notes:
 Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
 All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by
 AJQ/TDM
 Scale
 1:50
 Fig. 32
 05.07.93/15.01 (Ver 4.1.27)



Equipment & Methods		Location No. 7808		Location		Coordinates		Date	
As sheet 1		M62 (EAST)/M606 LINK ROADS		As sheet 1					
Carried out for		Ground Level		Coordinates		Date		Field Records and Test Results	
Department of Transport				As sheet 1					
Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log			Field Records and Test Results
				Depth	W	TCR	SCR	RQD	
Grey MUDSTONE (As sheet 1)									
Dark grey to black fissile highly weathered MUDSTONE, weak to moderately weak, extremely closely fractured. Recovered as flat gravel size fragments.			(4.80)	10.00 - 11.68	40	100	0	0	NI 50 (>25) CRF 0.22m Gas test at 11.68m 2% LEL
Brown, locally black MUDSTONE, very weak to weak, extremely to closely fractured. Occasional fossilised organic debris (SEATEARTH)	75.53		12.10 (0.30)	11.68 - 12.80	50	89	15	9	NI (>25)
Carbonaceous mudstone/coal?	75.23		12.40 (0.40)						
Dark grey thinly bedded slightly weathered SILTSTONE, moderately strong, closely fractured. Occasional thin laminae of grey sandstone. Discontinuities: 1. Subhorizontal, planar and smooth. 2. Subvertical, medium spaced, irregular to smooth.	74.83	x x x	12.80 (1.40)	12.80 - 15.85	98	65	49	NI 130 250 (8)	
	73.43	x x x	14.20 (2.90)						
Grey and dark grey very thinly to medium interbedded slightly weathered SILTSTONE and SANDSTONE, strong, closely to medium fractured. Discontinuities: 1. Subhorizontal, planar and smooth with occasional clay lining 2. Subvertical, medium spaced irregular and rough to smooth.		x x x	17.10 (2.90)	15.85 - 18.90	90			NI 200 300 (5)	
3 No. subvertical fractures. Infill of gravel size fragments with a little clay	70.53	x x x	17.10 (7.90)						
Grey fine to medium grained thinly to medium bedded slightly weathered SANDSTONE, very strong, closely to medium fractured. Occasional very closely to medium spaced thin laminae of dark grey siltstone. Discontinuities: 1. Subhorizontal, very closely to medium spaced planar rough and clay lined. 2. Subvertical, closely to widely spaced planar to irregular and rough.		•••••	17.10 (7.90)	18.90 - 21.98				NI 200 400 (5)	
		•••••							
Remarks									Logged by AJQ/TDW
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.									Scale 1:50
									Fig. 32



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level	Coordinates	Date
	As sheet 1		

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	If	
Grey SANDSTONE (As sheet 2)		●●●●●	(7.90 pen)	18.90 - 21.98		99	79	52		NI 200 400 (5) Gas test at 25.00m 2% LEL
				21.98 - 25.00		100	86	69		

BOREHOLE ENDS AT 25.00 m.

62.63

25.00

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
02.02	-	2.70	-	2.70	Water strike
02.02	-	2.70	-	1.20	After 20 mins
02.02	-	5.70	5.70	1.20	End of shift
03.02	-	7.30	6.50	0.60	End of shift
10.02	0800	7.90	7.70	0.60	
10.02	1800	12.80	11.00	1.80	
11.02	0800	12.80	11.00	0.60	
11.02	1800	25.00	11.40	-	

Remarks	Logged by AJQ/TDW
	Scale 1:50
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Fig. 32



Equipment & Methods
Hand excavated inspection pit to 1.20m. Cable tool boring, 150mm diameter to 8.05m. Rotary core drilling, 92mm diameter using Edeco T30, air/mist flush.

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

18193 27029

Carried out for
Department of Transport

Ground Level

88.32 m A.O.D.

Coordinates

8198.16m E

7028.23m N

Date

01.02.93

to 16.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records	
				Depth	Sample			Test
					Type	No.		
TOPSOIL	88.32 88.17		(0.15) 0.15	0.15 - 0.50	B	1		
MADE GROUND (Stiff brown grey sandy clay with a little angular to subangular fine to coarse gravel of brick and siltstone with occasional cobbles of brick)	87.42		(0.75)	0.50 - 1.00	B	2		
			0.90	1.00 - 1.45	U	3	34 blows 0.40m recovery	
				1.50	D	4		
				1.70	D	5		
			(1.80)	2.00 - 2.45	U	-	5 blows No recovery	
Soft to firm green brown v silty sl sandy CLAY, with occ rootlets and organic odour				2.00 - 2.50	B	6		
Medium dense brown subangular to subrounded generally fine to medium GRAVEL of moderately weak to moderately strong sandstone, with some clayey sand	85.62		(2.70)	2.50 - 2.95	U	7	41 blows 0.40m recovery	
			2.70	2.70	W	21		
Stiff grey and dark grey mottled slightly sandy CLAY with some to much fine to coarse angular to subrounded gravel of moderately strong sandstone and occasional carbonaceous mudstone	85.22		(0.40)	3.00	D	8		
			3.10	3.10	D	9		
			(0.80)	3.20 - 3.65	B	10	C N=23 7,8/5,7,6,5	
Dense to very dense grey angular to subrounded fine to coarse GRAVEL of strong to very strong siltstone with some very silty clay, and occasional cobbles	84.42		(2.30)	3.20 - 3.70	B	10		
				3.90	D	11		
				4.20 - 4.45	U	-		
				4.20 - 4.50	B	12	C N=40 100 blows No recovery 9,13/10,10,11,9 K=5x10-6 m/sec	
				4.50 - 4.95	B	13		
Grey highly weathered MUDSTONE, weak to moderately weak, recovered as angular to subangular fine to coarse gravel with a little sand and with some clay to 7.00m.	82.12		(1.85)	5.20	D	14	C 50 11,14/15,21,14 for 10mm	
				5.50 - 5.90				
				5.50 - 6.00	B	15		
Grey thinly to thickly laminated moderately weathered SILTSTONE, very weak to weak with occasional highly weathered thin beds	80.27			6.20	D	16		
				6.50 - 7.00	B	17		
				7.00 - 7.20	B	19	S 50 12,21/50 for 60mm	
				7.00 - 7.50	B	19		
Grey thinly laminated moderately weathered MUDSTONE, weak, extremely to very closely fractured. 9.30m, becoming dark grey and carbonaceous. Discontinuities: 1. Non-intact, randomly orientated, PL and SM	79.32			7.20	D	18		
				7.60 - 8.05	D	20	S N=52 11,12/16,14,12,10	
				8.05				
SILTSTONE (As sheet 2)	78.74		(0.95)	8.00 - 9.00			W TCR SCR RQD IF 100 62 62 N1	
			(0.58)	9.00			100 N1	
			(0.72)	9.00 - 10.50			93 11 9 N1 N1 130 (>25)	

Remarks

1. Chiselling from 3.80 to 3.90m, 30 mins; 4.50 to 4.80m, 15 mins; 4.80 to 5.00m, 15 mins; 5.70 to 5.90m, 30 mins and 7.20 to 7.30m, 15 mins.

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by

AJQ

Scale

1:50

Fig.

33



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level Coordinates Date As sheet 1
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Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	If	
Grey moderately weathered SILTSTONE, very weak to weak, extremely to very closely fractured, with some dark grey fossil plant fragments. Discontinuities; curved smooth polished. (SEATEARTH)	78.02	x x x	(0.72)	9.00 - 10.50		93	11	9		NI/NI/130 (>25) 50/90 (>25) CRF 0.57m
	77.82	y y y	10.30 (0.20) 10.50							
Grey thickly laminated to thinly bedded moderately to slightly weathered, slightly sandy SILTSTONE, moderately weak, very closely to closely fractured. With occasional fossil plants. Discontinuities: 1. Horizontal, planar, smooth with 10mm soft clay infill.	75.52	.	(2.30)	10.50 - 11.40		100	76	13		
Grey fine grained thinly laminated to thinly bedded slightly weathered silty SANDSTONE, strong to very strong. Closely fractured. Discontinuities: 1. 90 deg vertical, uneven, rough (452mm persistence). 2. 0 deg horizontal, planar rough.		.		12.80 - 14.90		97	95	62		
Grey fine to medium grained thinly laminated slightly weathered micaceous SANDSTONE, strong, closely to medium fractured with a little to some dark grey laminations of mudstone exhibiting cross bedding, lode and flame structures and occasional fossil plant fragments.		.	(18.68)	14.90 - 17.90		98	98	70		NI 200 310 (5)
Below 14.90m, with occasional lamiantions. Discontinuities: 1. 0 deg horizontal, planar, smooth with occasional soft clay infill. 2. 70-80 deg subvertical planar, rough (300mm persistence) iron stained.		.		17.90 - 19.30		91	91	60		Gas test at 19.30m 1% LEL
Very thin bed of very strong ironstone.		.								
Very thin bed of very strong ironstone.		.								
80 deg, subvertical slickensided, slightly polished planar fracture, with mineral precipitate on surfaces. Horizontal displacement		.								
Non-intact		.								

Remarks 2. Backfilled with grout on completion. 3. Rising head test carried out at 4.50m.	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 33



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level	Coordinates	Date
	As sheet 1		

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	If	
Non-intact. Very silty clay infill with occasional comminuted sandstone infill. SANDSTONE (As sheet 2) Below 20.50m, with occasional 80 deg incipient fractures.		•••••	19.30 - 20.85			99	82	52	NI 200 310	(5)
		•••••	20.85 - 22.30			100	99	57		
Below 23.85m, with occasional carbonaceous and micaceous laminations		•••••	22.30 - 23.85			98	97	77	NI 270 420 (4)	
		•••••	23.85 - 25.30	(18.68)	100	100	100	71		
Below 27.00m, becoming light grey with occasional thin beds of siltstone.		•••••	25.30 - 26.75			94	94	66	NI 180 260 (5)	
		•••••	26.75 - 28.25			97	69	33	NI	
		•••••	28.25 - 29.80			99	77	52	NI 100 200 (10)	
		•••••	29.80 - 31.30			100	97	31		

Remarks	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 33



SEIZNE 911

Equipment & Methods
As sheet 1

Location No. 7808
Location
M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level
Coordinates
Date
As sheet 1

Description
Reduced Level
Legend
Depth (Thick)
Drilling Records
Mechanical core log
Field Records and Test Results

SANDSTONE (As sheet 3)

Grey thinly to thickly laminated moderately weathered SILTSTONE, moderately weak, closely fractured.
Below 32.30m, becoming highly to moderately weathered.
Discontinuities:
1. Subhorizontal, planar and smooth.
2. 60 deg inclined, planar and smooth.

Becoming dark grey and interlaminated with siltstone, moderately strong to strong.

Medium bed of very strong ironstone. Extremely to very closely fractured. Non-intact.

Grey thinly laminated slightly weathered SILTSTONE, moderately weak to moderately strong, closely fractured, with occasional very thin to thin beds of very strong ironstone.
Discontinuities:
1. 70 deg subvertical, planar, smooth with occasional clay (soft) infill.
2. Subhorizontal, planar and smooth.

BOREHOLE ENDS AT 35.00 m.

