Haigh Huddleston & Associates
Civil & Structural Engineering Consultants
Firth Buildings, 99 - 101 Leeds Road, Dewsbury, WF12 7BU
t 01924 464342 f 01924 450662 e martin@haighhuddleston.co.uk

# Phase 1
# Geo-environmental Report

**ON**

**PROPOSED BUSINESS PARK**

**AT**

## LINDLEY MOOR ROAD, HUDDERSFIELD

**FOR**

**2SH Developments Ltd**

**Sep 2021**

**E21/7768/R001**

Haigh Huddleston Associates is the trading name of Haigh Huddleston Associates Limited
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Registered in England Number 6458196

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Existing Site Survey
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## 1.0 INTRODUCTION

1.1 This report is commissioned to examine the risk of contamination for the above site in line with the recommendations of Part II of the Environmental Protection Act 1990 PPS 23. It is based on information provided by both the client and statutory bodies in both written and verbal format. It is assumed that all information given is correct and factual at the time of writing this report. No liabilities can be accepted for information provided by third parties and subsequently found to be in error.

## 2.0 THE SITE

2.1 The site is located to the south of Lindley Moor Road, Huddersfield, Huddersfield and is situated around Ordnance Survey grid reference 410924, 419016. A site location plan is included in Appendix A.

2.2 The western, northern and eastern boundaries to the site are formed by Crosland Road, Lindley Moor Road and Weather Hill Road respectively. To the south there is ongoing residential development. Beyond Crosland Road to the west is an industrial park, beyond the highways to the north and east there are fields and existing residential developments. The site area is approximately 6.33ha.

2.3 The site consists of three grassed fields separated by intermittent mature hedges. The first hedge runs from the northern to the southern boundary, separating the western third of the site into a single field. A second hedge extends to the eastern boundary from the centre of the first hedge, separating the east of the site into north eastern and south eastern fields.

2.4 There are two metal pylons located on the site. The first is located in the north west of the site and has overhead cables heading to the north and the south east. The second is located in the east of the site and has overhead cables heading to the west and east.

2.5 The boundary to the site is formed by a one metre high, occasionally dilapidated, drystone wall. There are three access points on the eastern boundary from Weather Hill Road and one on the western boundary from Crosland Road.

2.6 The site falls from west to east from a high point of 265.5m AOD on the western boundary to a low point of 236.3m AOD in the south eastern corner at an average grade of 1 in 13. The site is noted to bank down at a steeper grade of 1 in 6 in the south eastern corner of the site.

## 3.0 SITE HISTORY

A number of historical Ordnance Survey plans from 1854-2020 have been consulted. These are contained for reference within Appendix C to the rear of the report. Below is a brief description outlining the significant developments that may affect future construction of the site.

| Date | Historical uses on site | Historical findings within 100m perimeter of the site | Historical findings further than 100m perimeter of the site |
|---|---|---|---|
| 1854 | i) The site is shown divided into three fields.<br>ii) Two wells are shown adjacent the eastern boundary.<br>iii) Supposed Roman Road indicated in north west of site. | i) There are highways to the northern, western and eastern boundaries.<br>ii) Haigh Cross approximately 30m to the south west. | i) Well approximately 100m south of site. |
| 1892-1918 | i) Wells no longer shown adjacent eastern boundary. | i) Two springs shown 50m south of site and one 100m north of site. | i) Well no longer shown. |
| 1948 | i) The on-site features are similar to the previous sheet. | i) Residential development immediately south east of site. | i) No significant developments within 500m of the site. |
| 1955-1966 | i) Roman Road no longer indicated in north west of site. | i) No significant developments within 100m of the site. | i) No significant developments within 500m of the site. |
| 1975-2010 | i) Pylons shown in the north west and east of the site. | i) Further residential development immediately south east of site. | i) M62 heading west to east approximately 150m to the north west. |
| 2021 | i) The on-site features are similar to the previous sheet. | i) Industrial development to west of site.<br>ii) Residential development to south west of site. | i) No significant developments within 500m of the site. |

## 4.0 SITE GEOLOGY & MINING

4.1 The BGS Digital Geological Map of Great Britain at 1:10,000 and 1:50,000 scale have been consulted and we would report as follows:-

4.2 There are no areas of made ground or artificial deposits shown on site. There are areas of made ground shown heading west to east approximately 76m north west of the site associated with the M62 construction.

4.3 No superficial strata is shown overlying the site.

4.4 The central and south eastern area of the site is shown to be underlain by the Pennine Lower Coal Measures consisting of Mudstone, Siltstone and Sandstone. The north eastern and north western corners of the site is underlain by the Elland Flags and 80 Yard Rock respectively, both consisting of Sandstone. A thin band of the site in the south east is shown to be underlain by the 48 Yard Rock formation consisting of Sandstone.

4.5 A fault is shown crossing the site from west to east from the north western corner to the eastern boundary. A second fault line is shown encroaching on the south western corner of the site.

4.6 In addition to the above, the site is in an area where **underground mining of the Elland Flags Sandstone is known or considered likely to have occurred**. The Elland Flag Formation is recorded in the north western corner of the site.

4.7 Pea Wood Fireclay Mine, which extracted shale, is recorded as **having workings partly on the surface and partly underground on the site**.

4.8 A Coal Authority Report is included in Appendix B and states that the property is in a surface area that could be affected by underground coal mining in 1 seam of coal at 80-90m depth and last worked in 1857. Any movement in the ground due to coal mining activity associated with these workings should have stopped by now. However, the property is in an area where the Coal Authority believes **there is coal at, or close to, the surface**. Historically, this coal could have been worked by private individuals and the workings would be unrecorded.

