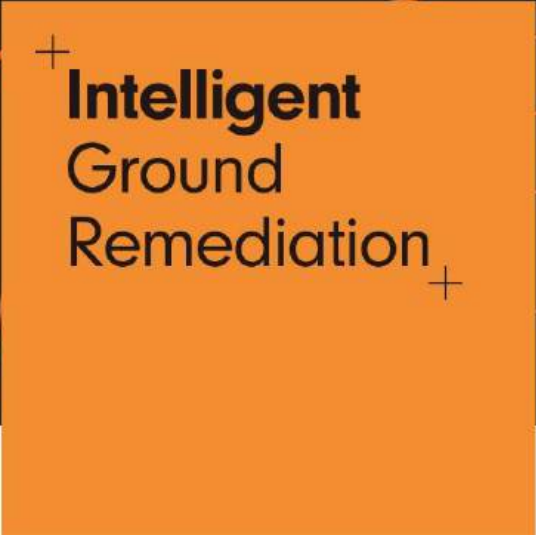




Intelligent
Ground
Remediation

Phase I Preliminary Risk Assessment

Thornccliffe Farm Shop
Westfield Lane, Huddersfield, HD8 9SZ

For Rosemary Parker
09 November 2023
Report ref. 23/1407.1.1



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Report Reviewed By

Paul Stapleton
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09 November 2023

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1.0 Introduction

Geo² Remediation Limited were commissioned by Rosemary Parker to conduct a Phase I Preliminary Risk Assessment of a parcel of land located at

Thorncliffe Farm Shop,

Westfield Lane, Huddersfield, HD8 9SZ

The site is approximately 0.33 hectares in area and located at grid reference 422890, 413220.

The study was undertaken to support a planning application associated with the further development of existing site facilities to create a pie production unit.

1.1 Scope of Works

The Phase I Preliminary Risk Assessment, consisting of a desk study, was conducted in order to establish evidence of potential contamination, if any, resulting from the past use of the site and current land use.

The desk study was also undertaken to identify possible sensitive receptors that may be at risk within the locality of the site.

2.0 Description of the Site and Surroundings

2.1 Site Description

The site is located 1.6km east from the village of Emley in the parish of Denby Dale in the Kirklees district of West Yorkshire. Figures 1 and 2 in Appendix A show the location of the site.

The site is currently Thorncliffe Farm Shop with associated carparking and a play area.

The area shown within the red site boundary on Figure A below, will be referred to throughout this document as 'the site'.

The site is located along Westfield Lane and Jagger Lane, it is currently accessed by one ingress/egress point on the southern boundary via Jagger Lane and two ingress/egress points on the northern boundary via Westfield Lane.



Figure A: Site Location Plan. Red is approximate site boundary and pink are 50m and 100m buffers.
Extract from Envirocheck report (Appendix C).

2.2 Site Surroundings

The site is located 1.6km east from the village of Emley in the parish of Denby Dale in the Kirklees district of West Yorkshire. The nearest residential properties are situated 60m southeast of the site. The surrounding land uses of the site are summarised in Table 1 below.

Direction	Land Use
North	Westfield Lane and agricultural fields beyond.
East	Stable and jumping ground with mainly agricultural fields beyond with a couple of houses.
South	Jagger Lane, woodlands, houses and a farm with agricultural fields beyond.
West	Westfield Lane and Jagger Lane joining, agricultural fields and residential properties beyond.

Table 1. Land Uses in the Surrounding Area.

3.0 Desk Study

3.1 Desk Study Data

Information regarding the environmental setting of the site was obtained from the Envirocheck report, which collated information from a variety of sources. A copy of the Envirocheck report is presented in Appendix C.

Where indicated in Table 2 below and Table 3 on the following page, the data from the Envirocheck report has been supplemented with additional information obtained from freely available online data.

Site Geology	Pennine Lower Coal Measures Formation consisting of mudstone, siltstone and sandstone. The northern boundary of the lies along a fault line. There is no superficial geology records available. There are no available BGS borehole logs within 500m of the site. There are 15no BGS Recorded Mineral Sites within 1,000m of the site, the closest of which was an underground coal mine located 61m east. The site has no to very low hazard regarding the potential for ground stability hazards including collapsible ground, ground dissolution, landslide, running sand and shrinking and swelling clays whilst there is a moderate hazard for compressible ground.
Coal	The site is located in a coal mining reporting area, with a review of the Coal Authority online interactive mapping indicating that the site is within a Development High Risk Area (DHRA), with mine shafts and potential shallow coal mining within 100m. A Shallow Mining Assessment has been undertaken and is reported separately, with additional details in section 3.2, below and the full report included in Appendix B.
Radon	The site is in a low probability radon area (less than 1% of homes are estimated to be at or above the Action Level). As such, no radon protective measures are necessary in the construction of new dwellings or extensions.
Site Hydrogeology	The bedrock is classified as a Secondary A Aquifer – defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as Minor Aquifers. The site is not located within a Source Protection Zone (SPZ). The nearest groundwater abstraction point is located 736m northeast, operated by H Lodge & Sons with a use for General Farming and Domestic. The groundwater beneath the site in the productive bedrock has been classed as high vulnerability.

Table 2. Environmental Assessment of the Site.

Site Hydrology	The nearest surface water feature is an unnamed stream located 102m northwest, flowing north-eastwards. There are no pollution incidents or discharge consents within 250m of the site
Waste and Infilled Land	There is one BGS recorded landfill site / historical landfill site within 1,000m of the site, located 339m north, which last received waste in 1983. There are 15no records of potentially infilled land (non-water) within 1km of the site and the closest being 50m south. While there are four records of potentially infilled land (water) within 1000m of the site, all are located 518-796m from the site and therefore considered to be too distance as to likely impact the site.
Unexploded Ordnance	A review of Zetica online risk mapping for the area indicates the site is located in a Low risk area with respect to unexploded ordnance.

Table 3. Environmental Assessment of the Site.

3.2 Coal Report

A shallow mining investigation has been undertaken for the site by G&M Consulting. As part of this, a Consultants Coal Mining Report was obtained, is included in Appendix B and is summarised briefly below:

- 23m below the site runs the two notable coal seams of Pennine Lower Coal Measures with their depth varying from 0.4-2.5m and 0.2-0.5m.
- There are five mine entries located within or to the close proximity of the proposed development site. However, they are all at a distance where they will not have adverse effects on the development.
- There is no geological faults, fissures or breaklines recorded.
- There are no outcrops recorded.
- Records suggest presence of probable unrecorded shallow workings underlying the site.
- An unlicensed opencast coal site encroaches the landownership of Thorncliffe Farm shop, however, does not span beneath the proposed development.
- There is no current Stop Notice delaying the start of remedial works or repairs to the property.
- 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.

Further comment on risks associated with coal will not be made here, and the shallow mining assessment should be referred to for conclusions and recommendations.

4.0 Site History

Details regarding the development of the site, its immediate surroundings and potentially contaminative land uses were obtained from a review of historical maps.

Copies of the maps are provided in Appendix C and a brief summary is provided in Table 4 with a more detailed summary provided in Table 5 below and Table 6 on the following page.

Key Historical Activities	
On-Site	The site has historically been used for agricultural use with few buildings from 1954 - pre2002. Post 2002 a building was established on the eastern boundary which extended further westwards in 2009 during which a building on the southern boundary was also created. In 2016 the southern building was replaced with a carpark and the northeastern corner became a playground area.
Off-Site	There is a road north (Westfield Lane) and south (Jagger Lane) of the site. Beyond this to 1km in all directions, there were many coal pits and from 1950s these started to become disused. There was a colliery situated 75m south in 1907 which in 1988 became a tip. At the same time a depot was established 80m southeast. In around 2016 a stable and a horse jumping field was created just outside the western boundary.

Table 4. Brief Summary of Historical Land Use On-Site and Off-Site.

All distances given in Table 5 below and Table 6 on the following page are approximate and are relative to the site, unless otherwise stated.

Date	On-Site	Off-Site	Potential Contamination
1854 - 1907	The site is part of an agricultural field, with a narrow building located near the eastern boundary.	Westfield Lane and Jagger Lane located just outside the northern and southern boundary respectively. Coal pit located 50m east across of Westfield Lane. Residential dwelling located 200m southeast. Coal pit located 500m and 750m southwest, 900m south, 800m and 850m southeast, 750m east. Sandstone Quarry located 800m north and 800m southeast. Factory 800m northwest. The remaining of the area within 1km is agricultural fields with few farms and residential dwellings. In 1894 a colliery is established 75m south and in 1907 reservoirs were created to the east of the colliery. Many of the coal and sandstone quarries is labelled as disused.	Potential made ground associated with building

Table 5. Detailed Summary Review of Historical Mapping (1854-1907)

Date	On-Site	Off-Site	Potential Contamination
1930	A building is erected inwards from the eastern plots.	A mine shaft is now labelled along with the colliery 75m south.	Potential made ground associated with construction.
1955- 1961	In 1961 a boundary is established through the middle of the site from northeast to southwest separating two fields.	In 1955 the colliery 50m south is now disused	N/a
2002- 2023	In 2002 a building on the eastern boundary is replaced by another building that forms an L shape that runs along southern and eastern boundary. This building expands westwards in 2009. During this time a carpark along the northern boundary was also created as well as a small building on the southern boundary. This smaller building is then replaced by a car parking area. In 2016 the northwestern corner of the site becomes a small playground area. The site then remains relatively unchanged from this date to 2023.	In 1988, the colliery 50m south is now labelled as tip. A depot has been established 80m southeast. In 2016, a stable along with a horse jumping field is located directly west of the site.	Potential made ground from construction of buildings and carpark.

Table 6. Detailed Summary Review of Historical Mapping (1930 – Present Day)

4.1 Discussion

From CMRA reports it was found that unlicensed opencast coal mining took place on the western boundary of the site extending offsite, yet it was not recorded on any historical mapping. Therefore, an intrusive investigation was undertaken to determine the impact of this on the proposed development.

5.0 Preliminary Risk Assessment

5.1 Source – Pathway – Receptor

UK legislation and guidance on assessing potentially contaminated land recommends the use of a risk assessment process based on a review of source/pathway/receptor relationships for various environmental media. The first stage of any risk assessment is to identify, using the desk study data and site information, the presence and extent of any hazard at the site, theoretical or demonstrable.

A key component of the overall risk assessment process is identification of “significant contaminant linkages” between contaminants and receptors. This can be accomplished through development of a site-specific conceptual model in which the potential contaminants, pathways and receptors identified on-site are described.

Each element can be defined as follows:

- **Contaminant source:** A substance either on or under the land and which has the potential to cause harm or pollution to human or environmental receptors.
- **Pathway:** A route or means by which a receptor can be exposed to or affected by a source.
- **Receptor:** A living organism or an ecological system, or controlled water, or property including buildings, crops and livestock.

The presence of all three of the above elements identifies a contamination linkage and a potentially unacceptable risk. To ensure that any risk present to, or, from the site can be appropriately managed each of these contamination linkages will be targeted by the investigation.

5.2 Hazard Identification

Given development of the site, there is potential for deposition of material to have taken place. Contamination sources may exist related to Made Ground soils on site, or to the potential for unlicensed mining which may have occurred at the site.

Due to the age of the buildings on site, it is unlikely that asbestos materials were used in the construction of the building, reducing the potential for asbestos in shallow Made Ground soils.

5.3 Initial Conceptual Site Model

Contamination linkages arise as a result of the interconnection of the contaminant source, contamination pathways and potential receptors. These contamination linkages are used to design the site investigation (if required), guiding the type of investigation, location of exploratory boreholes and the required sample analysis.

6.0 Risk Estimation

The objective of the qualitative risk assessment is to determine the significance of the risk, if any, which may occur as a result of the creation of pollutant linkages, which connect a potential receptor to an identified potential contaminant source at the site.

The perceived risk is based on a consideration of both the likelihood of an event (probability) occurring, and the severity of the potential consequence. Classification of these two factors is detailed in Appendix C.

6.1 Qualitative Risk Assessment

A qualitative risk assessment is undertaken, detailed in Table 7 on the following page, in line with guidance provided in CIRIA's Contaminated Land Risk Assessment: a guide to good practice CIRIA C552, 2001. The purpose of this assessment is to determine the relative significance of the identified contamination linkages by assessing the probability of an impact occurring and by assessing the perceived severity of an impact to a receptor.

Those linkages considered of low risk or less on the basis of the available site data will not be considered any further in this assessment. Linkages considered to be more significant are identified as presenting potentially unacceptable risk to the identified receptor. In these instances, further works may be considered necessary.

Linkage No.	Source	Pathway	Receptor	Probability	Severity	Risk Classification
1	Potential contamination (e.g. made ground) associated unlicensed opencast coal mining and potential of infilled land.	Leaching to groundwater, lateral and vertical flow, followed by migration within the aquifer	Surface water feature such as an unnamed stream located 102m northwest, flowing north-eastwards.	Low Likelihood Taking into account the highly permeable superficial deposits and distance to the nearest surface water receptor	Mild (non-sensitive receptor)	Low
2			The bedrock is classified as a Secondary A Aquifer The nearest groundwater abstraction point is located 736m northeast.	Low Likelihood Taking into account high vulnerability of the underlying aquifers and nearest groundwater abstraction point	Medium (sensitive receptor)	Moderate/Low
3	Potential for ground gases arising from infilled unlicensed opencast coal mining on the west of the site.	Exposure to harmful vapours, hazardous ground gas and tainting of water supply	Current and proposed Commercial site end users.	Low Likelihood Limited historical industrial land use of the site but taking into account the possibility of unknown backfilled material from shallow surface mining.	Medium (human health)	Moderate/Low
4	No asbestos register has been obtained; however, the post-2000 development of the site makes asbestos presence unlikely.		Neighbouring site users, principally within enclosed spaces.	Unlikely Taking into account that the nearest residential properties are 60m southeast.	Medium (human health)	Low
5		Direct contact, inhalation of vapours and ingestion	Current and proposed Commercial site end users, principally within landscaped area.	Low Likelihood Limited historical industrial land use of the site, with some buildings on the eastern side of the property, but potential for unlicensed mining.	Medium (human health)	Moderate/Low

Table 7. Summary of Qualitative Risk Assessment

7.0 Conclusions and Recommendations

7.1 Conclusions

A Phase I Preliminary Risk Assessment of the site known as Thorncliffe Farm Shop, located at Westfield Lane, Huddersfield, HD8 9SZ was undertaken, to support a planning application associated with the further development of existing site facilities to create a pie production unit.

The desk study identified that the potential for deposited material on the site may pose a risk to receptors, or controlled waters, depending on the composition of any material deposited.

Additionally, it is understood that unlicensed opencast coal mining may have taken place on the western boundary of the site. Geotechnical recommendations regarding this are detailed further in the Shallow Mining Investigation Report, but material associated with this activity may have the potential to impact upon current and future site users.

As such, Geo² considers there is a **Moderate/Low** risk to human health receptors and a **Moderate/Low** risk to the groundwater receptor.

7.2 Recommendations

The following measures are recommended to address the identified risks:

- In order to ensure that there is no evidence of significant contamination that could potentially have migrated vertically and/or horizontally from unlicensed mining or deposited material at the site, or is present within shallow soils, it is recommended that a site-wide ground investigation is undertaken to investigate soils and groundwater for the potential presence of contamination.
- The recommendations of the Shallow Mining Investigation Report should be followed at all times during any future redevelopment works on site.

8.0 Limitations

Geo²s' conclusions, recommendations and opinions are based on information gathered at the time of the investigation from a variety of third party sources and from observations made during site reconnaissance. Therefore, there may be conditions at the site that have not been taken into account which were not apparent at the time of investigation.

A portion of this report is based solely upon information provided by third parties. The information has not been independently verified by Geo². Whilst this report and the opinions given in it are accurate to the best knowledge of Geo², Geo² cannot guarantee the completeness or accuracy of any descriptions, opinions or conclusions based solely upon information that has not been independently verified.

The recommendations contained within this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted industry practices and hydrological and engineering practices at this time. As such they are not a guarantee that the site is free of hazardous materials or conditions.

9.0 References

British Standards Institute

BS10175:2011 "Investigation of potentially contaminated land sites – code of practice"

British Geological Society

Geology of Britain Viewer

CIRIA

C552 Contaminated Land Risk Assessment, a guide to good practise, 2001.

C665, Assessing risks posed by hazardous ground gases to buildings, 2007.

CL:AIRE

Good Practice For Risk Assessment For Coal Mine Gas Emissions, October 2021.

Environmental Agency

Land Contamination Risk Management (LCRM) Guidance, 2020

Landmark

Envirocheck Report, ref. 323279477

The Coal Authority

Coal Authority Interactive Viewer

G&M Consulting Ltd

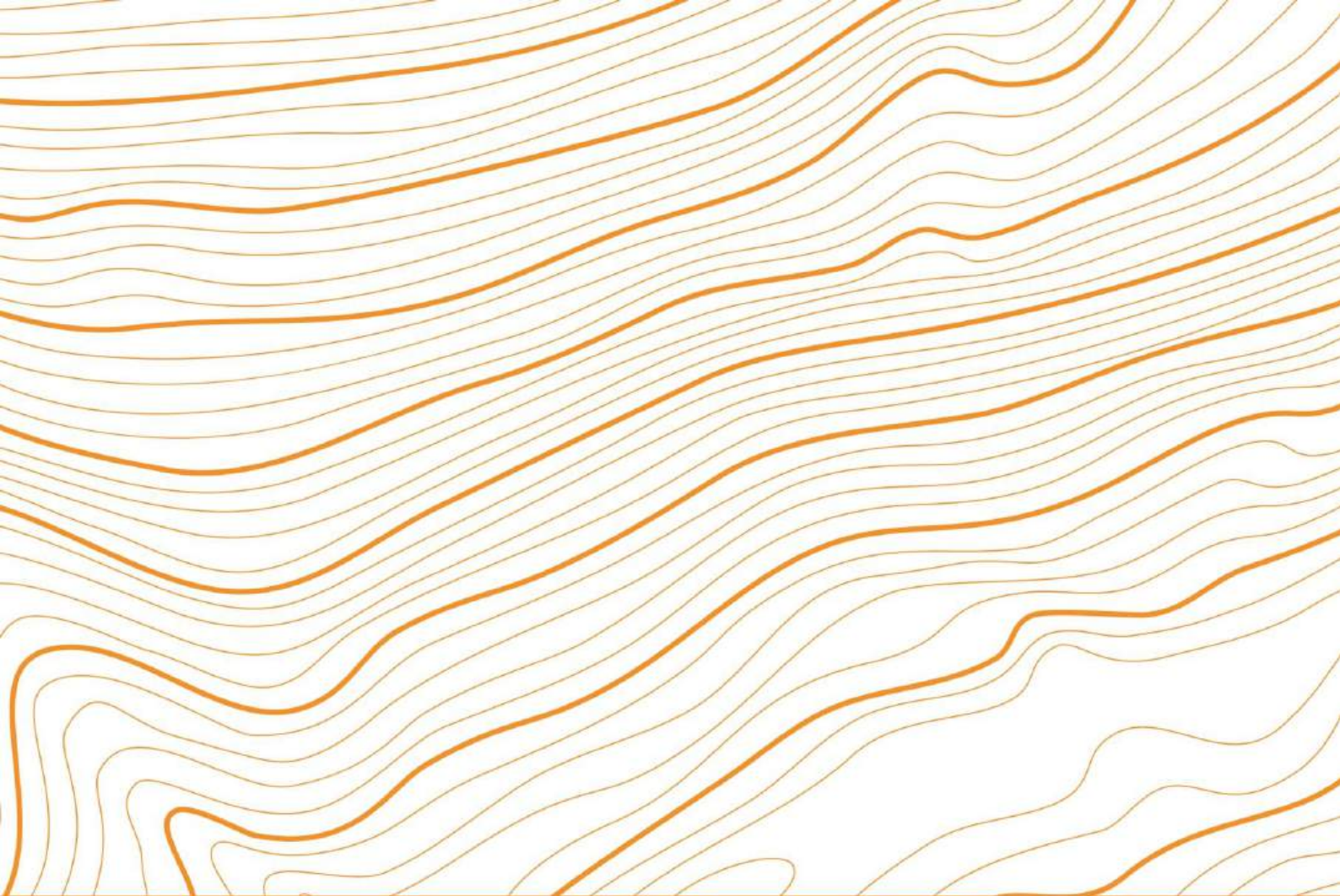
Shallow Mining Investigation, ref:C593/01/ATS

Zetica UXO

Risk Maps Viewer



Appendix A – Figures



Appendix B – Desk Study Data

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

323279477_1_1

Customer Reference:

1407nj

National Grid Reference:

422890, 413220

Slice:

A

Site Area (Ha):

0.33

Search Buffer (m):

1000

Site Details:

Thornccliffe Farm Shop, Westfield Lane
Emley
HUDDERSFIELD
HD8 9SZ

Client Details:

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Geo2 Remediation Ltd
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Prepared For:

Bradford
BD10 8NE

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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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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 1			1	1
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 1			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 1		Yes		
Pollution Incidents to Controlled Waters	pg 2				1
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				1 (*12)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 5	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 5	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				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 6		1	10	25

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 10			1	
Historical Landfill Sites	pg 10			1	
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Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
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Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
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 13	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 13	Yes	Yes		Yes
BGS Recorded Mineral Sites	pg 14		2	2	11
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 16	Yes	n/a	n/a	n/a
Mining Instability	pg 16	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 16	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 17	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 17	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 17	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 18				16
Fuel Station Entries	pg 19				1
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Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 20			1	7
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					

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National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 22	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: Limited Potential for Groundwater Flooding to Occur	A13SW (NE)	0	1	422894 413223
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (N)	241	1	422950 413500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	331	1	422900 413600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	430	1	422894 413700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	488	1	422400 413400
1	Discharge Consents Operator: I C Rudge Property Type: Mixed Farming Location: Engine House Farm, Westfield Lane, Emley Moor, KIRKLEES, West Yorkshire, HD8 9SZ Authority: Environment Agency, North East Region Catchment Area: Aire And Calder Navigation Reference: C4518 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge: Land/Soakaway Environment: Receiving Water: Land Adjacent To The Farm Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	443	2	422650 413650
2	Discharge Consents Operator: Oakes Estates Ltd Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Leys Farm Leys Lane, Emley, Huddersfield, West Yorkshire, Hd8 9ss Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra8307 Permit Version: 1 Effective Date: 19th March 2004 Issued Date: 19th March 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of River Dearne 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	A9NE (SE)	912	2	423610 412580
3	Local Authority Pollution Prevention and Controls Name: Holgate Construction Ltd Location: Saxonfield House Farm, Windmill Hill Lane, EMLEY MOOR, Huddersfield, HD8 9TA Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Supplied Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete Status: Authorised Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	486	3	422608 413674
	Nearest Surface Water Feature	A13NW (NW)	102	-	422817 413353

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Pollution Incidents to Controlled Waters Property Type: Farm Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Silage Liquor Note: Not Supplied Incident Date: 2nd August 1993 Incident Reference: 146597 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	A9NE (SE)	968	2	423700 412600
5	Water Abstractions Operator: H Lodge & Sons Licence Number: 2/27/08/024 Permit Version: 100 Location: Mouse House Dyke Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 2 Yearly Rate (m3): 846 Details: Upper Crawshaw Farm, Emley Moor, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th December 1965 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	736	2	423500 413700
	Water Abstractions Operator: C & M Hall Licence Number: 2/27/08/126 Permit Version: 4 Location: Borehole - Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 31st October 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1433	2	421820 412200
	Water Abstractions Operator: C & M Hall Licence Number: 2/27/08/126 Permit Version: 3 Location: Borehole - Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1433	2	421820 412200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 2 Location: Borehole - Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 18th September 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1433	2	421820 412200
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 1 Location: Borehole - Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1433	2	421820 412200
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 1 Location: Borehole - Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1433	2	421820 412200
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 1 Location: Borehole- Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1498	2	421750 412180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 1 Location: Borehole- Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: Household Water Supply: Drinking; Cooking; Sanitary; Washing; (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1498	2	421750 412180
	Water Abstractions Operator: C & M Hall Licence Number: 2/27/08/126 Permit Version: 4 Location: Borehole- Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 31st October 2016 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1829	2	421550 411910
	Water Abstractions Operator: C & M Hall Licence Number: 2/27/08/126 Permit Version: 3 Location: Borehole- Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1829	2	421550 411910
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 2 Location: Borehole- Coal Measures - Shelley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 18th September 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1829	2	421550 411910

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: T R & C Hall Licence Number: 2/27/08/126 Permit Version: 2 Location: Underground Strata - Coal Measures Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Wool Row Farm, Roydhouse, Shelley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 18th September 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NE (SW)	1829	2	421550 411910
	Water Abstractions Operator: Savile Trust (1965) Licence Number: 2/27/08/104 Permit Version: 100 Location: Borehole - Coal Measures - Emley Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 18 Yearly Rate (m3): 4540 Details: Emley Old Hall Farm, Emley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th June 1988 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5NE (SE)	1921	2	424530 412120
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13SW (NE)	0	4	422894 413223
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (NE)	0	4	422894 413223
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 331.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13NW (NW)	102	5	422817 413353
7	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13NE (NE)	321	5	423086 413514
8	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 199.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13NE (NE)	325	5	423090 413516
9	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A18SW (NW)	364	5	422674 413572
10	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A18SW (NW)	391	5	422704 413620
11	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A18SW (NW)	394	5	422707 413626
12	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 12.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A18SW (NW)	414	5	422705 413647
13	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 173.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A18SE (N)	480	5	423032 413725
14	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A18SE (N)	491	5	423085 413715

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 289.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A18SE (N)	492	5	423096 413711
16	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A18SE (N)	492	5	423092 413713
17	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 236.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NW (E)	545	5	423464 413388
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 150.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9NW (SE)	645	5	423332 412687
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 66.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	690	5	423512 413611
20	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 17.7 Watercourse Level: Underground Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	703	5	423369 413775
21	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	711	5	423387 413772
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 214.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9NW (SE)	733	5	423462 412684
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	745	5	423433 413778

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	749	5	423438 413778
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 97.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NE (E)	762	5	423657 413493
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 179.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	762	5	423457 413780
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NE (E)	816	5	423736 413428
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SW (S)	817	5	422804 412384
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SW (S)	845	5	422786 412358
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 194.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SW (S)	850	5	422783 412353
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 108.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	896	5	422518 412368
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19NW (NE)	939	5	423546 413937

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 170.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9NE (SE)	944	5	423643 412570
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A19SE (NE)	961	5	423736 413763
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A19SE (NE)	980	5	423750 413777
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 24.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A19SE (NE)	986	5	423754 413782
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 60.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A7SE (S)	992	5	422525 412263
38	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19NE (NE)	994	5	423597 413965
39	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A19NE (NE)	998	5	423603 413965
40	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 14.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Mouse House Dike Catchment Name: Don and Rother Primacy: 1	A19NE (NE)	998	5	423603 413965
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A3NW (S)	999	5	422647 412222

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	BGS Recorded Landfill Sites Site Name: Fletcher Pk Location: Windmill Hill Lane, HUDDERSFIELD, West Yorkshire Authority: British Geological Survey, National Geoscience Information Service Ground Water: Potential threat to ground water Surface Water: Potential threat to surface water Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good	A18SW (N)	339	-	422830 413606
43	Historical Landfill Sites Licence Holder: Not Supplied Location: Windmill Hill Lane, Huddersfield, West Yorkshire Name: Fletcher Park Operator Location: Chantry House, Wakefield Boundary Accuracy: As Supplied Provider Reference: EAHLD04804 First Input Date: Not Supplied Last Input Date: 31st December 1983 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial and Household Waste, and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1632 Other Ref: 4400/WY9	A18SW (N)	338	2	422828 413604
	Local Authority Landfill Coverage Name: Kirklees Metropolitan Borough Council - Has not been able to supply Landfill data		0	6	422894 413223
44	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13SE (S)	50	-	422898 413148
45	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13SE (E)	70	-	423019 413213
46	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13NW (NW)	386	-	422637 413571
47	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NW (SE)	481	-	423244 412827
48	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14SW (E)	640	-	423540 412966
49	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SW (W)	704	-	422158 413054
50	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NW (SE)	747	-	423432 412637
51	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SW)	759	-	422577 412492
52	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SW)	900	-	422256 412521
53	Potentially Infilled Land (Non-Water) Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A17SW (NW)	939	-	422112 413813

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NE (SE)	941	-	423743 412707
55	Potentially Infilled Land (Non-Water) Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	944	-	422698 412269
56	Potentially Infilled Land (Non-Water) Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A18NE (N)	971	-	422972 414236
57	Potentially Infilled Land (Non-Water) Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (SW)	977	-	422128 412538
58	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9SE (SE)	991	-	423608 412467
59	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (SW)	518	-	422429 412894
60	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	731	-	423458 412683
61	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SW (W)	755	-	422123 412984
62	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SW (W)	796	-	422081 412982
63	Registered Landfill Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 9 Site Location: Fletcher Park Landfill Site, Windmill House Lane, Emley Moor, Huddersfield, West Yorkshire Licence Easting: 422800 Licence Northing: 413800 Operator Location: 54 Bradford Road, BRIGHOUSE, West Yorkshire, HD6 1RY 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: Not Supplied 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: Asbestos Com. + Ind. Waste Ind. Non-Haz. Waste	A18SW (N)	536	2	422800 413800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	Registered Waste Treatment or Disposal Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 9 Site Location: Fletcher Park Pulveriser Plant, Windmill House Lane, Emley Moor, Huddersfield, West Yorkshire Operator Location: 54 Bradford Road, BRIGHOUSE, West Yorkshire, HD6 1RY Authority: Environment Agency - North East Region, Ridings Area Site Category: Pulverization Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: Not Supplied Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Controlled Wastes	A18SW (N)	536	2	422800 413800

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)	A13SW (NE)	0	1	422894 413223
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (NE)	0	1	422894 413223
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SE (SE)	118	1	423000 413098
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A13SW (S)	199	1	422894 413000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A12SW (W)	846	1	422000 413202
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 90 - 120 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A12SW (W)	846	1	422000 413223
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A19SE (NE)	923	1	423751 413668

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 25 - 35 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 90 - 120 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 15 - 30 mg/kg Concentration:	A7NW (SW)	939	1	422000 412793
65	BGS Recorded Mineral Sites Site Name: Cabbage Row Coal Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94451 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SE (E)	61	1	423010 413215
66	BGS Recorded Mineral Sites Site Name: Speedwell Colliery Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94452 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	78	1	422838 413123
67	BGS Recorded Mineral Sites Site Name: Cross Roads Coal Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94453 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	410	1	422615 413585
68	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94598 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	480	1	423240 412824
69	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94600 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	692	1	423305 412611

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	BGS Recorded Mineral Sites Site Name: Moor Top Coal Pit Location: Thorncliff, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94448 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SW (W)	706	1	422156 413051
71	BGS Recorded Mineral Sites Site Name: No 3 Drift Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94582 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SE (E)	712	1	423605 412934
72	BGS Recorded Mineral Sites Site Name: Crawshaw Location: Flockton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94395 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Emley Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	743	1	423038 413996
73	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94599 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	743	1	423434 412644
74	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94596 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SW)	752	1	422576 412499
75	BGS Recorded Mineral Sites Site Name: Crawshaw Lane Location: Flockton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94393 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Emley Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	838	1	423156 414060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94597 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	896	1	422257 412525
77	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94625 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (S)	938	1	422697 412275
78	BGS Recorded Mineral Sites Site Name: Leys Lane Delf Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94601 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	A9NE (SE)	957	1	423780 412736
79	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94595 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	982	1	422119 412541
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	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.	A13SW (NE)	0	7	422894 413223
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (NE)	0	-	422894 413223
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	422882 413224

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	94	1	422822 413105
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	1	422691 413214
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	242	1	422942 413503
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	422882 413224
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	94	1	422822 413105
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	1	422691 413214
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	242	1	422942 413503
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	76	1	422805 413135
	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	A13SW (NE)	0	1	422894 413223
	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	A13SW (NE)	0	1	422894 413223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
80	Contemporary Trade Directory Entries Name: Huddersfield Volvo Breakers Location: UNIT 2D, EMLEY MOOR BUSINESS PARK, LEYS LANE, EMLEY, HUDDERSFIELD, HD8 9QY Classification: Car Breakers & Dismantlers Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (SE)	647	-	423525 412917
80	Contemporary Trade Directory Entries Name: Jacklin Welding Location: UNIT 2B, EMLEY MOOR BUSINESS PARK, LEYS LANE, EMLEY, HUDDERSFIELD, HD8 9QY Classification: Machine Shops Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	658	-	423523 412889
81	Contemporary Trade Directory Entries Name: Eurotec Nutrition Ltd Location: Unit 53, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Pet Foods & Animal Feeds Status: Active Positional Accuracy: Automatically positioned to the address	A14SW (E)	671	-	423572 412962
81	Contemporary Trade Directory Entries Name: Brockbank Ceramics Location: Unit 4b, Emley Moor Business Park, Leys Lane, Huddersfield, HD8 9QY Classification: Ceramic Manufacturers, Supplies & Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (E)	676	-	423571 412948
81	Contemporary Trade Directory Entries Name: Emley Refinishers Ltd Location: UNIT 2, EMLEY MOOR BUSINESS PARK, LEYS LANE, EMLEY, HUDDERSFIELD, HD8 9QY Classification: Car Body Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SW (SE)	677	-	423557 412914
81	Contemporary Trade Directory Entries Name: D C Autos Location: Unit 4, Emley Moor Business Park, Leys Lane, Emley, HUDDERSFIELD, HD8 9QY Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	681	-	423577 412949
81	Contemporary Trade Directory Entries Name: Tenerfern Ltd Location: Unit 4 Emley Moor Business Park, Leys La, Emley, Huddersfield, West Yorkshire, HD8 9QY Classification: Marine Equipment & Supplies Status: Inactive Positional Accuracy: Manually positioned to the address or location	A14SE (E)	689	-	423596 412974
81	Contemporary Trade Directory Entries Name: Victoria Mouldings Location: Unit 7-8, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Glass Fibre Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (E)	690	-	423597 412974
81	Contemporary Trade Directory Entries Name: Panel-Lite Location: Emley Moor Business Pk, Leys La, Emley, Huddersfield, West Yorkshire, HD8 9QY Classification: Cladding Suppliers & Installers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A14SW (SE)	690	-	423570 412910
81	Contemporary Trade Directory Entries Name: Shaadiphotobooks.Com Location: Unit 19, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (SE)	691	-	423580 412930

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	Contemporary Trade Directory Entries Name: John T Addy Location: Unit 1A, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Precision Engineers Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address	A14SE (SE)	692	-	423576 412919
81	Contemporary Trade Directory Entries Name: River Digital Location: Unit 12, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Printers Status: Active Positional Accuracy: Automatically positioned to the address	A14SE (SE)	719	-	423610 412927
82	Contemporary Trade Directory Entries Name: Emley Tube Technology Location: Unit 1, Emley Moor Business Pk, Leys La, Emley, Huddersfield, West Yorkshire, HD8 9QY Classification: Refrigeration Equipment Manufacturers & Distributors Status: Inactive Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	716	-	423592 412896
83	Contemporary Trade Directory Entries Name: X 7 Vending Location: Unit 21, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Water Coolers Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	762	-	423651 412916
83	Contemporary Trade Directory Entries Name: Pitch World Ltd Location: Unit 28, Emley Business Pk, Leys La, Emley, Huddersfield, West Yorkshire, HD8 9QY Classification: Do It Yourself Wholesalers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A14SE (E)	783	-	423676 412922
83	Contemporary Trade Directory Entries Name: Maverick Wires Ltd Location: Unit 19, Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Classification: Bookbinding & Equipment Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	784	-	423666 412894
84	Fuel Station Entries Name: D C Autos Location: Church Street , Emley , Huddersfield, West Yorkshire, HD8 9QY Brand: Obsolete Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A14SE (E)	690	-	423597 412974
85	Points of Interest - Commercial Services Name: Huddersfield Volvo Breakers Location: Unit 2d Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A14SW (SE)	647	8	423525 412916
86	Points of Interest - Commercial Services Name: D C Autos Location: Unit 4 and 4b Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (E)	666	8	423562 412950
86	Points of Interest - Commercial Services Name: Devils Paint Jobs Ltd Location: Unit 2 Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	673	8	423552 412913

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	Points of Interest - Commercial Services Name: Emley Refinishers Ltd Location: Unit 2 Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	676	8	423556 412913
86	Points of Interest - Commercial Services Name: D C Autos Location: Unit 4 Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	689	8	423596 412974
86	Points of Interest - Commercial Services Name: Emley Refinishers & Restorers Location: Unit 4a Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (E)	690	8	423597 412974
86	Points of Interest - Commercial Services Name: A V Motors Location: Unit 10 Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (SE)	691	8	423580 412930
86	Points of Interest - Commercial Services Name: A V Motors Location: Unit 10 Emley Moor Business Park, Leys Lane, Emley, Huddersfield, HD8 9QY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SE (SE)	691	8	423580 412930
87	Points of Interest - Manufacturing and Production Name: Wind Turbine Location: HD8 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	341	8	422784 413598
88	Points of Interest - Manufacturing and Production Name: J Robertshaw Location: Jagger Lane, Emley, Huddersfield, HD8 9TF Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A7NE (SW)	527	8	422536 412775
88	Points of Interest - Manufacturing and Production Name: J Robertshaw Location: Moorhead Farm, Jagger Lane, Emley Moor, Huddersfield, HD8 9TF Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A7NE (SW)	528	8	422535 412774
89	Points of Interest - Manufacturing and Production Name: Shaft (Disused) Location: HD8 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A9NW (SE)	699	8	423309 412605
90	Points of Interest - Manufacturing and Production Name: Emley Business Park Location: HD8 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A14SE (SE)	712	8	423594 412909
90	Points of Interest - Manufacturing and Production Name: Emley Moor Business Park Location: HD8 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	793	8	423675 412893

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	Points of Interest - Manufacturing and Production Name: Wind Turbine Location: HD8 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	782	8	422389 413880
92	Points of Interest - Manufacturing and Production Name: Greenwood Location: 57 Westfield Lane, Emley, Huddersfield, HD8 9TD Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A17SE (NW)	785	8	422256 413750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	Areas of Adopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Unitary Development Plan Status: Adopted Plan Date: 1st March 1999	A13SW (NE)	0	10	422894 413223
94	Areas of Unadopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Local Plan Status: Submission Draft Plan Date: 25th April 2017	A13SW (NE)	0	10	422894 413223
95	Nitrate Vulnerable Zones Name: River Dearne Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SW (NE)	0	4	422894 413223

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Environment Agency - Head Office Kirklees Metropolitan Borough Council - Planning Services Wakefield City Metropolitan District Council - Environmental Health	January 2020 June 2020 October 2017 October 2017	Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North East Region	July 2023	Quarterly
Enforcement and Prohibition Notices Environment Agency - North East Region	March 2013	
Integrated Pollution Controls Environment Agency - North East Region	January 2009	
Integrated Pollution Prevention And Control Environment Agency - North East Region	January 2023	Quarterly
Local Authority Integrated Pollution Prevention And Control Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department Wakefield City Metropolitan District Council - Environmental Health	April 2014 April 2014 December 2020	Variable Variable Variable
Local Authority Pollution Prevention and Controls Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department Wakefield City Metropolitan District Council - Environmental Health	April 2014 April 2014 June 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department Wakefield City Metropolitan District Council - Environmental Health	April 2014 April 2014 June 2014	Variable Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2023	
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	
Registered Radioactive Substances Environment Agency - North East Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	July 2023 July 2023	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	October 2023	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified

Agency & Hydrological	Version	Update Cycle
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	As notified
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2023	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2023	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2023	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	October 2023	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	July 2023	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	July 2023 July 2023	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	January 2023 January 2023	Quarterly Quarterly
Local Authority Landfill Coverage Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Planning Services Wakefield City Metropolitan District Council - Environmental Health	February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Planning Services Wakefield City Metropolitan District Council - Environmental Health	October 2018 October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2006 March 2006	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	April 2018 April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	June 2015 June 2015	
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	March 2023	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Kirklees Metropolitan Borough Council - Planning Services Barnsley Metropolitan Borough Council - Planning Department Wakefield City Metropolitan District Council	August 2015 January 2016 July 2023	Variable Variable Variable
Planning Hazardous Substance Consents Kirklees Metropolitan Borough Council - Planning Services Wakefield City Metropolitan District Council Barnsley Metropolitan Borough Council - Planning Department	August 2015 February 2016 January 2016	Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	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	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	July 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	September 2023	Quarterly
Points of Interest - Education and Health PointX	September 2023	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2023	Quarterly
Points of Interest - Public Infrastructure PointX	September 2023	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2023	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

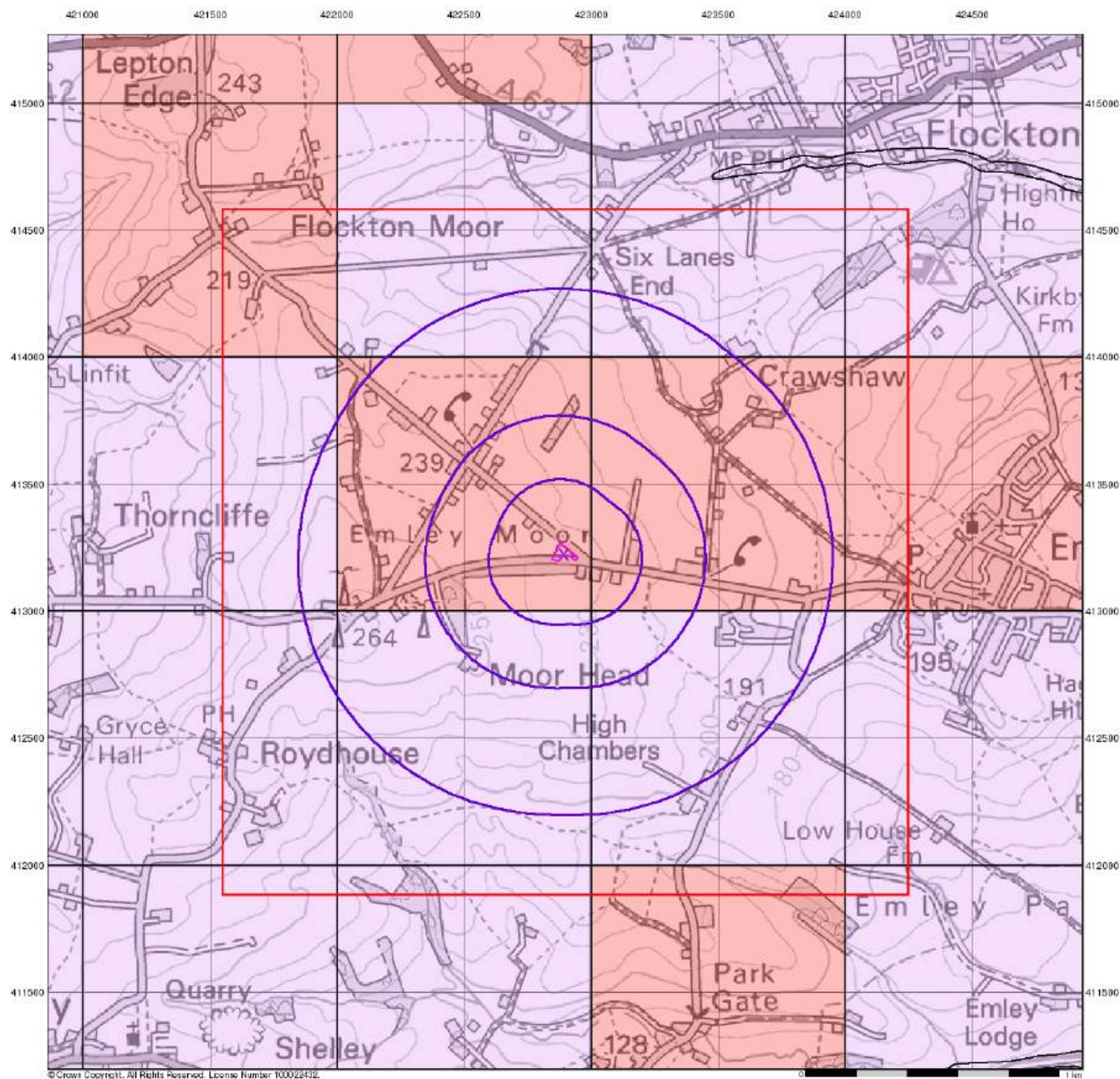
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	April 2023	Bi-Annually
Areas of Adopted Green Belt Barnsley Metropolitan Borough Council - Planning Department Kirklees Metropolitan Borough Council Wakefield City Metropolitan District Council	August 2023 August 2023 August 2023	Quarterly Quarterly Quarterly
Areas of Unadopted Green Belt Barnsley Metropolitan Borough Council - Planning Department Kirklees Metropolitan Borough Council Wakefield City Metropolitan District Council	August 2023 August 2023 August 2023	Quarterly Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	November 2023	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	August 2023	Bi-Annually
Marine Nature Reserves Natural England	April 2023	Bi-Annually
National Nature Reserves Natural England	August 2023	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 March 2023	Bi-Annually
Ramsar Sites Natural England	October 2023	Bi-Annually
Sites of Special Scientific Interest Natural England	March 2023	Bi-Annually
Special Areas of Conservation Natural England	April 2023	Bi-Annually
Special Protection Areas Natural England	October 2023	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 NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
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	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
8	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	Kirklees Metropolitan Borough Council Town Hall, Civic Centre, Huddersfield, West Yorkshire, HD1 2TA	Telephone: 01484 221000 Fax: 01484 442768 Website: www.kirklees.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
-	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.