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
01.02	-	2.70	-	2.70	Water strike
01.02	-	2.70	-	1.20	After 20 mins
01.02	-	8.05	7.30	5.30	End of boring
15.02	0800	8.00	7.60	2.30	Start of shift
15.02	-	11.70	7.60	-	Water entry
15.02	1800	19.30	9.00	1.30	End of shift
16.02	0800	19.30	9.00	1.18	Start of shift
16.02	1800	35.00	9.00	1.60	End of borehole

Remarks

Logged by

AJQ

Scale

1:50

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.



Soil Mechanics

SE12NE 912

BOREHOLE No. 29

Sheet 1 of 4

18184 26972

M62 (EAST)/M606 LINK ROADS

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample		
					Type	No.	
TOPSOIL (Driller's description)	96.22		(0.20)				
MADE GROUND Grey brown clay with a little angular fine to medium gravel of very weak to weak siltstone.	96.02		0.20	0.20 - 0.50	B	1	
			(0.70)	0.50 - 1.00	B	2	
MADE GROUND (Stiff grey clay with some fine to coarse angular to subangular gravel and cobbles of weak to moderately strong siltstone)	95.32		0.90	1.00 - 1.45	B	3	S N=16 6,8/4,5,4,3
			(0.80)	1.00 - 1.50	B	3	
	94.52		1.70	1.70	D	4	
MADE GROUND (Stiff dark grey mottled grey clay with some fine to medium angular to subangular gravel of weak mudstone and coal. Below about 2.70m, becoming brown with sandstone gravel).			(1.90)	2.00 - 2.45	U	5	91 blows 0.30m recovery
				2.50	D	6	
				2.70	D	7	
				3.00 - 3.50	U	8	71 blows 0.40m recovery
				3.50	D	9	
				3.70	D	10	
Orange brown fine to coarse gravel of strong sandstone.	92.62		3.60	4.00 - 4.45	B	11	C N=29 17,19/5,9,7,8
MADE GROUND (Stiff brown grey very silty clay with angular fine to coarse gravel of strong sandstone and gravel of mudstone)			(1.70)	4.00 - 4.50	U	-	U100 attempted, no penetration after 30 blows
				4.00	U	-	
				4.70	D	12	
				5.00 - 5.45	U	13	81 blows 0.40m recovery
	90.92		5.30	5.50	D	14	
MADE GROUND (Stiff to very stiff grey very silty clay, with much angular fine to medium gravel of weak to very weak mudstone and siltstone).			(1.50)	6.00	D	15	
				6.50 - 6.95	U	16	92 blows 0.40m recovery
Stiff dark brown grey very silty CLAY with occasional fibrous rootlets. (BURIED TOPSOIL)	89.42		6.80	7.00	D	17	
			(0.80)	7.60	D	18	
Very stiff orange brown, blue grey and dark grey mottled very silty CLAY, with a trace of fibrous plant rootlets and fine gravel of coal	88.62		7.60	7.60 - 8.10	U	19	88 blows 0.40m recovery
	88.32		(0.30)	8.10	D	20	
			7.90	8.10	D	20	
				8.50	D	21	
Gravel with some sandy clay			(3.80)	9.00 - 9.45	U	22	C N=33 6,11/7,8,9,9
Very stiff grey mottled orange brown sandy CLAY with some angular to subangular fine to medium gravel of moderately strong sandstone and mudstone.				9.00 - 9.50	B	22	
				10.00	D	23	

Remarks

1. Chiselling from 4.00 to 4.30m, 30 mins; 8.90 to 9.00m, 15 mins and 12.30 to 13.00m, 1 hour.

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics 05.07.93/15.23 (Ver 4.1.27)

Logged by

AJQ

Scale

1:50

Fig. 34



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level Coordinates Date As sheet 1
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Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests				Field Records		
				Depth	Sample		Test			
					Type	No.				
CLAY (As sheet 1) Very sandy clayey gravel	84.52		(3.80)	10.50 - 10.95	U	24		135 blows 0.40m recovery		
				11.00	D	25				
				11.20	W	30				
				11.50	D	26				
Grey highly weathered MUDSTONE weak to very weak. Recovered as angular fine to coarse gravel.	83.14		(1.38)	12.00 - 12.32	D	27	S ₄₉	5,9/15,21,13 for 25mm		
				12.00 - 12.50	B	28				
NI, recovered as clay with a little gravel. Grey slightly to moderately weathered thinly bedded SILTSTONE, very weak to moderately weak, extremely to very closely fractured. (Possibly DISTURBED) Intact	80.92		(2.22)	12.80 - 13.08	D	29	S ₅₀	14,18/21,29 for 50mm		
				13.00 - 13.50	W	TCR	SCR		RQD	If
				13.50 - 14.00	0	100	0		0	
				14.00 - 15.10	0	100	37		18	NI NI 100 (>25)
NI, recovered as gravel. Grey to dark grey highly weathered MUDSTONE, very weak, very closely fractured. (Possibly DISTURBED) No recovery	77.72		(3.20)	15.10 - 16.10	0	100	0	0	NI NI 30 (>25) Gas test at 17.10m, 14 LEL	
				16.10 - 17.10	0	100	18	0		
				17.10 - 17.70	100	0	0	0		
				17.70 - 18.80	100	73	26	0		
Grey to dark grey carbonaceous MUDSTONE, very weak. Recovered as gravelly clay.	77.37		(0.35)					NI		
Grey moderately weathered thinly bedded SILTSTONE, weak to moderately weak very closely fractured with occasional dark grey plant remains. (SEATEARTH)	76.92		(0.45)					NI 130 (>25)		
SILTSTONE (As sheet 3)			(3.20)	18.80 - 20.40	100	94	67	67	NI 90 200 (10)	

Remarks	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 34



Equipment & Methods: As sheet 1
 Location No. 7808
 Location: M62 (EAST)/M606 LINK ROADS

Carried out for: Department of Transport
 Ground Level: As sheet 1
 Coordinates: As sheet 1
 Date: As sheet 1

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results	
				Depth	W	TCR	SCR	RQD	If		
Dark grey thinly bedded moderately to slightly weathered SILTSTONE, weak to moderately strong, closely fractured. Discontinuities, 1. subhorizontal, planar and smooth, with occasional soft clay infill (<10mm). Below 21.70m, occasional thin laminae and thin beds of fine sandstone.	73.72	x x	(3.20)	18.80 - 20.40	100	94	67	67	NI 90 200 (10)	Gas test at 23.10m, 14 LEL	
				20.40 - 21.70	100	96	73	49			
				21.70 - 23.10	100	100	78	66			
				23.10 - 24.60	100	100	95	91			NI 100 300 (10)

BOREHOLE ENDS AT 24.60 m.

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993	-	3.00	3.00	2.90	
22.01	-	3.00	3.00	-	No water observed
23.01	-	3.00	3.00	-	Sealed
23.01	-	10.50	10.50	10.50	Water entry
23.01	-	10.50	10.50	10.50	No rise after 20 mins
29.01	1000	13.00	13.00	7.85	
29.01	1400	17.10	17.10	1.45	
01.02	1035	17.10	17.10	7.88	
01.02	1715	24.60	17.10	9.53	

Remarks: [Blank]

Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics 05.07.93/15.23 (Ver 4.1.27)

Logged by: AJQ
 Scale: 1:50
 Fig. 34



Equipment & Methods
Hand excavated inspection pit to 1.20m. Cable tool boring, 150mm diameter to 11.80m. Rotary core drilling, 92mm diameter using Edeco T30, air/mist flush.

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

18136 26974.

Carried out for
Department of Transport

Ground Level

96.76 m A.O.D.

Coordinates

8141.71m E
6973.31m N

Date

21.01.93
to 03.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
TOPSOIL	96.76 96.61		(0.15) 0.15	0.15 - 0.50	B 1		
MADE GROUND (Very stiff grey brown very silty clay with much angular to subrounded fine to coarse gravel of strong sandstone and moderately strong mudstone) Occasional cobbles of strong sandstone and organic odour.				0.50 - 1.00	B 2	C N=45	7,12/15,9,11,10
			(1.95)	1.00 - 1.45	B 3		
				1.00 - 1.50	B 3		
				1.70	D 4		
MADE GROUND (Firm to stiff very silty clay with subangular gravel of very weak siltstone. Below about 3.50m, with a trace of subrounded fine to coarse gravel of strong sandstone A trace of brick gravel)	94.66		2.10	2.00 - 2.50	U 5		105 blows 0.30m recovery
				2.50	D 6		
				2.70	D 7		
				3.00 - 3.50	U 8		71 blows 0.40m recovery
				3.50	D 9		
			(3.10)	3.80	D 10		
				4.00 - 4.50	U 11		65 blows 0.40m recovery
Stiff dark grey organic very clayey SILT with occasional fibrous matter, diameter <3mm (POSSIBLE BURIED TOPSOIL) Stiff very silty clay with occasional fine gravel of very weak sandstone and coal Orange brown	91.56		5.20	5.00 - 5.50	U 14		120 blows 0.40m recovery
				5.50	D 15		
			(1.90)	6.00	D 16		
				6.50 - 7.00	U 17		111 blows 0.35m recovery
				7.00	D 18		
Stiff yellow brown mottled grey very silty sandy CLAY with some rounded fine to medium gravel of moderately strong to strong sandstone, occasional gravel of weak coal Below about 8.50m, becoming brown	89.66		7.10	7.00	D 18		150 blows 0.35m recovery
				7.50	D 19		
				7.60 - 8.00	U 20		
				8.00	D 21		
			(3.10)	8.50	D 22		
				9.00 - 9.45	D 23	S N=24	4,8/6,6,5,7
			9.00 - 9.50	B 24			

Remarks

1. Chiselling from 1.20 to 1.60m, 30 mins; 10.80 to 11.20m, 15 mins and 11.20 to 11.70m, 1 hour.

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics 05.07.93/15.46 (Var 4.1.27)

Logged by

AJQ

Scale

1:50

Fig. 35



Soil Mechanics

SEIZME 913

BOREHOLE No. 30

Sheet 2 of 5

Equipment & Methods		Location No. 7808		Location		Coordinates		Date	
As sheet 1				M62 (EAST)/M606 LINK ROADS		As sheet 1			
Carried out for		Ground Level		Coordinates		Date			
Department of Transport									
Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records		
				Depth	Sample Type No.	Test			
Very silty CLAY (As sheet 1)	86.56		(3.10) 10.20	10.30 - 10.20	D 25	C 50	8, 11/12, 13, 15, 10 for 25mm		
Stiff grey very silty CLAY with much subangular fine to coarse gravel of weak to strong sandstone	86.16		(0.40) 10.60	10.30 - 10.70 10.30 - 10.80	B 26				
Grey fine to coarse thinly laminated sandstone GRAVEL, moderately weak	85.56		11.20	11.20 - 11.70	B 27		17, 21/50 for 50mm		
Recovered as soft with a little to some fine to medium gravel of mudstone and a little fine to medium gravel of sandstone.	84.96		(0.60) 11.80	11.70 - 11.80	D 28	S (50)			
Grey highly weathered MUDSTONE, very weak extremely closely fractured, recovered as slightly clayey fine to coarse gravel. Fractures: planar and rough to smooth.				11.80 - 12.60	100 97				
Very thin bed of very strong ironstone									
Subangular coarse gravel size fragments of very strong ironstone				12.60 - 14.10		92 28			
Grey thinly laminated highly weathered MUDSTONE and SILTSTONE recovered as soft to firm clay with much angular fine to coarse very weak to weak gravel.			(4.50)		0		NI		
Coarse gravel size fragments of very strong ironstone				14.10 - 15.60		81 23			
Dark grey thinly to thickly laminated moderately weathered slightly carbonaceous MUDSTONE, weak to moderately weak. Recovered as 10-30mm tabular gravel.	80.46		16.30 (0.25)						
Grey thinly to thickly laminated moderately weathered SILTSTONE, weak very closely fractured with some dark grey fossil plant fragments. Discontinuities: Curved and smooth polished. (SEATEARTH)	80.21		16.55 (0.50)	15.80 - 17.30	97	17	NI/NI/30 (>25)		
Completely weathered thin bed	79.71		17.05				NI NI 90 (>25)		
Grey sandy moderately to slightly weathered SILTSTONE, moderately weak to moderately strong. Closely fractured. Discontinuities: 1. Subhorizontal, planar and smooth with occasional soft clay infill (<5mm).			(2.67)	17.30 - 18.80	100 92	51			
							NI 60 90 (17)		
				18.80 - 20.30		69 68	16		
SANDSTONE (As sheet 2)	77.04		19.72						
Remarks								Logged by	
2. Chiselling from 10.80 to 11.20m, 15 mins and 11.20 to 11.70m, 1 hour.								AJQ	
3. Water sample taken at 20.30m.								Scale	
Notes:								1:50	
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics								Fig.	
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.								35	
								16.07.93/10.34 (Ver 4.1.27)	



Soil Mechanics

BOREHOLE No. 30

SEIZURE 913

Sheet 3 of 5

Equipment & Methods As sheet 1	Location No. 7808
	Location M62 (EAST)/M606 LINK ROADS

Carried out for Department of Transport	Ground Level	Coordinates	Date
	As sheet 1		

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	M	TCR	SCR	RQD	If	
<p>Light grey fine to medium grained thinly laminated slightly weathered micaceous SANDSTONE, very strong, closely to medium fractured, with cross bedding, lode and flame structures and some dark grey laminations</p> <p>55 deg intersecting discontinuities</p> <p>Below 26.00m, discontinuities becoming very closely to closely spaced predominantly 80 deg, planar and parallel with occasional clayey sand infill. Occasional fractures are incipient exhibiting fresh surfaces.</p> <p>Below 29.30m, occasional laminations. Discontinuities: 1. Horizontal, planar, smooth. 2. 80-90 deg, planar slightly uneven with occasional infill (30-50mm) of clay and sandstone gravel.</p> <p>55 deg intersecting discontinuities</p>			18.80 - 20.30			89	68	16		
			20.30 - 21.80			99	87	33		
			21.80 - 23.30			98	76	63		
			23.30 - 24.80			100	79	60		
			(11.78)		100					N1 140 240 (7)
			24.80 - 26.30			97	72	53		
			26.30 - 27.80			99	32	-		
			27.80 - 29.30			95	35	9		N1 70 140 (14)
		29.30 - 30.05			83	35	17			

Remarks Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Logged by AJQ
	Scale 1:50
	Fig. 35
	08.07.93/15.47 (Ver 4.1.27)



Equipment & Methods
As sheet 1

Location No. 7808
Location
M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level
Coordinates
Date
As sheet 1

Description
Reduced Level
Legend
Depth (Thick)
Drilling Records
Mechanical core log
Field Records and Test Results

SANDSTONE (As sheet 3)
65.26
(11.78)
30.05 - 31.50
85 59 24
NI 70 140 (14)

Light grey fine to medium grained slightly weathered SANDSTONE, very strong, closely fractured with occasional dark grey laminations of coal and carbonaceous mudstone.
65.26
31.50
31.50 - 33.00
100 99 87 63

Below 34.10m, with occasional sitstone laminations.
Discontinuities: 1. horizontal, planar and smooth. 2. 80 - 90 deg, planar slightly uneven with occasional infill (30 - 50mm) of clay and gravel of sandstone.
Non-intact, recovered as gravel
65.26
(3.55 pen)
33.00 - 34.10
100 57 22
NI 95 200 (11)
34.10 - 35.05
99 62 28
Gas test at 35.05m 1% LEL

BOREHOLE ENDS AT 35.05 m.

61.71
35.05

Water Level Observations During Boring					
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
21.01	-	9.50	9.00	-	End of shift
22.01	-	9.50	9.00	9.40	Overnight seepage, possibly surface water
22.01	-	11.80	10.50	-	No water observed
02.02	0800	11.80	11.80	9.53	Sealed.
02.02	-	20.30	15.80	-	Start of shift
02.02	1800	26.30	15.80	9.35	Water entry
03.02	0800	26.30	15.80	9.40	End of shift
03.02	1800	35.05	15.80	-	Start of shift

Remarks
Notes:
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics 05.07.93/19.46 (Ver 4.1.27)
Logged by
AJQ
Scale
1:50
Fig. 35



Soil Mechanics

SE12NE 944

BOREHOLE No. 31

Sheet 1 of 4

Equipment & Methods
 Cable tool boring, 150mm diameter 10.30m. Cased to 8.50m.
 Rotary core drilling, 92mm diameter using Edeco T30,
 air/mist flush.

Location No. 7808
Location 18104 26944
 M62 (EAST)/M606 LINK ROADS

Carried out for
 Department of Transport

Ground Level 97.86 m A.O.D.
Coordinates 8110.02m E
 6941.68m N
Date 25.01.93
 to 09.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
TOPSOIL	97.86 97.76		(0.10) 0.10	0.00 - 0.50	B 1		
MADE GROUND (Stiff grey brown slightly sandy clay with some angular to subrounded fine to coarse gravel of moderately strong sandstone and weak to moderately strong mudstone and occasional fibrous plant fragments)			(1.60)	0.50 - 1.00	B 2		
				1.20	U -		
				1.20	B 3		
				1.20 - 1.70			20 blows No penetration 7.20 for no penetration
MADE GROUND (Firm to stiff brown mottled orange brown sandy clay with a little angular to subangular fine to coarse gravel of sandstone and brick, and occasional fine gravel of very weak mudstone)	96.16		1.70	1.90	D 4		
				2.00 - 2.50	U -		
			(0.90)	2.00 - 2.50	D 5		81 blows No recovery
				2.50 - 2.70			
	95.26		2.60	2.50 - 3.00	B 6		16.21/50 for 50mm k=2x10 ⁻⁵ m/sec
MADE GROUND (Stiff brown mottled grey sandy clay with a little angular fine to coarse gravel of sandstone and mudstone). 2.60 - 3.00m, occasional coarse gravel to cobble size fragments of brick			(1.10)	3.00 - 3.50	U 7		
				3.50	D 8		
				3.70	D 9		
	94.16		3.70	4.00 - 4.50	U 10		100 blows 0.30m recovery
				4.50	D 11		
				4.70	D 12		
Stiff orange brown mottled grey slightly sandy CLAY with a little to some angular fine to coarse gravel of strong sandstone			(2.40)	5.00 - 5.30			
				5.00 - 5.50	B 13		7,12/15,16,19 for 55mm
				6.10	D 14		
	91.76		6.10	6.50 - 7.00	U 15		
				7.00	D 16		110 blows 0.40m recovery
				7.50	D 17		
Very stiff dark brown sandy CLAY with some to much angular fine to coarse gravel of strong sandstone and weak carbonaceous mudstone			(3.00)	8.00 - 8.50	U 18		
				8.50	D 19		145 blows 0.40m recovery
Orange angular fine to coarse gravel of generally strong sandstone				9.00	D 20		
Very silty clay with some gravel				9.50 - 9.90	D 21		
	88.76		9.10	9.50 - 10.00	B 22		
Grey stained orange highly weathered MUDSTONE, very weak to weak. Recovered as angular fine to medium gravel			(1.20)				
							7,9/13,14,17,6 for 10mm

Remarks
 1. Chiselling from 1.20 to 1.30m, 15 mins; 5.30 to 5.70m, 15 mins;
 6.00 to 6.20m, 15 mins; 7.70 to 7.80m, 30 mins and 9.60 to 10.20m,
 1 hour.

Notes:
 Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
 All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by
 AJQ/TDM
 Scale
 1:50
 Fig.
 36



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level Coordinates Date As sheet 1
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Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
MUDSTONE (As sheet 1) NI. Grey and brown clay	87.56		(1.20) 10.30	10.20 - 10.30	D 23 W	S (60) TCR SCR ROD	17,21/60 for 60mm
Grey stained orangish brown highly weathered MUDSTONE, very weak, extremely closely fractured. Discontinuities: 1. Non-intact, randomly orientated, planar and smooth with orange and purple staining.			(1.00) 11.30	10.30 - 11.40		100 0 0	NI
	86.56						
				11.40 - 12.80		93 0 0	
Grey highly weathered fissile MUDSTONE, very weak. Predominantly non-intact. Recovered as clayey gravel and cobble size fragments. (POSSIBLY DISTURBED)			(5.70)	12.80 - 14.30		80 5 0	NI NI 40 (>25)
				14.30 - 15.70	100	86 9 0	
Brown, locally black moderately weathered MUDSTONE, very weak, extremely closely fractured. Occasional gravel size fossilised organic debris. (SEATEARTH) Discontinuities: 1. Non-intact, randomly orientated, curved, smooth and polished.				15.70 - 17.00		100 5 0	
	80.86		17.00				NI NI 60 (>25)
			(0.60)				
	80.26		17.60				
				17.00 - 18.55		97 21 0	NI 100 300 (10)
Grey thinly bedded moderately weathered SILTSTONE, weak to strong, closely fractured. Below 18.55m, closely spaced highly weathered non-intact very thin to medium beds, recovered as slightly clayey gravel. Discontinuities: 1. Subhorizontal, planar and smooth. 2. Subvertical, irregular and smooth.			(2.00)				
				18.55 - 20.10		97 40 23	
Interbedded SILTSTONE and SANDSTONE (As sheet 3)	78.26		19.60 (0.70)				NI 70 (>25)

Remarks 2. Falling head test carried out at 2.70m.	Logged by AJQ/TDW
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 36



Equipment & Methods

As sheet 1

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

Carried out for

Department of Transport

Ground Level

Coordinates

Date

As sheet 1

Description

Reduced Level

Legend

Depth (Thick)

Drilling Records

Mechanical core log

Field Records and Test Results

Depth

W

TCR

SCR

RQD

If

Dark grey and grey very thinly interbedded slightly weathered SILTSTONE and SANDSTONE, weak to strong. Very closely to closely fractured.

Discontinuities:

- 1. Subhorizontal, planar and smooth.
- 2. Subvertical, irregular and smooth.

Subvertical fracture

Grey to dark grey thinly bedded slightly weathered SILTSTONE, weak to moderately strong. Very closely to closely fractured.

Discontinuities:

- 1. Subhorizontal, planar and smooth.
- 2. Subvertical, irregular and smooth.