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Groundwater Vulnerability

General

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

Agency and Hydrological

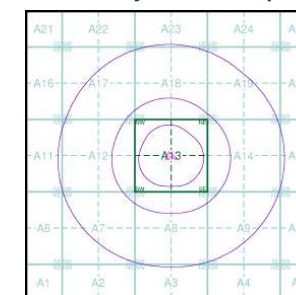
Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer
- Unproductive Aquifer
- Soluble Rock

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

Site Sensitivity Context Map - Slice A

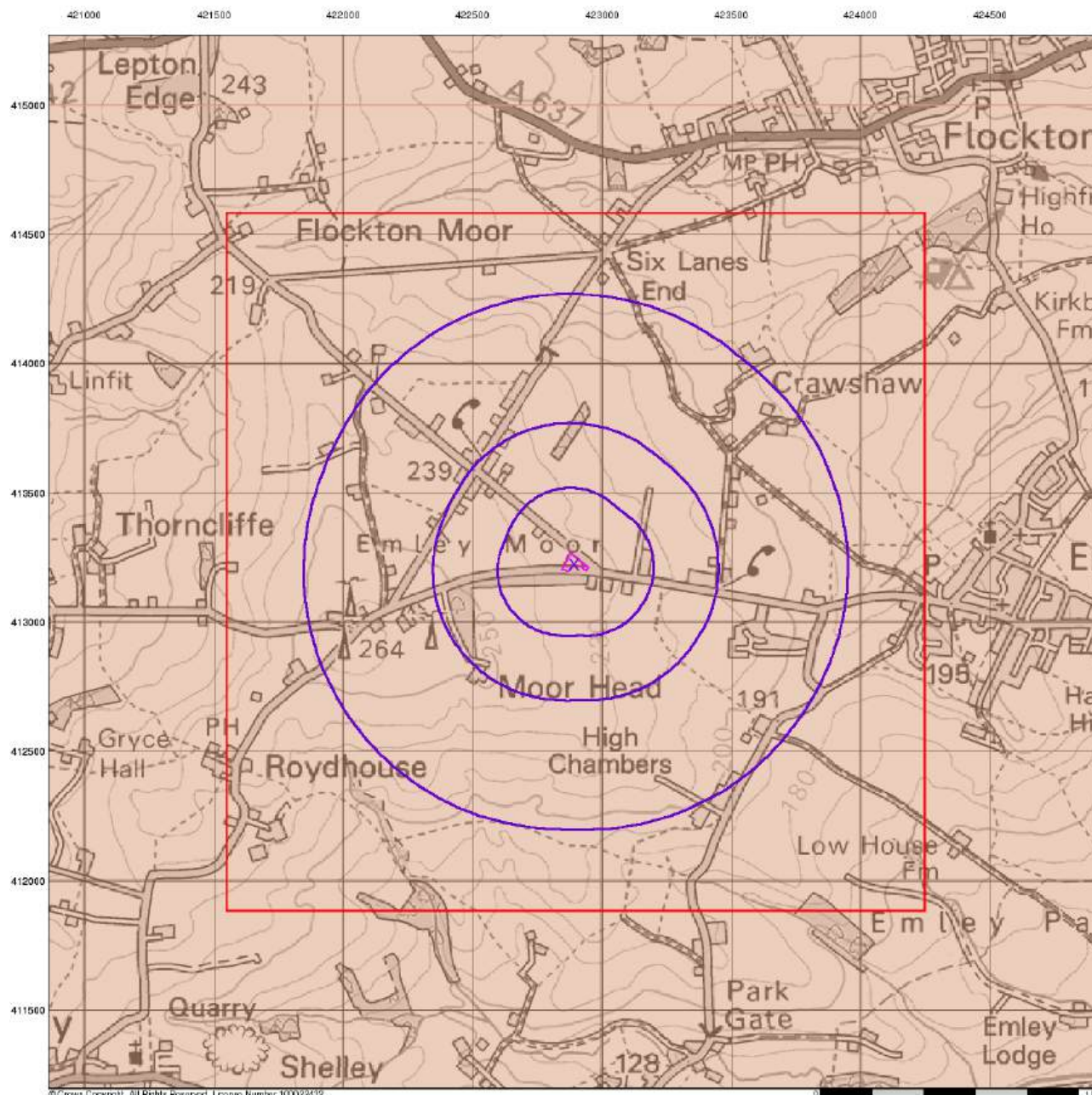


Order Details

Order Number: 323279477_1_1
 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

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Bedrock Aquifer Designation

General

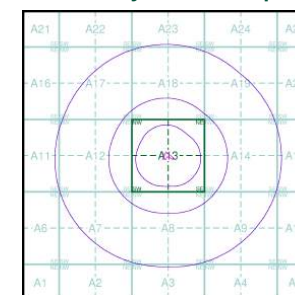
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

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

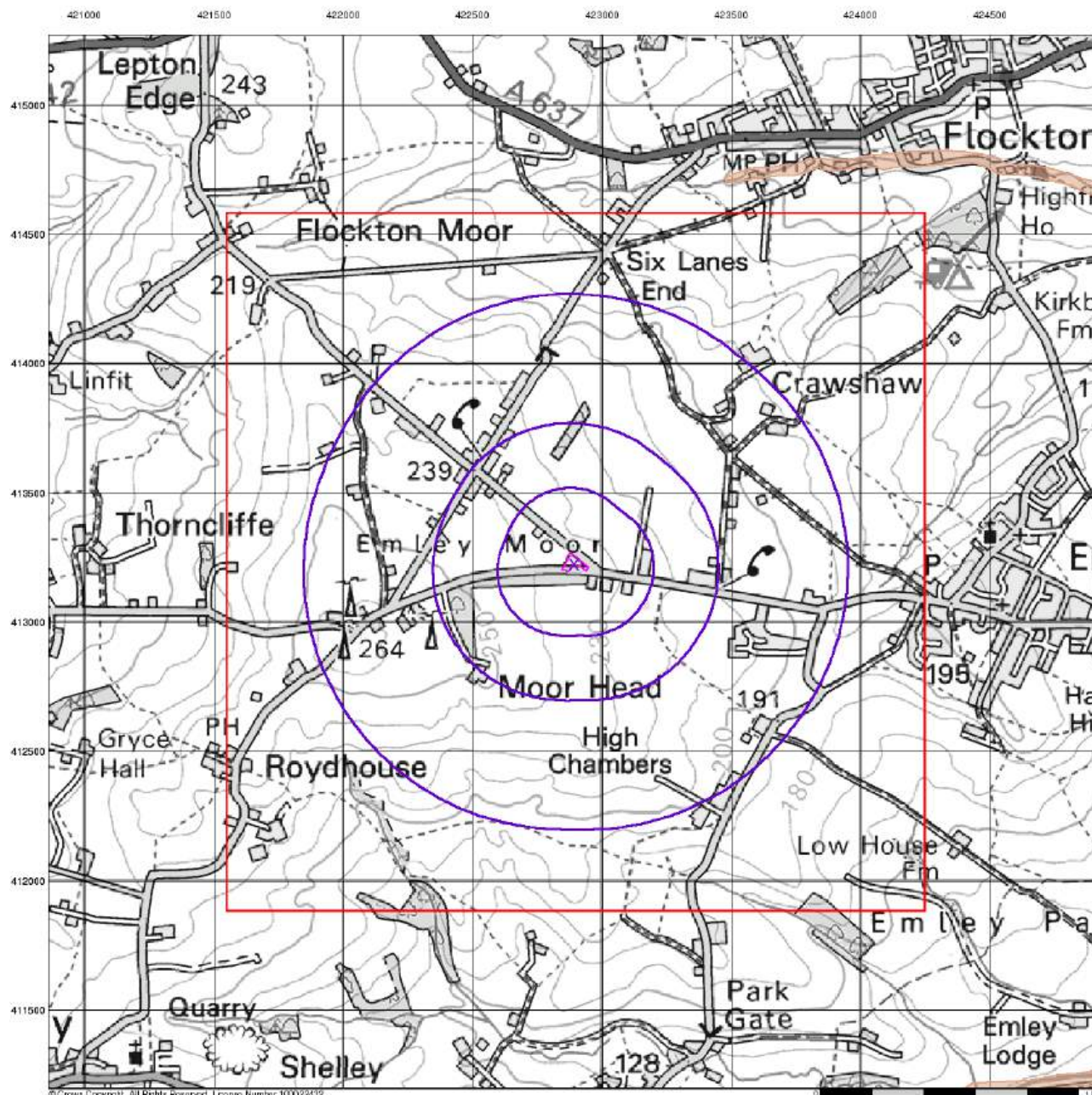
Order Number: 323279477_1_1
 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

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Superficial Aquifer Designation

General

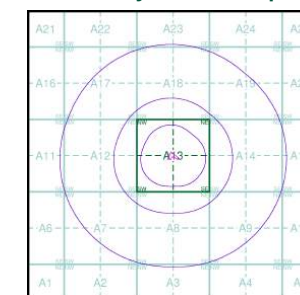
- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

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

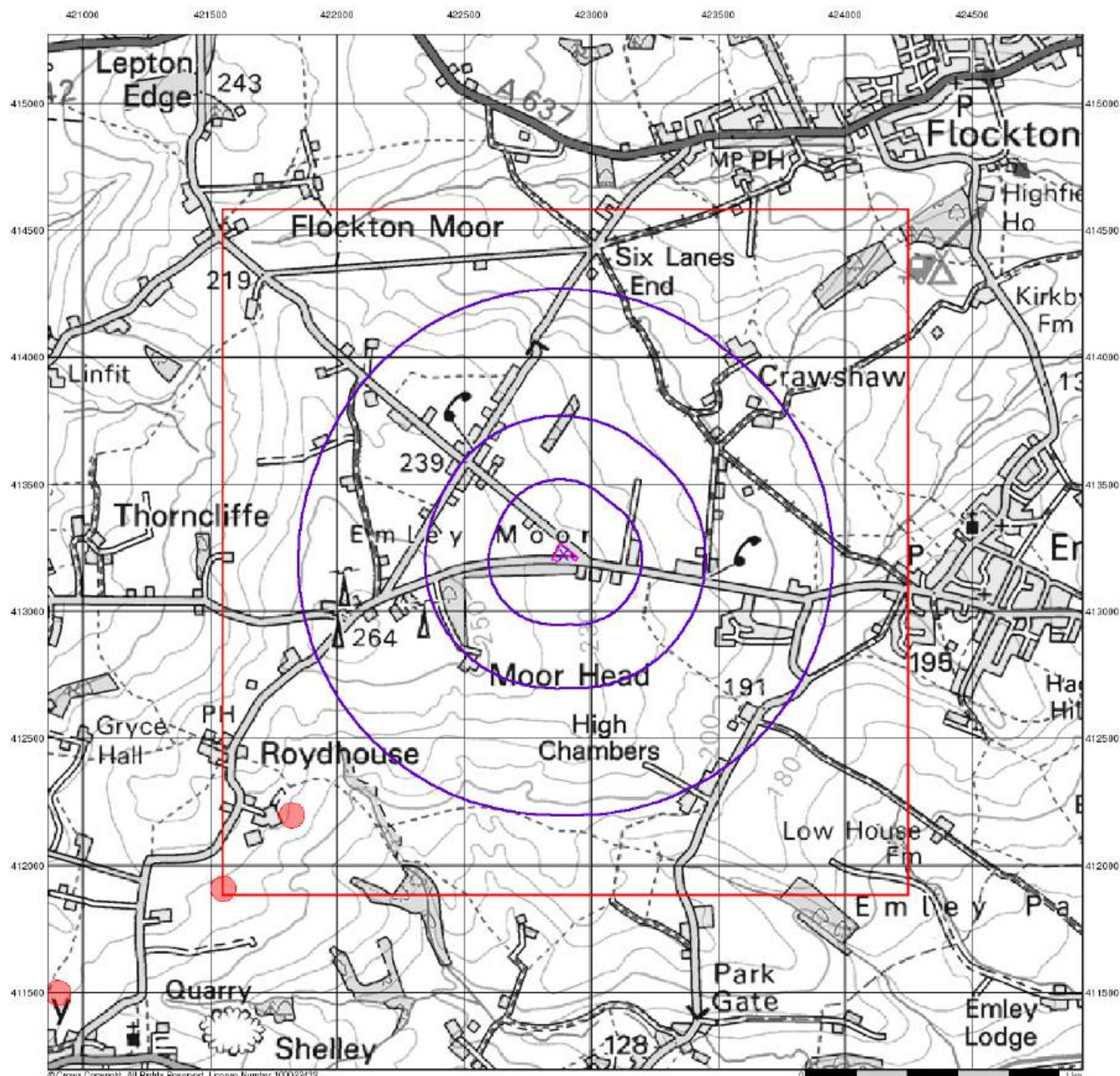
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 Site Area (Ha): 0.33
 Search Buffer (m): 1000

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Source Protection Zones

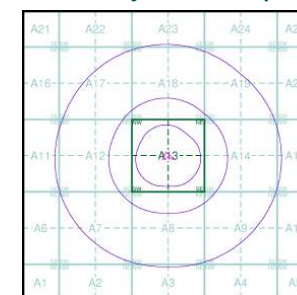
General

- ◊ Specified Site
- Specified Buffer(s)
- X 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

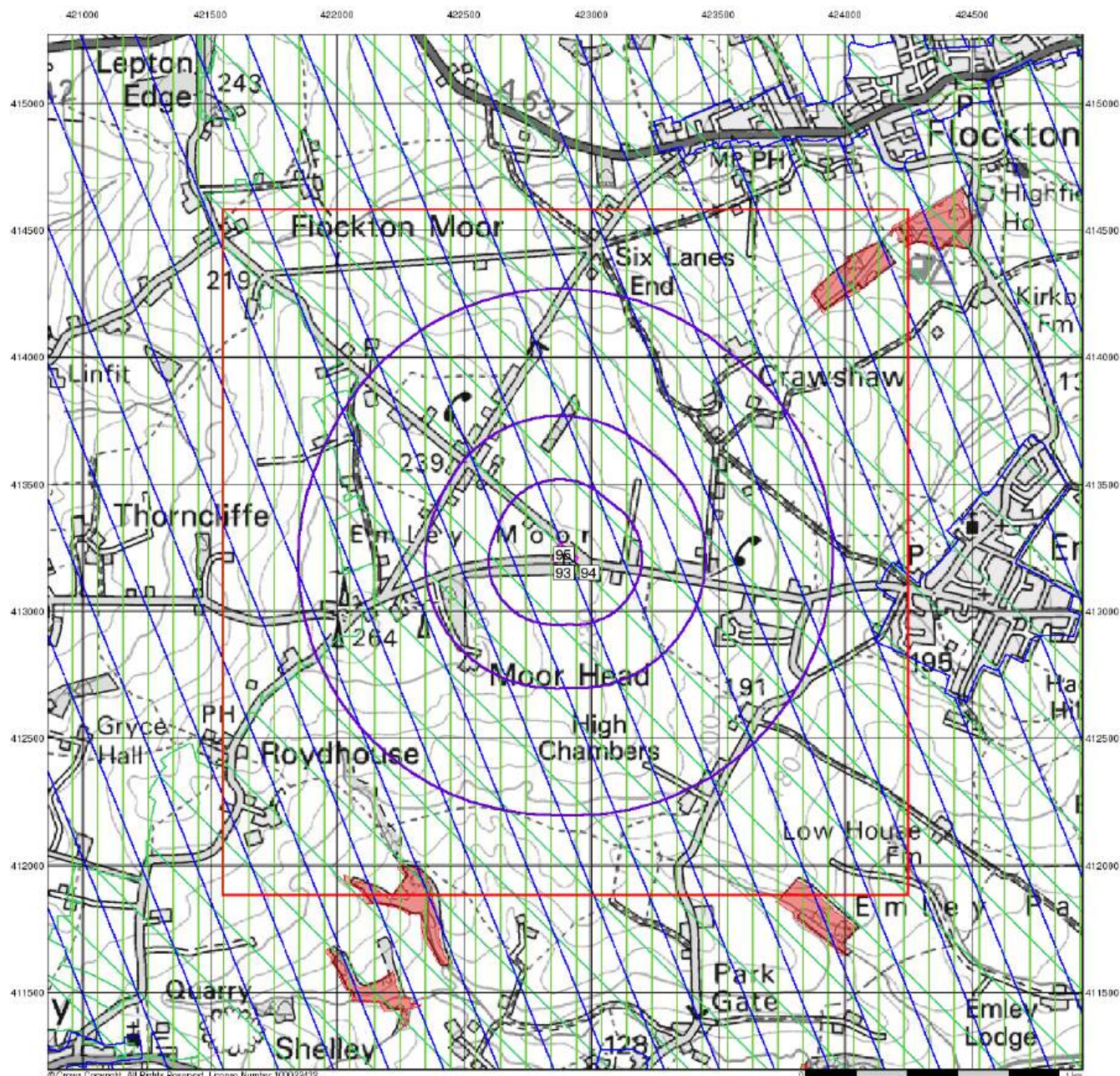


Order Details

Order Number: 323279477_1_1
 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

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Sensitive Land Uses

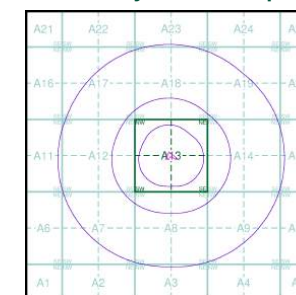
General

- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- 8 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

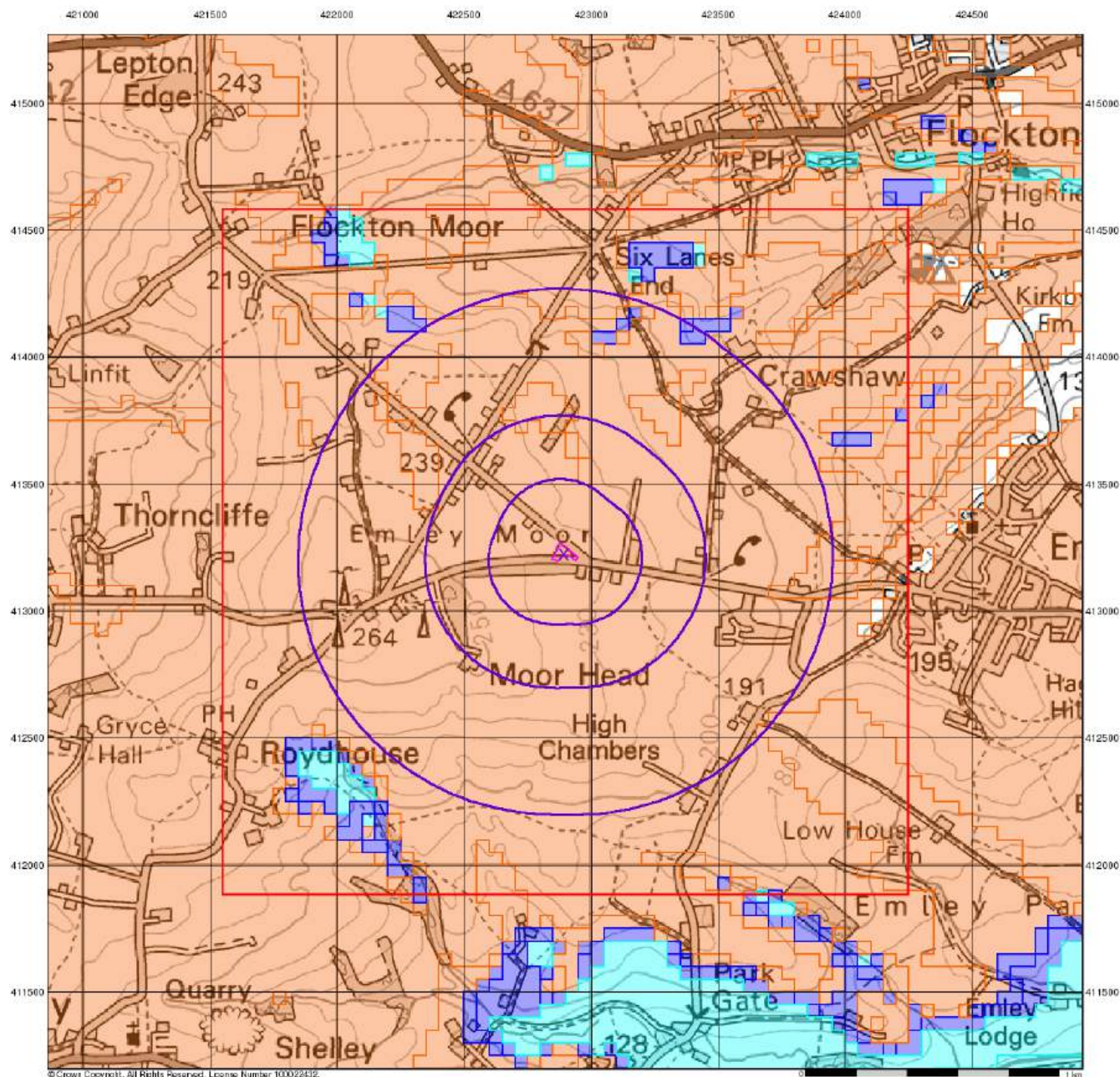
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 Customer Ref: 1407nj
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 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

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BGS Flood GFS Data

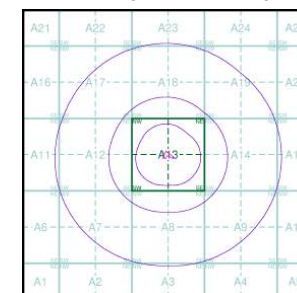
General

- 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

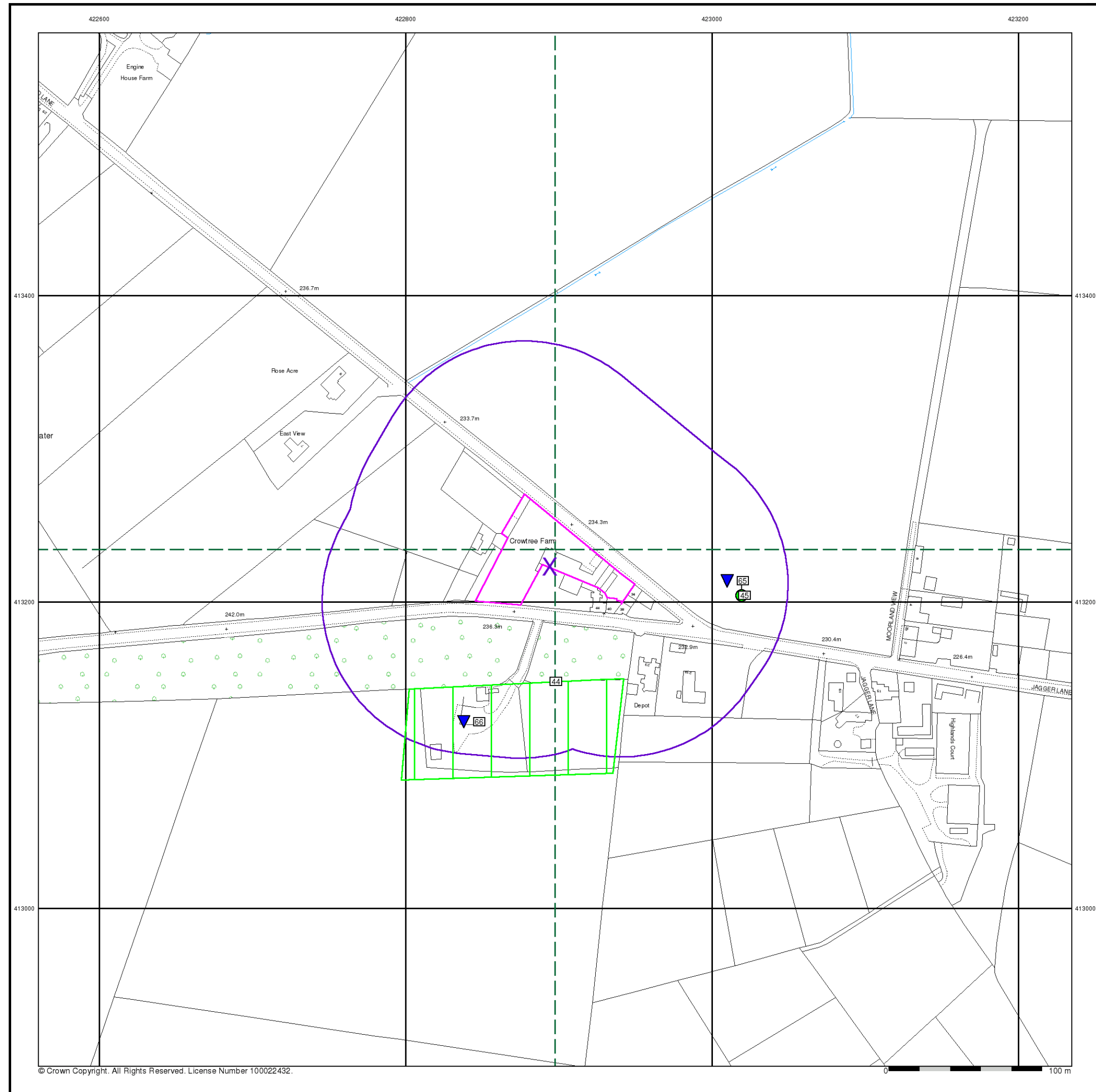
Order Number: 323279477_1_1
 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

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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

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 (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:	323279477_1_1
Customer Ref:	1407nj
National Grid Reference:	422890, 413220
Slice:	A
Site Area (Ha):	0.33
Plot Buffer (m):	100

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ

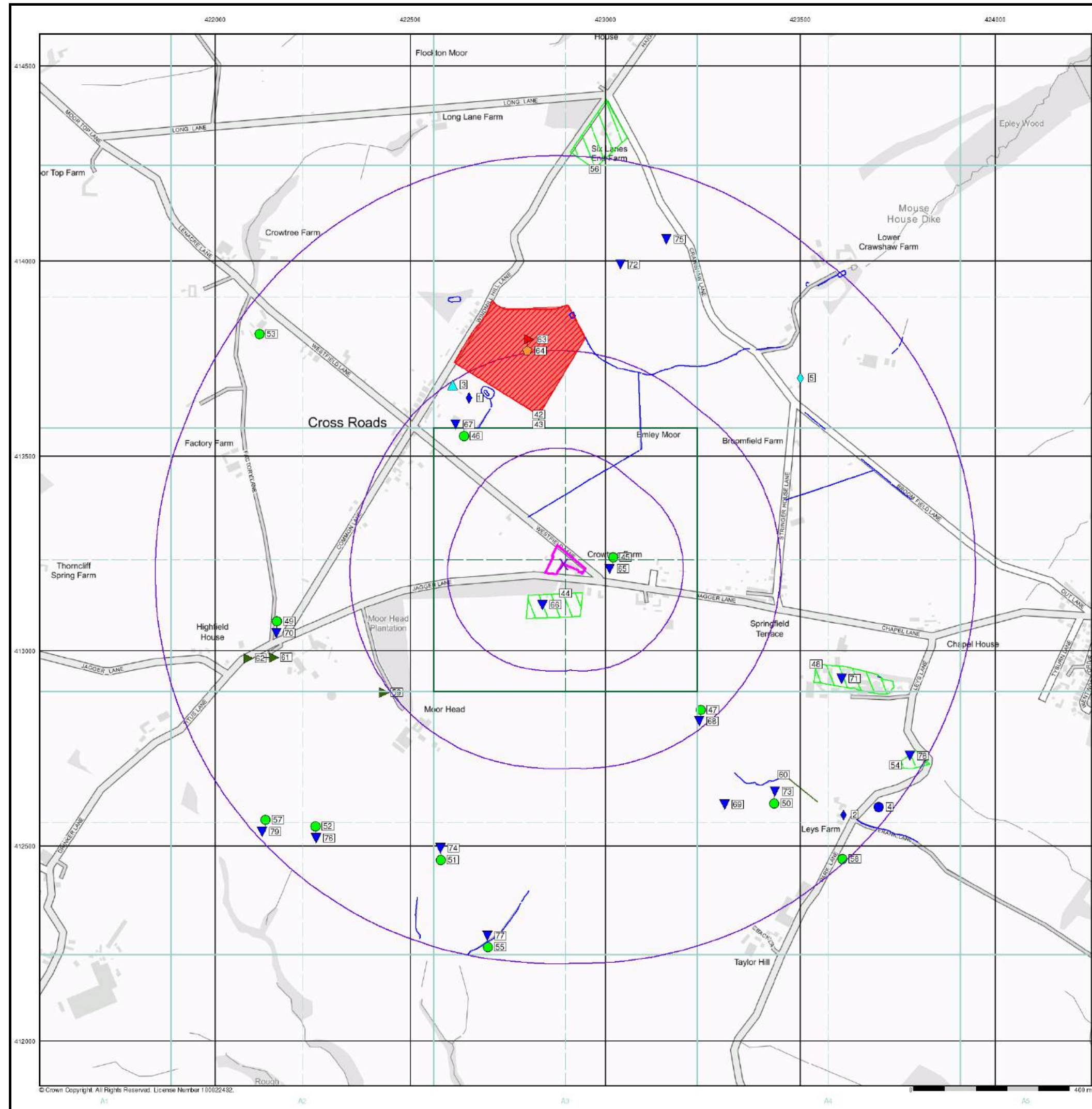
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A Landmark Information Group Service v50.0 03-Nov-2023 Page 1 of 1



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- General**

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

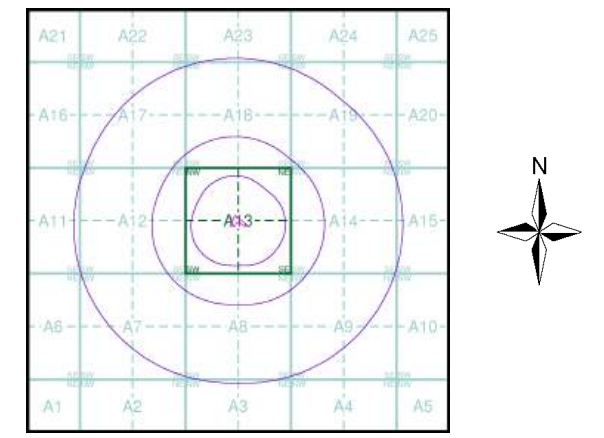
 - Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - 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
- 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 (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - 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
 - BGS Recorded Mineral Site
- Geological**