Grey and dark grey very thinly interbedded slightly weathered SANDSTONE and SILTSTONE, very strong. Closely fractured.

Discontinuities:

- 1. Subhorizontal, planar and smooth.
- 2. Subvertical, irregular and rough to smooth

BOREHOLE ENDS AT 21.65 m.

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
25.01	-	0.50	-	0.50	Water entry
25.01	-	4.50	-	-	Sealed
26.01	-	8.50	-	-	Start of shift
26.01	-	9.50	-	9.50	Water strike
26.01	-	9.50	-	9.50	After 20 mins
26.01	-	10.30	8.50	7.60	
08.02	1400	10.30	10.00	5.40	
08.02	1800	21.65	10.00	10.40	
09.02	0815	21.65	10.00	10.48	

Remarks

Logged by

AJQ/TDM

Scale

1:50

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

05.07.93/15.56 (Ver 4.1.27)

Fig. 36



Equipment & Methods
Hand excavated inspection pit to 1.20m. Cable tool boring, 150mm diameter to 11.60m. Rotary core drilling, 92mm diameter using Edeco T30, air/mist flush.

Location No. 7808
Location 18093 26962
M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level 97.63 m A.O.D.
Coordinates 8100.25m E 6960.15m N
Date 27.01.93 to 08.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
TOPSOIL	97.63 97.53		(0.10) 0.10	0.00 - 0.50	B 1		
MADE GROUND (Stiff grey brown clay with some angular to rounded fine to coarse gravel of brick, siltstone and sandstone and a trace of plant fragments. Below about 1.20m, locally slightly sandy with occasional cobbles of strong sandstone).			(1.70)	0.50 - 1.00	B 2		
				1.20 - 1.65		C N=19	9,12/8,4,3,4
				1.20 - 1.70	B 3		
MADE GROUND (Firm to stiff orange brown and grey mottled slightly sandy clay with a little angular to subangular fine to medium gravel of weak to moderately strong brick, siltstone and sandstone. Below about 2.70m, with abundant fibrous rootlets).	95.83		1.80	2.00 - 1.90	D 4	C 50	10,18/7,43 for 50mm
				2.00 - 2.30			
			(1.40)	2.00 - 2.50	B 5		
MADE GROUND (Stiff grey very silty clay with a little generally fine to medium gravel of very weak to weak siltstone and moderately strong sandstone and a trace of fine gravel of brick. Below about 3.60m, with some angular cobbles of strong sandstone).				2.70	D 6		
				2.70	W 30		
			(1.40)	3.00 - 3.50	U 7		61 blows 0.30m recovery
MADE GROUND (Stiff grey very silty clay with a little generally fine to medium gravel of very weak to weak siltstone and moderately strong sandstone and a trace of fine gravel of brick. Below about 3.60m, with some angular cobbles of strong sandstone).	94.43		3.20	3.50	D 8		
				3.70	D 9		
			(1.20)	4.00 - 4.45		C N=42	12,17/18,9,8,7
MADE GROUND (Stiff brown mottled grey and orange brown very silty clay with some angular to subangular fine to medium gravel of very weak to moderately weak sandstone, siltstone and mudstone).				4.00 - 4.50	B 10		
	93.23		4.40	4.80	D 11		
			(0.90)	5.00 - 5.50	U 12		145 blows 0.30m recovery
Very stiff brown very silty CLAY with a little angular fine to medium gravel of coal and a trace of brick and fibrous rootlets. (POSSIBLE BURIED TOPSOIL)	92.33		5.30	5.50	D 13		
				5.70	D 14		
			(0.80)	6.10	D 15		
Firm orange brown CLAY with occasional fibrous rootlet.	91.53		6.10	6.10	D 15		
				6.20 - 6.70	U 16		110 blows 0.40m recovery
			(0.40)	6.70	D 17		
Brown and grey angular fine to coarse GRAVEL of strong sandstone and weak mudstone with some sandy clay.	91.13		6.50	6.70	D 17		
				7.30	D 18		
			(1.20)	7.60	D 19		
Very stiff brown mottled grey slightly sandy CLAY with a little fine orange brown gravel of very weak mudstone and infilled rootlets	89.93		7.70	7.70 - 8.20	U 20		120 blows 0.40m recovery
				8.20	D 21		
			(0.70)	8.40	W 29		
Grey thinly laminated highly weathered MUDSTONE, recovered as fine to coarse gravel of very weak to weak mudstone, with some clay.	89.23		8.40	8.50	D 22		
				9.20 - 9.65	D 23	S N=49	7,8/11,12,13,13 K=2x10 ⁻⁶ m/sec
			(2.00)	9.20 - 9.70	B 24		

Remarks
1. Chiselling from 2.30 to 2.25m, 15 mins and 3.70 to 4.40m, 1 hour 30 mins.

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by
AJQ
Scale
1:50
Fig.
37



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level Coordinates Date As sheet 1
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Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type	Sample No.	
MUDSTONE (As sheet 1)	87.23		(2.00)	10.40	D	25	
Grey stained brown highly weathered very silty MUDSTONE, weak to very weak recovered as angular fine to coarse. Below about 11.30m, very weak to moderately weak			(1.20)	10.70 - 11.10			S 52
				10.70 - 11.20	B	27	
Grey thinly laminated highly weathered MUDSTONE, recovered as very silty clay, with much angular fine to medium gravel of very weak to weak siltstone and occasional ironstone nodules. 11.75-12.20m and 12.60-12.00m, occasional gravel of very strong ironstone.	86.03		(2.00)	11.30 - 11.60	D	28	S 50
				11.60 - 11.90			W 100, TCR 83, SCR -, RQD -, If
Grey and dark grey thinly laminated highly weathered SILSTONE and MUDSTONE, weak recovered as fine to coarse clayey gravel. Cobble of very strong ironstone recovered	84.03	x x x	(1.40)	11.90 - 12.40		92	-
				12.40 - 13.60	0	75	-
Dark grey thinly laminated moderately weathered SILSTONE, very weak to weak, extremely closely fractured. Discontinuities: Non-intact, randomly orientated, planar and smooth Recovered as soft to firm grey clay with some siltstone gravel	82.63	x x x	(0.50)	13.60 - 14.35	100	60	-
				14.35 - 15.00	0	49	-
Grey brown thinly laminated highly weathered SILSTONE, recovered as fine to coarse gravel of weak slightly clayey siltstone, with some dark grey fossil plant remains (SEATEARTH)	82.13	x x x	(1.00)	15.00 - 15.50		100	100
				15.50 - 16.50		76	-
Grey very thinly to thinly bedded moderately to slightly weathered in parts sandy SILSTONE, moderately weak to moderately strong. Closely fractured. 18.82-19.12m, non-intact due to extremely closely fractures. 1 No. Vert. PL RO fracture with up to 30mm of comminuted siltstone. Discontinuities: 1. 0-10 deg Horz. PL, RO with occ 1-2mm clay infill. 2. 35-45 deg inclined PL, RO intersecting. 3. 85-90 deg Vert. PL, RO.	81.13	x x x	(3.00)	15.50 - 16.50			NI 120 (>25)
				16.50 - 18.00	100	89	71
SILTSTONE/SANDSTONE (As sheet 3)	78.13	x x x	(2.35)	18.00 - 19.50		100	71
				19.50 - 21.00		85	67

Remarks 2. Chiselling from 10.70 to 11.30m, 1 hour. 3. Falling head test carried out at 9.20m.	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 37



SEIZNE 915

Equipment & Methods

As sheet 1

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level

Coordinates

Date

As sheet 1

Description

Reduced Level

Legend

Depth (Thick)

Drilling Records

Mechanical core log

Field Records and Test Results

Depth

M

TCR

SCR

RQD

If

Grey to dark grey thinly to medium interbedded slightly weathered SILTSTONE and SANDSTONE, strong. Closely fractured. Discontinuities:
1. Subhorizontal planar and smooth.
2. Subvertical, irregular and smooth.

x x x
x x x
x x x
x x x
x x x
x x x
x x x
x x x

(2.35)

19.50 - 21.00

85

67

25

NI
90
130
(11)

Grey and light grey fine to medium grained thinly laminated slightly weathered SANDSTONE, strong, closely fractured exhibiting lode and flame structures with occasional sandstone nodules

75.78

x x x

21.85

21.00 - 22.50

97

70

59

(0.65 pen)

30
70
160
(14)

BOREHOLE ENDS AT 22.50 m.

75.13

•••••
•••••
•••••

22.50

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
27.01	-	2.40	-	2.40	Water strike
27.01	-	2.40	-	2.40	After 20 mins
27.01	-	5.40	-	8.40	Water strike
27.01	-	8.40	-	7.10	After 20 mins
27.01	-	9.20	7.00	8.00	End of shift
28.01	-	9.20	7.00	7.60	Start of shift
28.01	-	11.60	10.50	8.30	
07.02	0800	11.60	11.30	4.82	Start of shift
07.02	-	22.50	16.00	11.10	End of borehole

Remarks

Logged by

AJQ

Scale

1:50

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

05.07.93/16.16 (Ver 4.1.27)

Fig. 37

Soil Mechanics

SEIZNE 915

BOREHOLE No. 32

Sheet 4 of 4

Location No. 7808
Location M62 (EAST) / M606 LINK ROADS

Type of installation Slotted standpipe

Date of installation 8.2.93

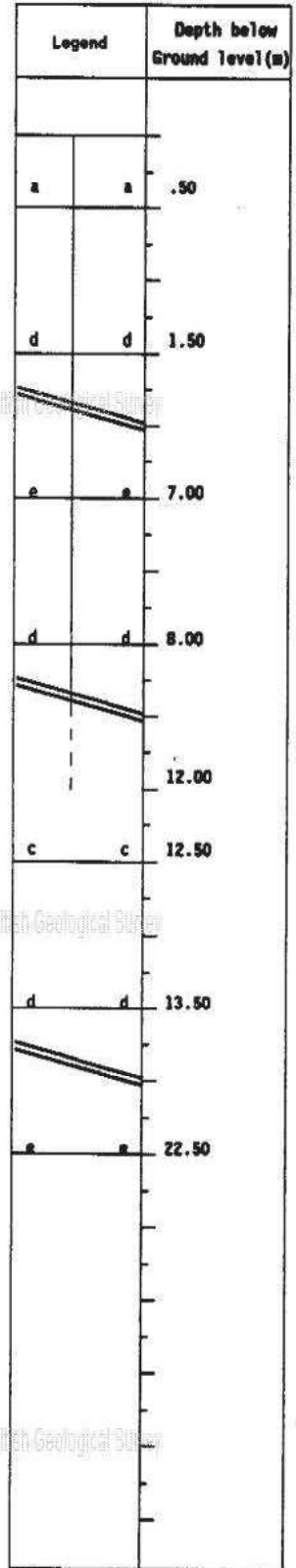
Carried out for Department of Transport

Internal diameter of tubing 19 mm

Length of filter 4500 mm

Diameter of filter 120 mm

Depth (m)		SUMMARY OF INSTALLATION
From	To	
		Surface protection : Stopcock cover
0.00	.50	Concrete
.50	1.50	Bentonite seal
1.50	7.00	Bentonite/Cement Grout
7.00	8.00	Bentonite seal
8.50	12.00	Slotted section
8.00	12.50	Gravel
12.50	13.50	Bentonite seal
13.50	22.50	Bentonite/Cement Grout



key

- a Concrete
- b Sand filter
- c Gravel filter
- d Bentonite seal
- e Bentonite/cement grout
- f Backfill

Remarks

1. Ground level and coordinates as sheet 1

DETAILS OF INSTRUMENTS



Equipment & Methods
Cable tool boring, 150mm diameter to 9.97m. Cased to 8.50m
Rotary core drilling, 92mm diameter using Edeco T30,
air/mist flush.

Location No. 7808
Location

18081 26986.

M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level
98.11 m A.O.D.

Coordinates
8086.55m E
6983.34m N

Date
29.01.93
to 06.02.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests				Field Records
				Depth	Sample Type	Sample No.	Test	
TOPSOIL	98.11 98.01		(0.10) 0.10	0.00 - 0.50	B	1		
MADE GROUND (Brown grey slightly sandy clay with some to much angular fine to coarse gravel of very weak to weak mudstone and siltstone and occasional plant fragments and cobbles of strong sandstone).			(1.60)	0.50 - 1.00	B	2		
				1.20 - 1.70	U	3	41 blows 0.40m recovery	
	96.41		1.70	1.70	D	4		
MADE GROUND (Firm to stiff dark grey slightly sandy clay with some angular fine to coarse gravel of weak siltstone, strong sandstone and brick).			(1.60)	2.00	D	5		
				2.20 - 2.70	U	6	57 blows 0.40m recovery	
				2.70	D	7		
MADE GROUND (Firm to stiff brown sandy clay with a little angular fine to medium gravel of very weak to weak siltstone and sandstone and rare fibrous plant rootlets).				3.00	D	8		
	94.81		3.30	3.20 - 3.70	U	9	41 blows 0.40m recovery	
			(1.20)	3.70	D	10		
Firm to stiff dark grey organic very silty CLAY with occasional fibrous rootlets and organic odour. (BURIED TOPSOIL)				4.00	D	11		
	93.61		4.50	4.20 - 4.70	U	12	60 blows 0.40m recovery	
Firm orange brown slightly sandy CLAY with some angular to subangular fine to coarse gravel of very strong sandstone and gravel size pockets of sand.			(0.60)	4.70	D	13		
	93.01		5.10	5.10	D	14		
			(0.70)	5.20 - 5.40	U	-	70 blows No recovery	
				5.40	D	15		
	92.31		5.80	5.50 - 6.00	U	16	131 blows 0.40m recovery	
				6.00	D	17		
Stiff orange brown and grey mottled slightly sandy CLAY with some angular fine to medium gravel of weak mudstone and occasional infilled rootlets tracks.			(1.55)	6.70	D	18		
				7.00 - 7.35	U	19	150 blows 0.25m recovery	
	90.76		7.35	7.35	D	20		
			(1.15)	8.00	D	21		
Grey thinly laminated highly weathered MUDSTONE, recovered as brown stained red brown angular fine to coarse gravel of very weak to weak mudstone.				8.50 - 8.95	D	22	N-47 7,7/8,12,12,15	
	89.61		8.50	8.50 - 9.00	B	23		
Grey highly weathered MUDSTONE, extremely closely fractured. Discontinuities; planar and rough to smooth.			(1.47)					
				9.00 - 10.50				
SILTSTONE (As sheet 2)	88.14		9.97					

Remarks
1. Chiselling from 5.40 to 5.50m, 30 mins and 9.20 to 9.60m, 1 hour.

Notes:
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column. 05.07.93/16.22 (Ver 4.1.27)

Logged by
AJQ
Scale
1:50
Fig. 38



Equipment & Methods
As sheet 1

Location No. 7808
Location
M62 (EAST)/M606 LINK ROADS

Carried out for
Department of Transport

Ground Level
Coordinates
Date
As sheet 1

Description

Reduced Level
Legend
Depth (Thick)
Drilling Records
Mechanical core log
Field Records and Test Results

SANDSTONE (As sheet 2)
Discontinuities:
1. 30 deg inclined, parallel smooth, planar.
2. 70 deg inclined, parallel smooth, planar.
3. 0 deg horizontal planar, smooth with occasional 15mm infill of comminuted sandstone.
4. 19.63-19.86m, inclined incipient parallel undulose rough with 50mm infill.

77.51
•••••
(1.50 pen)
20.60
19.10 - 20.60
100
93
83
73
W1
80
210
Gas test at 20.60m 0% LEL (12)

BOREHOLE ENDS AT 20.60 m.

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993 29.01	-	10.00	8.50	-	No water observed.
06.02	0800	9.00	9.00	7.10	Start of shift
06.02	-	13.10	9.00	13.10	Water entry
06.02	-	13.10	9.00	2.20	After 30 mins
06.02	1800	20.60	14.00	9.65	End of borehole

Remarks
Notes:
Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics 05.07.93/16.22 (Ver 4.1.27)
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by
AJQ
Scale
1:50
Fig. 38



Soil Mechanics

SEIZNE 927

BOREHOLE No. 44

Sheet 1 of 4

Equipment & Methods
 Cable tool boring, 150mm diameter, to 11.80m. Rotary coring, 92mm diameter, using an Edeco T30, with air/mist as flush.

Location No. 7808

Location M62 (EAST)/M606 LINK ROADS

18020 27081

Carried out for
Department of Transport

Ground Level
98.95 m A.O.D.

Coordinates
8022.68m E
7081.11m N

Date
08.04.93

Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
Soft to firm silty CLAY with some rootlets. (TOPSOIL)	98.95		(0.35)	0.35	D 1		
	98.60		0.35	0.50	D 2		
MADE GROUND (Firm to stiff brown mottled orange brown and grey very silty clay with a little to some subangular to subrounded fine to coarse gravel of mudstone).				1.00 - 1.45	U 3		75 blows 0.35m recovery
				1.50	D 4		
			(2.55)	1.75	D 5		
				2.00 - 2.45	U 6		89 blows 0.40m recovery
				2.50	D 7		
Slightly sandy with occasional gravel of coal. MADE GROUND (Stiff brown mottled light grey and dark grey very silty clay with a little to some fine to coarse gravel of mudstone, sandstone and coal). Below 3.10m, with much gravel.	96.05		2.90	2.75	D 8		
			(0.80)	3.00 - 3.10	D 9	C N-31	U100 attempted, poor penetration after 40 blows 15,16/6,8,10,7
				3.10 - 3.55	B 10		
				3.10 - 3.60	D 11		
Firm orange brown mottled grey sandy CLAY. Foreman reports occasional sandstone cobbles. Very stiff brown mottled grey slightly sandy CLAY with some subangular fine to coarse gravel of mudstone and siltstone and occasional dark grey carbonaceous pockets (<10mm size). Below about 4.80m, with occasional orange brown mottling.	95.25		(0.40)	3.70	D 12		
			94.85	4.10	D 13		150 blows 0.30m recovery
				4.20 - 4.65	U 14		
				4.70	D 15		
			(1.90)	4.95	D 16	S N-40	5,6/9,10,10,11
				5.20 - 5.65	B 17		
				5.20 - 5.70	D 18		
Grey and brown mottled completely weathered MUDSTONE, recovered as very stiff clay with some lithorelicts of very weak mudstone (<6mm size).	92.95		6.00	6.00	D 19		Poor penetration after 150 blows 0.25m recovery
			(0.50)	6.20 - 6.50	U 20		
Grey with some orange brown staining highly weathered MUDSTONE, recovered as angular fine to coarse gravel of very weak to weak mudstone.	92.45		6.50	6.50	D 21		
				7.00	D 22	S N-42	4,5/9,10,11,12
				7.20 - 7.65	B 23		
				7.20 - 7.70	D 24		
			(4.20)	8.00	D 25	S N-31	5,6/7,7,8,9
				8.20 - 8.65	B 26		
				8.20 - 8.70	D 27		
				9.00	D 28	S N-32	7,5/6,8,9,9
				9.20 - 9.65	B 29		
				9.20 - 9.70	D 30		

Remarks

1. Chiselling from 3.10 to 3.70m for 0.5 hours, 11.40 to 11.80m for 0.5 hours.

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics
All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

Logged by

AJQ

Scale

1:50

Fig. 51



Equipment & Methods As sheet 1	Location No. 7808 Location M62 (EAST)/M606 LINK ROADS
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Carried out for Department of Transport	Ground Level	Coordinates As sheet 1	Date
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Description	Reduced Level	Legend	Depth (Thick)	Samples/Tests				Field Records
				Depth	Sample		Test	
					Type	No.		
MUDSTONE (As sheet 1)			(4.20)	10.30	W	36		150 blows
Dark grey thinly laminated carbonaceous highly weathered MUDSTONE, recovered as very weak to weak gravel.	88.25		10.70	U	31			
			(0.40)	D	32			
Grey brown highly weathered, locally sandy SILTSTONE, very weak to weak extremely closely fractured with much dark grey fossil plant remains. Discontinuities, curved, smooth, polished. (SEATEARTH) 11.80-12.00m, Core loss. 12.40-13.00m. Grey stained brown siltstone. Recovered as gravel with a little clay.	87.85	x x x	11.10	D	33	S	9,15/16,21,13 for 25mm	
			(0.70)	D	34			
Grey highly weathered MUDSTONE, recovered as clay with some mudstone gravel.	87.15	x x x	11.80					
			(0.60)					
Grey thin bedded moderately weathered SILTSTONE, strong, very closely fractured. Discontinuities: 1. Subhorizontal, planar, rough with a little clay infill. 2. Subvertical, planar to irregular and rough. 14.90m, Vertical fracture.	86.55	x x x	12.40					
			(2.10)	12.70 - 14.20	100	100	43	33
Dark grey very thinly bedded slightly weathered SILTSTONE, moderately strong to strong, very closely to closely fractured. Occasional thick laminae of sandstone. Discontinuities: 1. Subhorizontal, planar and smooth. 2. Subvertical, planar to irregular and smooth. 17.30-17.40m, 17.45-17.60m, subvertical fracture.	84.45	x x x	14.50					
			(1.30)	14.20 - 16.20	100	95	40	24
Grey and dark grey very thinly interbedded slightly weathered SANDSTONE and SILTSTONE, strong closely fractured. Discontinuities: 1. Subhorizontal, irregular rough occasionally clay lined. 2. Subvertical irregular and rough, occasionally clay lined.	83.15	x x x	15.80					
			(2.55)	16.20 - 19.20	100	97	58	42
Vertical fracture	80.60	x x x	18.35					
			(13.15)	19.20 - 22.20	100	100	79	60
SANDSTONE (As sheet 3) Intersecting subvertical and vertical fractures.								