 - BGS Recorded Mineral Site

Site Sensitivity Map - Slice A

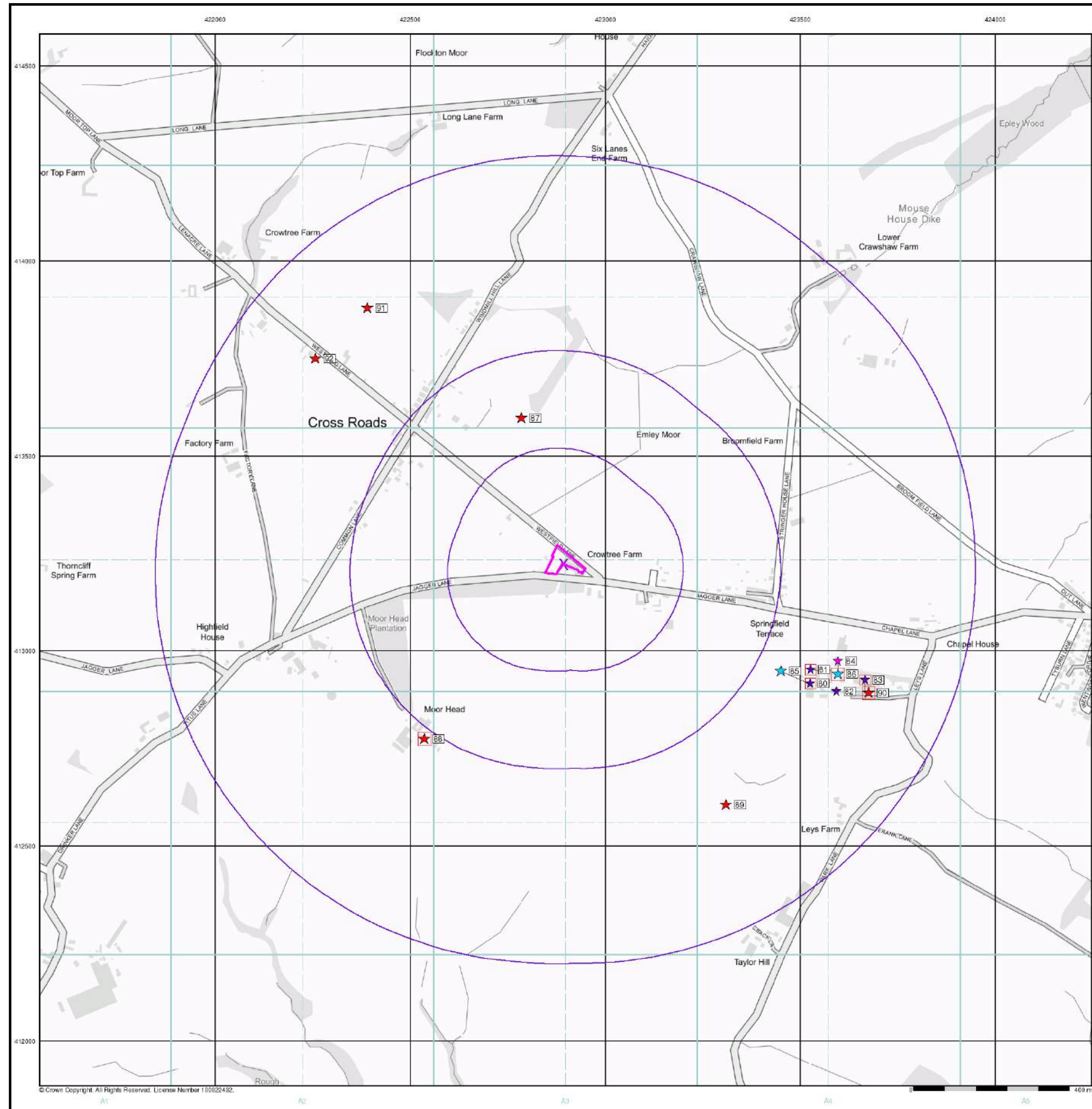


Order Details

Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

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Industrial Land Use Map

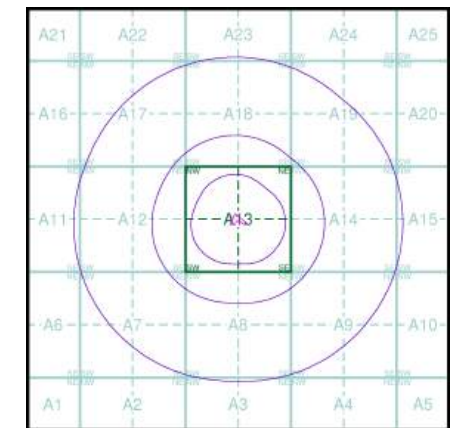
General

- 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

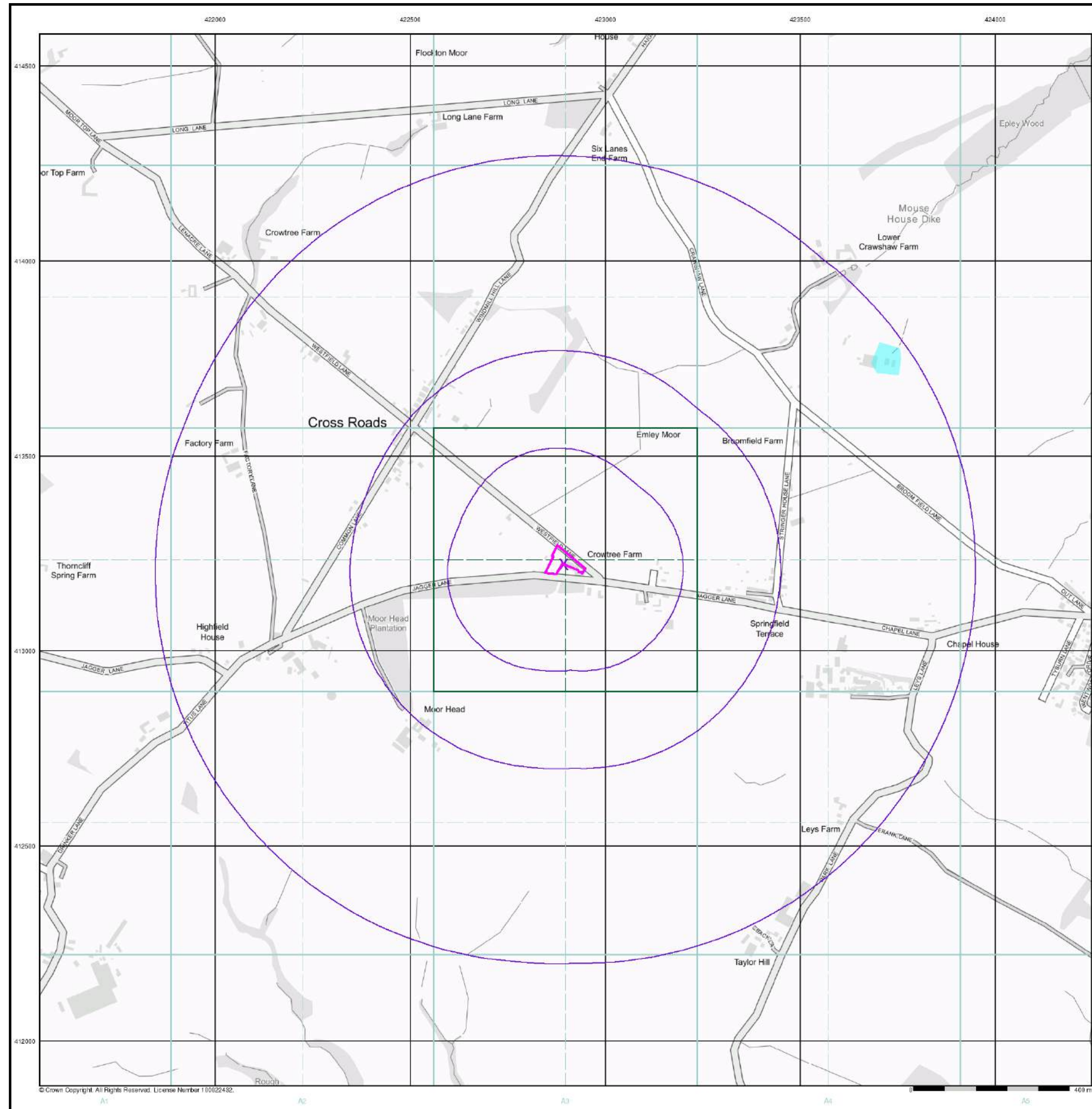


Order Details

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Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

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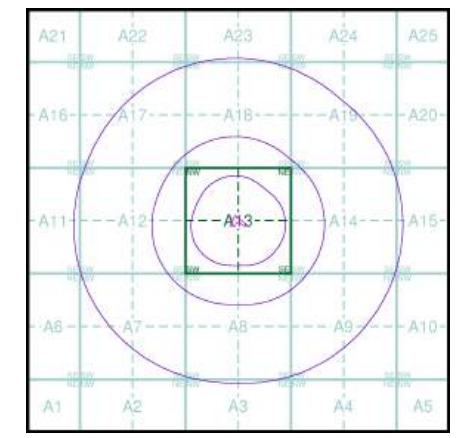
General

- 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

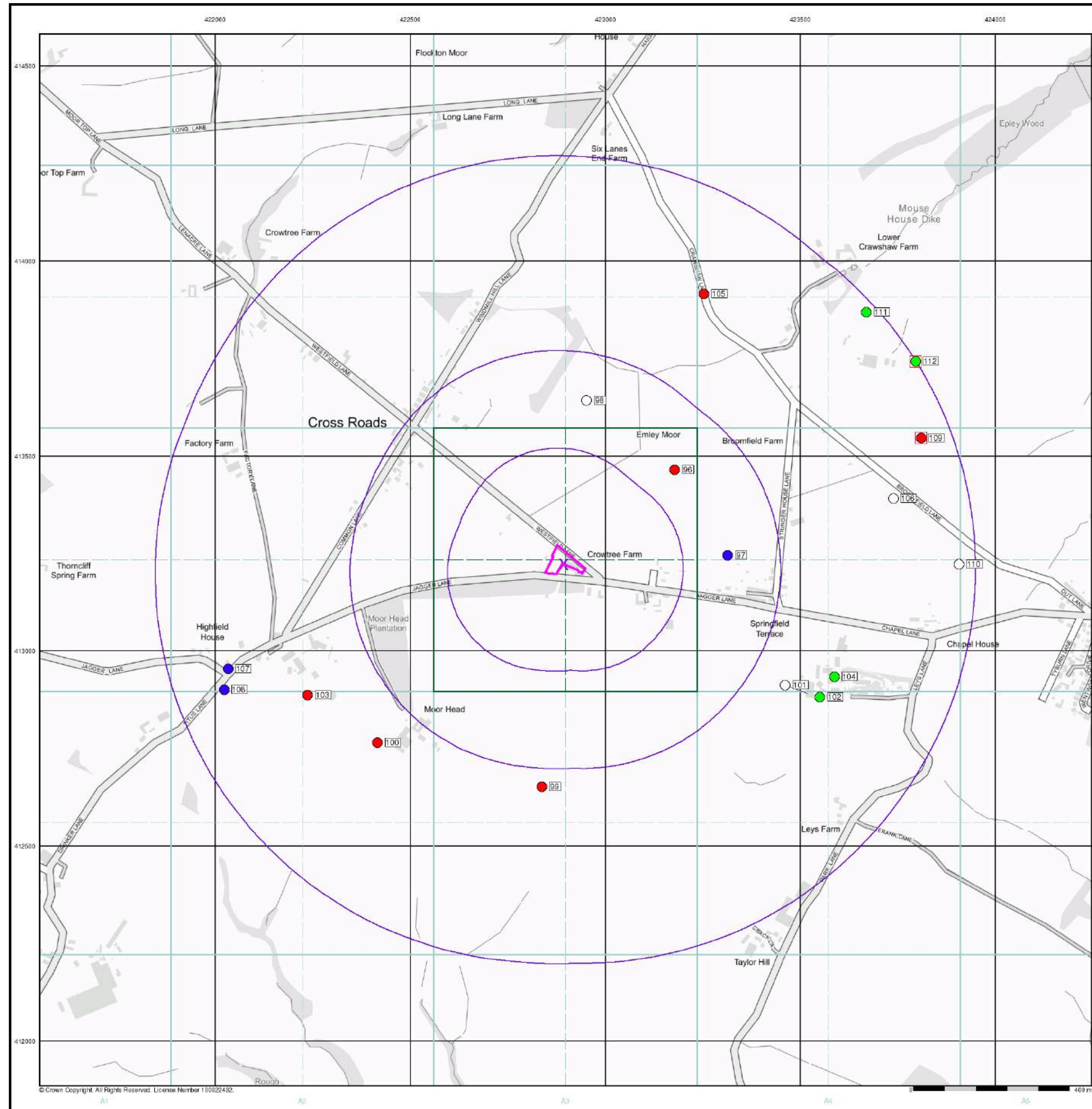


Order Details

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Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

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General

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

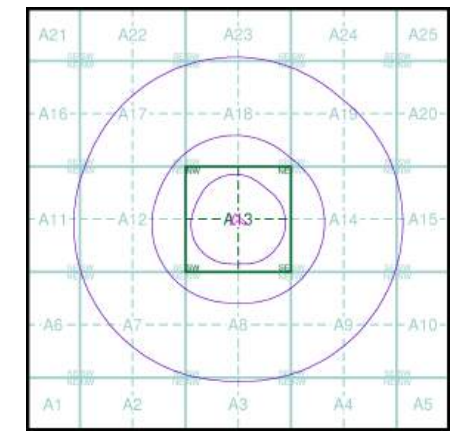
Agency and Hydrological (Boreholes)

- 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

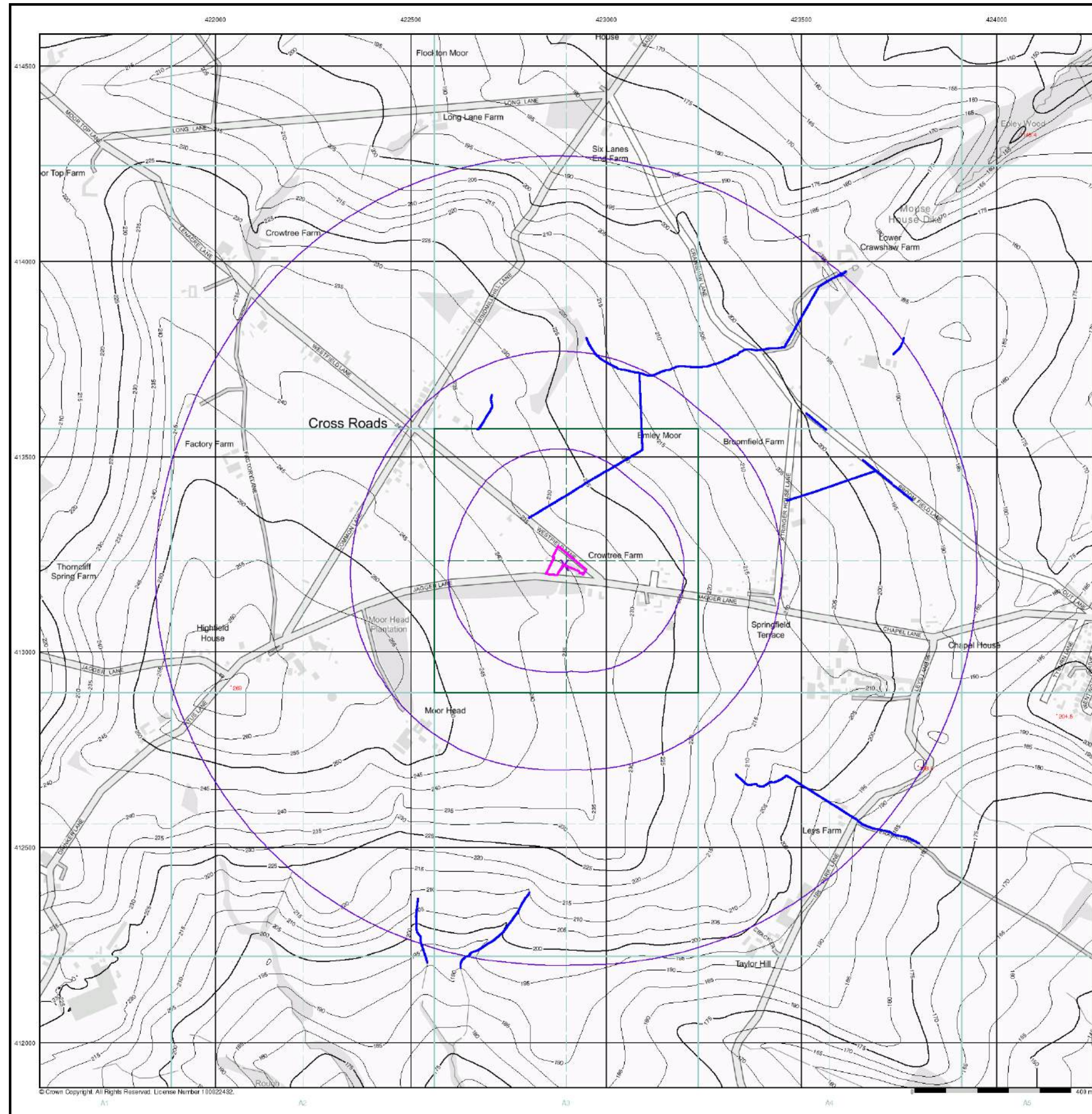


Order Details

Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

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General

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

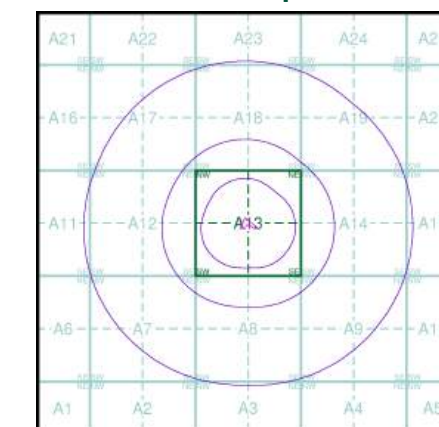
OS Water Network Data

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

Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

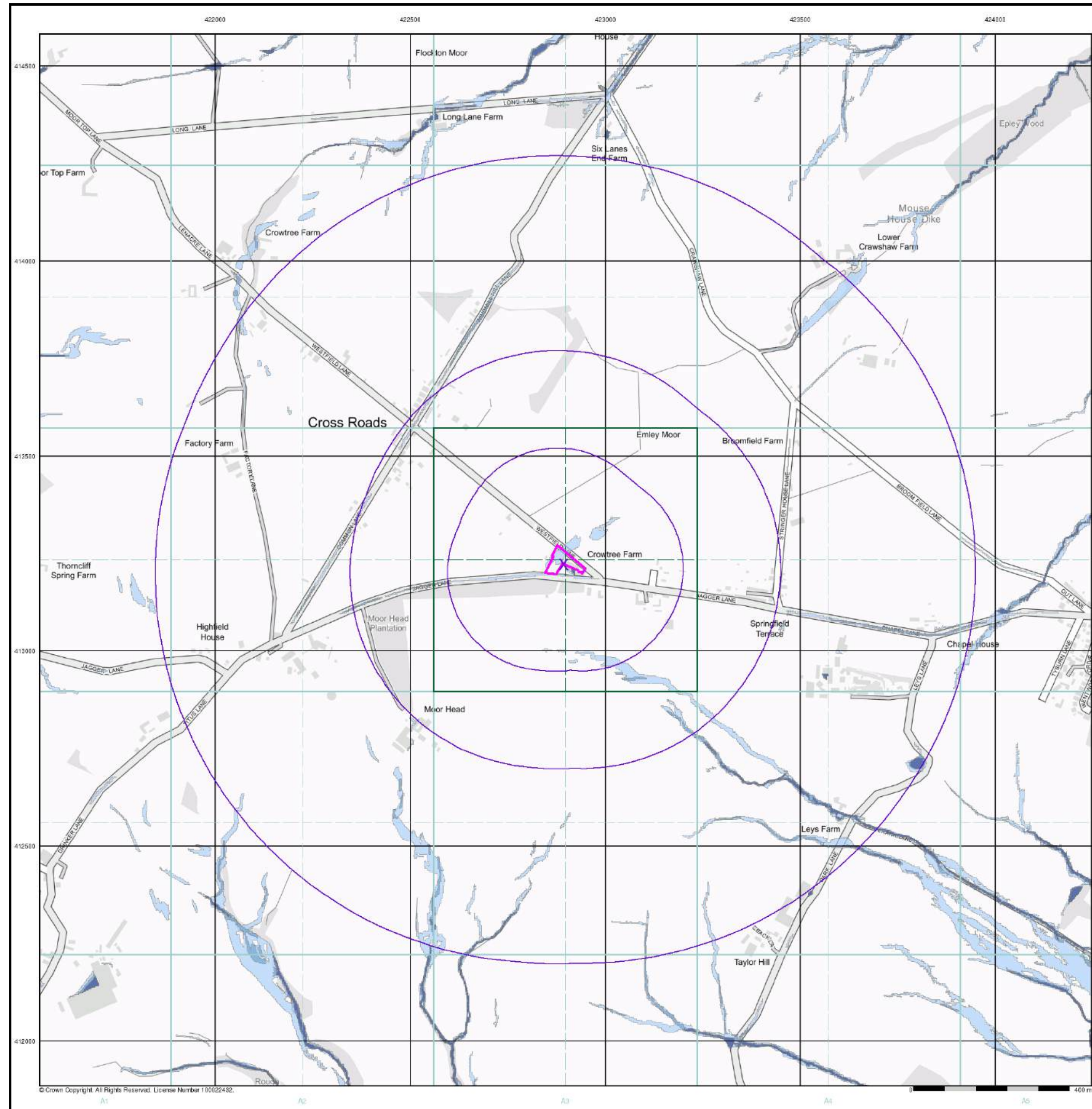
Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ

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INFORMATION GROUP

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



General

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

Risk of Flooding from Surface Water

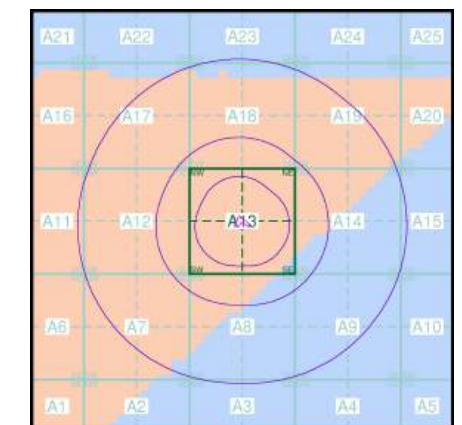
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

E/NRW Suitability Map - Slice A

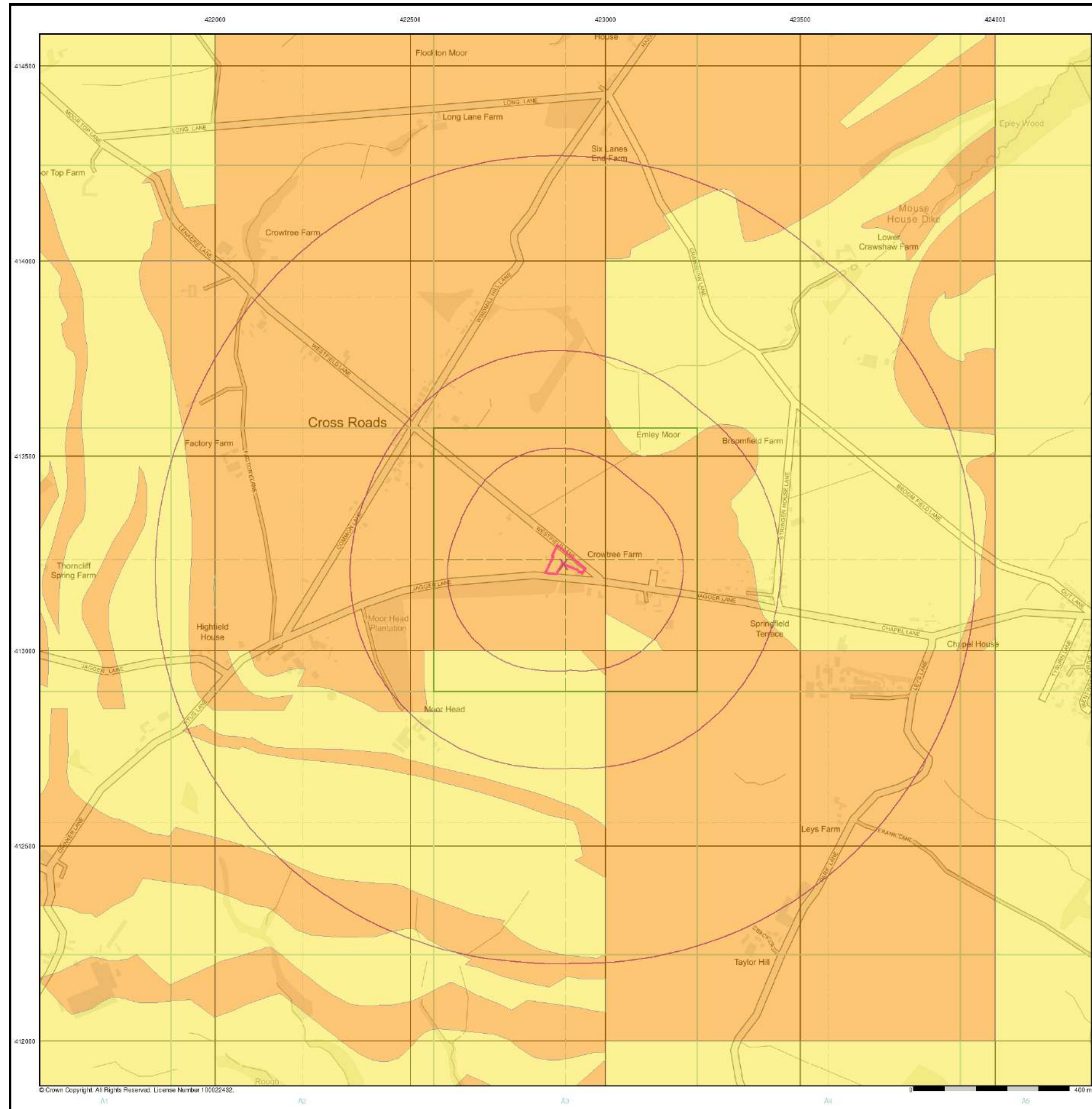


Order Details

Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

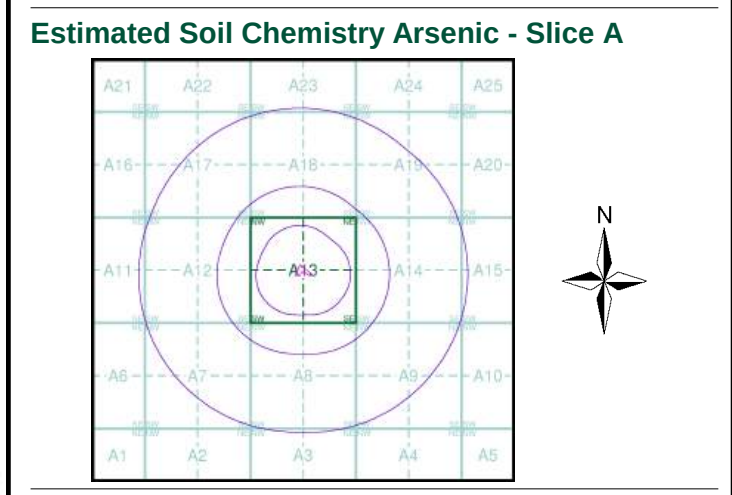
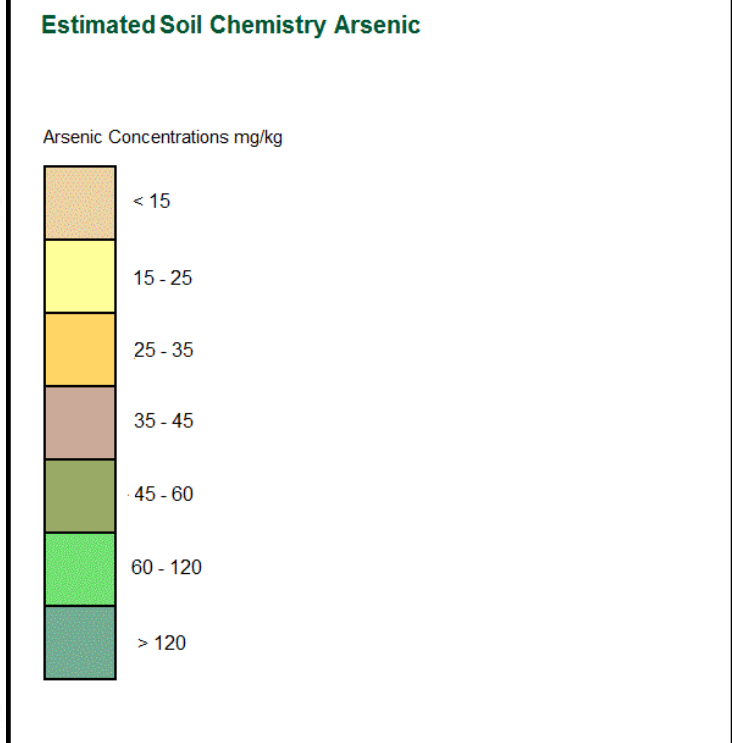
Thorncliffe Farm Shop, Westfield Lane, Emley,
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General

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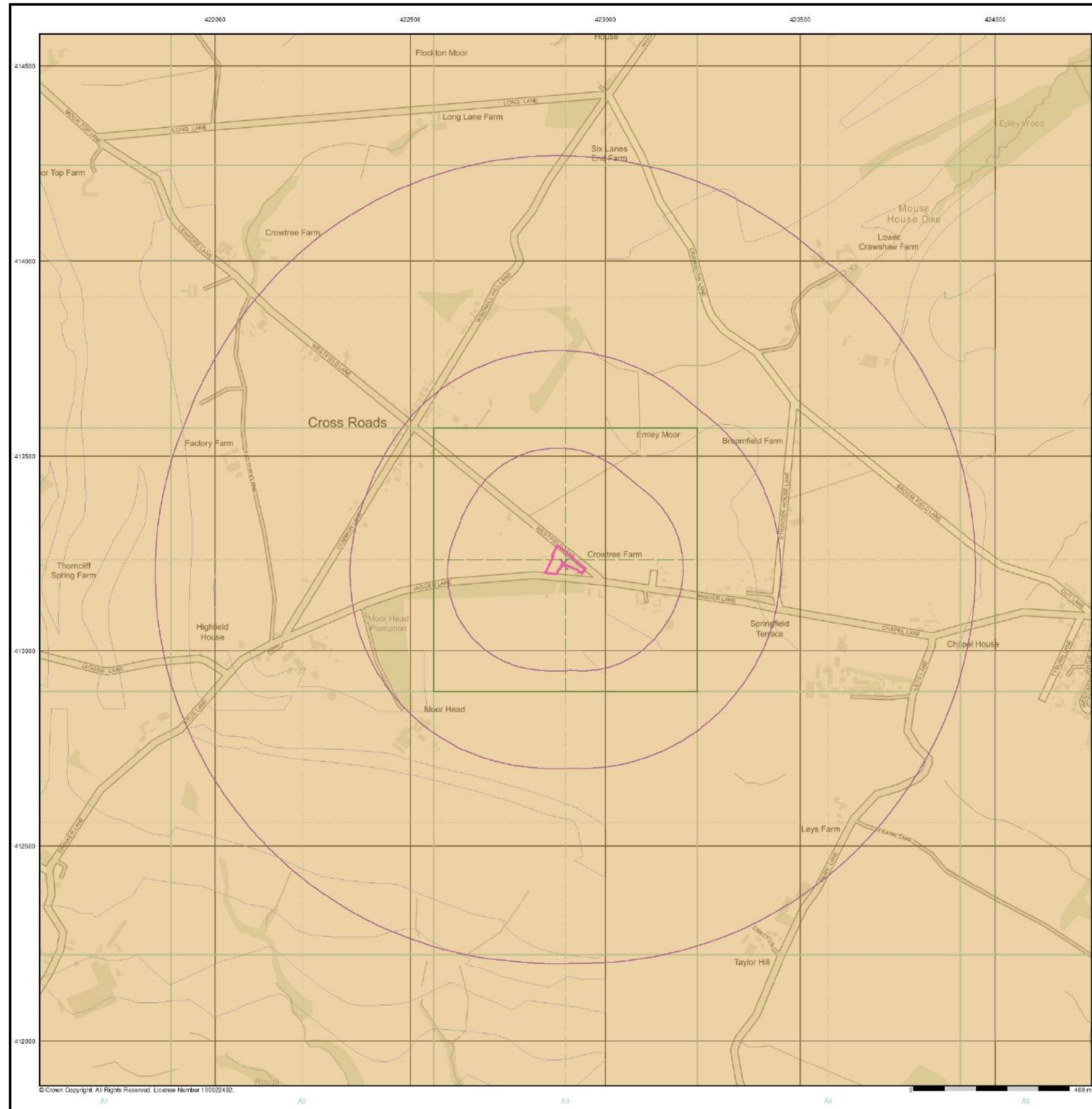


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Customer Ref: 1407nj
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Site Details

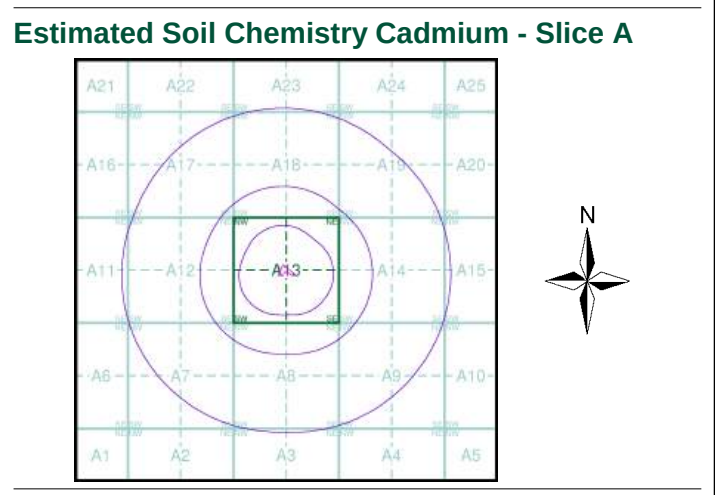
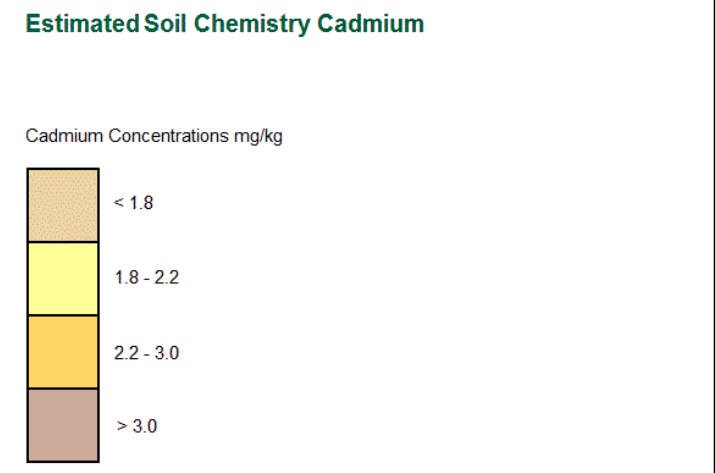
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General

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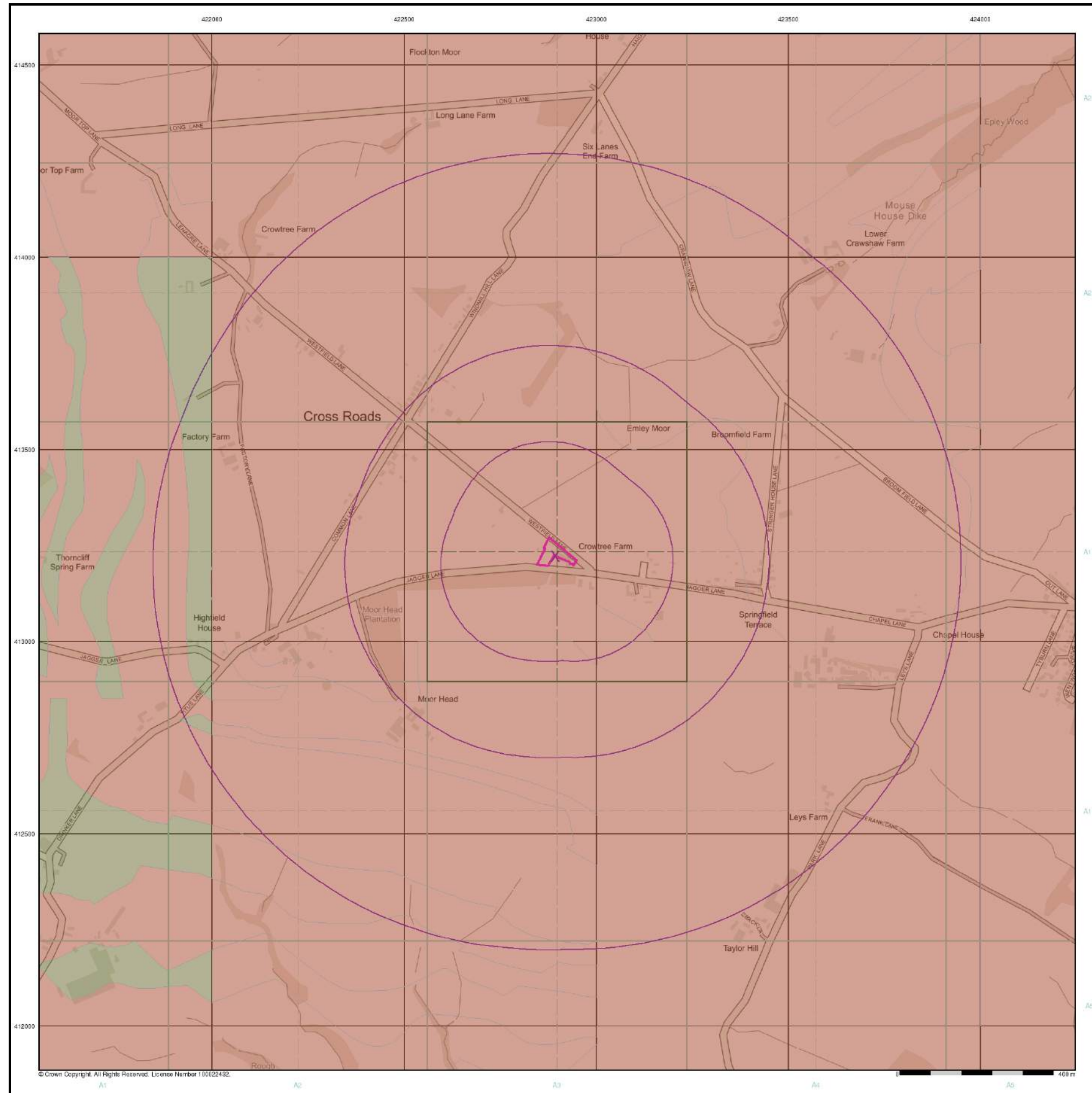


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Slice: A
Site Area (Ha): 0.33
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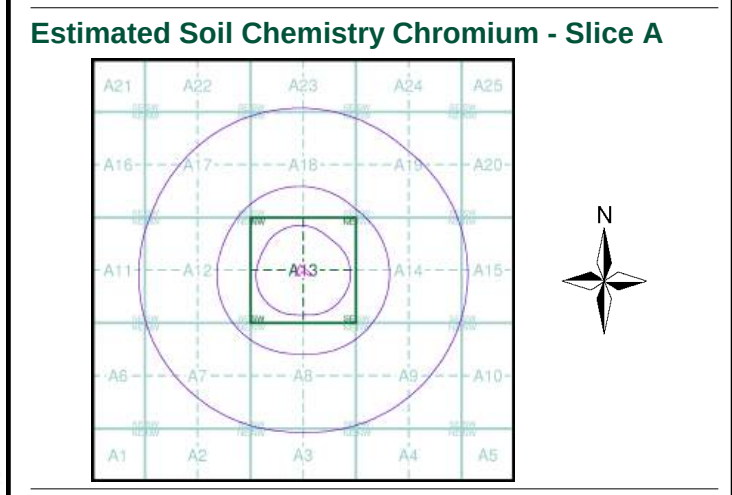
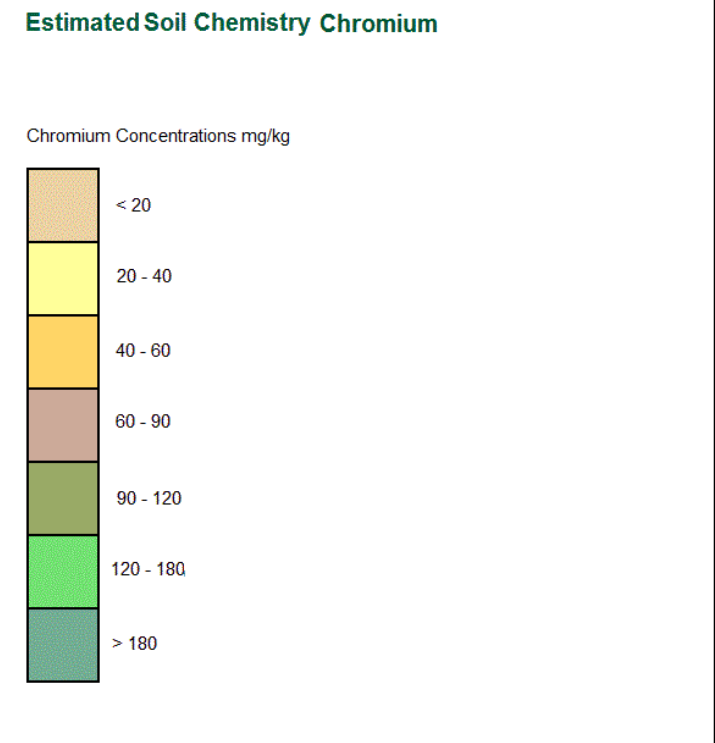
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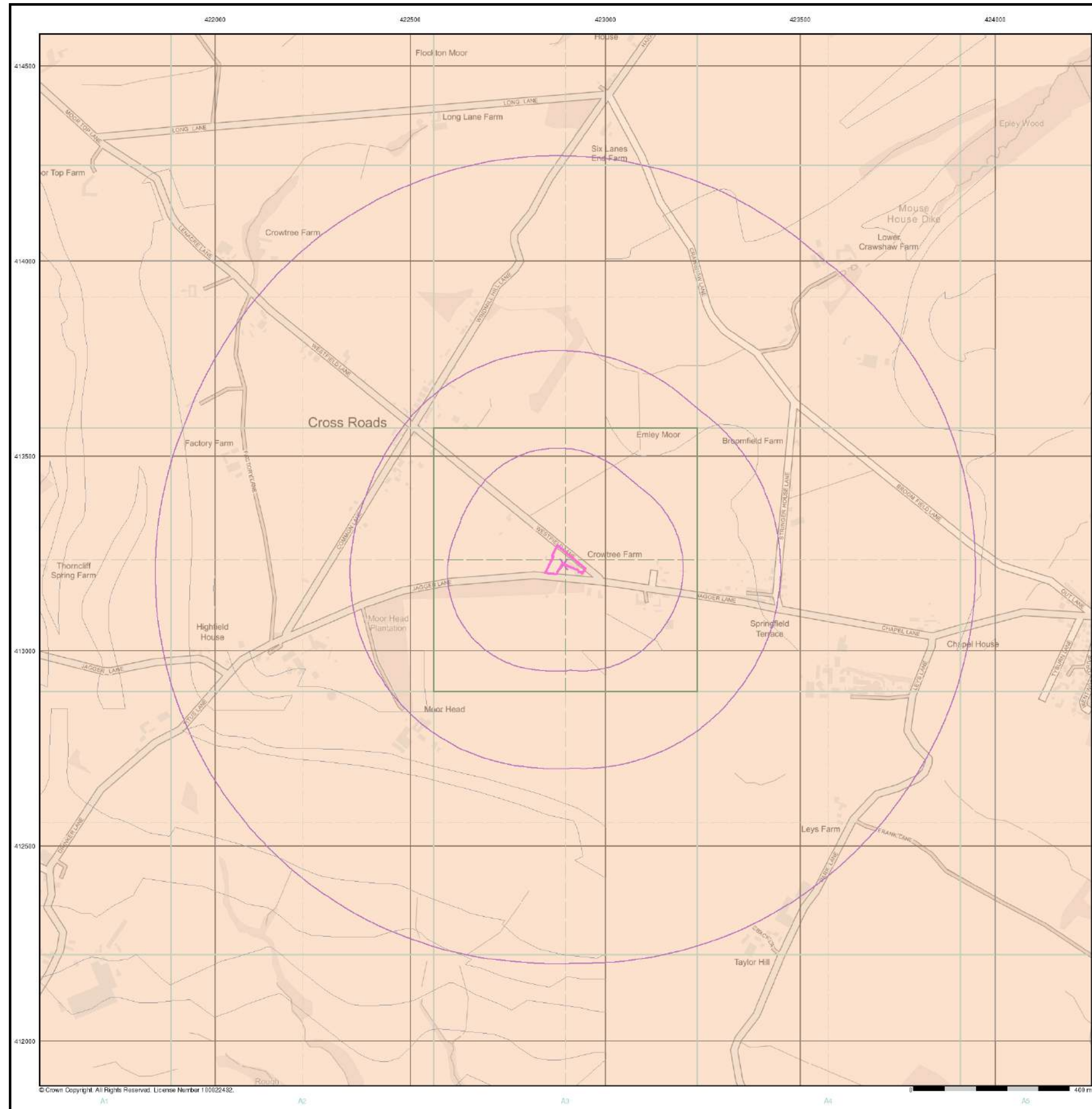


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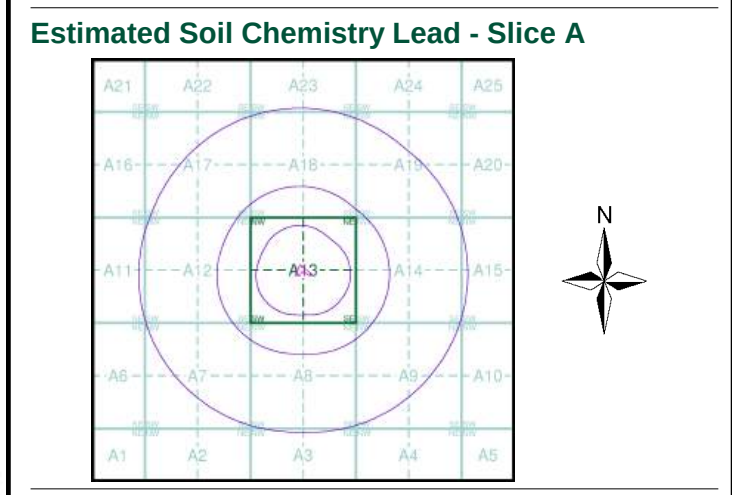
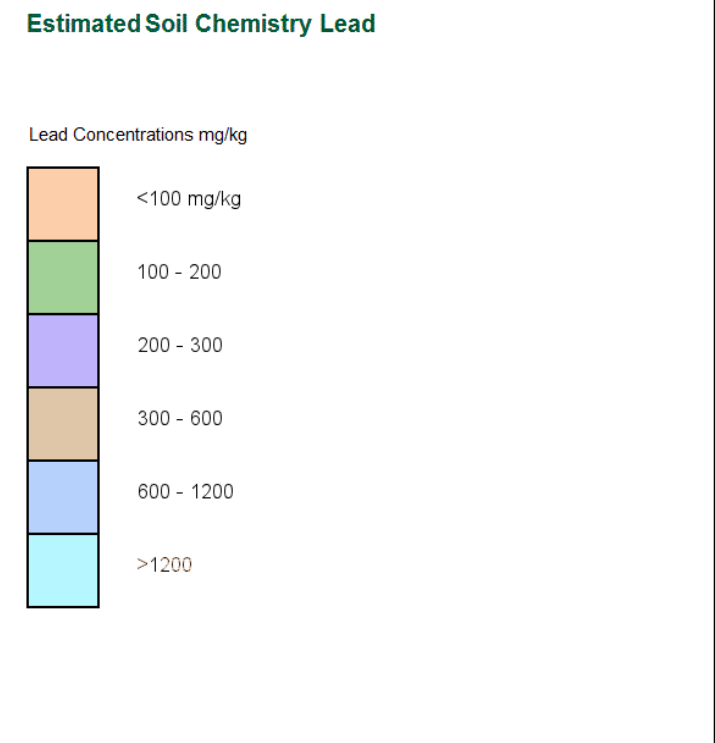
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General

Specified Site Specified Buffer(s) Bearing Reference Point

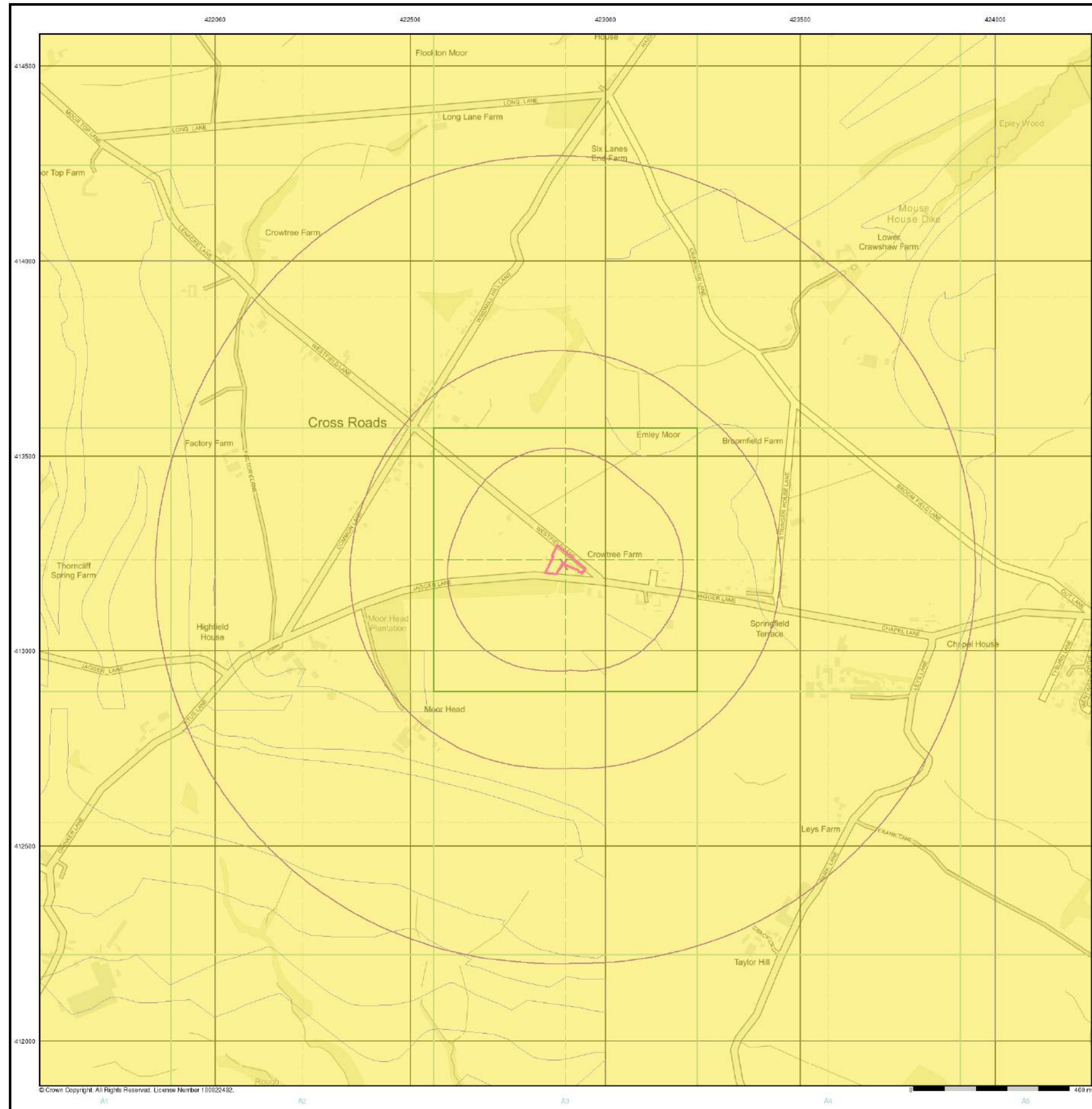


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Site Details

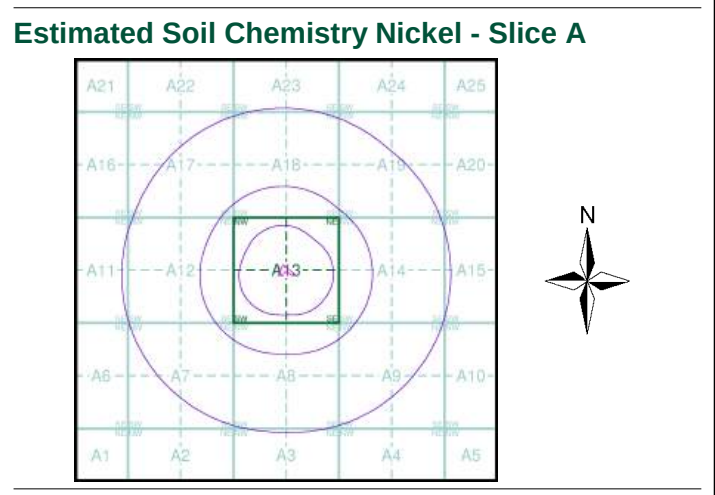
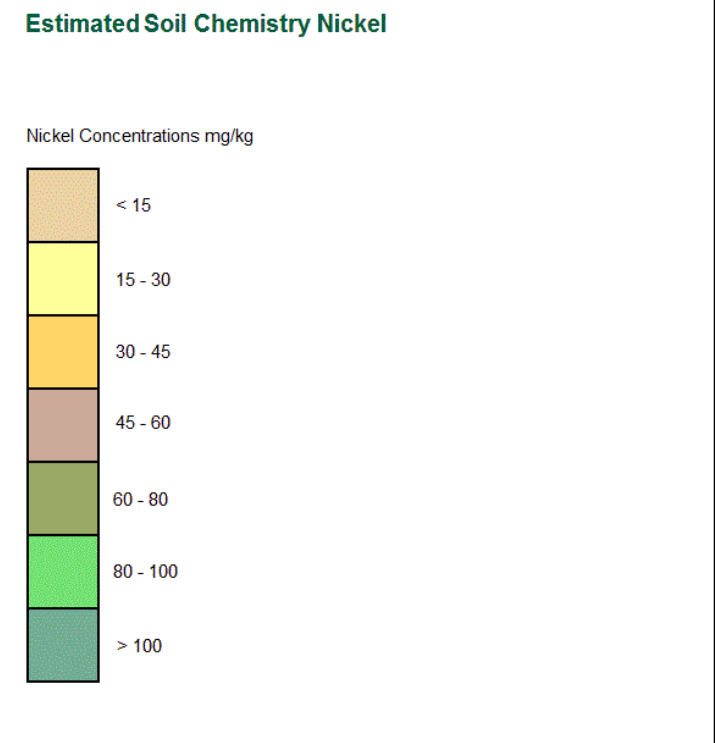
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Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	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

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	TR	Thornhill Rock	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	BRSR	Birstall Rock	Sandstone	Not Supplied - Westphalian
	ER	Emley Rock	Sandstone	Not Supplied - Westphalian
	LPE	Lepton Edge Rock	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	FHR	Falhouse Rock	Sandstone	Not Supplied - Westphalian
	PF	Penistone Flags	Sandstone	Not Supplied - Westphalian
		Rock Segments		
		Faults		

Geology 1:50,000 Maps

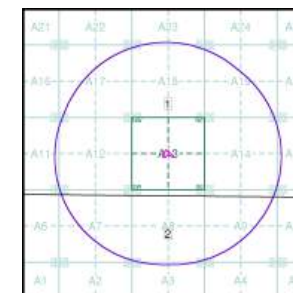
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published 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 ID:	2
Map Sheet No:	077	Map Sheet No:	086
Map Name:	Huddersfield	Map Name:	Glossop
Map Date:	2003	Map Date:	2012
Bedrock Geology:	Available	Bedrock Geology:	Available
Superficial Geology:	Available	Superficial Geology:	Available
Artificial Geology:	Available	Artificial Geology:	Available
Faults:	Not Supplied	Faults:	Not Supplied
Landslip:	Available	Landslip:	Available
Rock Segments:	Not Supplied	Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

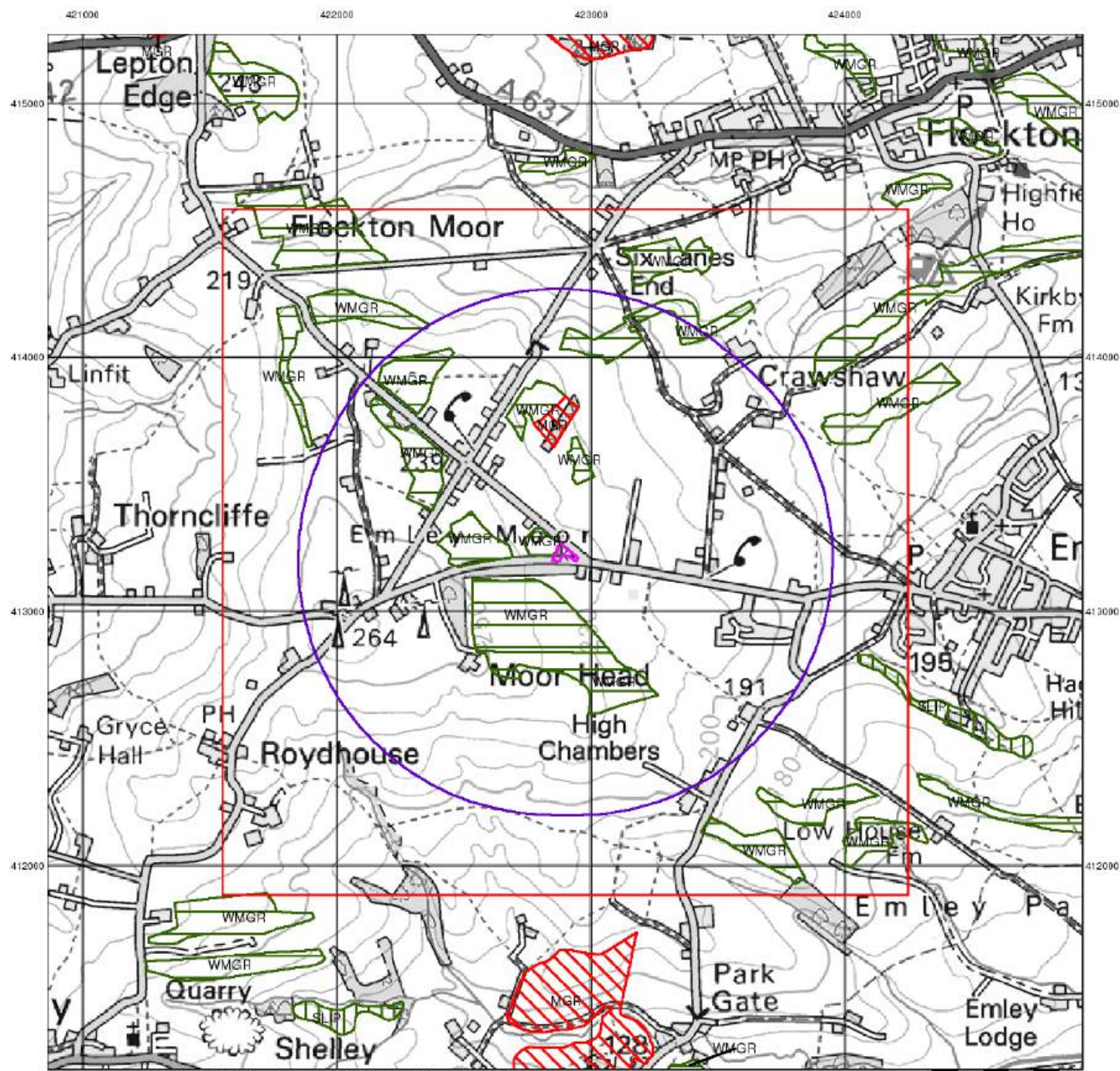


Order Details:

Order Number:	323279477_1_1
Customer Reference:	1407nj
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Site Area (Ha):	0.33
Search Buffer (m):	1000

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Artificial Ground and Landslip

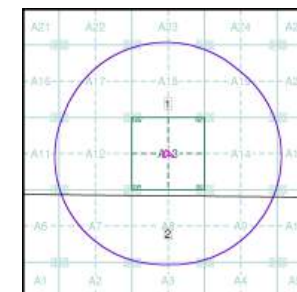
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

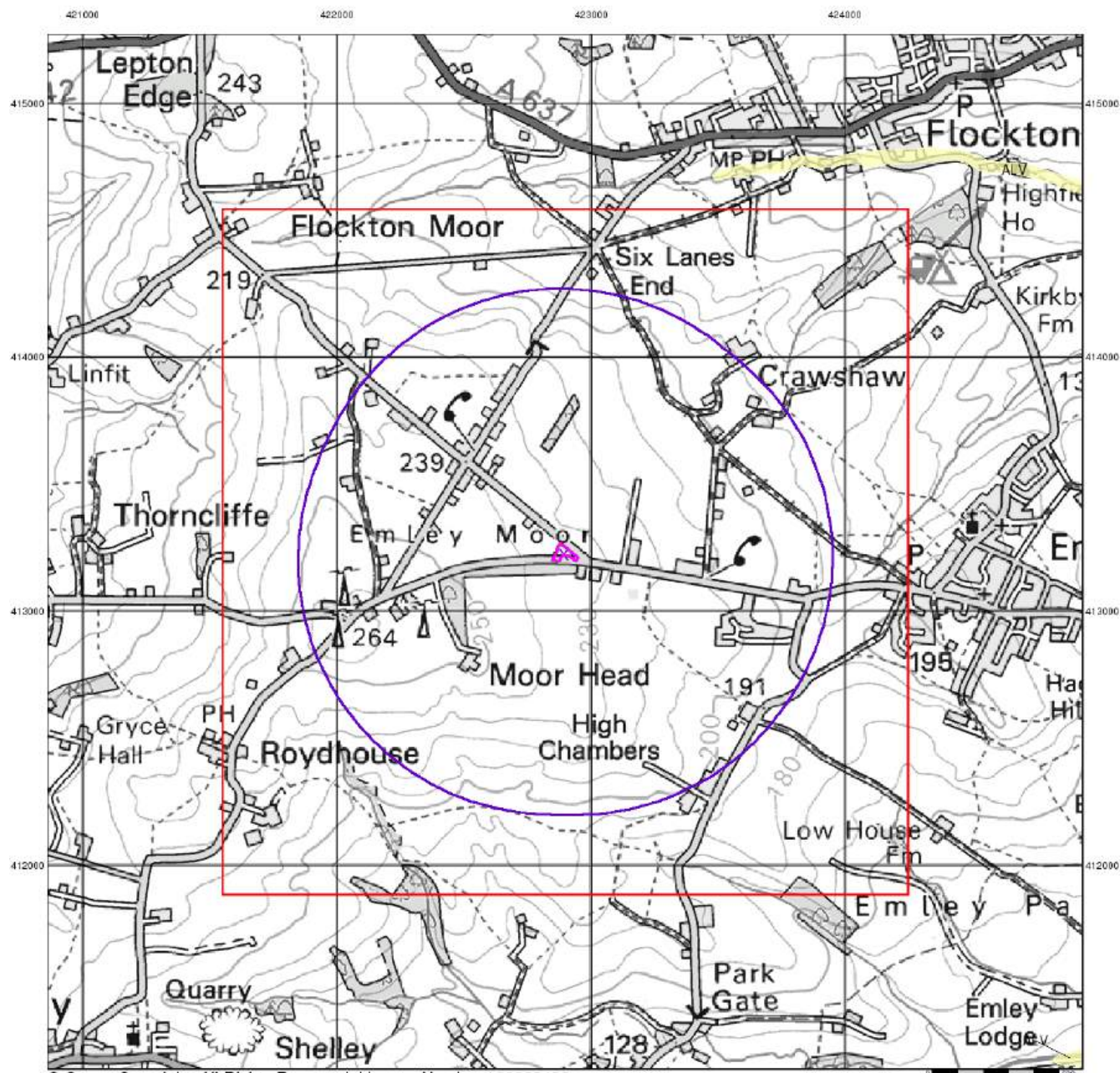
Order Number: 323279477_1_1
 Customer Reference: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details:

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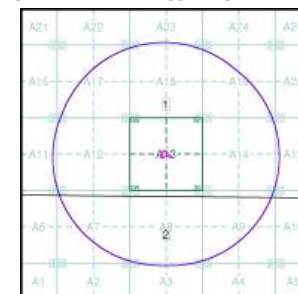
Superficial Geology

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:

Order Number: 323279477_1_1
Customer Reference: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details:

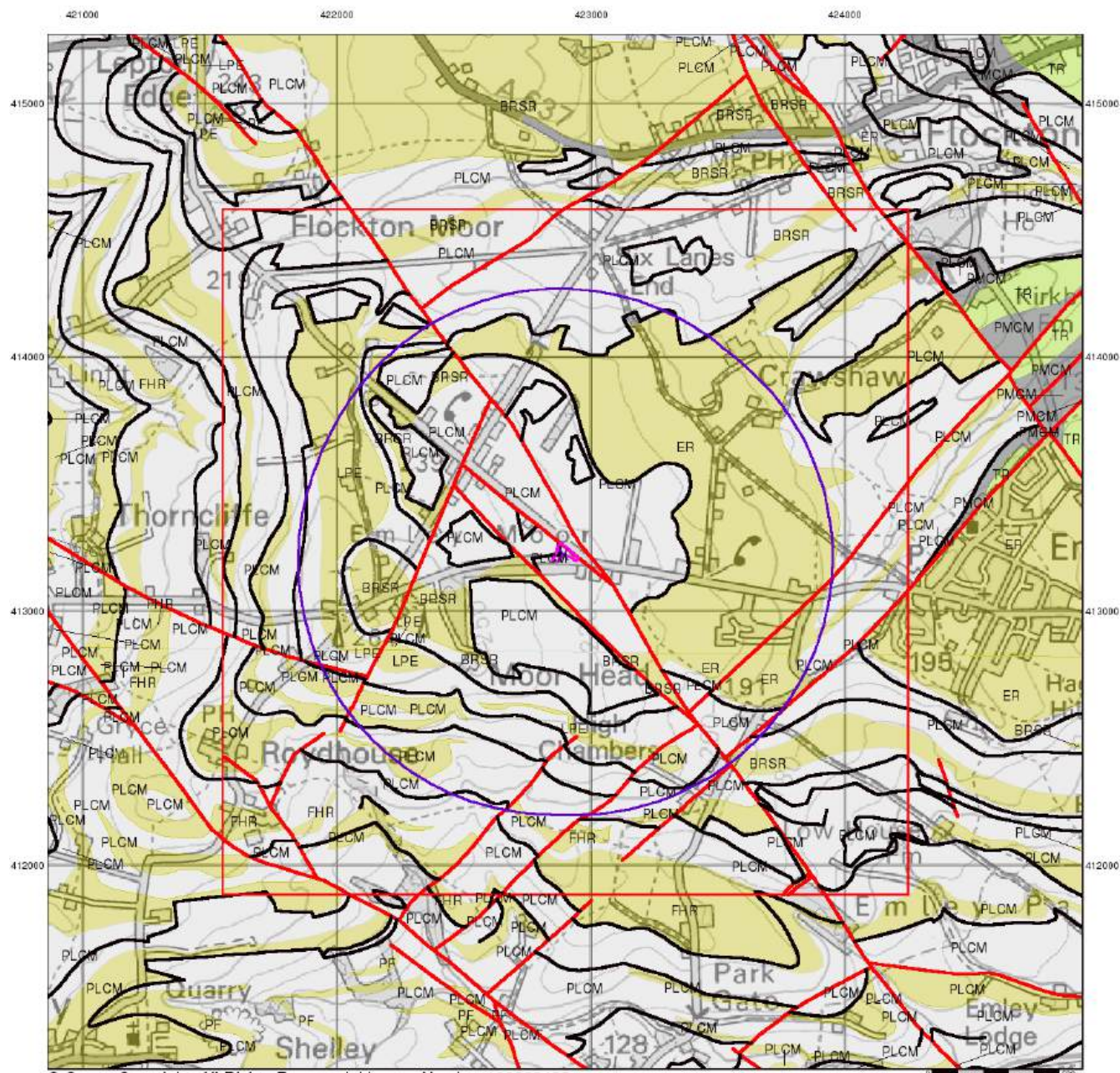
Thornciffe Farm Shop, Westfield Lane, Emley, HUDDERSFIELD, HD8 9SZ

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Bedrock and Faults

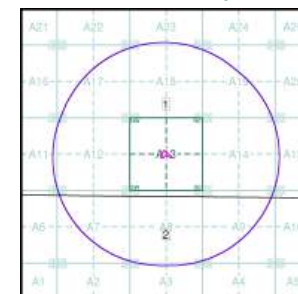
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

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: 323279477_1_1
Customer Reference: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details:

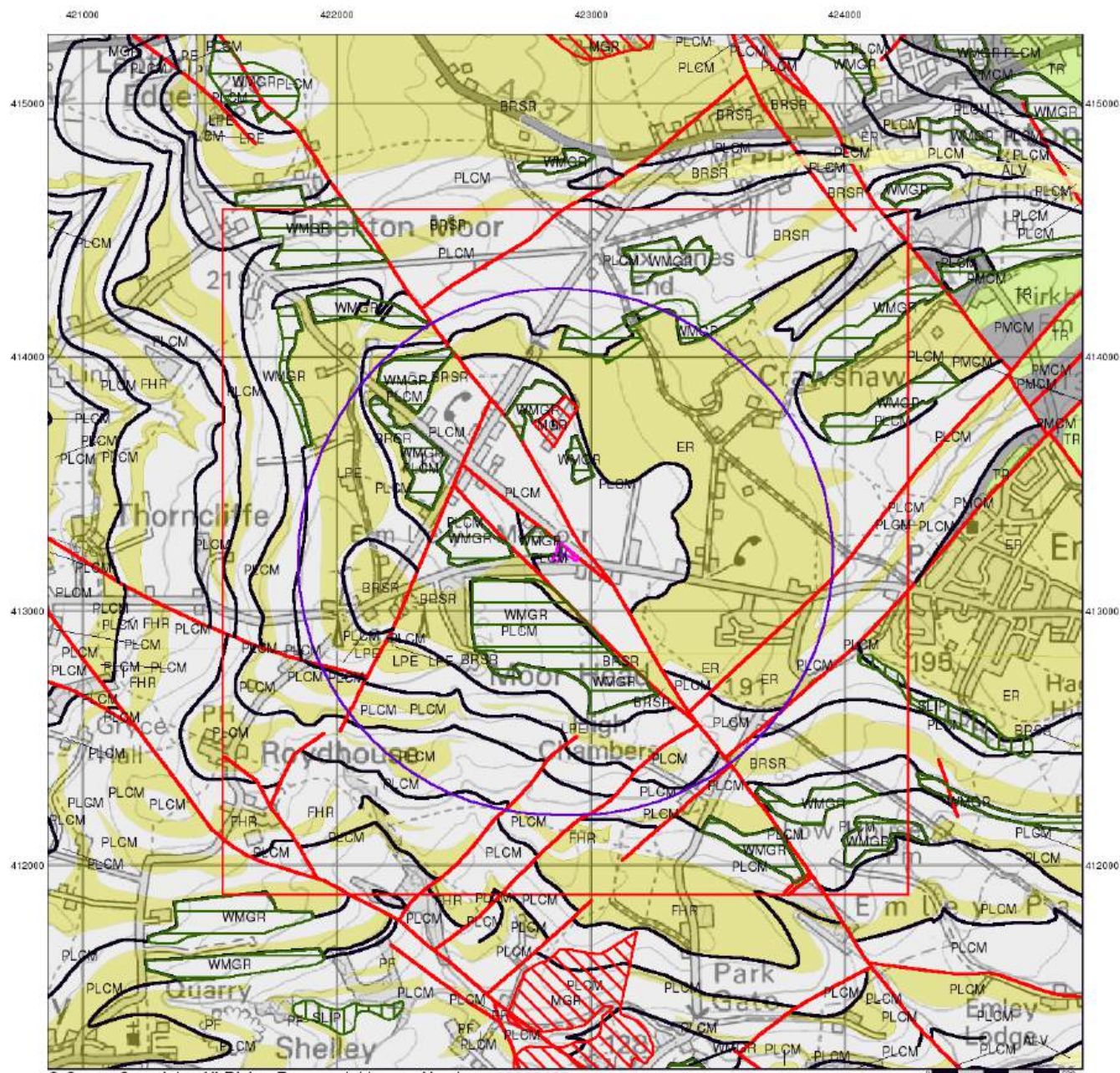
Thornciffe Farm Shop, Westfield Lane, Emley, HUDDERSFIELD, HD8 9SZ

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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.

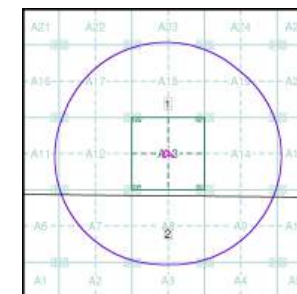
Additional Information

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: 323279477_1_1
Customer Reference: 1407nj
National Grid Reference: 422890, 413220
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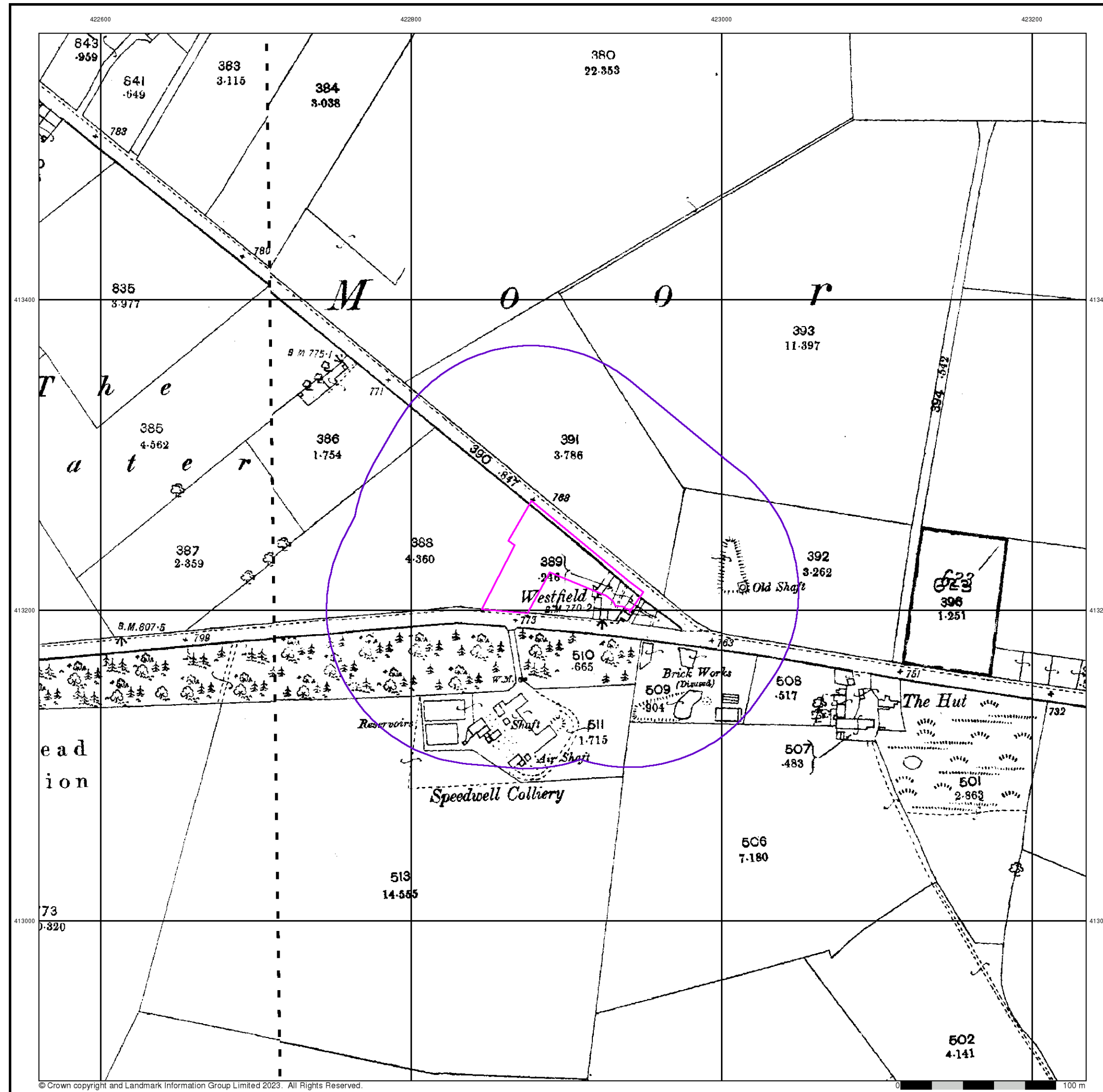
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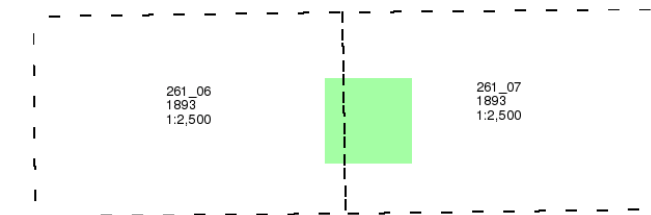
Yorkshire

Published 1893

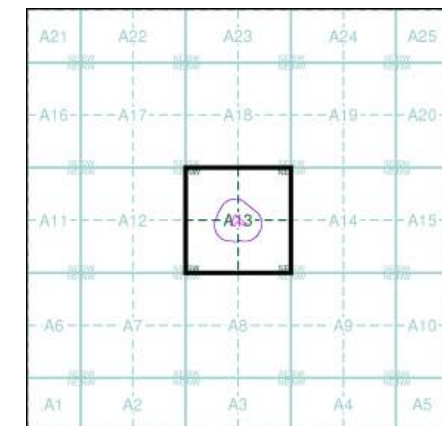
Source map scale - 1:2,500

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

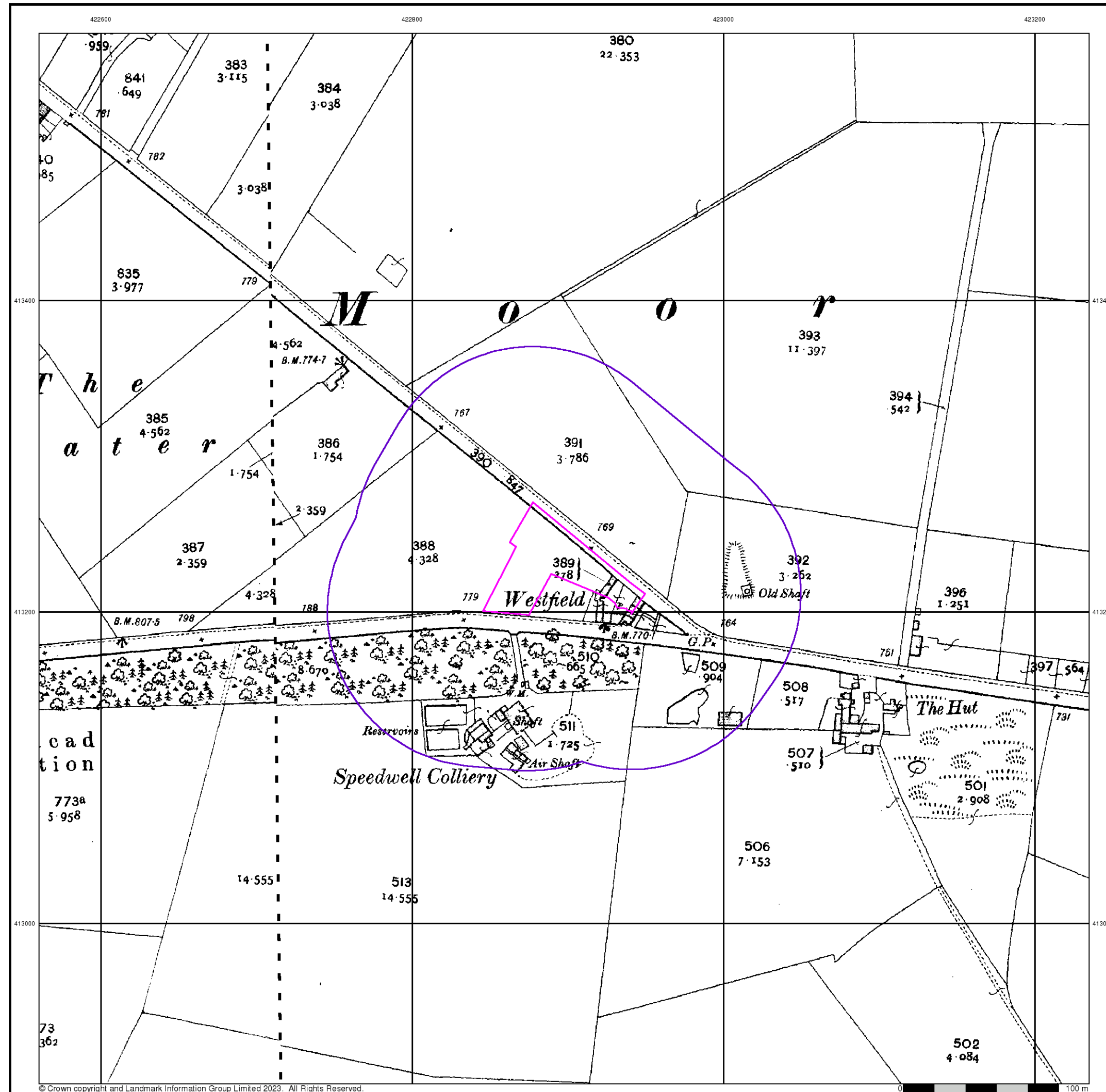


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Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ



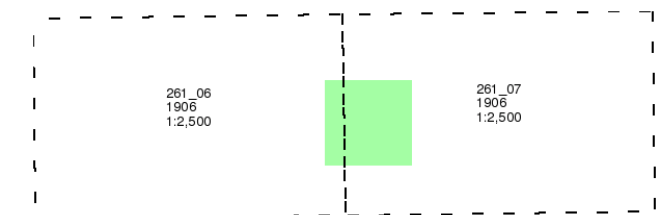
Yorkshire

Published 1906

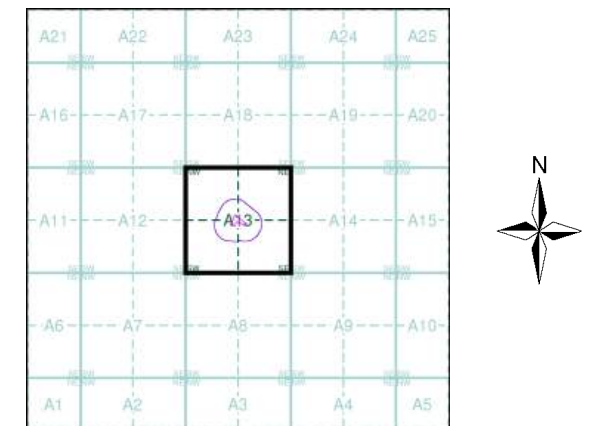
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered 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