Remarks 2. Backfilled with grout on completion.	Logged by AJQ
Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Scale 1:50
	Fig. 51



Soil Mechanics

SEIZNE 927

BOREHOLE No. 44

Sheet 3 of 4

Equipment & Methods As sheet 1	Location No. 7808
	Location M62 (EAST)/M606 LINK ROADS

Carried out for Department of Transport	Ground Level	Coordinates	Date
	As sheet 1		

Description	Reduced Level	Legend	Depth (Thick)	Drilling Records		Mechanical core log				Field Records and Test Results
				Depth	W	TCR	SCR	RQD	IF	
Clay lined horizontal fracture Vertical fracture. Clay lined horizontal fracture. Very weak micaceous sandstone. Very weak micaceous sandstone. NI, recovered as clay with some gravel. Clay lined horizontal fracture Clay lined fracture Clay infill on subvertical and horizontal fractures. Clay lined horizontal fractures.			19.20 - 22.20	100	100	79	60			
			22.20 - 23.70	100	77	62	55			
			23.70 - 25.00	100	100	85	72			
			25.00 - 25.50	100	90	80	62		NI 180 400 (6)	
			25.50 - 28.00	100	100	72	48			
			28.00 - 30.60	100	96	73	37			

Remarks Notes: Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.	Logged by AJQ
	Scale 1:50
	Fig. 51



Equipment & Methods

As sheet 1

Location No. 7808

Location

M62 (EAST)/M606 LINK ROADS

Carried out for

Department of Transport

Ground Level

Coordinates

Date

As sheet 1

Description

Reduced Level

Legend

Depth (Thick)

Drilling Records

Mechanical core log

Field Records and Test Results

SANDSTONE (As sheet 3)

Clay lined horizontal fracture.

Grey thinly laminated slightly weathered SILTSTONE, moderately strong to strong, very closely to closely fractured.

Vertical fracture

Grey thinly laminated siltstone.

Discontinuities:

1. Subhorizontal, planar and smooth.

2. Subvertical, planar, rough to smooth with occasional clay lining. Below 32.50m, occasional thin laminae of sandstone.

Clay lined fractures.

NI, recovered as gravel with a little clay.

NI, recovered as gravel

Dark grey thinly laminated slightly weathered SILTSTONE, very weak to moderately strong, extremely closely to closely fractured.

Discontinuities:

1. Subvertical, planar and smooth with occasional clay infill.

2. Subhorizontal, irregular and smooth. 3. Non intact, randomly orientated, planar to irregular, smooth with a little clay infill.

NI, recovered as gravel with a little clay.

BOREHOLE ENDS AT 35.20 m.

Water Level Observations During Boring

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth to Water (m)	Remarks
1993					
08.01	0800	0.00	0.00	-	Start of shift
08.01	-	10.30	-	10.30	Water entry
08.01	1800	11.80	9.00	10.80	End of borehole
10.02	0800	11.80	11.80	9.37	
10.02	1800	28.00	12.00	10.99	
11.02	0800	28.00	12.00	11.60	
11.02	1800	35.20	12.00	11.22	

Remarks

Logged by

AJQ

Scale

1:50

Notes:

Materials are described in accordance with Appendices. For explanation of symbols and abbreviations see Fig. 1. (c) Soil Mechanics All depths and reduced levels in metres. Thicknesses given in brackets in depth column.

08.07.93/13.43 (Ver 4.1.27)

Fig. 51

Green 1878, Geology of the Yorkshire Coalfield. *Mem. Geol. Surv.*
 GEOLOGY OF THE YORKSHIRE COALFIELD.

About Low Moor we give a section from an article by Mr. E. S. George in the Transactions of the P. and L. S. of Leeds, Vol. I., Part I.

	(30.) Low Moor Section.	
	Thickness.	Total.
	ft. in.	ft. in.
Sandstone, Oakenshaw Rock. - - - - -	24 0	
Measures containing some thin Coal Bands - - - - -	103 6	
CROW COAL - - - - -	1 6	129 0
Measures - - - - -	27 6	
BLACK BED IRONSTONE - - - - -	4 6	
BLACK BED COAL - - - - -	2 10	163 10
Measures - - - - -	27 6	
Sandstone, Thick Stone. - - - - -	27 0	
Measures - - - - -	63 1	
BETTER BED COAL - - - - -	2 3	283 8

This section will serve to connect what we have already given with those that are yet to follow, and as far as it extends upwards from the Better Bed coal, is a typical section of the district.

The Black Shale containing the ironstone immediately overlies the coal; the Black Bed Coal itself has nearly attained its greatest thickness.

The Better Bed Coal is 2 ft. 3 in. thick, which is above the average.

The next group of sections is obtained from the sinkings of the Engine Pit, No. 6 Pit, and No. 2 Pit, Hunsworth, and a Boring at Westgate Hill, Tong.

SG 12 NE *1234* *(SE 18820 26778)*

	(31.) Engine Pit, Hunsworth.		(32.) No. 6 Pit, Hunsworth.	
	Thickness.	Total.	Thickness.	Total.
	ft. in.	ft. in.	ft. in.	ft. in.
Blocking Coal. - - - - -				
Measures - - - - -				
LOUSEY COAL - - - - -	0 4		0 4	0 4
Measures - - - - -			54 8½	
TRUB COAL - - - - -	92 10		0 7	55 7½
Measures - - - - -			15 6	
COAL (a) - - - - -	Coal 0 11 Underclay 1 7 Coal 0 2	at 135' 11" 2 8 at 137.8	0 7	71 10½
Measures - - - - -			7 0	
COAL (b) - - - - -	21 10		2 3	81 1½
Measures - - - - -				
SHERTCLIFFE BED COAL (c) - - - - -	2 0	119 8.		
Measures - - - - -			0 10	
Sandstone, Spertcliffe Bed Sandstone. - - - - -	8 0		30 0	
Measures - - - - -			18 0	
Coal - - - - -	22 3		0 3	
Measures - - - - -			11 10	
Sandstone, Oakenshaw Rock. - - - - -	14 9		49 6	191 6½
Measures containing some thin Coal Bands - - - - -				
COAL (a) - - - - -	Coal 0 11 Underclay 1 7 Coal 0 2	at 135' 11" 2 8 at 137.8		
Measures - - - - -			83 0	
COAL (b) - - - - -	21 10		0 10	275 4½
Measures - - - - -				
SHERTCLIFFE BED COAL (c) - - - - -	2 0	119 8.		
Measures - - - - -			0 10	
Sandstone, Spertcliffe Bed Sandstone. - - - - -	8 0		30 0	
Measures - - - - -			18 0	
Coal - - - - -	22 3		0 3	
Measures - - - - -			11 10	
Sandstone, Oakenshaw Rock. - - - - -	14 9		49 6	191 6½
Measures containing some thin Coal Bands - - - - -				
COAL (a) - - - - -	Coal 0 4 Underclay 3 11 Coal 0 2½	at 339' 11"		
Measures - - - - -			83 0	
CROW COAL - - - - -	5 11½	298 0½	0 10	275 4½
Measures - - - - -				
BLACK BED IRONSTONE - - - - -	3 2		36 2	
White Shale - - - - -	0 4		4 2	
BLACK BED COAL - - - - -	2 7	328 8½	2 8½	318 7
Measures - - - - -			16 10	
Sandstone, Thick Stone. - - - - -			42 2	
Measures - - - - -			60 9½	
BETTER BED COAL - - - - -			1 7	459 11½

base of shale

APPENDIX C

Site Visit Record

SITE VISIT RECORD

Date of Visit: 29/04/21

Client: Keyland Developments Ltd

Site Name: North Bierley Phase 2 Land

Refer to Drawing No: LD10258-002.....

Visited by: Jonathan Currie

Job No: LD10258

Site Contact Name: Barry GMI

Access (key required): Off Cliff Hollins Lane and report to GMI compound

Site Area (Ha): c. 3.15 hectares

GENERAL SITE DETAILS

Relevant Identification (*names of buildings, roads etc*):

Undeveloped land accessed from third party land to the north that is currently undergoing earthworks.
 Access to the GMI compound for the land to the north is from Cliff Hollins Lane

.....

Present Land Use:

The site comprises undeveloped land with a large, grassed mound within its south western section and several smaller mounds within its central section. A disused filter bed complete with filter media is present within the northern section of the site..

.....

Adjacent Land Uses: The site is bound by a steep slope and a slip lane to the M62 to the south, the M606 to the west, Hunsworth Beck to the east; beyond which lies Hanging Wood to the east and land that is currently undergoing earthworks for future development to the north

.....

Adjacent public highways, roads leading to / crossing / servicing the site:

As above

.....

Site Access (main access points, dimensions, by rig/excavator etc, footpaths):

Vehicular access to the site is only available from Cliff Hollins Lane to the north and then through the land currently under development south of this lane. There are no formal roads through this land but there are temporary haulage roads (compacted earth) for wagons etc. Access to the main part of the site has to be obtained through a locked 2.5m high palisade gate. Vehicular access to the top of the mound within the south western section of the site can only be obtained by driving along a moderate slope alongside the M606. A tracked dumper or similar would likely be required to tow drilling equipment along this slope and into position on top of the mound

Site Boundary (hedges, walls and fences open etc):

The site is partly bound by a 2.5m high gated metal palisade fence to the north, a 1m high barbed wire fence to the east; beyond which lies Hunsworth Beck, a 1m high wooden fence to the south; beyond which lies a steep slope leading up to the M62 slip road and 1 m high wooden fence to the west; beyond which lies the M606

.....

.....

Topography (general site setting, land gradients, slopes etc):

The site has variable topography but is relatively flat across its northern and eastern sections. A steeply sloped mound with a relatively flat plateau is present within the south western section of the site that rises from typical site levels by 6 – 8m with the slope continuing along the western section of the site.....

.....

EVIDENCE OF LAND USE:

Archaeology (*old buildings, monuments, mounds, ditches, artefacts in soil, pottery/glass*):

N/A

.....

.....

Site Relics (*evidence of past land use, building remains, roads, humps, bumps, hollows etc*):

A dry-stone wall was noted within the central northern section of the site that appeared to be partly retaining a large L-shaped mound of possible colliery spoil. A former filter bed with filter media was noted to the north

.....

Buildings (*general condition/construction, eg: brick/steel framed, asbestos, pits / basement, use*):

N/A

.....

Storage Facilities (*eg: tanks/drums/chemicals/ capacity/condition/bunding/containment*):

A single flammable gas cannister was noted adjacent to the 2.5m high metal palisade gate. A small green industrial housing unit was noted within the south eastern section of the site that contained a valve. A strong sewage / putrid odour was noted. Small grey industrial housing units were also noted within the southern and south western parts of the site. However, these could not be accessed

.....

.....

Activities/Processes on Site (*past and present/materials/equipment*):

No current activities observed on-site. Numerous mounds of possible colliery spoil indicating that coal mining may have occurred at or beneath the site. Relict sewage works infrastructure to the north hints at the sites previous uses as a wastewater treatment works. Earthworks were being undertaken at the land to the north during the visit

Observable Environment (*noise/dust/odours/emissions*):

Noise from the adjacent motorway recorded at 70db.

.....
.....

Waste Management (*fly tipping/waste disposal/fires*):

General fly tipping at the land immediately to the south of the site. Some rotten timber sleepers and discarded water pump tubing were noted within the northern section of the site

.....
.....

Underground Services (*evidence of manholes, grates, culverts, water supply, telephone*):

A large manhole was noted adjacent to the green industrial housing unit within the south west with another manhole a short distance to the north west. Three outfalls (c. 300mm diameter pipes) that appear to be from beneath the site were noted within the south easternmost section of the site to Hunsworth Beck. Two large manhole covers were noted at the land immediately to the south of the site

.....
.....