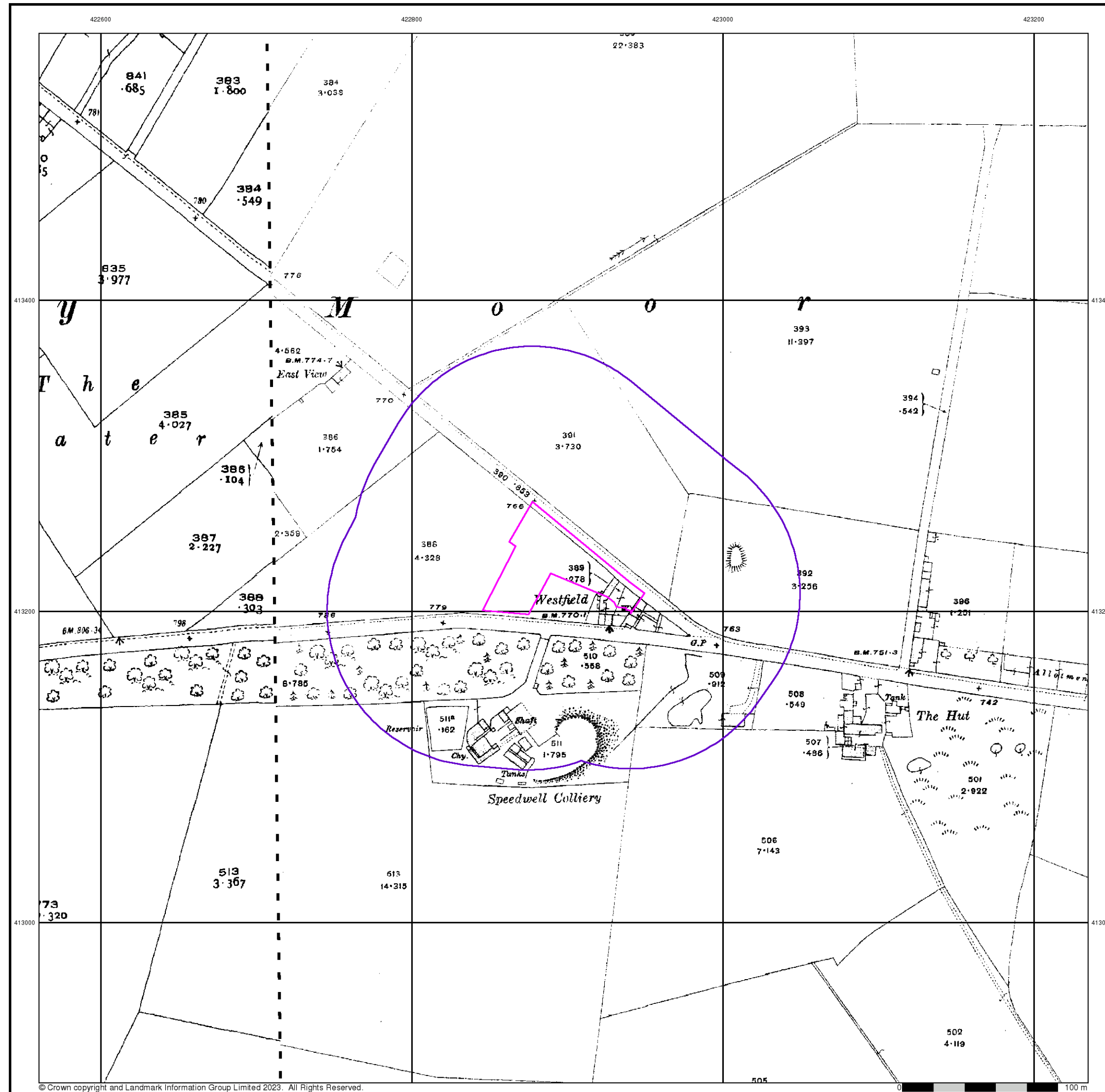
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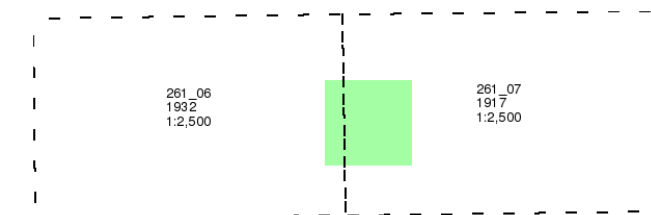
Yorkshire

Published 1917 - 1932

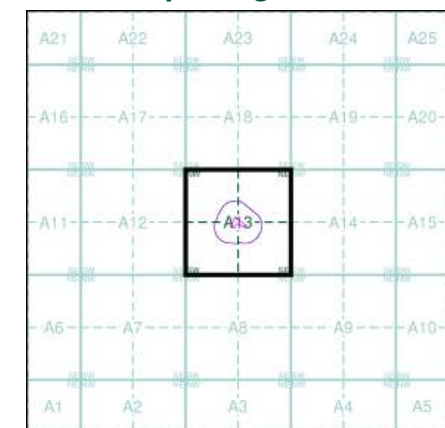
Source map scale - 1:2,500

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

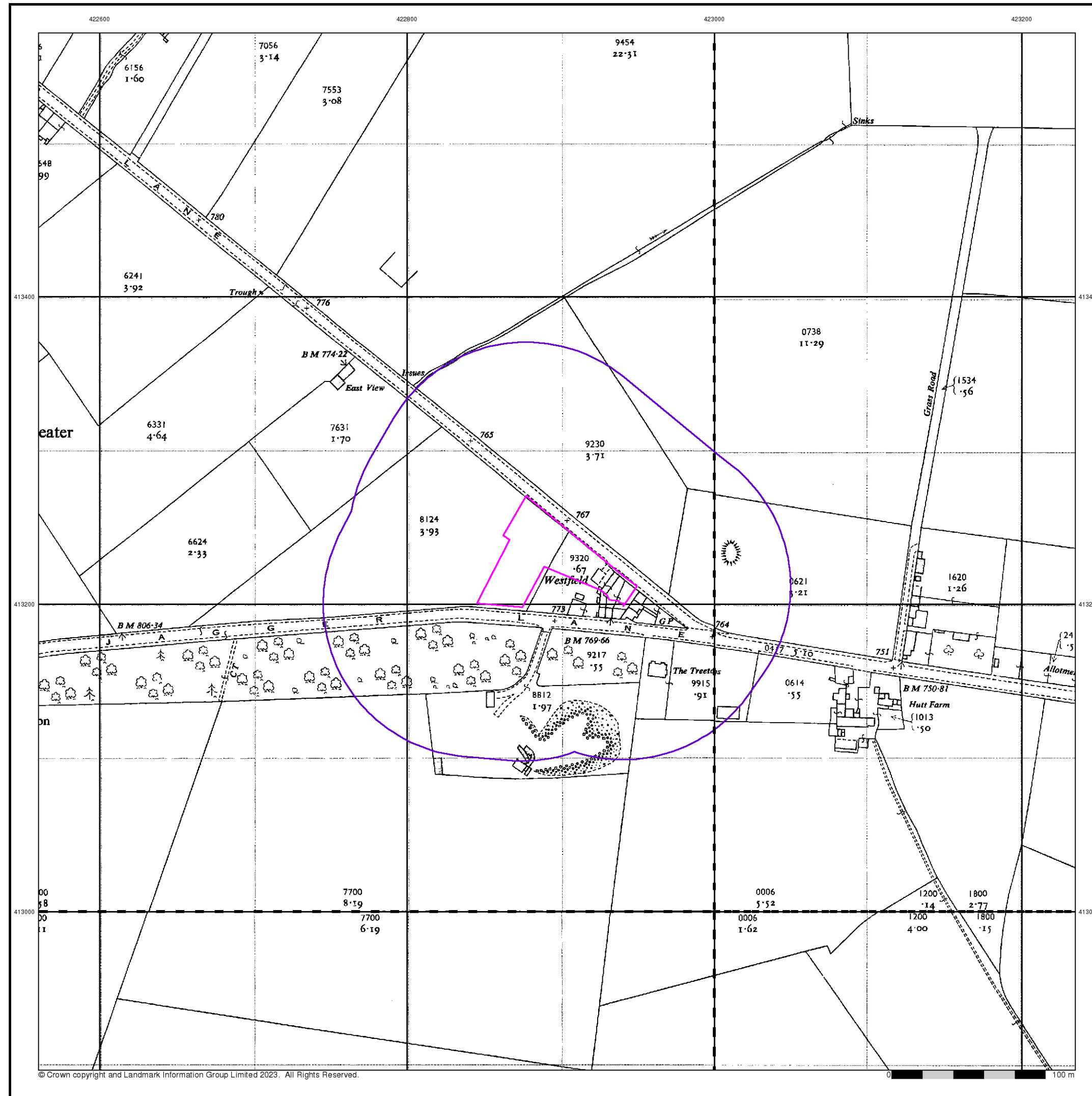


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Ordnance Survey Plan

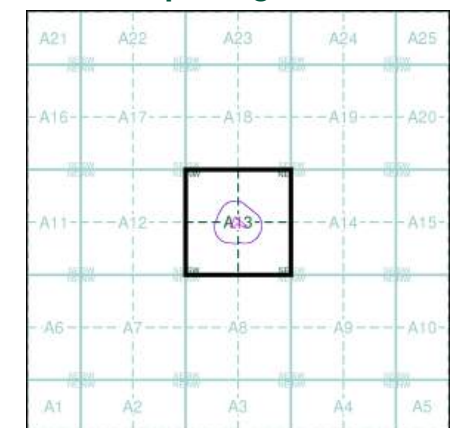
Published 1961
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Map Name(s) and Date(s)

SE2213 1961 1:2,500	SE2313 1961 1:2,500
SE2212 1961 1:2,500	SE2312 1961 1:2,500

Historical Map - Segment A13

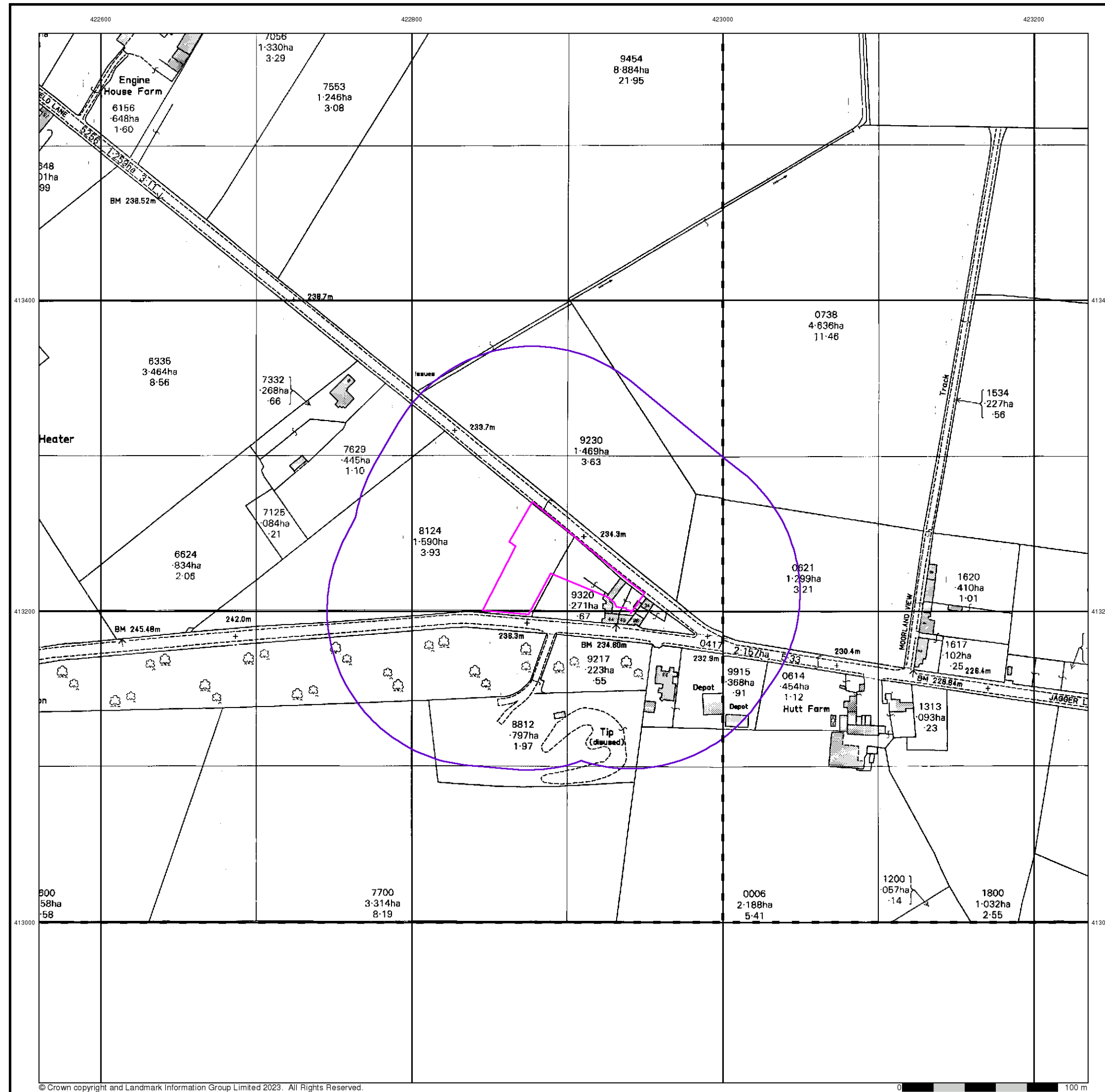


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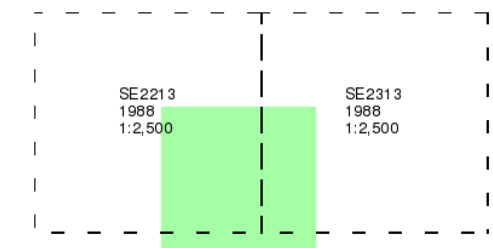
Ordnance Survey Plan

Published 1988

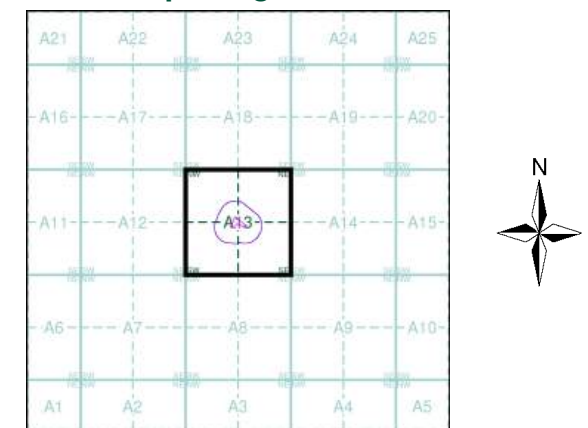
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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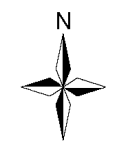
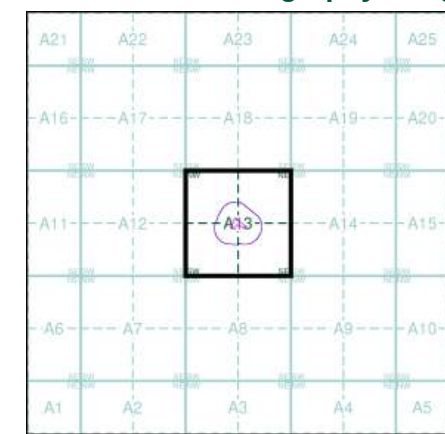


Historical Aerial Photography

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: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 100

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ

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				
	County Borough Boundary (England)				
	County Burgh Boundary (Scotland)				
	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
	Bracken		Heath
	Marsh		Reeds
	Building		Glasshouse
	Sloping Masonry		Pylon
	Cutting		Embankment
	Road Under		Road Over
	Level Crossing		Foot Bridge
	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
	Civil Parish		
	BP, BS Boundary Post or Stone		Police Station
	Church		Post Office
	Club House		Public Convenience
	Fire Engine Station		Public House
	Foot Bridge		Signal Box
	Fountain		Spring
	Guide Post		Telephone Call Box
	Mile Post		Telephone Call Post
	Mile Stone		Well

1:10,000 Raster Mapping

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

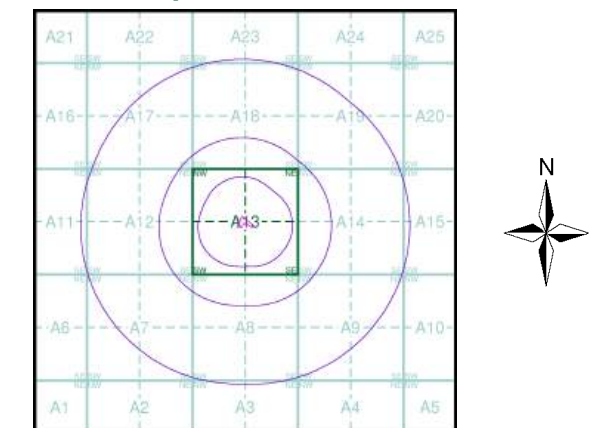
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1854	2
Yorkshire	1:10,560	1894	3
Yorkshire	1:10,560	1907 - 1908	4
Yorkshire	1:10,560	1930	5
Yorkshire	1:10,560	1932 - 1933	6
Yorkshire	1:10,560	1938 - 1948	7
Yorkshire	1:10,560	1948	8
Ordnance Survey Plan	1:10,000	1955	9
Ordnance Survey Plan	1:10,000	1967	10
Ordnance Survey Plan	1:10,000	1980	11
Ordnance Survey Plan	1:10,000	1993	12
10K Raster Mapping	1:10,000	2000	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2023	15

Historical Map - Slice A



Order Details

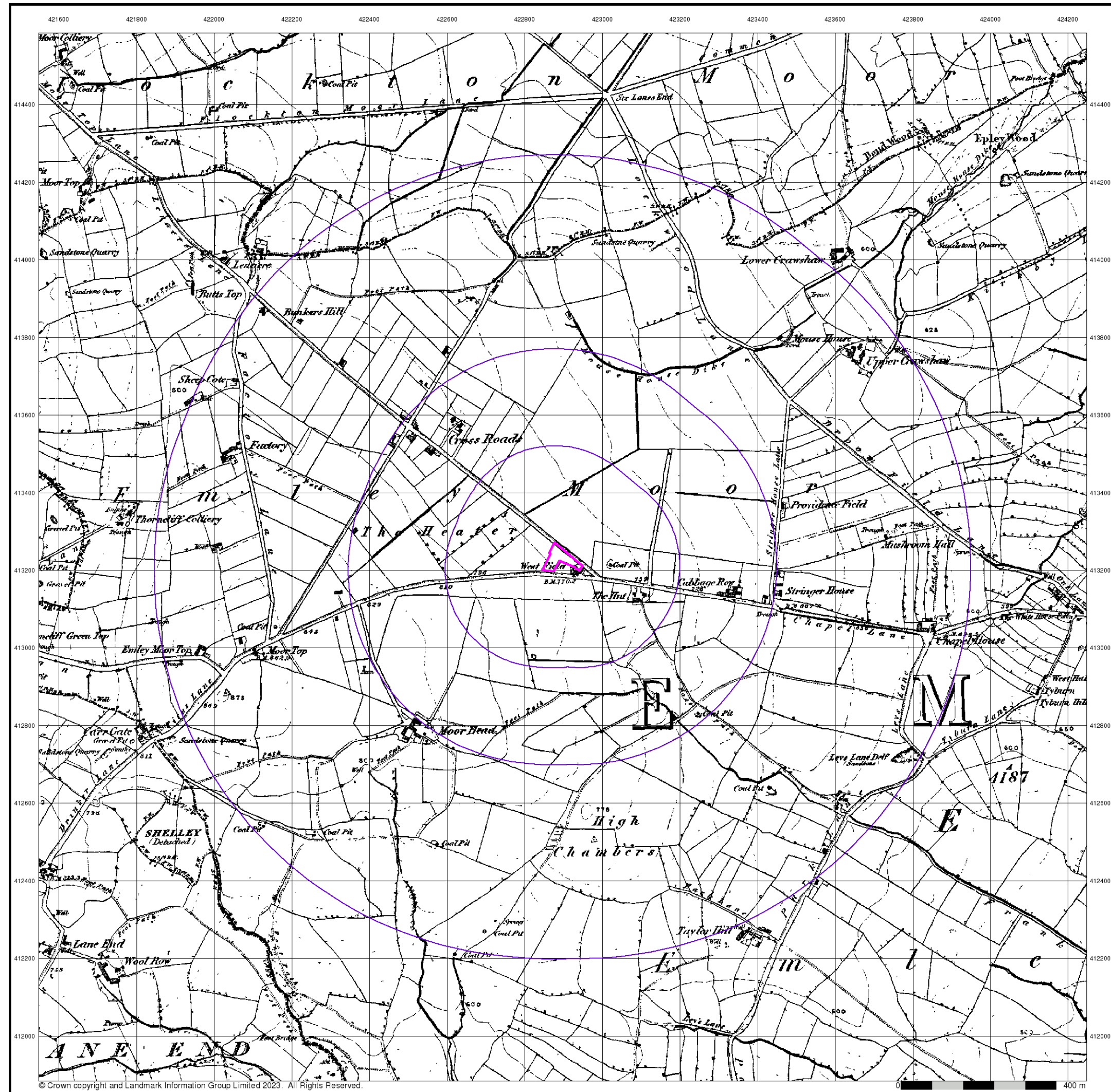
Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ

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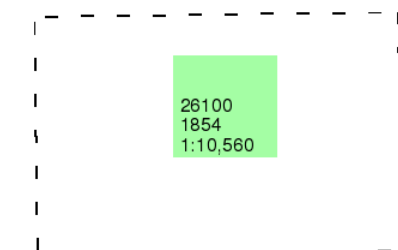
Yorkshire

Published 1854

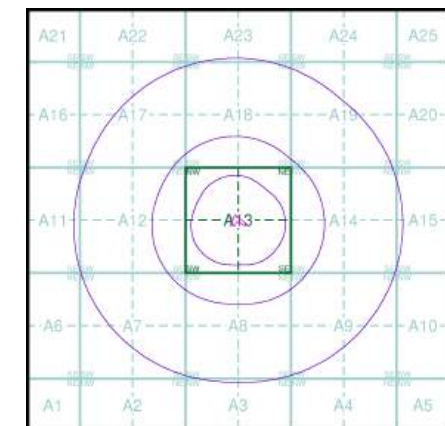
Source map scale - 1:10,560

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

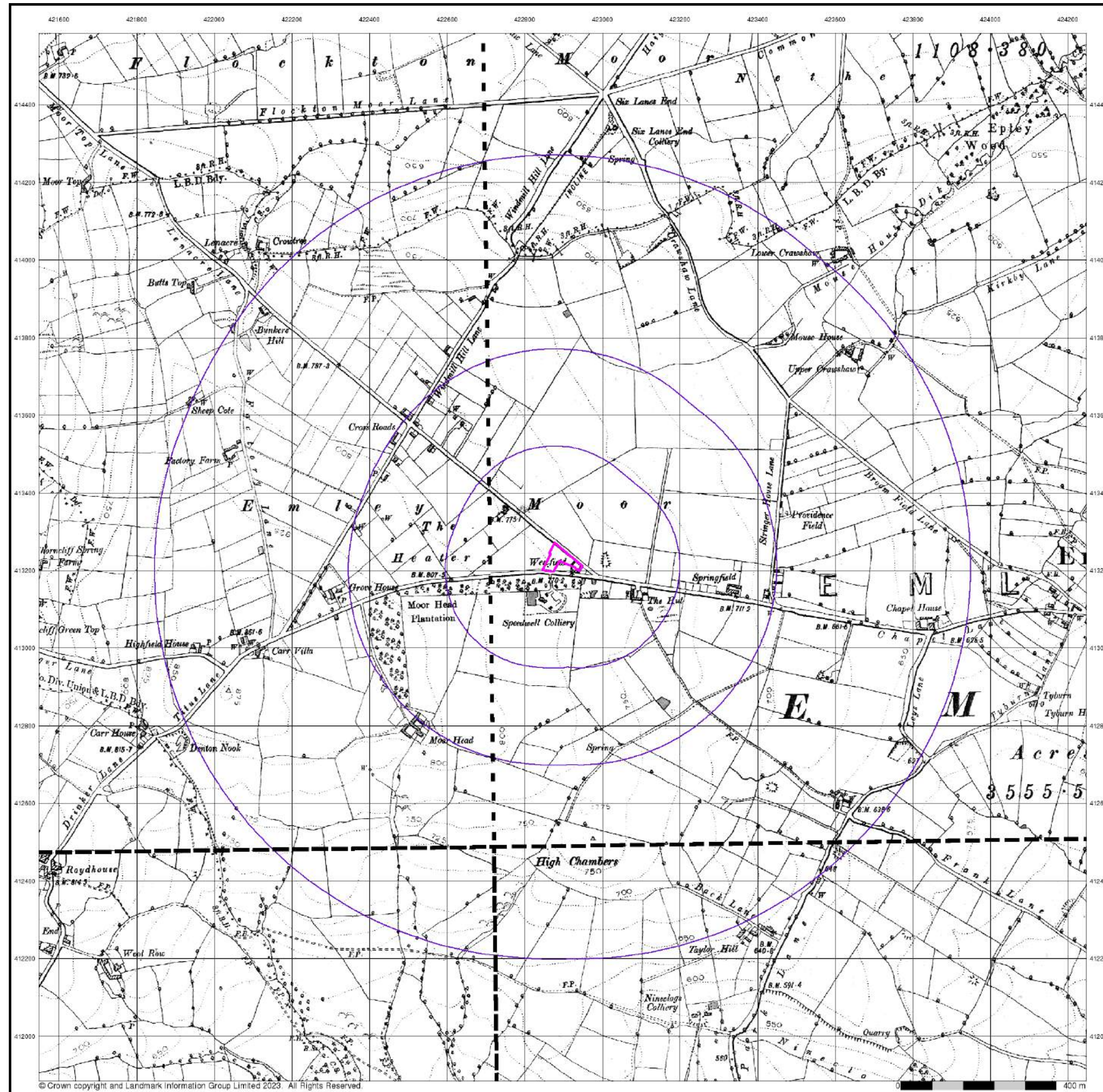


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Yorkshire

Published 1894

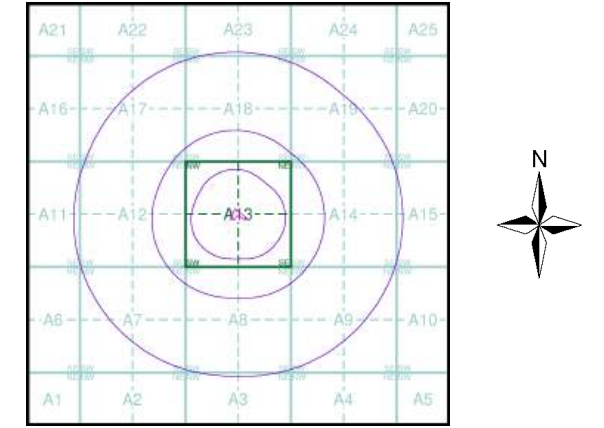
Source map scale - 1:10,560

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)

261NW 1894 1:10,560	261NE 1894 1:10,560
261SW 1894 1:10,560	261SE 1894 1:10,560

Historical Map - Slice A

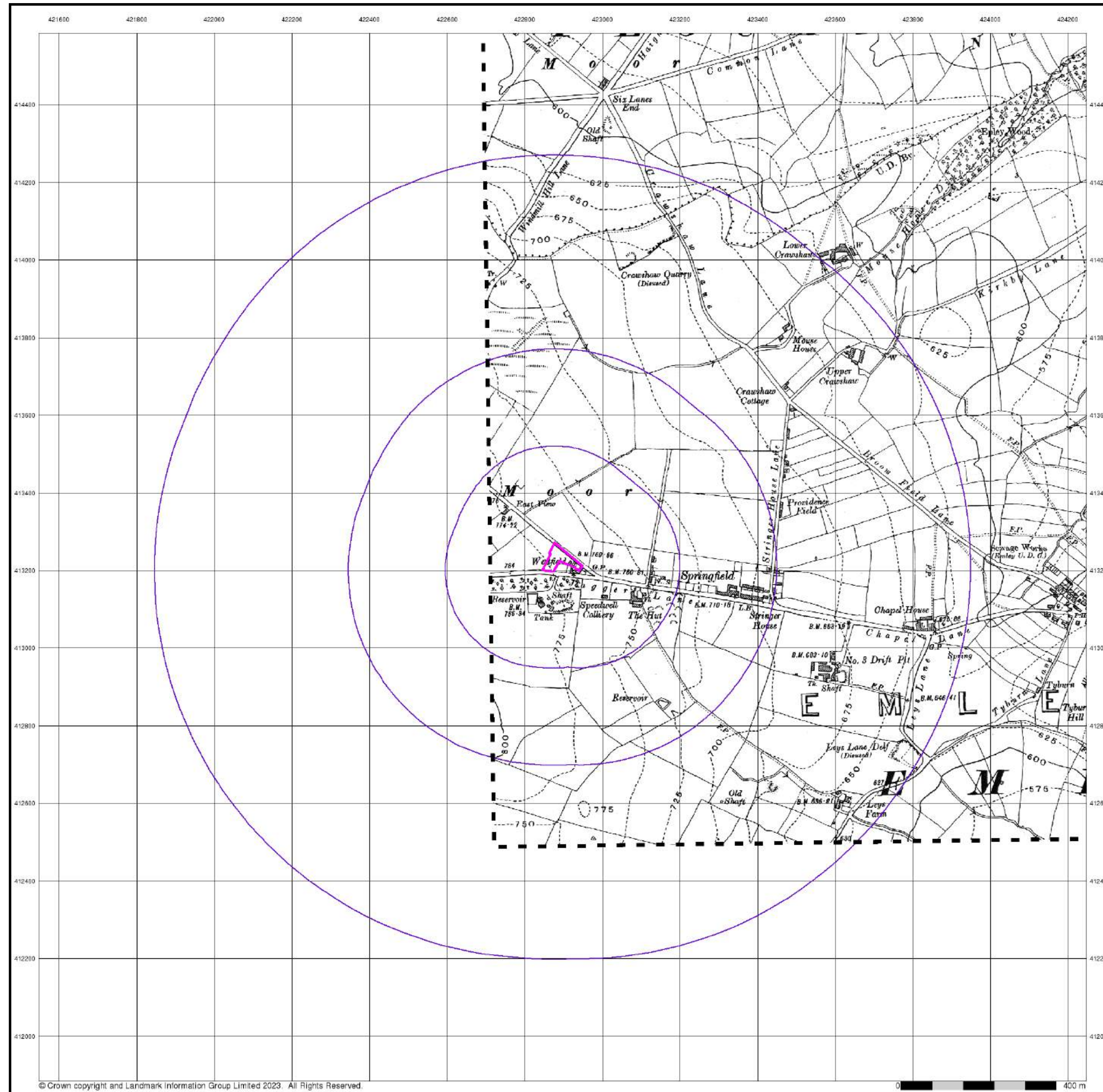


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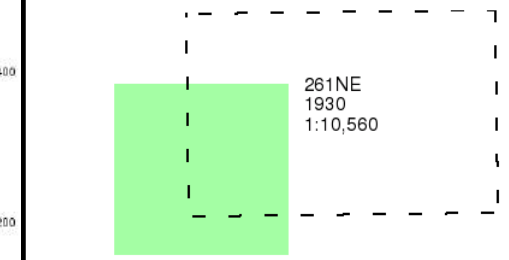
Yorkshire

Published 1930

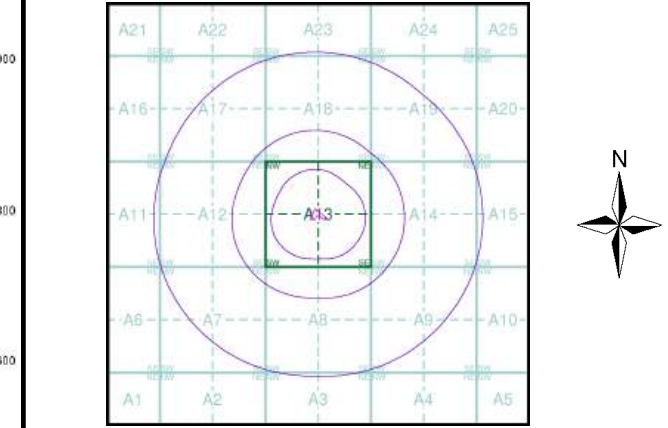
Source map scale - 1:10,560

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

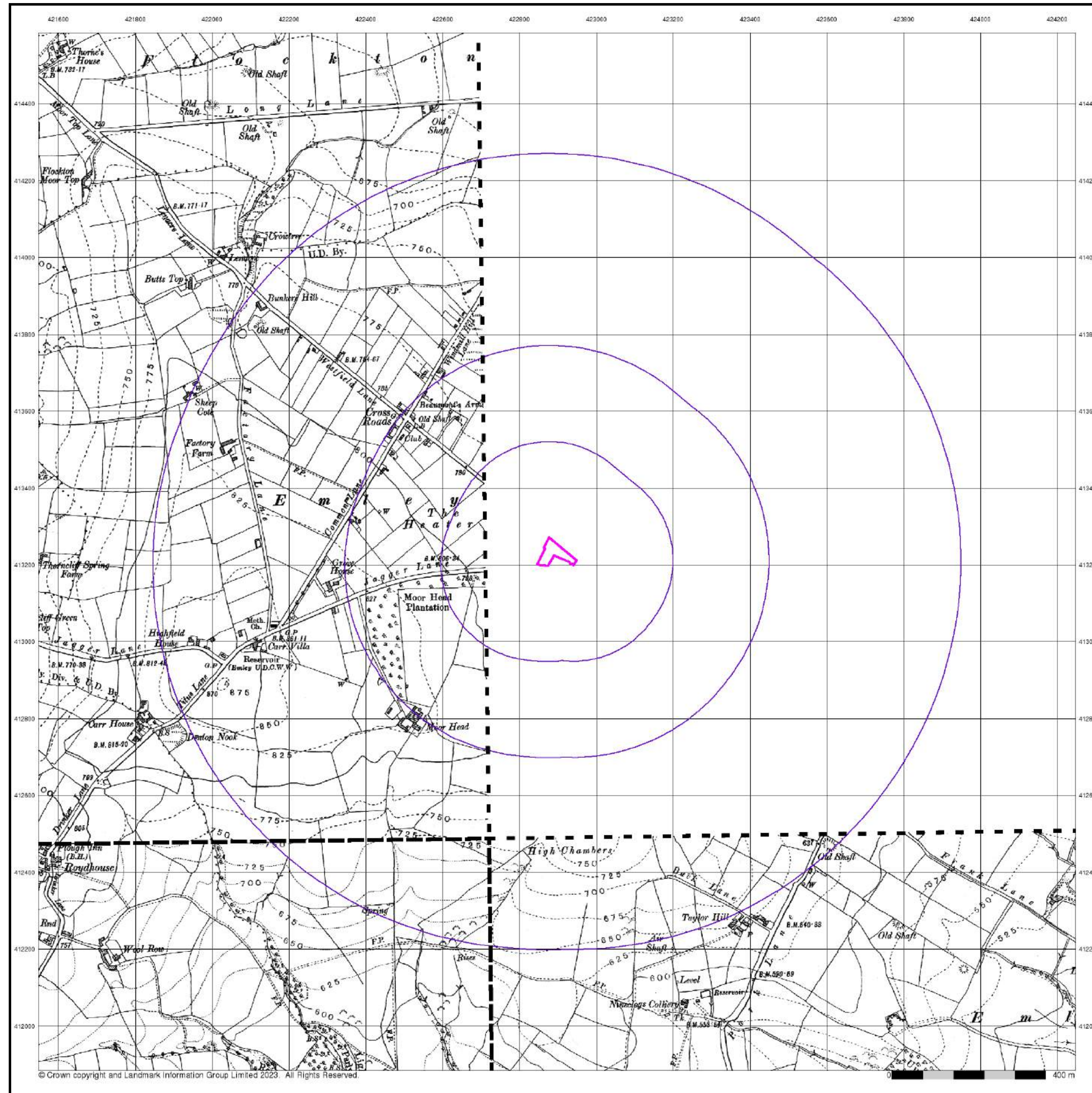


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Yorkshire

Published 1932 - 1933

Source map scale - 1:10,560

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Map Name(s) and Date(s)

261NW 1933 1:10,560		261SE 1932 1:10,560
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Historical Map - Slice A

Order Details

Order Number:	323279477_1_1
Customer Ref:	1407nj
National Grid Reference:	422890, 413220
Slice:	A
Site Area (Ha):	0.33
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Site Details

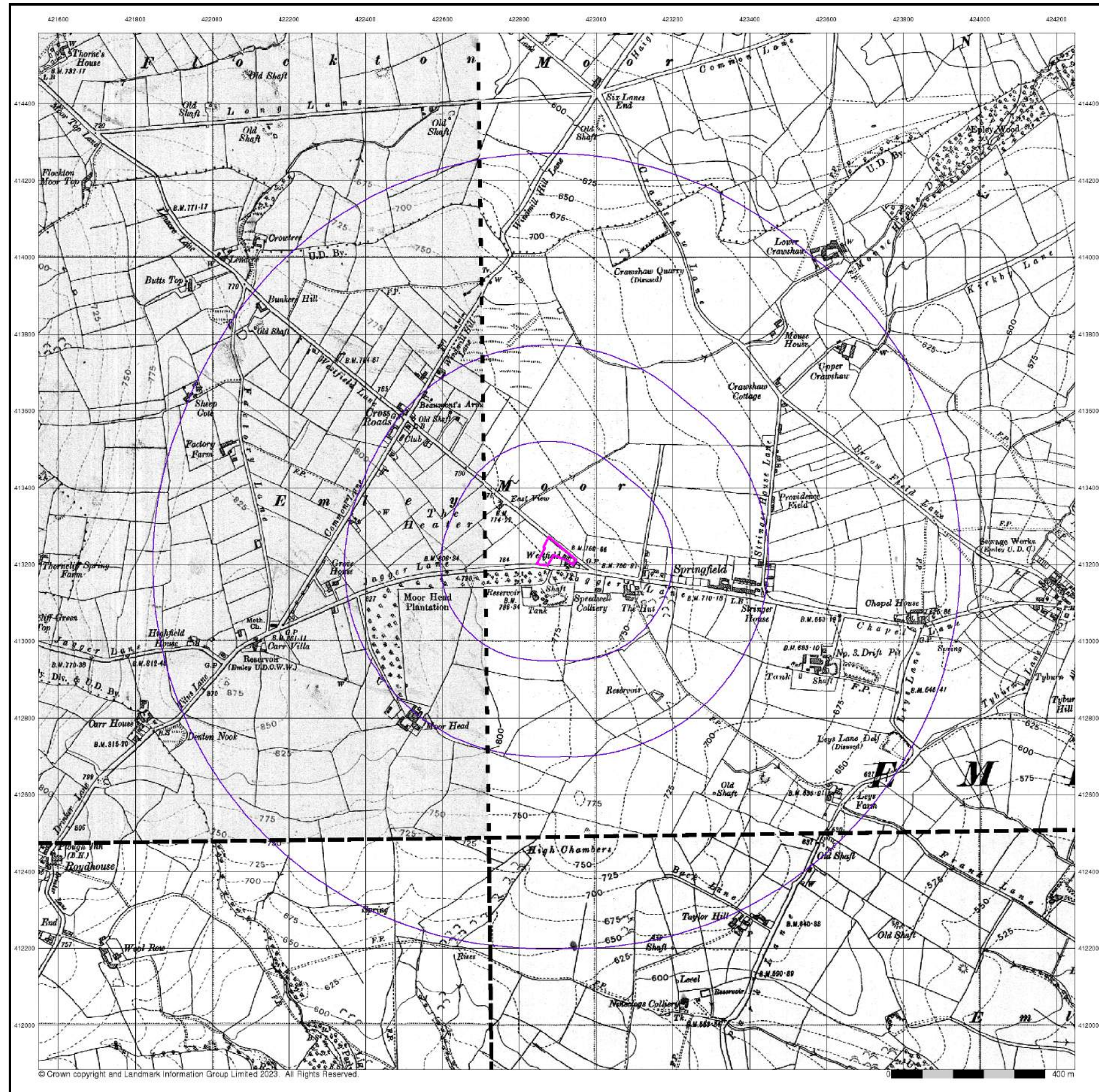
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Yorkshire

Published 1938 - 1948

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)

261NW 1938 1:10,560	261NE 1948 1:10,560
261SW 1948 1:10,560	261SE 1938 1:10,560

Historical Map - Slice A

Order Details

Order Number:	323279477_1_1
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Slice:	A
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Site Details

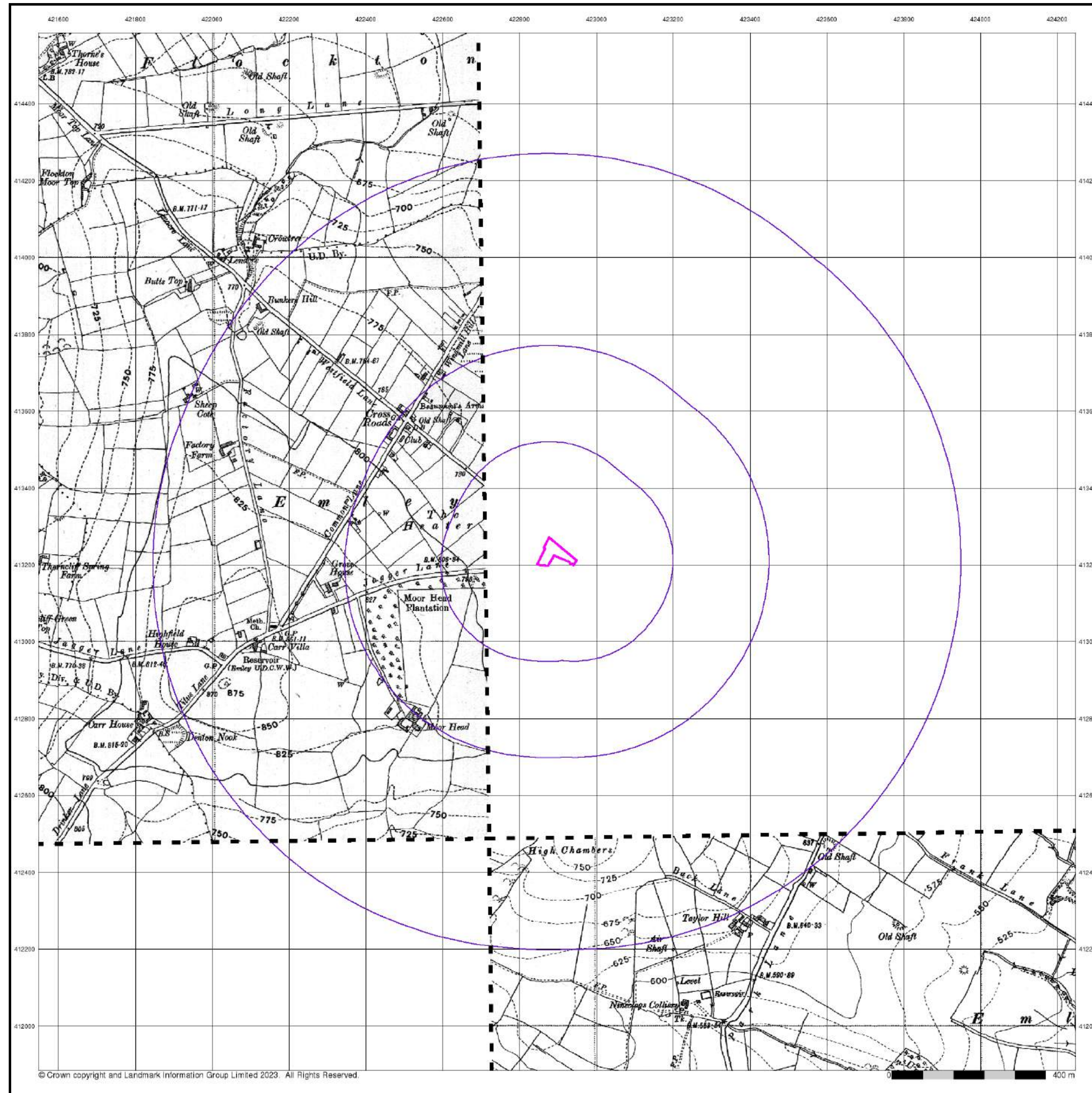
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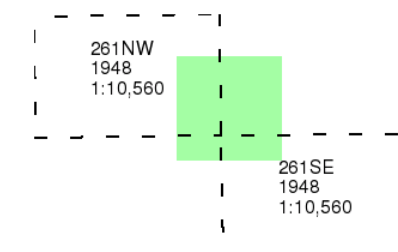
Yorkshire

Published 1948

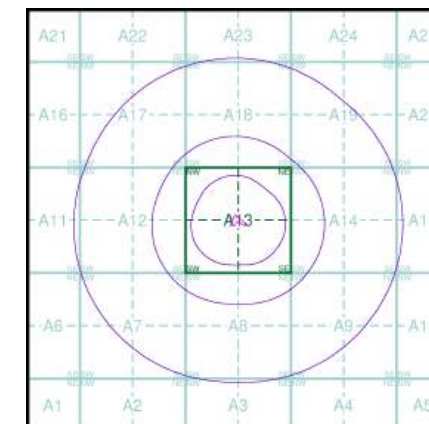
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

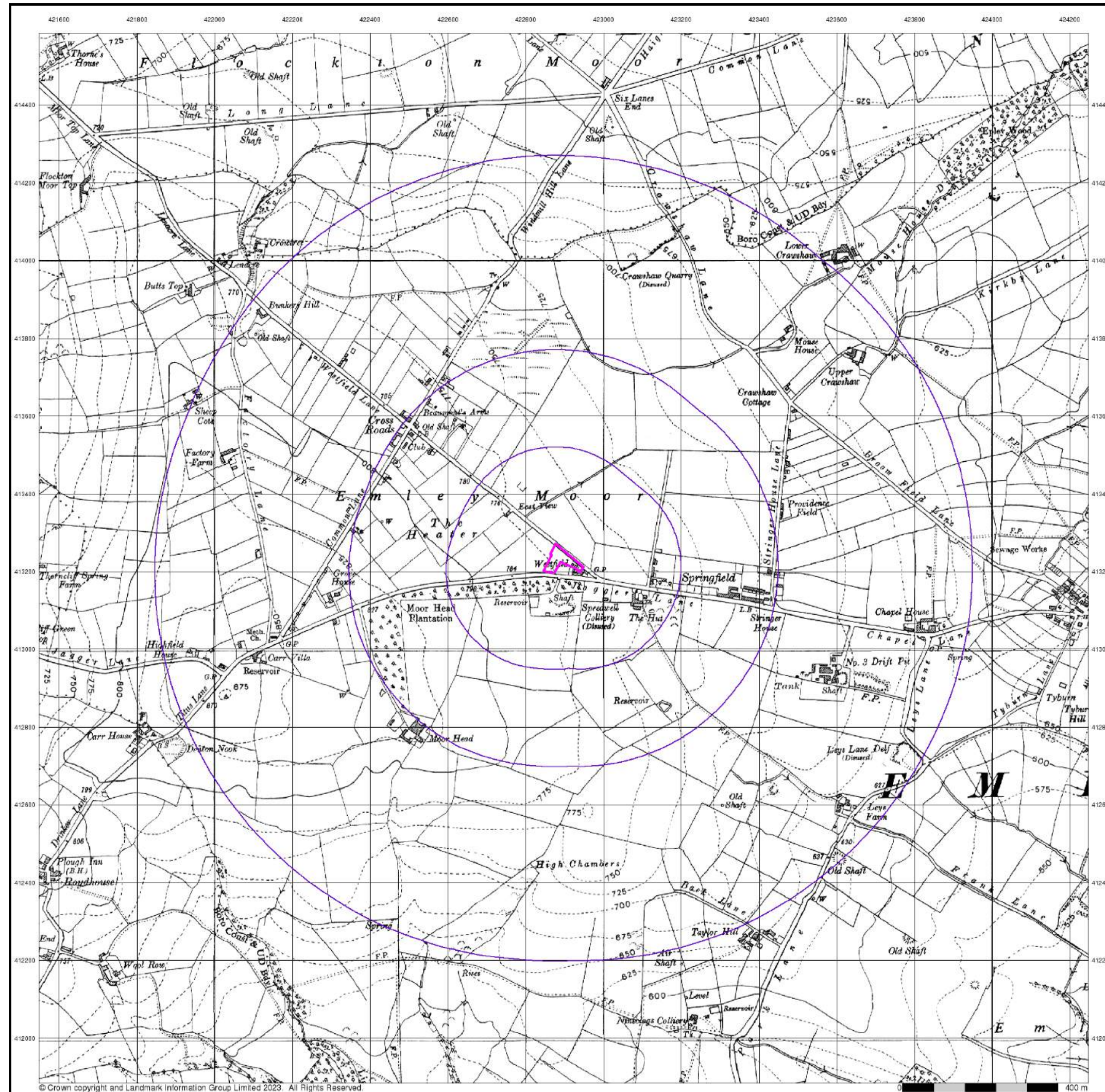
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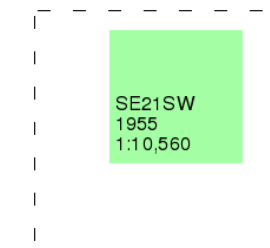
Ordnance Survey Plan

Published 1955

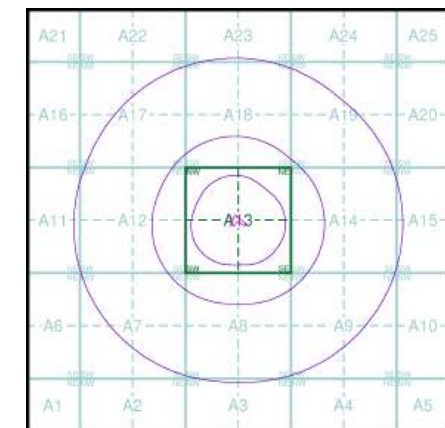
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Map Name(s) and Date(s)



Historical Map - Slice A

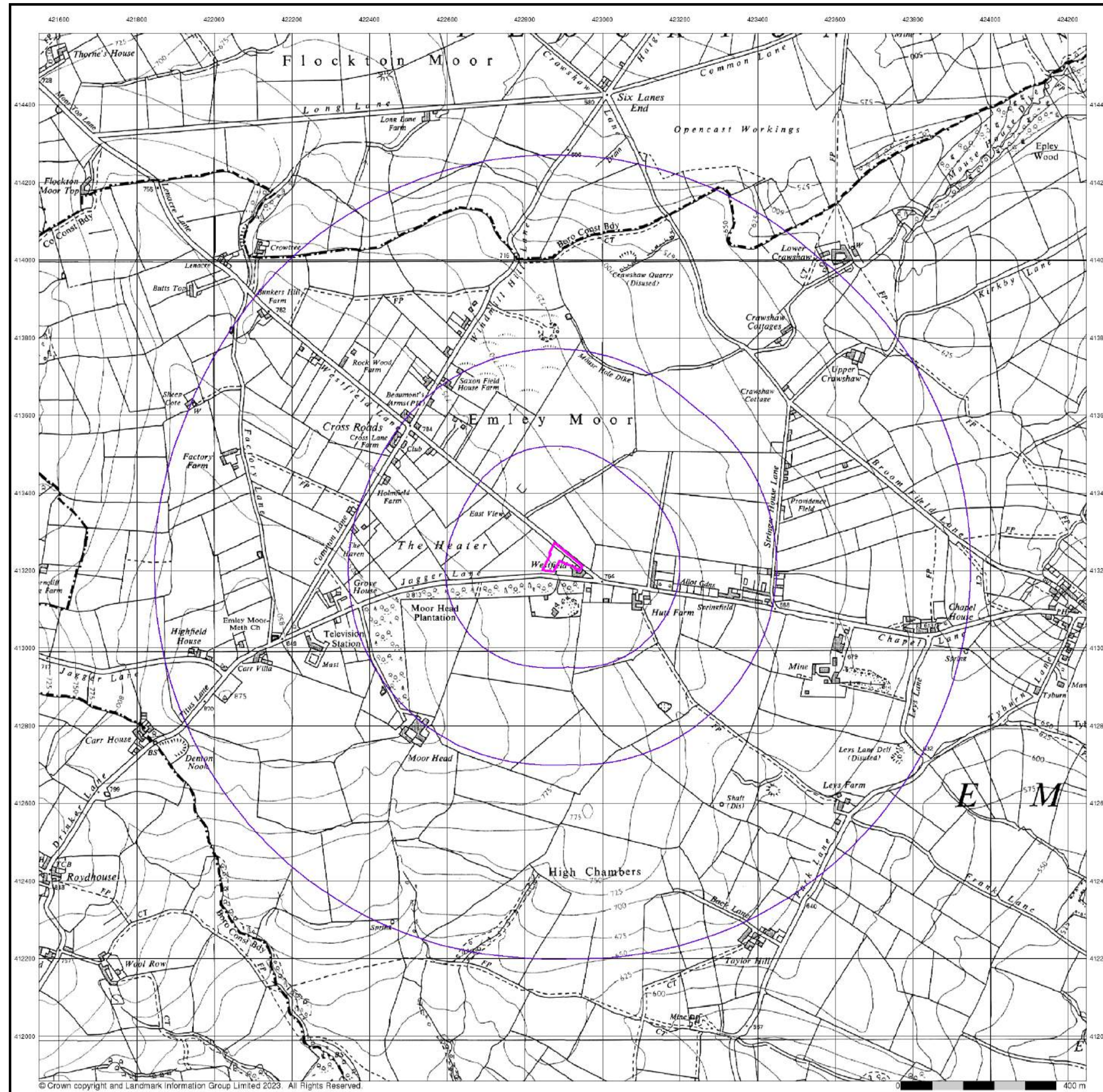


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Ordnance Survey Plan

Published 1967

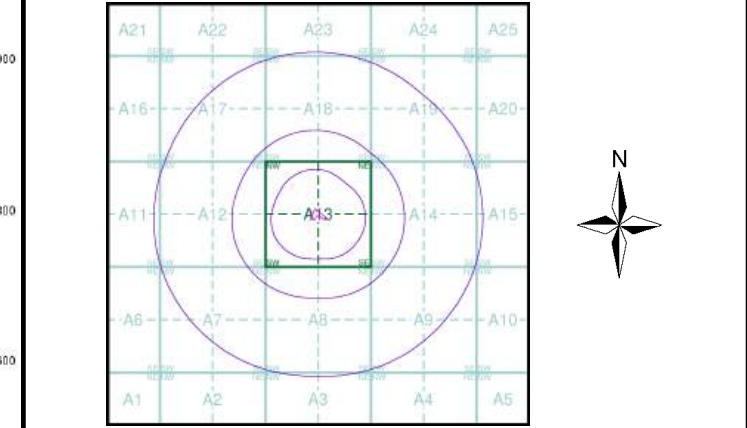
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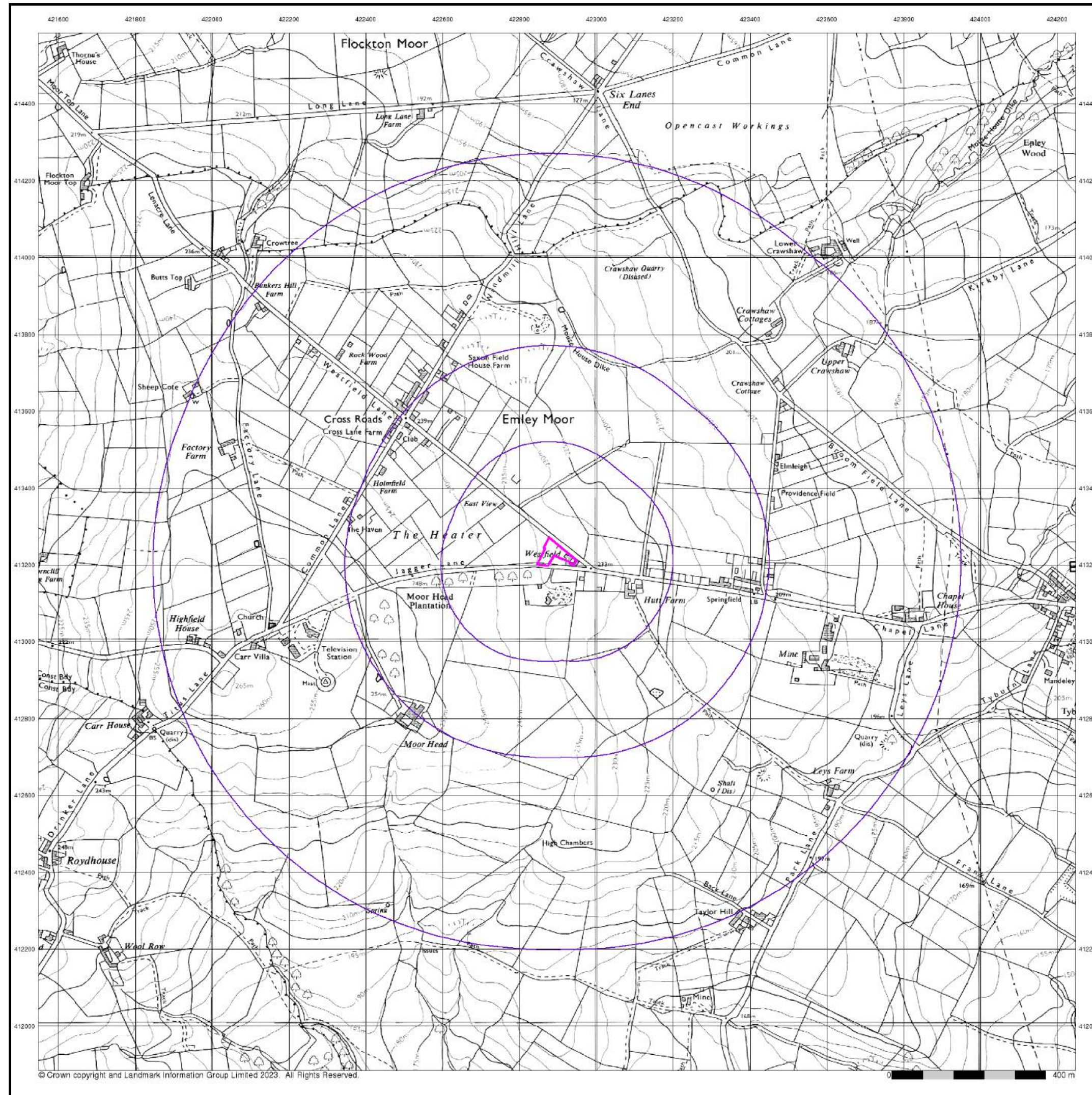


Historical Map - Slice A



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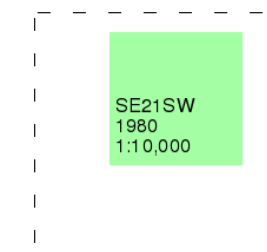
Ordnance Survey Plan

Published 1980

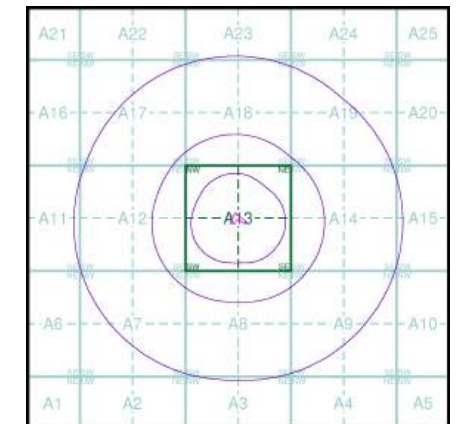
Source map scale - 1:10,000

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Historical Map - Slice A



Order Details

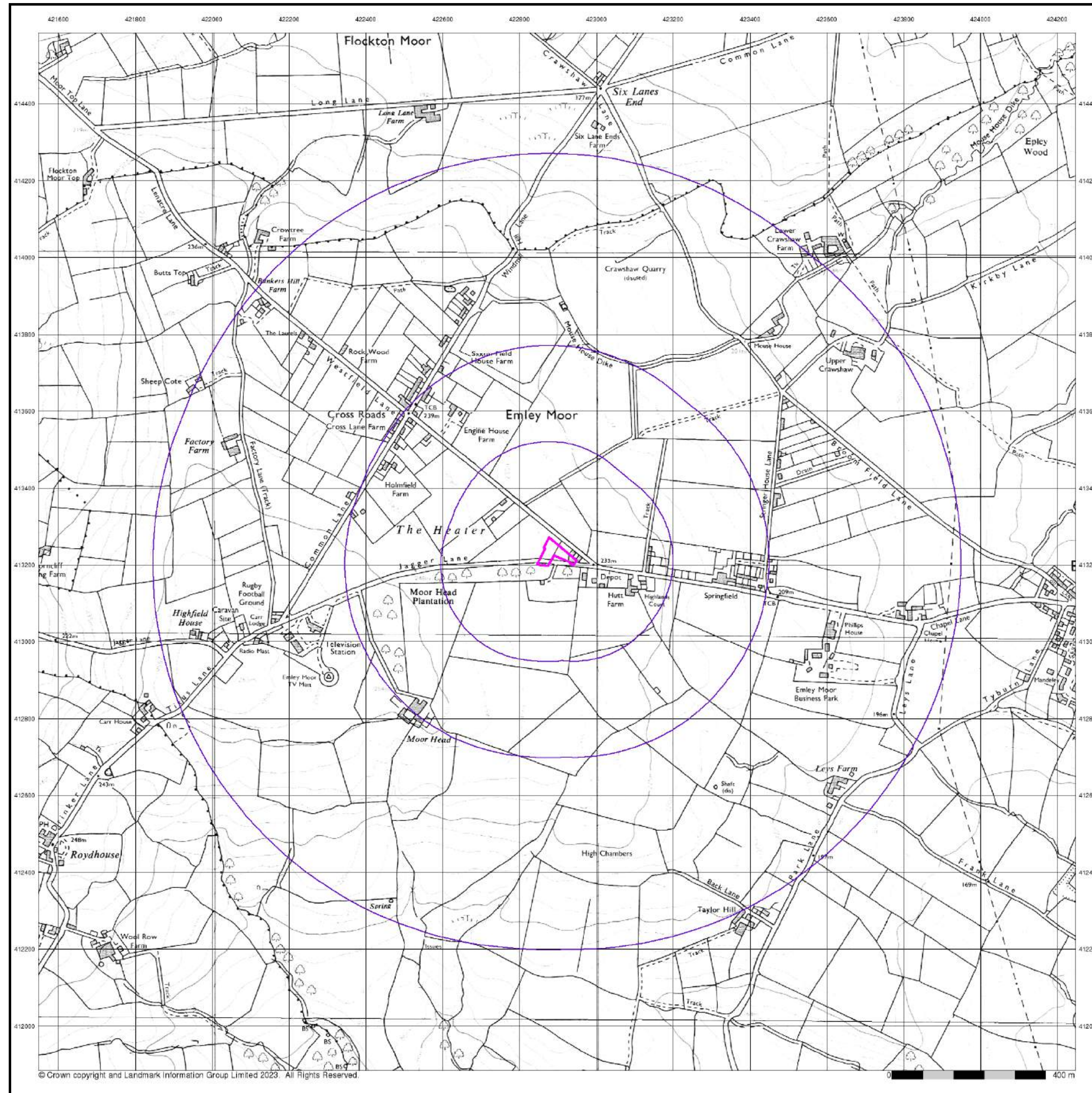
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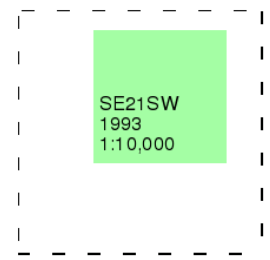
Ordnance Survey Plan

Published 1993

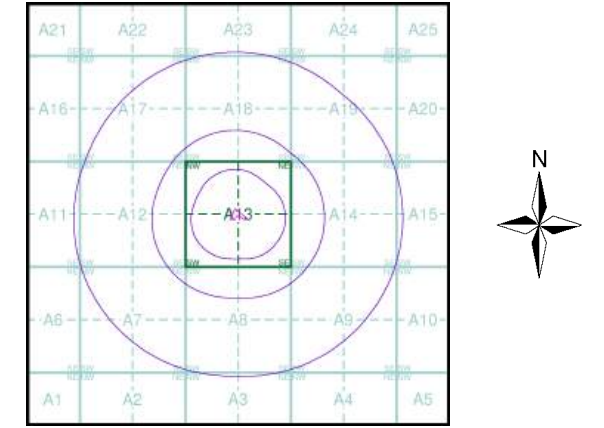
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Map Name(s) and Date(s)

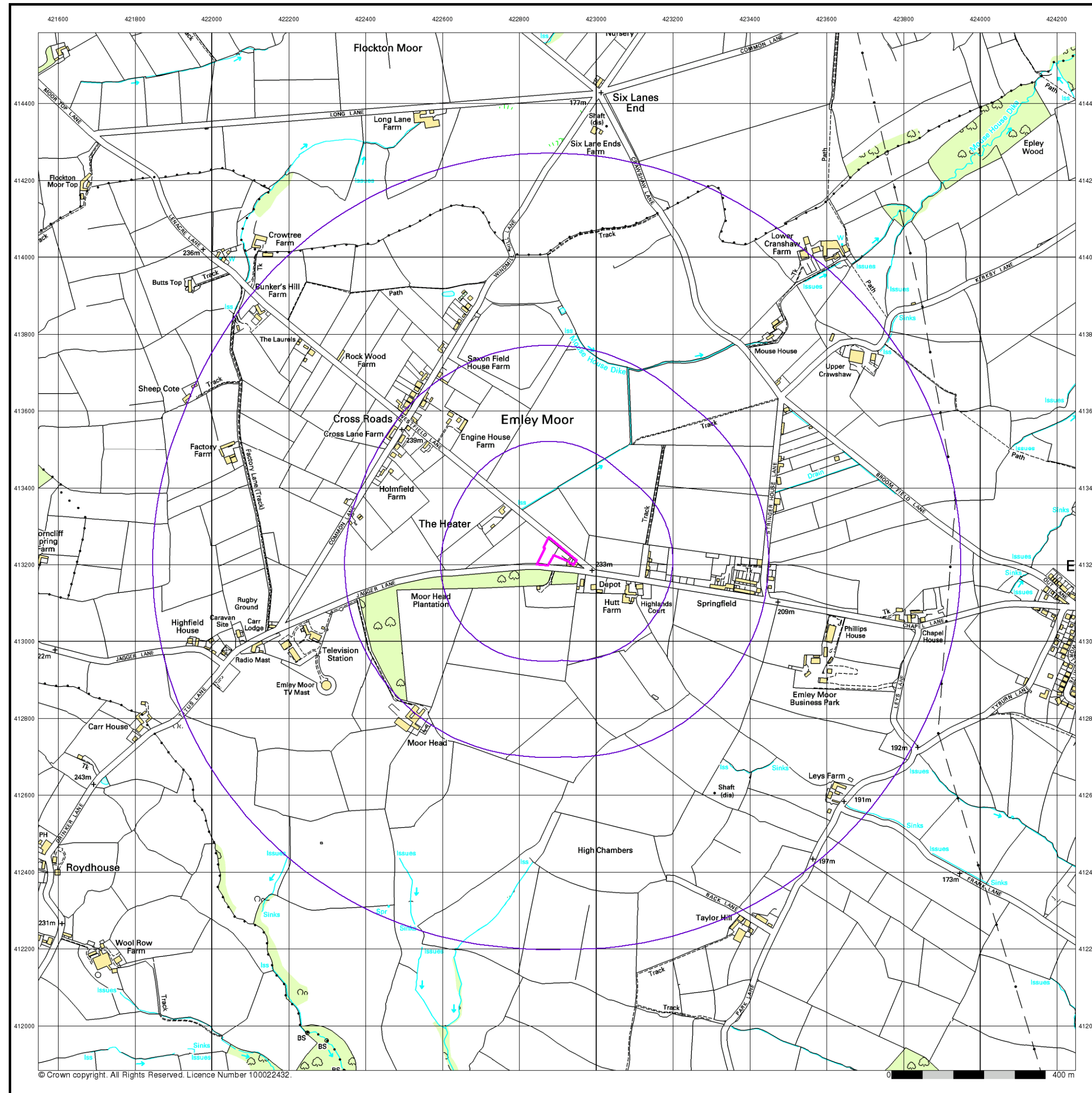


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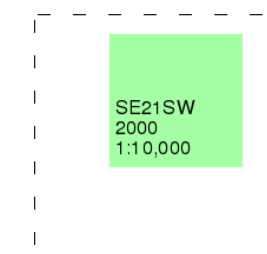
10k Raster Mapping

Published 2000

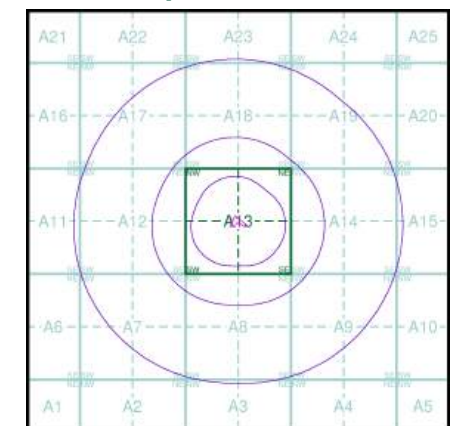
Source map scale - 1:10,000

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

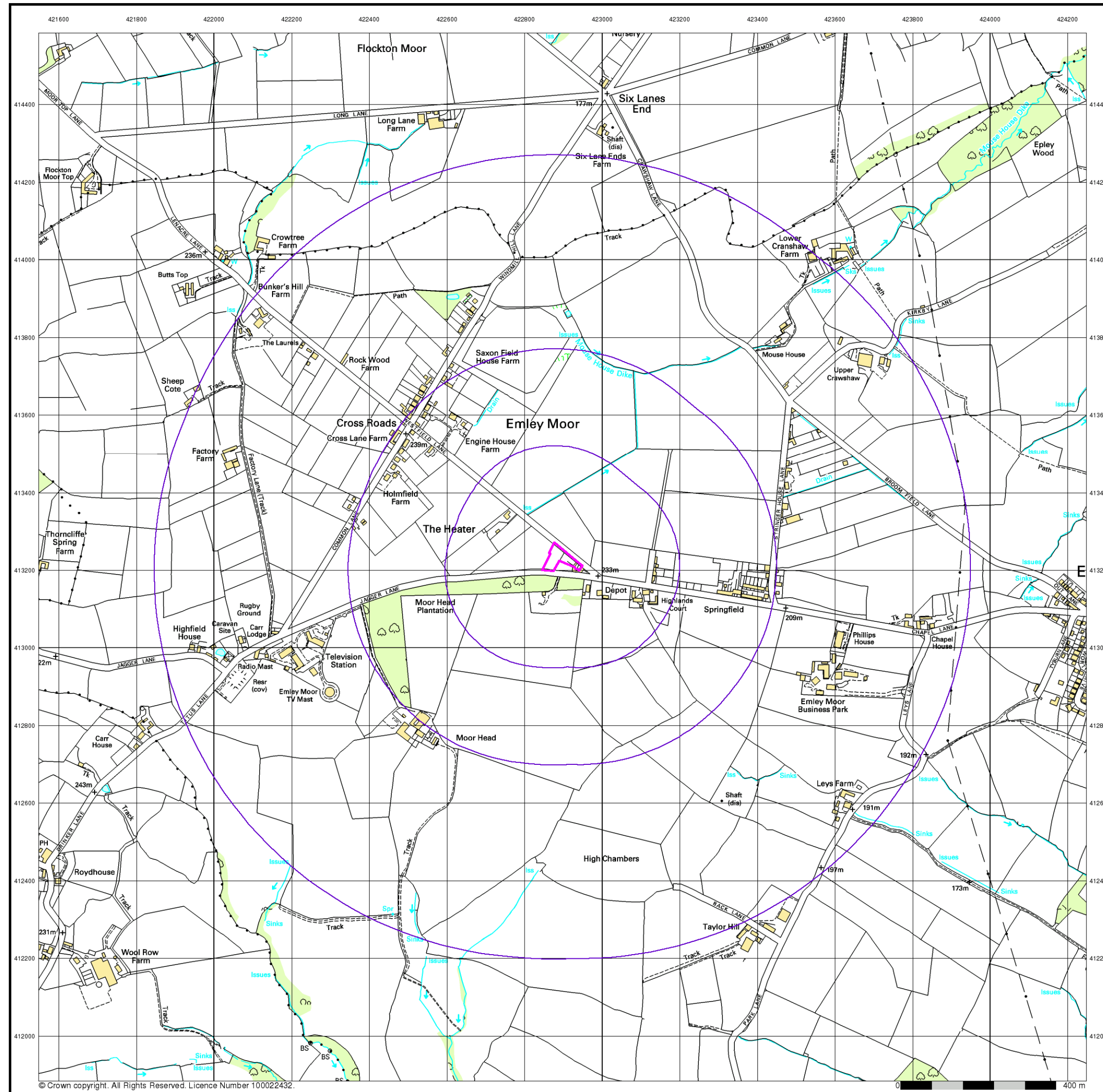


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Site Details

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10k Raster Mapping

Published 2006

Source map scale - 1:10,000

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)

SE21SW

2006

1:10,000

Historical Map - Slice A

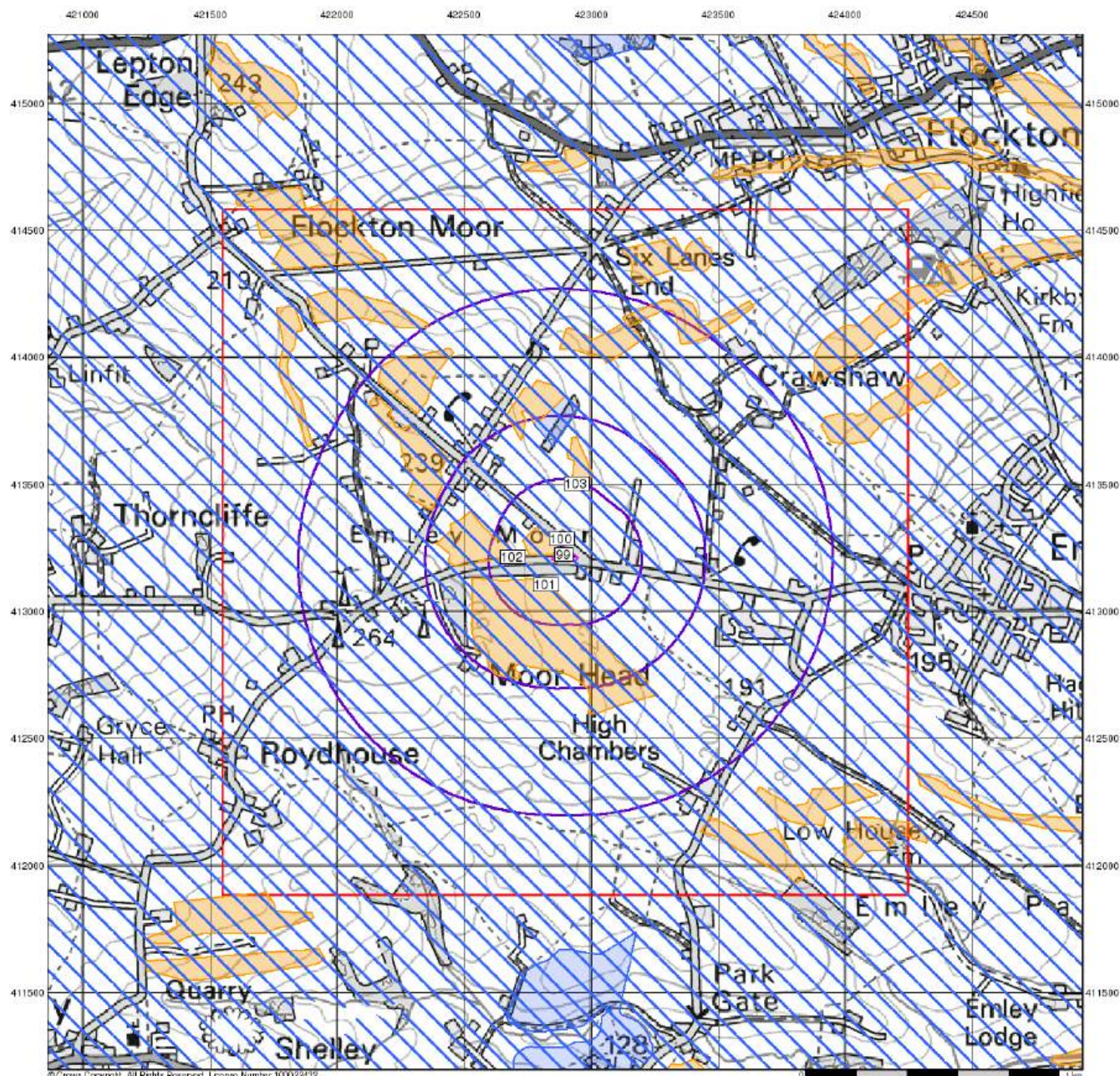
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Order Details

Order Number:	323279477_1_1
Customer Ref:	1407nj
National Grid Reference:	422890, 413220
Slice:	A
Site Area (Ha):	0.33
Search Buffer (m):	1000

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ



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Ground Stability Data (1:50,000)

General

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

Potential for Compressible Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Collapsible Ground Stability Hazards