Overhead Services (*overhead cables/pipes etc*):

None observed on-site. However, electricity pylons and transmission lines cross the land immediately to the north of the site.....

.....

EVIDENCE OF GROUND CONDITIONS

Vegetation (*description and condition, tree, frequency and age, bare patches, saplings, new growth*):

The site is mostly grassed with a mixture of young to mature trees along the eastern, southern and western boundaries.....

.....

Ecology (*woodland, trees, hedges, ponds, running water, water loving plants, wildflowers, wildlife*):

Sem-mature to mature trees were noted alongside Hunsworth Beck in the east, along the slope to the south and as isolated thickets along the western boundary. Mature woodland was noted on the opposite side of Hunsworth Beck.....

.....

Soil Cover (*vegetated/unvegetated soil/made ground/hardstanding/condition/cracks/staining*):

Most of the site was noted to be grassed. Concrete hardstanding was noted at the location of the filter bed to the north.

.....

Evidence of Geological Setting (*made ground, natural superficals and underlying rock*):

An L-shaped mound 2-3m high was present within the centre of the site comprising possible colliery spoil (very sandy gravel of shale and mudstone). A linear 0.5 – 1m high bund was also present alongside Hunsworth Beck that also comprised similar materials. Several bricks were noted embedded into the topsoil within the south eastern section of the site. An area of reddish-brown gravel of mixed lithologies was noted in the central north western section of the site.

.....

Groundwater and Drainage (*ponding, streams, springs, wells, marshes, tides, rivers, etc*):

Hunsworth Beck is present along the sites eastern boundary and flows to the south through a culvert beneath the slip road to the M62. The beck is located at reduced elevation (3 – 4m) to the site with steep slopes

Subsidence (*fissures, abrupt changes in slope, collapse, tilting trees/posts, property damage*):

A very shallow and subtle elongate bowl-shaped depression is indicated within the central northern section of the site

Evidence of Mining (*surface features, shafts, trenches, tunnels, caves, wells, boreholes, gas, etc*):

Other than the colliery spoil mounds and several circular mounds at the general location of the recorded mine shafts there were no obvious mining related features.

HAZARDS identified:

.....
.....
.....

Additional Remarks:

A c. 1.5m diameter above ground pipeline was noted to the north of the site alongside Hunsworth Beck that connects to a suspected pump station

Photographs/Video:.....

Photographs provided on request.....

APPENDIX D

Zetica UXO Risk Map and Pre-Desk Study Assessment




UNEXPLODED BOMB RISK MAP










SITE LOCATION

Map Centre: 418131,427103



LEGEND

-  **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
-  **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
-  **Low:** Areas indicated as having 15 bombs per 1000acre or less.

-  **military**
-  **industry**
-  **UXO find**
-  **transport**
-  **dock**
-  **Luftwaffe targets**
-  **utilities**
-  **Bombing decoy**
-  **other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.


*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Currie, Jonathan

From: Kim Pelling <kim.pelling@zetica.com>
Sent: 09 June 2021 16:30
To: Currie, Jonathan
Cc: Uxo; Research
Subject: RE: LD10258 - UXO PRA

Good afternoon Jonathan

Please find the PDSA below as requested. Any further queries, don't hesitate to contact us.

	
Pre-Desk Study Assessment	
Site:	North Brierley Phase 2 Land, Bradford, West Yorkshire
Client:	Wardell Armstrong
Contact:	Jonathan Currie
Date:	9 th June 2021
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none">■ Transport infrastructure and public utilities.■ Industries important to the war effort including, munitions factories, chemical, engineering, and metal works.■ Military training areas.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none">■ Transport infrastructure and public utilities.■ Industries important to the war effort, including chemical and engineering works.■ Anti-Aircraft (AA) and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	1No. located approximately 3.7km southwest of the Site.
WWII Bombing	During WWII the Site was located in the Urban District (UD) of Spenborough, which officially recorded 6No. High Explosive (HE) bombs with a bombing density of 0.7 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed.

Post-WWII Military Activity on or Affecting the Site	None identified.
Recommendation	A detailed desk study, whilst always prudent, is not considered essential in this instance.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

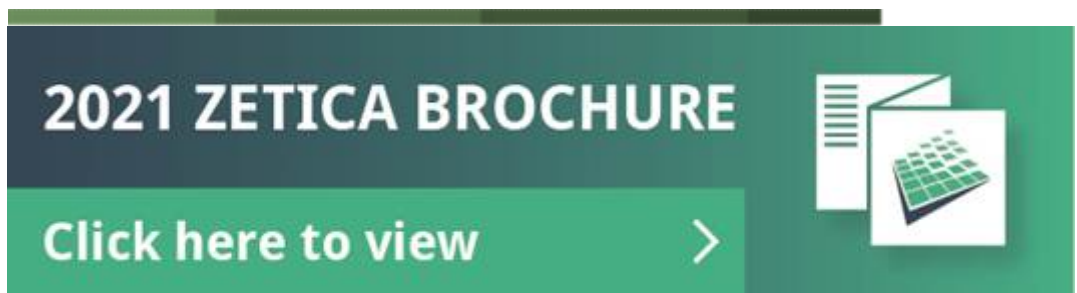
It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

Many thanks

Kim

Kim Pelling
Risk Assessor
Zetica Limited

T. 01993 886 682 | E. kim.pelling@zetica.com | W. www.zeticauxo.com | T. [@ZeticaUXO](https://twitter.com/ZeticaUXO)



From: Kim Pelling <kim.pelling@zetica.com>
Sent: 07 June 2021 08:54
To: Currie, Jonathan <jcurrie@wardell-armstrong.com>
Cc: Uxo <Uxo@zetica.com>; Research <Research@zetica.com>
Subject: RE: LD10258 - UXO PRA

Good morning Jonathan

That's not a problem We'll get a PDSA completed for you as quickly as possible.

Many thanks

Kim

Kim Pelling
Risk Assessor
Zetica Limited

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2021 ZETICA BROCHURE



Click here to view >

From: Currie, Jonathan <jcurrie@wardell-armstrong.com>
Sent: 06 June 2021 15:05
To: Uxo <Uxo@zetica.com>
Cc: Stefan Lang <stefan.lang@zetica.com>
Subject: LD10258 - UXO PRA

Dear sir / madam,

Would you be able to provide us with a PRA for the site shown in the attached plan please.

The site looks to be in a low risk area, but from historical plans we have noted rifle range with targets located c. 500m north of the site. It is not envisaged that this would cause too much of an issue, but it seems prudent for you guys to confirm this.

The site used to be a coal pit until the early 1900's when it became part of the larger North Bierley Sewage Works (may have been an infrastructure target during the war) and this has been operational since that time until 2010.

We will be undertaken site investigations at the site that includes trial pits and deep boreholes. Subsequent, to this there will be mass earthworks associated with the redevelopment of the site (possibly with piled foundations for new structures).

Kind regards,

Jonathan Currie | Principal Engineering Geologist

Wardell Armstrong LLP
36 Park Row, Leeds, LS1 5JL
t: 0113 831 5533 m: 07388 525 039



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APPENDIX E

Environmental Risk Assessment Methodology

Consequence of Risk Being Realised (based on CIRIA C552, 2001)			
Classification	Category	Definition	Examples
Severe short-term (acute) risks only	Humans	Short-term (acute) risk to human health likely to result in “significant harm” as defined by the Environment Protection Act 1990, Part 2A.	High concentrations of cyanide on the surface of an informal recreation area.
	Controlled Waters	Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.	Major spillage of contaminants from site into controlled water.
	Property	Catastrophic damage to buildings/property.	Explosion causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
	Ecological System	A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.	
Medium chronic (long term) risks; “significant harm”	Humans	Chronic damage to Human Health (“significant harm” as defined in Defra 2006).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).	Leaching of contaminants from a site into a major or minor aquifer.
	Ecological System	A significant change in a particular ecosystem	Death of a species within a designated nature reserve.
Mild chronic (long term) risks; less sensitive receptors	Controlled Waters	Pollution of non-sensitive water resources.	Pollution of non-classified groundwater
	Property	Significant damage to buildings, structures and services (“significant harm” as defined in Circular on Contaminated Land, Defra, 2006). Damage to sensitive buildings/structures/services	Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability)
	Ecological System	Significant damage to crops. Damage to the environment.	
Minor	Financial project	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve.	

Consequence of Risk Being Realised (based on CIRIA C552, 2001)			
Classification	Category	Definition	Examples
chronic (long term) risks; mild	Humans	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).	The presence of contaminants at such concentrations that protective equipment is required during site works.
	Property	Easily repairable effects of damage to buildings, structures and services	The loss of plants in a landscaping scheme. Discolouration of concrete.

Probability of Risk Being Realised (C552 CIRIA, 2001)	
Classification	Definition
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Risk Classification Definitions (C552 CIRIA, 2001)	
Very High	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. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.

Risk Classification Definitions (C552 CIRIA, 2001)	
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Moderate / Low	
Low	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.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Risk Classification Matrix (C552 CIRIA, 2001)					
		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

A P P E N D I X F

Coal Authority Consultants Mining Report



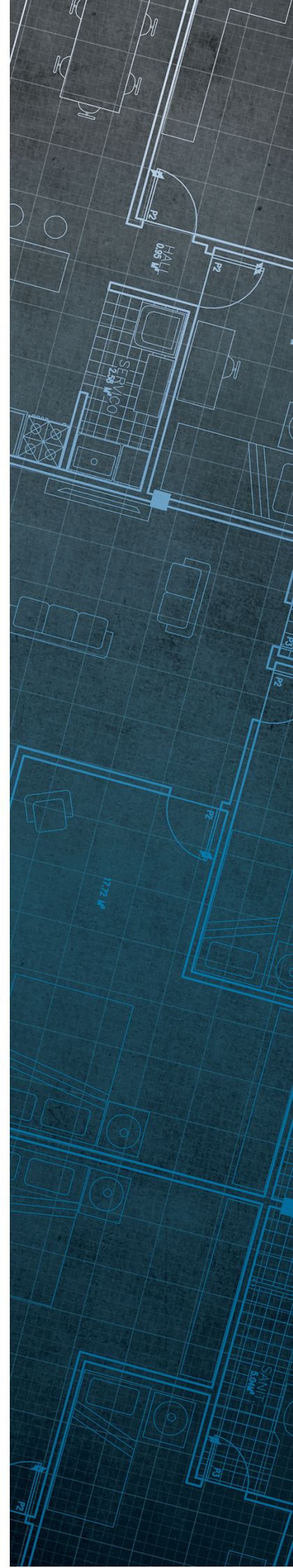
The Coal
Authority

Consultants Coal Mining Report

North Bierley Phase 2 Land
West Yorkshire

Date of enquiry: 6 May 2021
Date enquiry received: 6 May 2021
Issue date: 6 May 2021

Our reference: 51002514265001
Your reference: LD1933



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

Jonathan Currie

Enquiry address

North Bierley Phase 2 Land
West Yorkshire


How to contact us

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Nottinghamshire
NG18 4RG

www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	WHINMOOR	Coal	6H9P	2	Beneath Property	2.0	East	66	1929
unnamed	BLACK BED	Coal	6G9M	58	Beneath Property	1.9	East	216	1874
unnamed	BLACK BED	Coal	6HA8	62	Beneath Property	1.9	East	76	1886
unnamed	BLACK BED	Coal	6HA5	63	Beneath Property	1.9	East	71	1890
unnamed	BLACK BED	Coal	6H9Q	70	Beneath Property	1.9	East	170	1864
unnamed	BETTER BED	Coal	6G9P	92	Beneath Property	1.9	East	56	1868
unnamed	BETTER BED	Coal	6HA9	96	Beneath Property	3.2	South-East	56	1884
unnamed	BETTER BED	Coal	6NMO	107	South-West	2.4	South-East	61	1867
unnamed	BETTER BED	Coal	6H9T	115	Beneath Property	2.5	South-East	46	1867

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	418427-005	418129 427116		Coal	
Shaft	418427-011	418128 427107		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

9011	LM5	4056
2111	2795	M31
FGB667	LM21	2983

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
WHINMOOR	Coal	Yes	Within	N/A	284
WHINMOOR	Coal	Yes	Within	N/A	299
WHINMOOR	Coal	Yes	Within	N/A	344

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the "Summary of findings" map (on separate sheet) for details of any opencast areas 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 31 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

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

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.