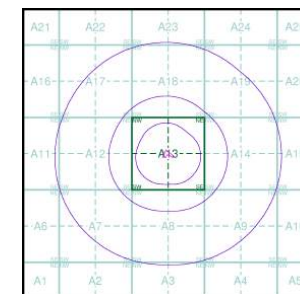
- High
- Moderate
- Low
- Very Low

Brine Pumping and Salt Mining

- Brine Pumping Related Feature
- Salt Mining Related Feature

- Point
- Polygon

Mining and Ground Stability - Slice A



Order Details

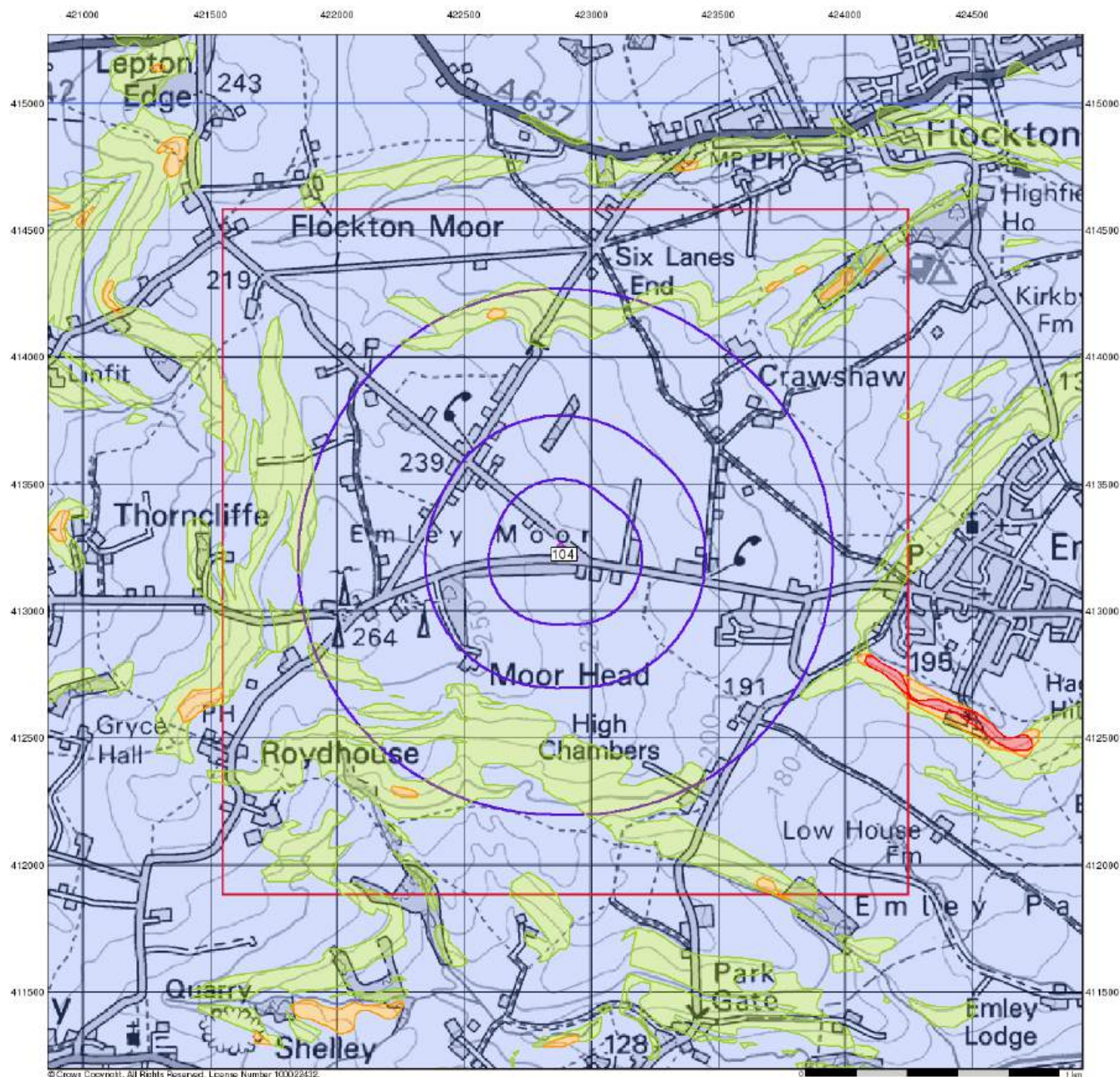
Order Number: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Search Buffer (m): 1000

Site Details

Thornciffe Farm Shop, Westfield Lane, Emley, HUDDERSFIELD, HD8 9SZ

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Ground Stability Data (1:50,000)

General

- Specified Site
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- Bearing Reference Point
- Slice
- Map ID

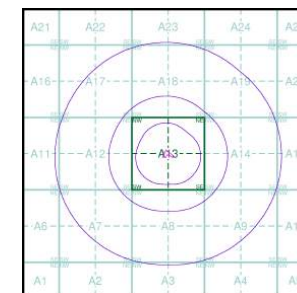
Potential for Landslide Ground Stability Hazards

- High
- Moderate
- Low
- Very Low

Potential for Ground Dissolution Stability Hazards

- High
- Moderate
- Low
- Very Low

Mining and Ground Stability - Slice A



Order Details

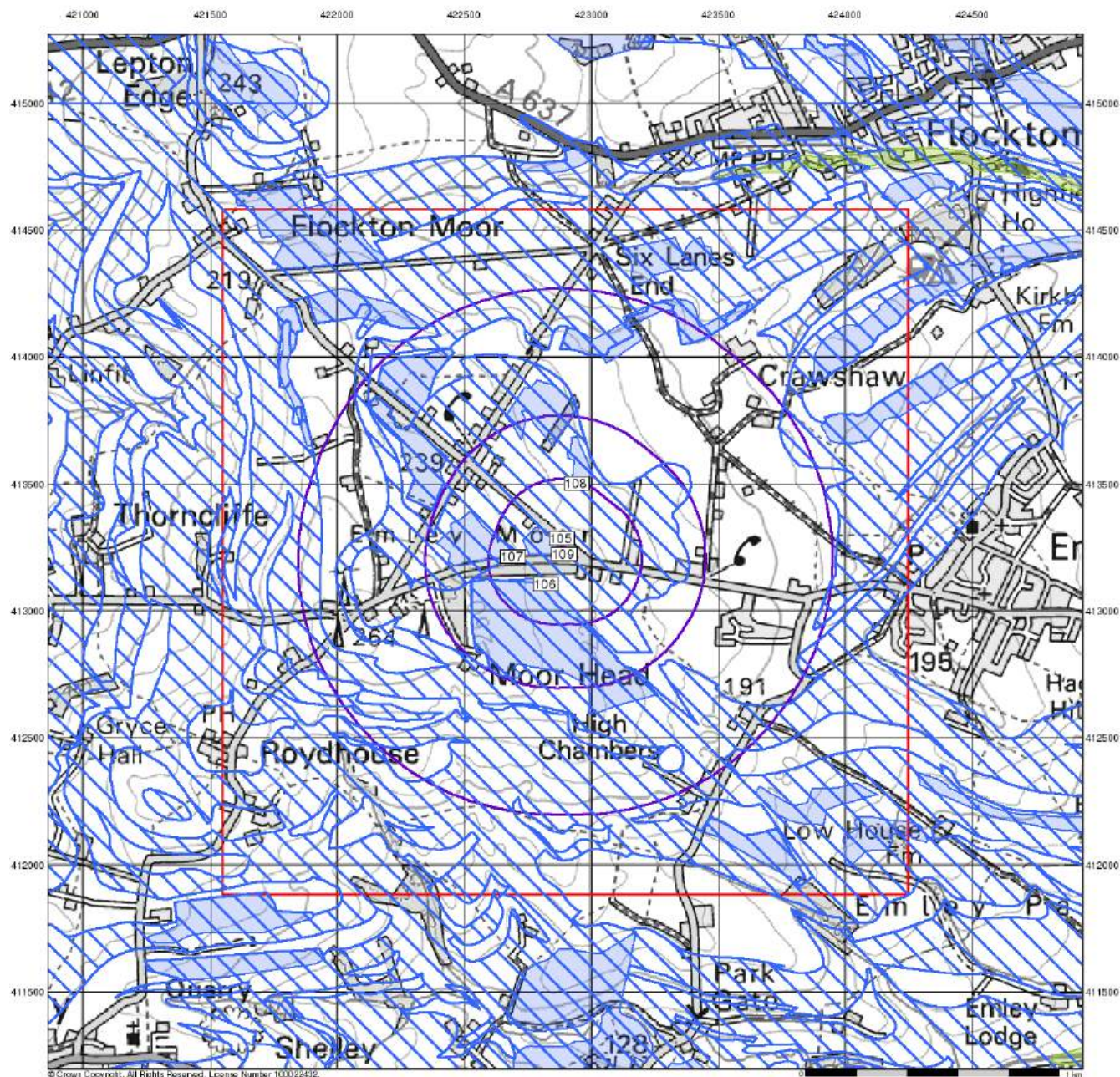
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 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

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Ground Stability Data (1:50,000)

General

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

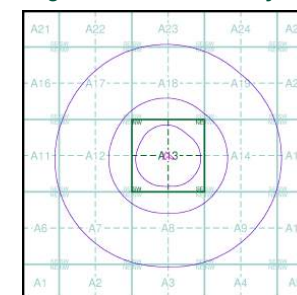
Potential for Running Sand Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 323279477_1_1
 Customer Ref: 1407nj
 National Grid Reference: 422890, 413220
 Slice: A
 Site Area (Ha): 0.33
 Search Buffer (m): 1000

Site Details

Thornciffe Farm Shop, Westfield Lane, Emley, HUDDERSFIELD, HD8 9SZ

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Mining and Ground Stability Datasheet

Order Details:

Order Number:

323279477_1_1

Customer Reference:

1407nj

National Grid Reference:

422890, 413220

Slice:

A

Site Area (Ha):

0.33

Search Buffer (m):

1000

Site Details:

Thornccliffe Farm Shop, Westfield Lane
Emley
HUDDERSFIELD
HD8 9SZ

Client Details:

Mr M Swindells
Geo2 Remediation Ltd
Coniston House
Louisa Street
Bradford
West Yorkshire
BD10 8NE

Prepared For:

Bradford
BD10 8NE

Report Section and Details	Page Number
Summary	-
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. 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).	
Mining and Natural Cavities Data	1
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. 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.	
Historical Land Use Information (1:2,500)	7
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. 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.	
Historical Land Use Information (1:10,000)	10
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. 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.	
Ground Stability Data (1:50,000)	12
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.	
Historical Map List	13
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.	
Data Currency	14
Data Suppliers	15
Useful Contacts	16

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The brine subsidence data relating to the Droitwich 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		2	2	11
Coal Mining Affected Areas	pg 3	Yes	n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 3	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas	pg 3	3	4	1	14
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)	pg 7		9	n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 7		5	n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 8		6	n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 8		2	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 10				3
Heap, unknown constituents					
Mineral Railway	pg 10				1
Mining & quarrying general	pg 10			1	3
Mining of coal & lignite	pg 10		2	1	8
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 10		2	2	11
Potentially Infilled Land (Water)	pg 11				4
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 12	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 12	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 12	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 12	Yes	Yes	n/a	n/a
Salt Mining Related Features					

Report Version v53.0

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mineral Sites Site Name: Cabbage Row Coal Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94451 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SE (E)	61	1	423010 413215
2	BGS Recorded Mineral Sites Site Name: Speedwell Colliery Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94452 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	78	1	422838 413123
3	BGS Recorded Mineral Sites Site Name: Cross Roads Coal Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94453 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	410	1	422615 413585
4	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94598 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	480	1	423240 412824
5	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94600 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	692	1	423305 412611
6	BGS Recorded Mineral Sites Site Name: Moor Top Coal Pit Location: Thorncliff, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94448 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SW (W)	706	1	422156 413051

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	BGS Recorded Mineral Sites Site Name: No 3 Drift Pit Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94582 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SE (E)	712	1	423605 412934
8	BGS Recorded Mineral Sites Site Name: Crawshaw Location: Flockton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94395 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Emley Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	743	1	423038 413996
9	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94599 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	743	1	423434 412644
10	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94596 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (SW)	752	1	422576 412499
11	BGS Recorded Mineral Sites Site Name: Crawshaw Lane Location: Flockton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94393 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Emley Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	838	1	423156 414060
12	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94597 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	896	1	422257 412525

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	BGS Recorded Mineral Sites Site Name: High Chambers Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94625 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SW (S)	938	1	422697 412275
14	BGS Recorded Mineral Sites Site Name: Leys Lane Delf Location: Emley, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94601 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	A9NE (SE)	957	1	423780 412736
15	BGS Recorded Mineral Sites Site Name: Moor Head Coal Pits Location: Royd House, Kirkburton, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94595 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A7SW (SW)	982	1	422119 412541
	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.	A13SW (NE)	0	2	422894 413223
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (NE)	0	3	422894 413223
	Non Coal Mining Areas of Great Britain No Hazard				
16	Potential Mining Areas Name: Emley Ceased Operation: 1918 Commodity: Coal; Blocking Bed Reference: 6837 Alternate: Nine Clogs Name/Mine: Speedwell Alternate: Speedwell Name/Mine: Speedwell Custodian: Not Supplied	A13SW (NE)	0	4	422894 413223
17	Potential Mining Areas Name: Speedwell Ceased Operation: 1913 Commodity: Coal; Wheatley Lime Reference: 6069 Alternate: Not Supplied Name/Mine: Not Supplied Custodian: Not Supplied	A13SW (NE)	0	4	422894 413223
18	Potential Mining Areas Name: Speedwell Ceased Operation: Not Supplied Commodity: Coal; Wheatley Lime Reference: Not Supplied Alternate: Park Name/Mine: Not Supplied Custodian: Walter Rowley and Wilson, 20 Park Row, Leeds.	A13SW (NE)	0	4	422894 413223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	Potential Mining Areas Name: Fletcher Park Ceased Operation: 1927 Commodity: Coal; Flockton Thick Reference: 8791 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A13NW (N)	24	4	422893 413294
20	Potential Mining Areas Name: Emley Moor Ceased Operation: 1878 Commodity: Coal; Wheatley Lime Reference: 911 Alternate Name/Mine: Goldroyd Custodian: Not Supplied	A13SW (W)	134	4	422712 413221
21	Potential Mining Areas Name: Emley Moor Ceased Operation: 1881 Commodity: Coal; Blocking Bed Reference: 1286 Alternate Name/Mine: Sawney Nook Custodian: Not Supplied	A13SW (W)	134	4	422712 413221
22	Potential Mining Areas Name: Thorncliffe Ceased Operation: Not Supplied Commodity: Coal; Blocking Bed; Wheatley Lime or Three Quarters Reference: Not Supplied Alternate Name/Mine: Crinoline Alternate Name/Mine: Denton Nook Alternate Name/Mine: New Alternate Name/Mine: Sawney Nook Alternate Name/Mine: Sycamore Custodian: Walter Rowley and Wilson, 20 Park Row, Leeds.	A13SW (W)	134	4	422712 413221
23	Potential Mining Areas Name: Emley Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A8NE (SE)	353	4	423118 412895
24	Potential Mining Areas Name: Emley Moor Ceased Operation: 1919 Commodity: Coal; Blocking Bed Reference: 6896 Alternate Name/Mine: Standbeck Custodian: Not Supplied	A14SW (E)	567	4	423516 413231
25	Potential Mining Areas Name: Shelley Ceased Operation: Not Supplied Commodity: Coal Reference: Not Supplied Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A7NE (SW)	619	4	422314 412884
26	Potential Mining Areas Name: Park Mill Ceased Operation: 1913 Commodity: Coal; New Hards Reference: 4553; 6068 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A14SW (SE)	651	4	423520 412900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	Potential Mining Areas Name: Six Lane Ends Ceased Operation: 1890 Commodity: Coal; New Hards; Old Hards Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Stella Coal Co. Ltd., Hedgefield, Blaydon, Durham.	A18NW (N)	828	4	422883 414098
28	Potential Mining Areas Name: Six Lane Ends or Waterloo Ceased Operation: 1902 Commodity: Coal; New Hards Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Lord Allendale, Estate Office, Bretton, Wakefield.	A18NW (N)	828	4	422883 414098
29	Potential Mining Areas Name: Six Lane Ends or Waterloo Ceased Operation: Not Supplied Commodity: Coal; Old Hards; Probably Flockton Thin Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Embleton, Barton and Stancliff, Central Bank Chambers, Leeds.	A18NW (N)	828	4	422883 414098
30	Potential Mining Areas Name: Flockton Lane Ceased Operation: 1917 Commodity: Coal; Stone Reference: 6650 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A18NW (N)	845	4	422700 414096
31	Potential Mining Areas Name: Hope Ceased Operation: 1884 Commodity: Coal; Old Hards Reference: Not Supplied Alternate: Not Supplied Name/Mine: Custodian: Lord Allendale, Estate Office, Bretton, Wakefield.	A18NW (N)	845	4	422700 414096
32	Potential Mining Areas Name: Woolrow Ceased Operation: 1925 Commodity: Coal; Black Bed; Blocking Bed Reference: 8528 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A7SE (SW)	891	4	422319 412482
33	Potential Mining Areas Name: Emley Moor Ceased Operation: 1882 Commodity: Coal; Wheatley Lime Reference: 1450 Alternate: Laneside Name/Mine: Custodian: Not Supplied	A12SW (W)	938	4	421907 413211
34	Potential Mining Areas Name: Roydhouse Ceased Operation: 1922 Commodity: Coal; Wheatley Lime Reference: 7647 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A12SW (W)	938	4	421907 413211
35	Potential Mining Areas Name: Thorncliffe Spring Ceased Operation: 1883 Commodity: Coal; Seam unnamed Reference: 1451 Alternate: Not Supplied Name/Mine: Custodian: Not Supplied	A12SW (W)	938	4	421907 413211

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	Potential Mining Areas Name: Park Mill Ceased Operation: 1915 Commodity: Coal; Wheatley Lime Reference: 6572 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A15NW (E)	969	4	423918 413237
37	Potential Mining Areas Name: Tyburn Lane Ceased Operation: 1896 Commodity: Coal; Black Bed Reference: 3465 Alternate Name/Mine: Not Supplied Custodian: Not Supplied	A15NW (E)	969	4	423918 413237

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	Extractive Industries or Potential Excavations from 1855-1909 Use: Brick Works (Disused) First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SE (SE)	20	-	422948 413181
39	Extractive Industries or Potential Excavations from 1855-1909 Use: Speedwell Colliery First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SW (S)	47	-	422897 413150
40	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Deposited Material First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SE (E)	48	-	422997 413218
41	Extractive Industries or Potential Excavations from 1855-1909 Use: Unspecified Pit First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SE (SE)	58	-	422944 413139
42	Extractive Industries or Potential Excavations from 1855-1909 Use: Reservoirs First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SW (SW)	60	-	422834 413142
43	Extractive Industries or Potential Excavations from 1855-1909 Use: Old Shaft First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SE (E)	65	-	423014 413215
44	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)	68	-	422895 413133
45	Extractive Industries or Potential Excavations from 1855-1909 Use: Shaft First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SW (S)	71	-	422861 413128
46	Extractive Industries or Potential Excavations from 1855-1909 Use: Air Shaft First Map Published 1893 Date: Last Map Published Not Applicable Date:	A13SW (S)	93	-	422875 413105
47	Extractive Industries or Potential Excavations from 1893-1915 Use: Speedwell Colliery First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SW (SW)	14	-	422867 413186
48	Extractive Industries or Potential Excavations from 1893-1915 Use: Unspecified Deposited Material First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SE (E)	49	-	422998 413216

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	Extractive Industries or Potential Excavations from 1893-1915 Use: Reservoirs First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SW (SW)	62	-	422834 413140
50	Extractive Industries or Potential Excavations from 1893-1915 Use: Old Shaft First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SE (E)	66	-	423015 413213
51	Extractive Industries or Potential Excavations from 1893-1915 Use: Shaft First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SW (S)	73	-	422861 413127
52	Extractive Industries or Potential Excavations from 1893-1915 Use: Air Shaft First Map Published 1906 Date: Last Map Published Not Applicable Date:	A13SW (S)	94	-	422874 413104
53	Extractive Industries or Potential Excavations from 1906-1937 Use: W First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SE (SE)	5	-	422933 413198
54	Extractive Industries or Potential Excavations from 1906-1937 Use: Speedwell Colliery First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SW (S)	17	-	422886 413182
55	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SE (E)	55	-	423001 413229
56	Extractive Industries or Potential Excavations from 1906-1937 Use: Reservoir First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SW (SW)	63	-	422837 413139
57	Extractive Industries or Potential Excavations from 1906-1937 Use: Unspecified Deposited Material First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SE (S)	65	-	422904 413139
58	Extractive Industries or Potential Excavations from 1906-1937 Use: Shaft First Map Published 1917 Date: Last Map Published Not Applicable Date:	A13SW (S)	73	-	422864 413126
59	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1961 Date: Last Map Published N/A Date:	A13SE (E)	58	-	423004 413232

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	Extractive Industries or Potential Excavations from 1950-1980 Use: Unspecified Deposited Material First Map Published 1961 Date: Last Map Published N/A Date:	A13SE (S)	67	-	422908 413137

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	General Quarrying Use: Not Supplied Date of Mapping: 1907	A18NE (N)	755	-	423062 414002
62	General Quarrying Use: Not Supplied Date of Mapping: 1854	A18NE (N)	817	-	423151 414040
63	General Quarrying Use: Not Supplied Date of Mapping: 1854	A9NE (SE)	941	-	423743 412707
64	Mineral Railway Use: Not Supplied Date of Mapping: 1894	A18NW (N)	763	-	422794 414028
65	Mining & quarrying general Use: Not Supplied Date of Mapping: 1908	A13NW (NW)	386	-	422637 413571
66	Mining & quarrying general Use: Not Supplied Date of Mapping: 1907	A9NW (SE)	701	-	423309 412603
67	Mining & quarrying general Use: Not Supplied Date of Mapping: 1908	A17SW (NW)	939	-	422112 413813
68	Mining & quarrying general Use: Not Supplied Date of Mapping: 1907	A9SE (SE)	991	-	423608 412467
69	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894 - 1948	A13SE (S)	50	-	422898 413148
70	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A13SE (E)	70	-	423019 413213
71	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A9NW (SE)	481	-	423244 412827
72	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1907 - 1955	A14SW (E)	640	-	423540 412966
73	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A12SW (W)	704	-	422158 413054
74	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A9NW (SE)	747	-	423432 412637
75	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A8SW (SW)	759	-	422577 412492
76	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A7SE (SW)	900	-	422256 412521
77	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A8SW (S)	944	-	422698 412269
78	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1894 - 1907	A18NE (N)	971	-	422972 414236
79	Mining of coal & lignite Use: Not Supplied Date of Mapping: 1854	A7SW (SW)	977	-	422128 412538
80	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13SE (S)	50	-	422898 413148
81	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13SE (E)	70	-	423019 413213

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A13NW (NW)	386	-	422637 413571
83	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NW (SE)	481	-	423244 412827
84	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A14SW (E)	640	-	423540 412966
85	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A12SW (W)	704	-	422158 413054
86	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NW (SE)	747	-	423432 412637
87	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (SW)	759	-	422577 412492
88	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SE (SW)	900	-	422256 412521
89	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A17SW (NW)	939	-	422112 413813
90	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9NE (SE)	941	-	423743 412707
91	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A8SW (S)	944	-	422698 412269
92	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A18NE (N)	971	-	422972 414236
93	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A7SW (SW)	977	-	422128 412538
94	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9SE (SE)	991	-	423608 412467
95	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (SW)	518	-	422429 412894
96	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A9NW (SE)	731	-	423458 412683
97	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SW (W)	755	-	422123 412984
98	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A12SW (W)	796	-	422081 412982

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.				
99	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
100	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	422882 413224
101	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	94	1	422822 413105
102	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	1	422691 413214
103	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	242	1	422942 413503
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
104	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
105	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	0	1	422882 413224
106	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	94	1	422822 413105
107	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	1	422691 413214
108	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (N)	242	1	422942 413503
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
109	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (NE)	0	1	422894 413223
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	76	1	422805 413135

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

1:2,500	Mapsheet	Published Date
Yorkshire	261_06	1893
Yorkshire	261_07	1893
Yorkshire	261_06	1906
Yorkshire	261_07	1906
Yorkshire	261_07	1917
Yorkshire	261_06	1932
Ordnance Survey Plan	SE2212	1961
Ordnance Survey Plan	SE2213	1961
Ordnance Survey Plan	SE2312	1961
Ordnance Survey Plan	SE2313	1961

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

1:10,560	Mapsheet	Published Date
Yorkshire	261_00	1854
Yorkshire	261_NE	1894
Yorkshire	261_NW	1894
Yorkshire	261_SE	1894
Yorkshire	261_SW	1894
Yorkshire	261_NE	1907
Yorkshire	261_SE	1907
Yorkshire	261_NW	1908
Yorkshire	261_SW	1908
Yorkshire	261_NW	1938
Yorkshire	261_SE	1938
Yorkshire	261_NE	1948
Yorkshire	261_SW	1948
Ordnance Survey Plan	SE21SW	1955
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	SE21SW	1993

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	December 2022	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2022	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	July 2023	Bi-Annually
Ground Stability Data (1:50,000)	Version	Update Cycle
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
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



Historical Land Use Information (1:2,500)

General

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

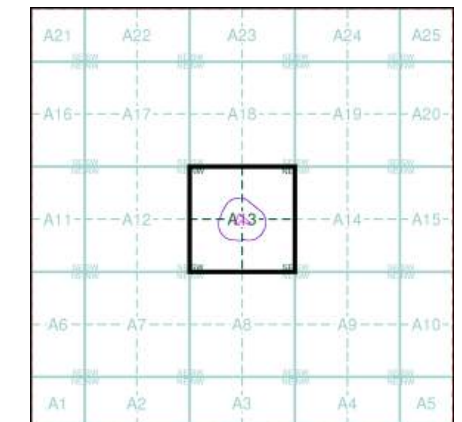
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	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: 323279477_1_1
Customer Ref: 1407nj
National Grid Reference: 422890, 413220
Slice: A
Site Area (Ha): 0.33
Plot Buffer (m): 100

Site Details

Thorncliffe Farm Shop, Westfield Lane, Emley,
HUDDERSFIELD, HD8 9SZ



Contaminated Land Appraisals
Brownfield Remediation Solutions
Site Investigation Services
Earthworks Design and Control
Flood Risk Assessments

Mr Paul Stapleton
Geo2 Remediation Ltd
Coniston House
Louisa Street
Idle
Bradford
BD10 8NE

18th August 2023

Ref C593/01/ATS

Dear Paul,

Ref: Shallow Mining Investigation on land at Thorncliffe Farm Shop, Westfield Lane, Emley Moor.

1. Introduction

On the instructions of Geo2 Remediation Ltd, G&M Consulting Ltd have carried out an intrusive mining investigation on land at Thorncliffe Farm Shop, Westfield Lane, Emley Moor, West Yorkshire. The work was carried out in support of a planning application associated with the further development of the existing site facilities with a single new pie production building; the proposed layout of which is shown on the drawing presented in Attachment A of this report.

The investigation work was undertaken to provide information on the underlying ground conditions and assess the likelihood of historical shallow mine workings affecting the site. G&M Consulting Ltd (G&M) was present on site during the fieldwork, and this report presents the findings of the investigation.

The site as a whole has been subject to a coal mining risk assessment (CMRA) and a historical intrusive mining investigation has been undertaken in support of a previous planning application associated with the site, both of which were undertaken by Rogers Geotechnical Services Ltd, details of which are summarised in Section 2 of this report; a copy of the CMRA is presented in Attachment B of this report. A review of the Coal Authority (CA) Interactive Map (<http://mapaps2.bgs.co.uk/coalauthority/home.html>), shows the site to lie within a 'development high risk area'.

The site is located to the south of Westfield Lane, approximately 1.5 km west of the village of Emley, approximately 9 km south-east of Huddersfield town centre, West Yorkshire and is centred at National Grid Reference SE 229 132. The area, of the proposed new building, is rectangular in shape, approximately 15 m by 6 m, with the long axis aligned north-east to south-west. This area of the site, which sits in the western part of the site as a whole, is a mix of tarmac and gravel and currently houses two cargo-style containers, which are used as part of the adjacent farm shop; these buildings are noted to be sited within a larger area used for car parking for the farm shop.

The Chestnuts
Brackenhill Road, East Lound,
Haxey, Doncaster. DN9 2LR
Registered in England No. 5806528
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Tel: 01427 752788
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Mob: 07718 122766
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Website: www.soilexperts.co.uk

The comments and opinions presented in this report are based on the findings of a review of available information and ground conditions encountered during the intrusive investigation work. There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

2. Background Information

The historical information presented below, was submitted in support of a previous proposed extension to the existing farm shop on site. The proposed new pie production building in the current approval is located approximately 50 m to the west of the previous submission.

CMRA

The CMRA prepared by Rogers Geotechnical Services Ltd (RGSL) should be read in conjunction with this report. A summary of the conclusions from the CMRA are as follows:

The appropriate map sheet for the site and the geology viewer has been examined and the following table presents the indicated geology:

Table 1: Geological Data for the Site			
Strata Type	Strata Name ⁵	Previous Name ⁵	Description ³
Artificial Ground	Made ground	-	Non listed to be present directly beneath the proposed development, however, a deposit of made ground encroaches the land boundary of Thorncliffe Farm shop. This deposit is anticipated to represent unlicensed opencast coal workings.
Superficial Geology	None recorded	-	-
Solid Geology	Pennine Lower Coal Measures Formation	Lower Coal Measures	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

On the geological map, there is one dip indicator relevant to the site (i.e. within 500m of the site or within the same fault block) that suggests the solid geology beneath the site dips 3° to the east.

There is one coal seam that is shown to outcrop within the local area. However, the trajectory of the outcrop appears to have been altered due to unlicensed opencast workings of this seam. Moreover, the generalised vertical section (GVS) on the published geological map suggests that there may also be other seams present close to the site surface, the surface outcrops of which may have been removed by faulting in the area. These seams are summarised as follows:

Table 2: Summary of Coal Seams Within the Vicinity of the Site.			
Seam Name	Seam thickness ^{5a}	Outcrop distance from site ^{5a}	Anticipated depth below site
Third Brown Metal Coal	0.0 – 0.8m	50m W	Within 10m
Middleton Little Coal	0.2 – 0.9m	Doesn't outcrop	Within 20m

^aAll distances are given as approximations only. It should be noted that coal seam thicknesses vary over relatively short distances

In light of the above and taking into account the regional structural geology and the topography of the area, the Third Brown Metal and Middleton Little Coal seams are anticipated to be present at depths of less than 30m below the surface of the site.

Based on the above information, it is possible that there could be a sufficient thickness of competent overburden above the above mentioned seams, such that the overburden should prevent the risk of instability posed by the presence of any illicit workings.

Nevertheless, the available data indicates that the Third Brown Metal Coal could have been extracted by opencast methods within 50m west of the proposed development, indicating that this seam is likely to be present at relatively shallow depth within the area. As such, it is possible that this seam could have been extracted from small scale open-cast workings, bell pits or day-holes beneath the proposed development. However, if the seams have been worked via underground mining methods, the actual extraction thickness, and subsequent voiding, may be significant in comparison to the seam thickness.

As such, it is strongly recommended that the true thicknesses and depths of the Third Brown Metal Coal and the Middleton Little Coal seams are investigated. Therefore a moderate risk rating has been placed on these seams, and further investigation is recommended to prove or disprove the presence of illicit mining activity.

In regard to deeper mining which could affect the site, whilst the property is within a surface area that could be affected by past underground mining, due to the time passed since withdraw of support was undertaken, the risks posed by ground movement attributed to these workings is limited.

Within the above referenced CMRA, the summary of findings drawing, provided by the CA, indicates the presence of a historical area of unlicensed opencasting immediately adjacent to the western boundary of the new build, see below;



Area of Unlicensed opencast site

Location of proposed new building

Previous Intrusive Investigation

Following on from the preparation of the CMRA, an intrusive ground investigation was undertaken by RGSL. The fieldwork comprised two rotary open-hole boreholes, drilled to a maximum depth of 30 m below ground level (bgl). The following points were recorded in the investigation report, issued following completion of the fieldwork;

In accordance with the geology of the area, the succession has been shown to include the following:

Table 3: Generalised strata profile

Depth to base (m)	Strata type	Positions strata was revealed	Groundwater strikes (m)
0.1	Brick Sets	All	None
2 – 2.5	Yellow and grey CLAY (Residual Soils)	All	None
23 – 30m	INTERBEDDED light and dark grey MUDSTONES with 2 notable Coal seams (detailed below) (Pennine Lower Coal Measures Formation)	All	None

'+' Denotes that the strata extended below the termination depth of the investigated positions, thus the extent of the deposit is only proven to the depths indicated.

Within the Pennine Lower Coal Measures, the following notable horizons were recorded.

Table 4: Notable Horizons

Feature	Depth (m)		Thickness (m)	Positions encountered
	Top	Bottom		
Dark grey MUDSTONE with traces of COAL	11	11.4	0.4	BH1
Dark grey MUDSTONE with traces of COAL	11	12.5	2.5	BH2
COAL (Intact)	20.2	20.7	0.5	BH1
COAL (Intact)	20.8	21	0.2	BH2

This investigation has identified that beneath the brick sets, the site is capped with yellow and grey clays that spans to depths ranging between 2m and 2.5m below ground level (bgl). This stratum is anticipated to represent the upper most weathered fraction of the Pennine Lower Coal Measures formation, as indicated by the geological data for the site. Casing was installed to 3m and 3.5m within BH1 and BH2 respectively to support the hole. Below this stratum, competent layers of the Pennine Lower Coal Measures Formation were revealed to a depth of 30m, predominantly comprising interbedded horizons of light and dark grey mudstones.

Within the Pennine Lower Coal Measures, traces of coal were observed in association with dark grey mudstone at a depth of 11m in both boreholes. It is reasoned that this feature represents an inferior, poor quality coal seam. Based on the geological appraisal, the thickness and depth, this feature is consistent with the Third Brown Metal Coal.

A cyclothem of interbedded light and dark grey mudstone was present between the upper seam and a lower seam. Within both boreholes, at depths of between 20m – 21m, a second coal seam was intersected that ranged in thickness between 0.2m and 0.5m. The seam was noted to be intact; no evidence of voided, brecciated or broken ground was encountered within the seam or surrounding horizons. Based on the available published geology, this seam is anticipated to represent the Middleton Little Coal Seam.

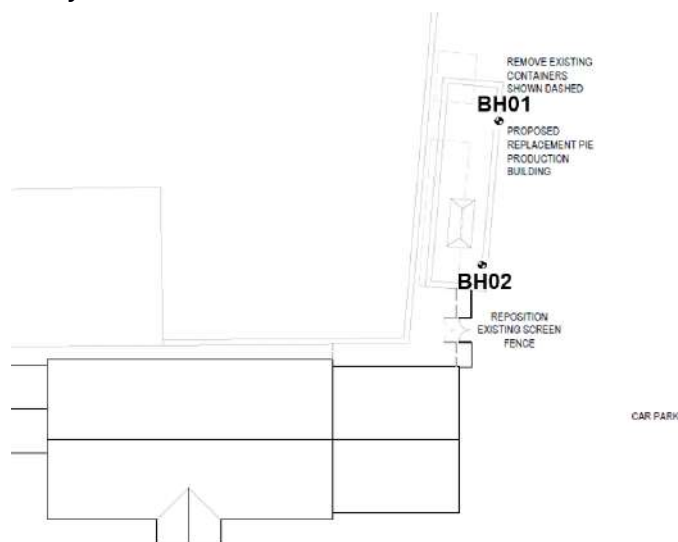
3. Fieldwork

The fieldwork was carried out on the 8th August 2023. Two rotary open-holes, referenced BH01 and BH02 were both drilled to a depth of 30 m below ground level (bgl), to allow logging of the soils and solid strata through examination of flush returns and rate of penetration of the drill bit. Drilling was initially progressed using 150mm diameter augers through the superficial soils, and a casing set into the underlying bedrock, to aid flush returns.

The drilling works were undertaken by Cape using a Beretta T25 tracked rotary drilling rig and carried out under the Terms and Conditions of the Coal Authority Permission No 26985, a copy of which is presented in Attachment C of this report.

Drilling was undertaken using water flush. In accordance with the CA permission, the boreholes were monitored for gases during their advancement. The boreholes were backfilled on completion.

The locations of the exploratory holes are shown below.



4. Ground Conditions

The driller records 'Tarmac and fill hardcore' in both boreholes to 0.4 m bgl, underlain by a 'clay brown grey' to 2.7 m and 2.3 m bgl in BH01 and BH02 respectively, which was further underlain by 'a 0.1 m to 0.2m thick "coal/mudstone black mix'.

The superficial deposits are underlain in both boreholes by a sequence of mudstones and occasional sandstone to depths of between 7.5 m and 7.9 m bgl, respectively. A coal seam was encountered beneath this sequence as follows;

Borehole No	Coal (m) (Thickness)	Drillers Description
BH01	7.5 – 8.2 (700 mm)	'dirty coal'
BH02	7.9 – 8.6 (700 mm)	'dirty coal'

The coal was underlain in both of the boreholes by a '*mudstone grey silty*' (drillers description) to depths of between 9.3 m and 10.0 m bgl. These mudstones were underlain by '*sandstone grey silty with odd mudstone*

bands' (drillers description), which were encountered between 16.5 m and 16.9 m bgl, in BH01 and BH02, respectively. A further coal seam was encountered beneath this sandstone as follows;

Borehole No	Coal (m) (Thickness)	Drillers Description
BH01	16.5 – 17.3 (800 mm)	'coal'
BH02	16.9 – 17.7 (800 mm)	'dirty coal'

The coal was underlain by a '*mudstone grey silty*' (drillers description) to depths of between 19.0 and 19.5 m bgl, respectively and further underlain by '*sandstone grey silty with odd mudstone bands*' (drillers description), to the base of each borehole.

Based on the geological records and CMRA, it is considered that the shallow seam of coal is likely to be the 3rd Brown Metal coal, noted in the CMRA, to be '*within 10 m*', depth beneath the site, such that the coal, encountered between 16.5 m and 16.9 m bgl, is likely to be the Middleton Little coal (this was anticipated '*within 20 m*', depth beneath the site in the CMRA). Based on the geological records it is anticipated that the next seam, the Middleton Main coal, is likely to be at a depth of between 30-35m bgl. This seam was not encountered in this investigation.

The exploratory hole records are presented in Attachment D of this report.

During the drilling, monitoring of methane, carbon monoxide, hydrogen sulphide and oxygen was undertaken at the borehole surface. No significant concentrations of methane, carbon monoxide or hydrogen sulphide were recorded, as detailed on the attached logs no gases were noted during drilling.

5. Conclusions/Recommendations

On the instructions of Geo2 Remediation Ltd, G&M Consulting Ltd have carried out an intrusive mining investigation on land at Thorncliffe Farm Shop, Westfield Lane, Emley Moor, West Yorkshire. The work was carried out in support of a planning application associated with a single new pie production building.

The drilling works were carried out in accordance with the CA permission 26985.

Given the relatively small size of the proposed new building, it is considered that two boreholes were sufficient to assess the likelihood of shallow workings beneath the site.

No evidence of voided or soft strata, broken ground or loss of flush was noted during the drilling of the boreholes.

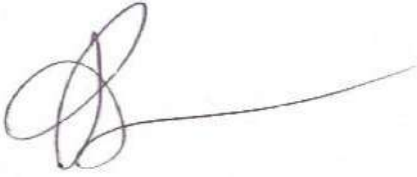
One seam of intact coal, 700mm thick, was recorded in both of the boreholes between 7.5 m and 7.9 m bgl, within a bedrock sequence of sandstone and mudstones. This seam was described by the driller as 'dirty coal', which may be indicative of a poor quality coal. A second seam of coal, 800mm thick, was encountered in both holes, between 16.5 m and 16.9 m bgl. In BH02, the driller described the seam as 'dirty coal', again possibly indicating a poor quality coal. Based on the published geological records for the area, it is considered that the shallower seam represents the 3rd Brown Metal coal and the deeper seam, the Middleton Little coal.

Based on the evidence of the two boreholes drilled it does not appear that the site is adversely affected by shallow mine workings within the seams of coal encountered at the locations drilled.

However, in consideration of the fact that historical unlicensed opencasting is shown immediately adjacent to the western boundary of the new build, it is recommended that a watching brief is maintained during the development work, and that all surfaces exposed during construction of the foundations or areas external to the new build, are examined by a suitably qualified person, for evidence of such activity. If evidence of backfilled opencast is encountered within influencing distance of the foundations, work should immediately cease and the Coal Authority notified and the advice of geotechnical specialists sought.

We trust this report and the attachments meet with your approval and are sufficient for your present needs. Your client should submit this document to the local authority for their comment/approval prior to undertaking any development work.

Yours sincerely

A handwritten signature in dark ink, consisting of a series of loops and a long horizontal stroke extending to the right.

Andrew Swinbourne

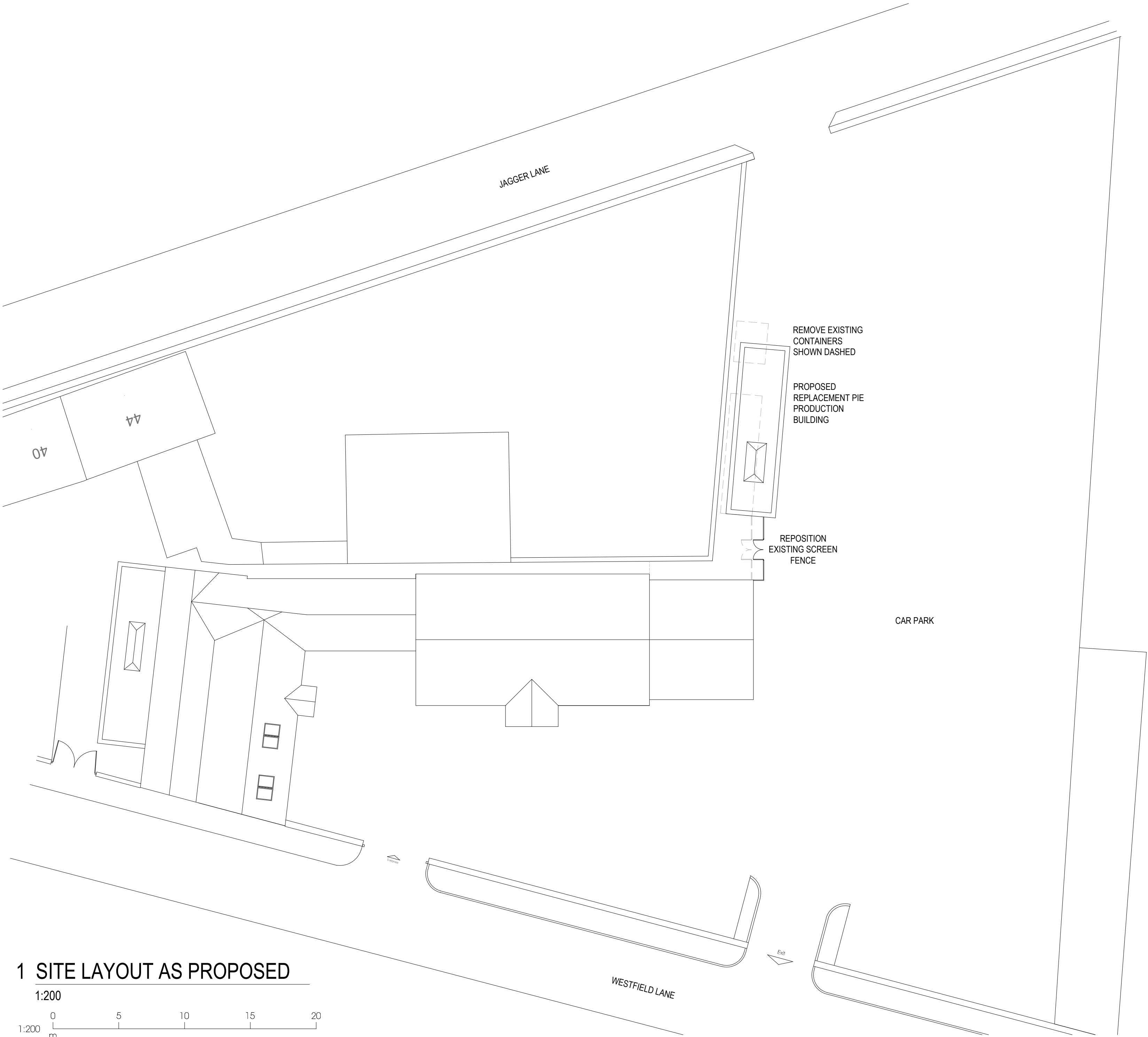
For and on behalf of **G&M Consulting Ltd**

Attachments



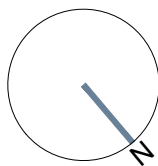
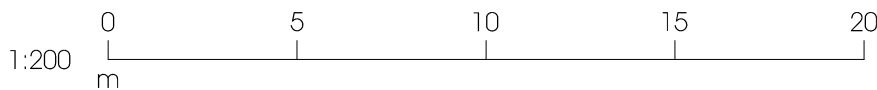
ATTACHMENT A

DRAWINGS



1 SITE LAYOUT AS PROPOSED

1:200



P01 23.08.22 Preliminary Issue GW JR

Rev:	Date:	Description:	By:	Auth:
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Farrar
Bamforth
Architecture

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Huddersfield
HD1 4DN
T: 01484 424 008
F: 01484 512 305
E: design@farrarbamforth.co.uk
W: www.farrarbamforth.co.uk

Client:
THORNCLIFFE FARM SHOP

Project Name:
PROPOSED REPLACEMENT PIE PRODUCTION BUILDING

Project Address:
THORNCLIFFE FARM SHOP, 1 WEST FIELD LANE, EMLEY MOOR,
HUDDERSFIELD

Project	Originator	Functional	Spatial	Form	Discipline	Number
22C01	FBA	ZZ	XX	DR	A	0701

Title:
SITE LAYOUT AS PROPOSED

Status:	Code	Description	Revision:	Code
	S0	WORK IN PROGRESS		P01

Created By:	Authorised By:	Date:	Scale at A2:
GW	JR	AUG 22	1:200

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ATTACHMENT B

CMRA

**Environmental
Geotechnical
Specialists**



COAL RISK ASSESSMENT

job number C129/19/E/210	date 24.09.19
site address Thornccliffe Farm Shop 1 Westfield Lane Emley Moor HD8 9SZ	
written by R.A. Palmer	checked by C.E. Mason
issued by R.A. Palmer	

Rogers Geotechnical Services Ltd

Telephone 0843 50 666 87 **Fax** 0843 51 599 30

Email enquiries@rogersgeotech.co.uk

www.rogersgeotech.co.uk

Offices 1 & 2, Barncliffe Business Park, Near Bank, Shelley,
Huddersfield, West Yorkshire HD8 8LU.



GEO TECHNICAL
ENVIRONMENTAL



Contents

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2.1	British Geological Survey Map Viewer	2
2.2	Coal Authority Mines Report	3
2.3	Geological Survey Borehole Records	3
3.	Risk Assessment	4
4.	Conclusions	5

Appendices

1.	Site Plan
2.	Coal Authority Report



Report on a Coal Mining Risk Assessment

Location: Thorncliffe Farm Shop,
1 Westfield Lane, Emley Moor, Huddersfield HD8 9SZ

For: Farrar Bamforth Associates Ltd

Report No. C129/19/E/210

Report date: September 2019

For and on behalf of **Rogers Geotechnical Services Ltd**

redacted

Rob Palmer MSc FGS ACI^{redacted}H
Senior Geo-environmental Engineer

Steve Rogers CEng CGeol MICE MCIHT FGS ACIEH
Technical Director

1. Introduction

It is understood that as part of the planning application at the site, a Coal Mining Risk Assessment has been requested by the planning authority. Consequently, a desktop study was commissioned in order to assess the risk to the development from coal mining. This report presents the findings of the study.

2. Geological Desk Study

The geological desk study has been undertaken using the following sources of information.

- British Geological Survey map sheet¹.
- British Geological Survey *Geology of Britain Viewer*².
- Coal Authority Consultants Coal Mining Report³.
- British Geological Survey *Borehole Records*⁴.

¹ Sources: British Geological Survey (NERC) Map Sheet 77 ; Huddersfield Solid and Drift Editions

² Sources: British Geological Survey (NERC) Geology of Britain Viewer [online resource from www.bgs.ac.uk]

³ Coal Authority Reference: 51002175931001 dated 18th September 2019.

⁴ Sources: British Geological Survey (NERC) Borehole Records [online resource from <http://www.bgs.ac.uk/>]



2.1 British Geological Survey Maps and Viewer

The appropriate map sheet for the site and the geology viewer has been examined and the following table presents the indicated geology:

Table 1: Geological Data for the Site

Strata Type	Strata Name ⁵	Previous Name ⁶	Description ³
Artificial Ground	Made ground	-	Non listed to be present directly beneath the proposed development, however, a deposit of made ground encroaches the land boundary of Thorncliffe Farm shop. This deposit is anticipated to represent unlicensed opencast coal workings.
Superficial Geology	None recorded	-	-
Solid Geology	Pennine Lower Coal Measures Formation	Lower Coal Measures	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

On the geological map, there is one dip indicator relevant to the site (i.e. within 500m of the site or within the same fault block) that suggests the solid geology beneath the site dips 3° to the east.

There is one coal seam that is shown to outcrop within the local area. However, the trajectory of the outcrop appears to have been altered due to unlicensed opencast workings of this seam. Moreover, the generalised vertical section (GVS) on the published geological map suggests that there may also be other seams present close to the site surface, the surface outcrops of which may have been removed by faulting in the area. These seams are summarised as follows:

Table 2: Summary of Coal Seams Within the Vicinity of the Site.

Seam Name	Seam thickness ^{5*}	Outcrop distance from site ^{5*}	Anticipated depth below site
Third Brown Metal Coal	0.0 – 0.8m	50m W	Within 10m
Middleton Little Coal	0.2 – 0.9m	Doesn't outcrop	Within 20m

*All distances are given as approximations only. It should be noted that coal seam thicknesses vary over relatively short distances

In light of the above and taking into account the regional structural geology and the topography of the area, the Third Brown Metal and Middleton Little Coal seams are anticipated to be present at depths of less than 30m below the surface of the site.

⁵ Sources: British Geological Survey (NERC) Map Sheets 77; Huddersfield; Solid and Drift Edition, and Geology of Britain Viewer [online resource from www.bgs.ac.uk]

⁶ Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [online resource from www.bgs.ac.uk]



2.2 Coal Authority Mines Report

As part of this study a Coal Authority Consultants Coal Mining Report has been obtained. The report is presented as Appendix 2 and for the purposes of discussion has been summarised below:

Table 3: Summary of the Consultant's Coal Mining Report

Has the report highlighted evidence or potential of:			
Ref	Mining Feature	Yes/No	Comments
1	Underground Coal Mining	Yes	Middleton Main – 40m depth – Beneath site – 0.58m thickness – last worked 1885. Wheatley Lime – 76m depth – Beneath site – 0.82m thickness – last worked 1903.
2	Probable Unrecorded Shallow Workings	Yes	-
3	Spine Roadways at Shallow Depth	No	No spine roadway recorded at shallow depth.
4	Mine Entries	Yes	422413-007 – Shaft – Treated in 1986. 422413-008 – Shaft – Treated in 1986. 422413-010 – Shaft – No treatment details. 422413-028 – Shaft – No treatment details. 423413-001 – Shaft – No treatment details.
5	Abandoned mine plans	Yes	Plans of abandoned mine workings below the site are suggested to be available by the Coal Authority.
6	Outcrops	No	No outcrops recorded within the development site.
7	Geological Faults	No	No faults, fissures or breaklines recorded.
8	Opencast Mines	Yes	An unlicensed opencast coal site encroaches the landownership of Thorncliffe Farm shop, however, does not span beneath the proposed development. Please refer to the 'summary of findings' map within the Coal Authority Report.
9	Coal Authority Managed Tips	No	None recorded within 500 metres of the enquiry boundary.
10	Site Investigations	Yes	Site investigation undertaken approx. 50m to the south-east of the site.
11	Remediated Sites	No	None recorded within 50 metres of the enquiry boundary.
12	Coal Mining Subsidence	Yes	The Coal Authority has received one claim within 50 metres of the enquiry boundary, since 31st October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
13	Mine Gas	No	None recorded within 500 metres of the enquiry boundary.
14	Mine Water Treatment Schemes	No	None recorded within 500 metres of the enquiry boundary.
15	Future underground mining	No	For further information please see section 3 of the Consultant's Coal Mining Report (ref 51002175931001).
16	Coal mining licensing	No	
17	Court orders	No	
18	Section 46 notices	No	
19	Withdrawal of support notices	Yes	The property is in an area where notice to withdraw support was given in 1982.

2.3 Geological Survey Borehole Records

The British Geological Survey (NERC) keeps borehole records from across Britain which are available for public viewing through their website⁷. As part of this study, the records in the area around the site have been reviewed in order to assist in establishing the geological conditions.



Unfortunately in this instance, there are no borehole scans available within the vicinity of the site that will assist with this assessment. Whilst there are borehole scans present within 500m to the north, south and east of the site, these boreholes are situated on outcrops stratigraphically below the Third Brown Metal and Middleton Little Coal seams. Therefore, these seams are not present within these boreholes. Furthermore, other borehole scans are available at a greater distance to the site within other faulted blocks. However, these are not anticipated to represent comparable ground conditions to those anticipated to be present below the site.

3. Risk Assessment

The risk to the stability of the proposed residential development has been evaluated from the data obtained and with reference to the following ratings and definitions:

- Low - The possibility of instability is unlikely therefore no further action is necessary.
- Moderate - The possibility of instability is likely and further investigation or remedial action may be required.
- High - The possibility of instability is highly likely and further investigation or remedial action will be necessary.

Table 4: Development Specific Risk Assessment

Item	Risk of Instability	Coal Seams and Features Considered	Risk Rating
1	Shallow coal seams	Third Brown Metal Coal	Moderate
		Middleton Little Coal	Moderate
2	Coal workings at depth	Whilst the Coal Authority report indicates that there are past underground workings at depth, the collapse of such features are not anticipated to affect the stability of the surface.	Low
3	Mine entries	5 mine shafts detailed on the 'summary of findings' map are all at a distance where they will not have adverse effects on the development.	Low

On the basis of all of the information provided above, two coal seams are anticipated to be present within 30m of the surface at the site. Whilst these seams may be of limited thickness, the possibility of these seams being worked below the site cannot be ruled out. Historic coal mining activity is evident in the nearby area, and therefore it is considered that if coal was known to be close to ground level it could have been removed illicitly via shallow mining methods with relative ease.

It may be noted that guidance available from both the NHBC and the CIRIA publication, SP32 - *construction over abandoned mine workings*, suggests that competent overburden thickness above a coal seam should be greater than 10 times the thickness of a seam plus seam thickness in order that the collapse of workings would pose a low risk to surface structures.

On this basis, assuming a maximum thickness of the coal seams, the table below suggests the thickness of competent overburden required above each seam to mitigate instability at the surface.

**Table 5: Required Thickness of Competent Overburden**

Seam Name	Seam thickness	Anticipated depth below site	Required thickness of competent overburden.
Third Brown Metal Coal	0.0 – 0.8m	10m	8.8m
Middleton Little Coal	0.2 – 0.9m	20m	9.9m

Based on the above information, it is possible that there could be a sufficient thickness of competent overburden above the above mentioned seams, such that the overburden should prevent the risk of instability posed by the presence of any illicit workings.

Nevertheless, the available data indicates that the Third Brown Metal Coal could have been extracted by opencast methods within 50m west of the proposed development, indicating that this seam is likely to be present at relatively shallow depth within the area. As such, it is possible that this seam could have been extracted from small scale open-cast workings, bell pits or day-holes beneath the proposed development. However, if the seams have been worked via underground mining methods, the actual extraction thickness, and subsequent voiding, may be significant in comparison to the seam thickness.

As such, it is strongly recommended that the true thicknesses and depths of the Third Brown Metal Coal and the Middleton Little Coal seams are investigated. Therefore a moderate risk rating has been placed on these seams, and further investigation is recommended to prove or disprove the presence of illicit mining activity.

In regard to deeper mining which could affect the site, whilst the property is within a surface area that could be affected by past underground mining, due to the time passed since withdraw of support was undertaken, the risks posed by ground movement attributed to these workings is limited.

4. Conclusions

In light of the potential risks of instability at the site from the working of shallow coal, it cannot be recommended that development takes place without further investigation to conclusively determine the presence of such workings. This work should include physical drilling methods to explore the ground conditions.

General practice is to undertake rotary openhole boreholes at three locations across the site to mitigate against the potential for drilling through intact columns associated with pillar and stall workings. However, in this instance, given the relatively small size of the development, it is anticipated that two boreholes should be sufficient.

It is normal to investigate the ground to 30m below ground level; any workings below this depth are unlikely to result in significant instability. However, in this case, the risk of instability is due to shallow workings, therefore, drilling to these depths may not be necessary and the objective should be to ensure that the shallow seams are un-worked or have sufficient competent cover. It may therefore be possible, in the first instance, to undertake one borehole to 30m below the top of the rockhead, with the second borehole proving the depth and continuity of the coal seam(s). In any event, it is considered that approval should be sought with the Local Authority as to the efficacy of this approach.



In addition it is recommended that careful inspections take place during the development. Should any evidence for day-holes, bell pits or open-cast workings become apparent, works should be halted and the advice of geotechnical specialists sought.

It is of note that Rogers Geotechnical Services would be happy to assist in any further intrusive investigation that may be required.



Appendix 1

Site Plan

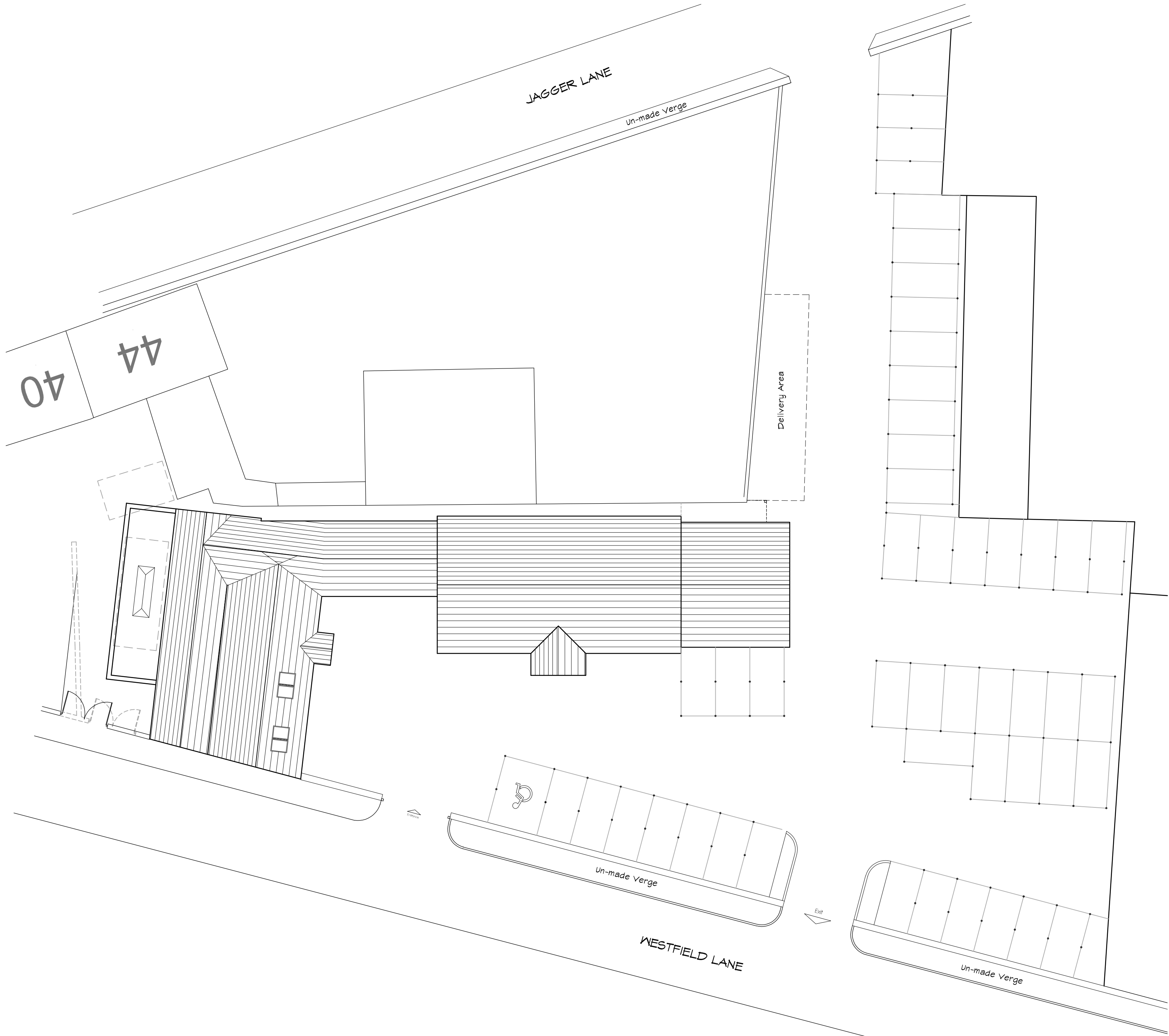


Google Earth

© 2018 Google

90 m





P02	Client amendments	26.04.19	MC	JR
P01	Preliminary Issue	24.04.19	MC	JR

Rev	Description	Date	By	Rvw
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Proposed Kitchen Extension

at Thorncliffe Farm Shop
1 West Field Lane
Emley Moor
Huddersfield

for Thorncliffe Farm Shop

Farrar Bamforth Associates Ltd.

Chartered Architectural Technologists

51 Trinity Street, Huddersfield, HD1 4DN
Tel. (01484) 424008 Fax: (01484) 512305
E-mail: design@farrarbamforth.co.uk
Website: www.farrarbamforth.co.uk

Site Layout Plan as Proposed

Project	Originator	Zone	Level	Type	Role	Number	Revision
---------	------------	------	-------	------	------	--------	----------

18C31 ▪ FBA ▪ ZZ ▪ XX ▪ DR ▪ A ▪ 0701 ▪ P02

Drawn	Date	Suitability	Revision Status	Scale at A2
MC	Apr 19	S2	Preliminary	1 : 200

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Appendix 2

Coal Authority Report



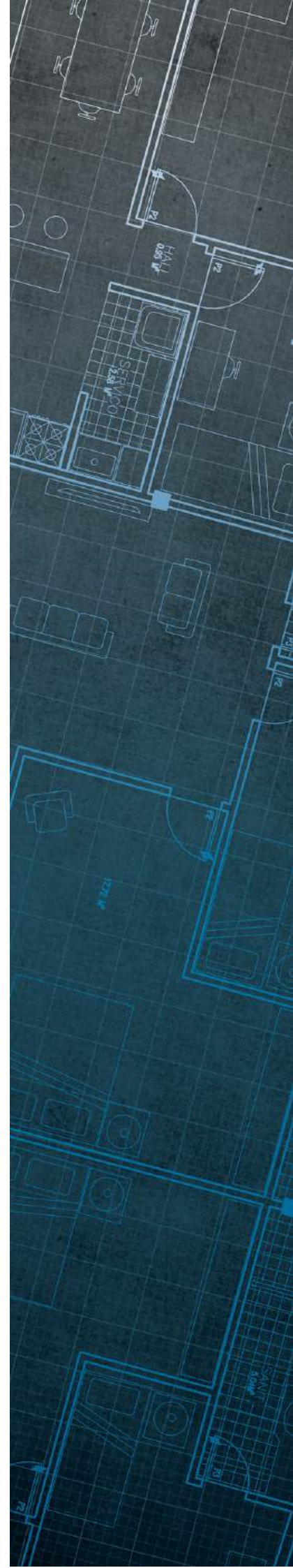
The Coal
Authority

Consultants Coal Mining Report

Thornccliffe Farm Shop
1 Westfield Lane
Emley Moor
Huddersfield
Kirklees
HD8 9SZ

Date of enquiry:	18 September 2019
Date enquiry received:	18 September 2019
Issue date:	18 September 2019

Our reference:	51002175931001
Your reference:	C129/19/E/210



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

ROGERS GEOTECHNICAL SERVICES LTD

Enquiry address

Thorncliffe Farm Shop
1 Westfield Lane
Emley Moor
Huddersfield
Kirklees
HD8 9SZ

How to contact us

0345 762 6848 (UK)
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Nottinghamshire
NG18 4RG

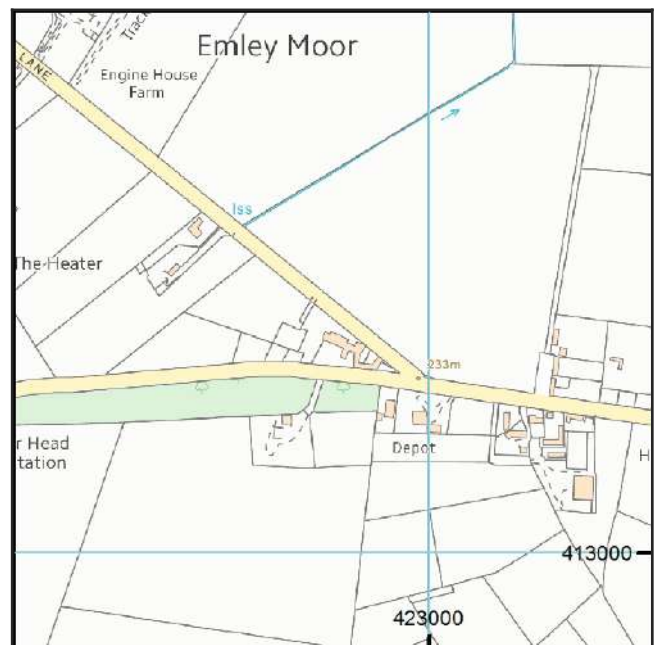
www.groundstability.com

 @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	MIDDLETON MAIN	Coal	62X6	40	Beneath Property	2.6	North-East	58	1885
UNAMED	WHEATLEY LIME	Coal	62X9	76	Beneath Property	2.8	North-East	82	1903

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	422413-007	422864 413128	was filled in March 1986	Coal	
Shaft	422413-008	422877 413107	was filled in March 1986	Coal	
Shaft	422413-010	422993 413217		Coal	
Shaft	422413-028	422983 413182		Coal	
Shaft	423413-001	423019 413213		Coal	

Abandoned mine plan catalogue numbers

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

NE766	NE622	NE950
R3	NE897	BE42
6837	14072	6069

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

No outcrops recorded.

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

Distance to site investigation (m)	Direction
48.6	South-East

See Section 4 for further information.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

There are 1 claim(s) within 50 metres of the property boundary that do not match the property address. These are shown on the enquiry boundary plot.

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.

If further subsidence damage claims information is required, please visit www.groundstability.com.

See Section 4 for further information.

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 in an area where a notice to withdraw support was given in 1982.

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.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

Coal mining subsidence

The site is within an area of previous interest. It is close to where the Coal Authority or licensed mine operator has investigated and where necessary remediated issues relating to coal mining subsidence.

The site requires further investigation and may influence your risk assessment. We recommend that you order the appropriate **Coal Authority Subsidence Claims Report**, which will include more information about the hazard.

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

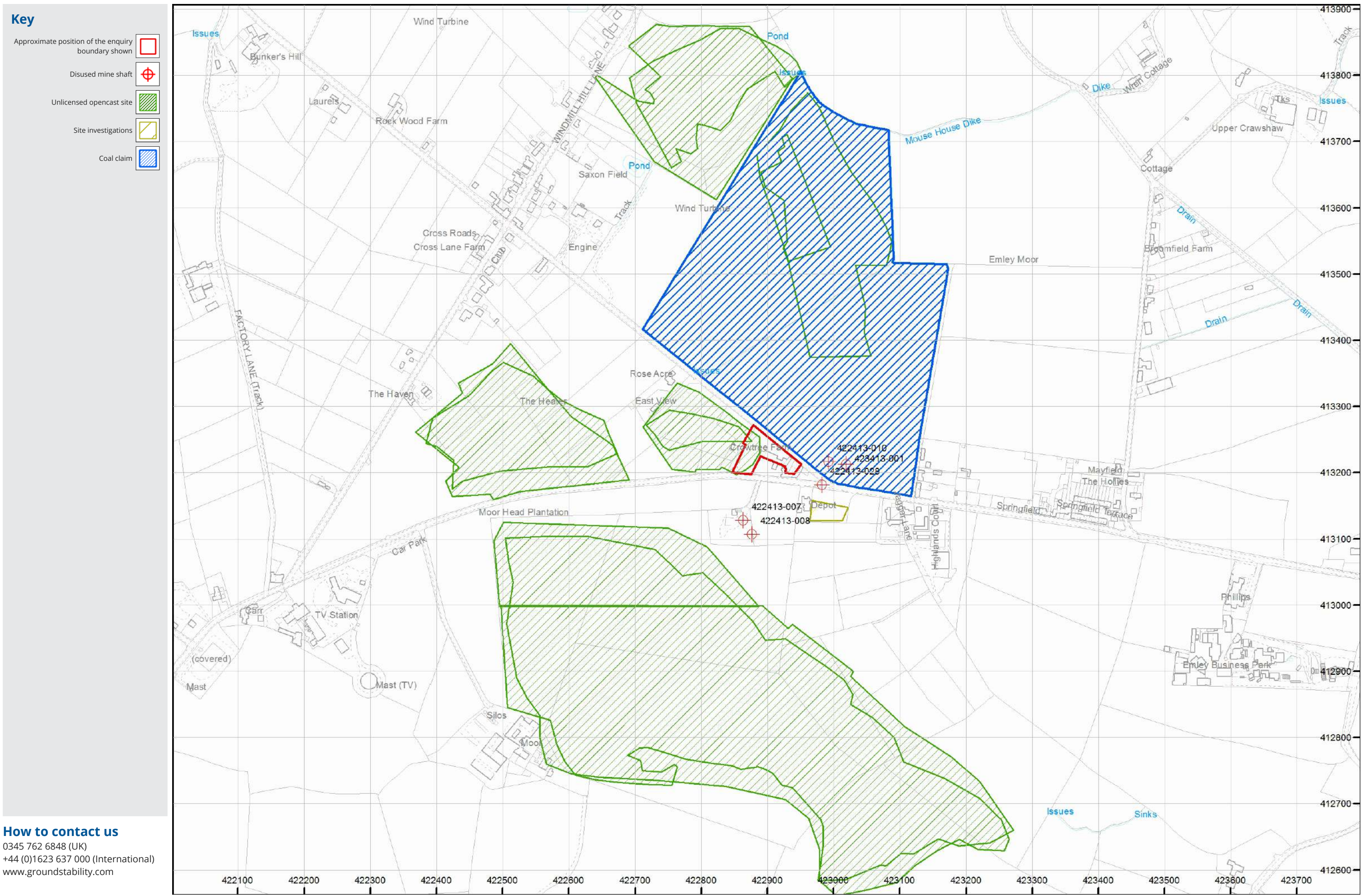
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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VAT receipt

Issued by	The Coal Authority 200 Lichfield Lane Mansfield Nottinghamshire NG18 4RG
Tax point date	18 September 2019
Issued to	ROGERS GEOTECHNICAL SERVICES LTD BARNCLIFFE MILLS NEAR BANK SHELLEY HUDDERSFIELD KIRKLEES HD8 8LU
Property search for	THORNCLIFFE FARM SHOP 1 WESTFIELD LANE EMLEY MOOR HUDDERSFIELD KIRKLEES HD8 9SZ
Reference number	51002175931001
Date of issue	18 September 2019
Cost	£112.13
VAT @ 20%	£22.43
Total received	£134.56
VAT registration	598 5850 68

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





ATTACHMENT C

COAL AUTHORITY PERMIT



The Coal
Authority

Permit to Enter or Disturb Coal Authority Interests

Permit 26985

Name and Address of Permit Holder:

Thorncliffe Farm Shop
1 Westfield Lane
Emily Moor
Huddersfield
HD8 9SZ

Site Location:

Thorncliffe Farm Shop
1 Westfield Lane
Emily Moor
Huddersfield
HD8 9SZ

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Ground investigation by three boreholes to 30m within the Authority's interests at the identified site location above as shown on the Grant Permit Boundary (overleaf) for the period of **12 months** from the granted date shown below. *The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Permit Holder's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.*

Conditions:

- Manned entry (i.e.) into mine entries/workings) is strictly prohibited.
- Water flush
- Gas Monitoring CO, CH₄, CO₂, O₂, H₂S at borehole and rig
- Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works
- Appropriate borehole sealing without delay and to withstand site level changes

Signed: Richard Morson Granted Date: 18/07/23

For and on behalf of The Coal Authority

Nominated Representative: Richard Morson, Permitting Manager;

The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG

Tel: 01623 637450; E-Mail: permissions@coal.gov.uk



The Coal
Authority

Granted Permit Boundary

Permit Ref: 26985

Permit Boundary:



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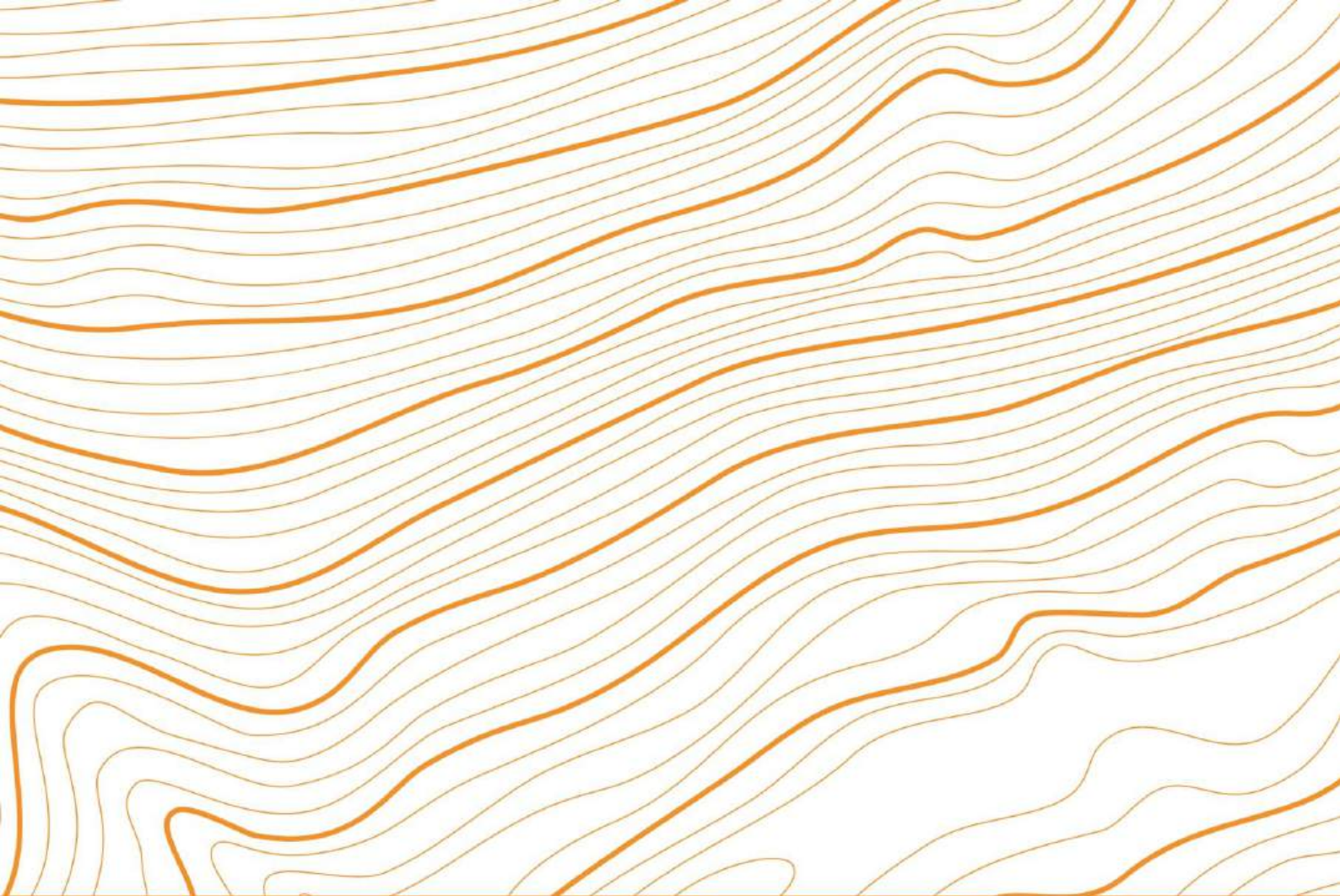


ATTACHMENT D

DRILLING RECORDS

Client: Geo 2 Remediation	Site: Thorncliffe Farm Shop 1 Westfield Lane, Emly Moor, Huddersfield. HD8 9SZ		Cape Site Services unit 2, rear of Castle Buildings Carlton Road, Barnsley, S71 3HX	
Date: 08/08/2023	Method: water flush	Permit No: 26985		
Driller: Ian Wiles			Driller Assistant: Richard Hawkins, Simon Fish	
			Page No: 1 of 1	

Measurements In Meters				
BH No:	FROM	TO	THICKNESS	DESCRIPTION
1				
	0	0.2	0.2	Tarmac
	0.2	0.4	0.2	Fill hardcore
	0.4	2.7	2.3	Clay brown grey with odd coal & black mudstone fragments
	2.7	2.9	0.2	Coal mudstone black mix
	2.9	3.5	0.6	Mudstone grey brown soft silty
	3.5	4.5	1	Sandstone brown soft
	4.5	7.5	3	Mudstone grey silty
	7.5	8.2	0.7	Coal Dirty
	8.2	9.3	1.1	Mudstone Grey Silty
	9.3	16.5	7.2	Sandstone grey silty odd mudstone bands
	16.5	17.3	0.8	Coal
	17.3	19	1.7	Mudstone grey silty
	19	30	11	Sandstone grey silty odd mudstone bands
				Cased to 2m No gases recorded
2				
	0	0.2	0.2	Tarmac
	0.2	0.4	0.2	Fill hardcore
	0.4	2.3	1.9	Clay brown grey
	2.3	2.4	0.1	Coal mudstone black mix
	2.4	4	1.6	Mudstone grey brown soft silty mix odd coal trace
	4	5.3	1.3	Sandstone brown soft with some mudstone
	5.3	7.9	2.6	Mudstone grey silty
	7.9	8.6	0.7	Coal Dirty
	8.6	10	1.4	Mudstone Grey Silty
	10	16.9	6.9	Sandstone grey silty odd mudstone bands
	16.9	17.7	0.8	Coal dirty
	17.7	19.5	1.8	Mudstone grey silty
	19.5	30	10.5	Sandstone grey silty odd mudstone bands
				Cased to 1.5m No gases recorded



Appendix C – Risk Assessment Terminology

Definitions and Classifications of Risk Assessment Terminology.

Probability

Probability can be defined as the chance of a particular event occurring in a given period of time.

Descriptions of each of the four qualitative terms to be used in this report to describe the perceived probability of any identified pollutant linkage becoming realised are shown below in Table W.

Term	Description
High Likelihood	There is pollutant linkage and an event would appear 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 pollutant 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 pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table W. Description of Probability Classifications

Severity

Severity (consequence) can be defined as the adverse effects (or harm) arising from a defined hazard, which impairs the quality of human health or the environment in the short or longer term.

Descriptions of each of the four qualitative terms to be used in this report to describe the perceived potential severity of any identified pollutant linkage becoming realised are shown below in Table X.

Term	Description
Severe	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs. Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce. Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population. Catastrophic damage to crops, buildings or property.
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs. Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce. Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. Significant damage to crops, buildings or property.
Mild	Exposure to human health unlikely to lead to "significant harm". Equivalent to EA Category 3 pollution incident including minimal or short-lived effect on water quality; marginal effect on amenity value, agriculture or commerce. Minor or short-lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population. Minor damage to crops, buildings or property.
Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects of damage to buildings, structures and services.

Table X. Description of Severity Classifications

Once the severity and probability of a pollutant linkage has been determined the risk can be assessed using the risk matrix shown overleaf on Table Y.

Risk Matrix

By cross referencing the derived severity and probability in Table Y, below the perceived potential risk can be determined.

		Severity			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Table Y. Risk Assessment Matrix

The risk categories detailed above are defined below in the following Table Z.

Term	Description
Very High Risk	There is a high probability that significant harm could arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
High Risk	Significant harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
Moderate Risk	It is possible that without appropriate remedial action, harm could arise to a designated receptor but it is relatively unlikely that any such harm would be severe and if any harm were to occur, it is likely that such harm would be relatively mild.
Low Risk	It is possible that significant harm could arise to a designated receptor from an identified hazard but it is likely that at worst this harm if realised would normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

Table Z. Definition of Risk