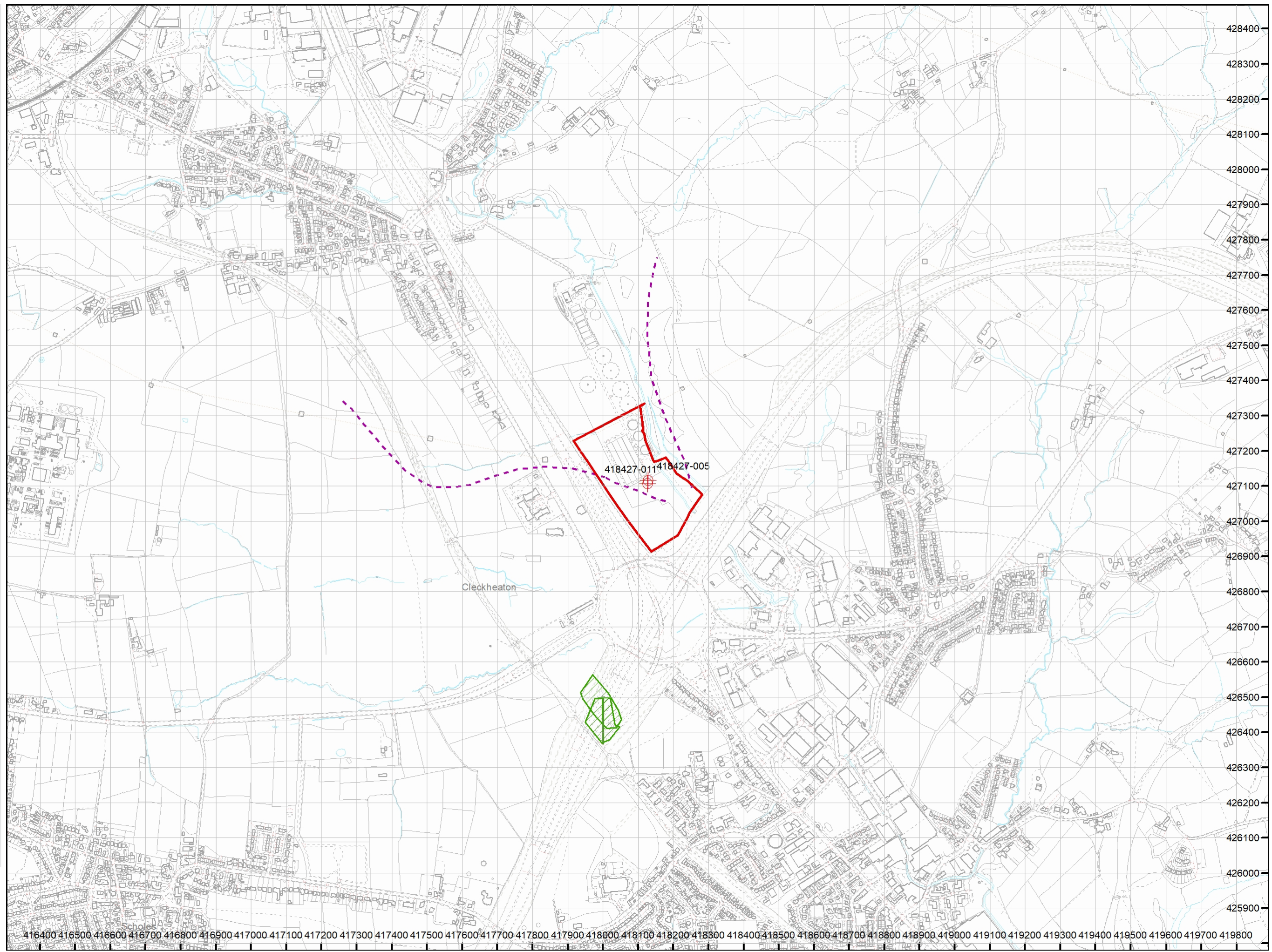
Payment to owners of former copyhold land

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.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Outcrop (Conjectured) 
- Unlicensed opencast site 

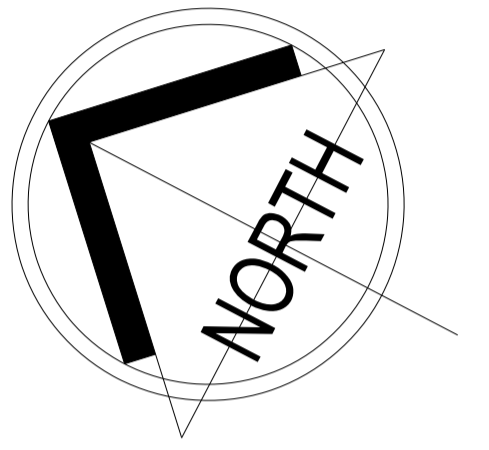


How to contact us
 0345 762 6848 (UK)
 +44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX G

Current Proposed Development Plan

Notes:
 This drawing is the sole copyright of KPP Architects Ltd and reproduction in any form is forbidden unless permission is obtained in writing.
 Do not scale from this drawing. Any discrepancies on site should be brought to the attention of KPP Architects Ltd.
 Work and materials must comply with the current building regulations and codes of practice and be read in conjunction with building specifications and other sub-contractors information. All materials are to be installed in strict accordance with the recommendations of the manufacturers.



TOTAL FLOOR AREA 102,250 ƒ²

NETT DEVELOPABLE AREA 5.89 ACRES
 2.38 Ha

Rev	Description	By	Chkd	Date

Client

KEYLAND

Project Title
**NORTH BIERLEY
 FORMER WATER
 TREATMENT WORKS**

Drawing Title
SITE LAYOUT PROPOSAL

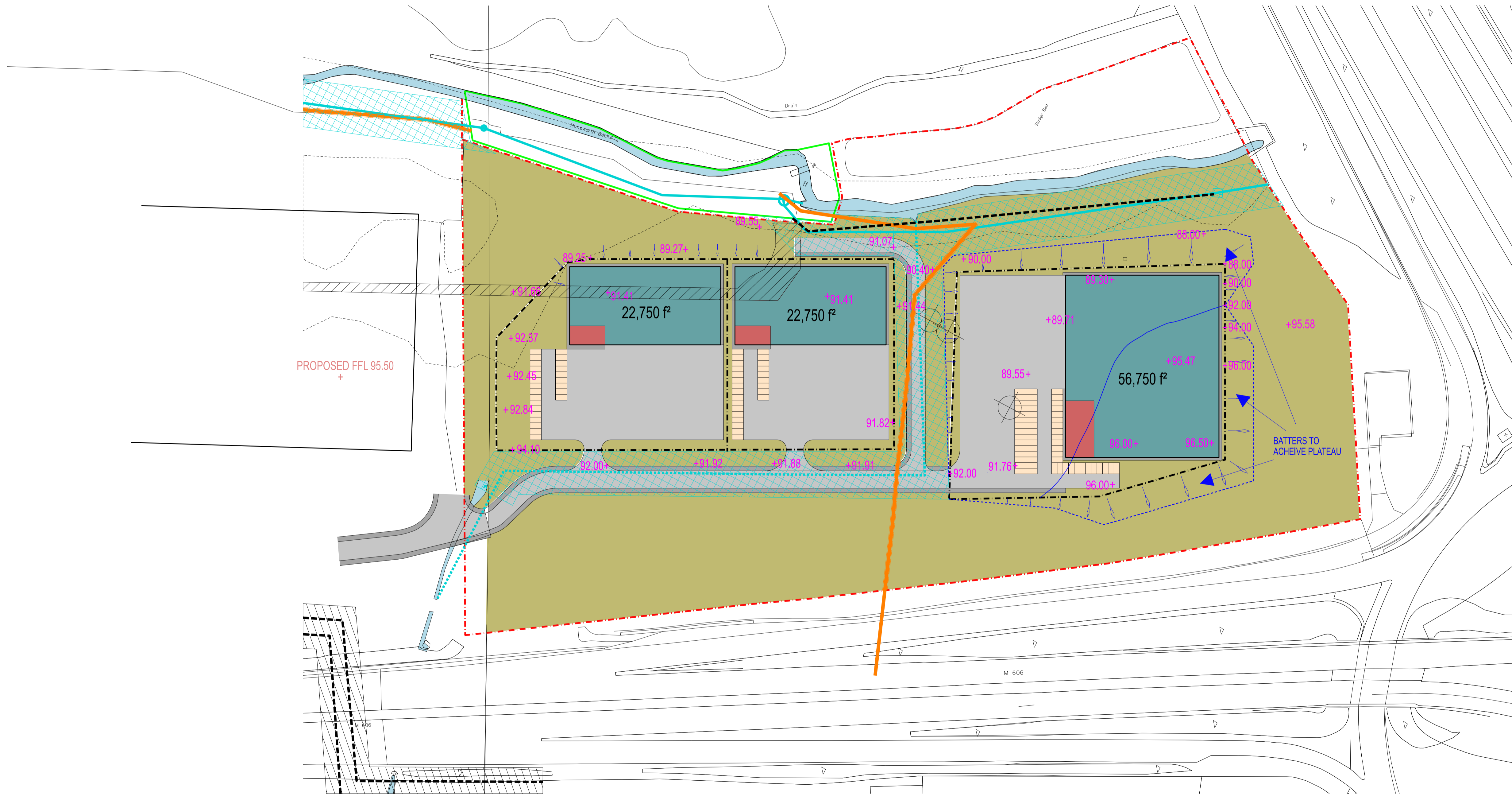
KPP ARCHITECTS
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 12 Town Street
 Horsforth, Leeds LS184RJ
 T : +44 (0) 113 2390460
 E : architects@kpp-leeds.co.uk
 W : www.kpp-leeds.co.uk

Scale	Size	Date	Drawn	Checked
1:1000	A1	14.06.21	AS	.

Status
DRAFT

KPP Job No
1773-01

Number
220



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