4.9 The property is not in area where the Coal Authority has granted, or plans to grant, a licence to remove or otherwise work coal using underground methods. However, reserves of coal exist in the local area which could be worked in the future.

4.10 No mine entries are recorded within, or within 20m of, the site boundary. However, based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

4.11 The Coal Authority Online Interactive Map shows a coal outcrop crossing from the western boundary to the south east corner of the site. Probable shallow workings extend northwards from the outcrop covering the majority of the site.

4.12 There are no recorded BGS boreholes in the immediate vicinity of the site.

4.13 Archaeological investigation work has previously been undertaken on site by Onsite Archaeology Ltd and is detailed in their report ef: OSA20EV08 (Revised) dated July 2020. The trial trenching generally found a shallow depth of topsoils overlying yellowish orangey brown clays and sandstone fragments. Land drains formed from sandstone were encountered on site in addition to a former quarry on the southern boundary of the site.

.

## 5.0 ENVIRONMENTAL CONSIDERATIONS

### 5.1 Radon

The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

No Radon Protective Measures are necessary.

### 5.2 Landfill Sites

There are no historical or active/recent landfills recorded within 250m of the site. However, there is unrecorded backfill to the former quarry located on the southern boundary of the site.

### 5.3 Flood Risk

The site is not an area at risk of flooding from rivers or the sea. The site is not located in an Environment Agency designated Flood Zone.

### 5.4 Groundwater

The bedrock underlying the site is classed as a Secondary A Aquifer. These are 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.

There are four licensed discharge to controlled waters recorded within 250m of the site. Two are located 184m north west of the site and are both treated effluent discharges to groundwater. The remaining two are located 196m south of the site and are site drainage outfalls by surface water drain to Grimescar Dike.

There are no groundwater or surface water abstraction licences recorded within 250m of the site.

There is a single pollution incident to controlled waters within 250m of the site. This is located 165m south of the site and was a Category 1 (Major) incident involving suspended solids. This is not associated with the site.

The site is not located in a source protection zone.

The nearest recorded open surface water feature is an un-named watercourse located 166m north east of the site. This is classed as an inland river not influenced by normal tidal action.

## 5.5 Designated Environmentally Sensitive Site

The land immediately north of Lindley Moor Road to the north of the site is classified as part of the South and West Yorkshire Green Belt.

## 6.0 PRELIMINARY CONCEPTUAL SITE MODEL

6.1 The initial stage in assessing the risks posed from contaminated land during the redevelopment of a site is to prepare a conceptual model. A generalised conceptual model can be developed highlighting the main pollutant linkages through a contaminant ► pathway ►receptor model for an industrial development. In order to prepare the conceptual model for a particular site the following parameters need to be reviewed as discussed below.

6.2 Contamination of existing land can be caused by a number of factors, including:-

i) Possible historical/current industrial activities.
ii) Disposal of waste materials.
iii) Storage of materials.
iv) A number of natural processes can also lead to hazardous gases and elevated heavy metals.

6.3 Potential pathways can include ground and surface water, permeable strata, existing services providing a conduit and voided ground. Potential receptors can include human health, ecosystems, controlled waters and building structures. There are a number of ways that a receptor can be exposed to the contaminant these include, inhalation, direct contact, ingestion, dermal contact and uptake.

6.4 The site has not been developed since the earliest map of 1854, and there has been little development in the immediate vicinity of the site. However, there has been recorded underground extraction of coal, sandstone and shale beneath and in the vicinity of the site.

i) Potential shallow sandstone, shale or coal workings beneath the site.
ii) Possible ground gas migration from potential shallow mine workings.
iii) Localised lead contamination from protective paint to pylons.
iv) Infill material to former quarry identified in south of site.

There is therefore considered to be a low/moderate risk of ground contamination present.

6.5 Considering the proposed industrial end use, there will be two possible human receptor groups exposed to the existing onsite contamination:-

a) Site operatives during development.
b) End users, future site visitors (the critical receptor is a 17 year old female).

6.6 Human receptors may be exposed to site contamination by a number of possible pathways. These pathways are summarised in Table 1 below.

**Table 1- Potential Human Exposure Pathways**

| Human Exposure Pathway | Site Visitors | Construction Workers |
|---|---|---|
| **Soil Ingestion** | YES | YES |
| **Consumption of Home Grown Vegetables** | NO | NO |
| **Dermal Contact** | YES | YES |
| **Dust Inhalation** | YES | YES |
| **Gases/Vapours** | YES | NO |

6.7 The construction workers will come into contact with any contaminated soil to a far greater extent than future residents. The exposure pathways are generally through dermal contact and indirect ingestion. However their exposure will be for a limited time and the provision and correct use of personnel protective equipment and adequate welfare facilities during construction should restrict their risks to acceptable levels.

6.8 The risk of pollution to controlled waters by existing contamination is considered low. There has been no historical development of the site likely to cause contamination and no surface water features are in the immediate vicinity of the site.

6.9 No specific areas of ecological importance have been identified in the initial desk top study. Therefore the site is considered to be in a low risk environmental setting. The potential for phototoxic materials to exist at shallow depth should be considered, these could pose a potential risk to new planting and soft landscaping areas within the proposed development.

6.10 The proposed planning drawings commercial/industrial units with associated parking areas. The presence of elevated sulphates and hydrocarbons could affect the long term integrity of buried concrete structures, including foundations and drainage pipes. Plastic water supply pipes can also be damaged by the presence of hydrocarbon contamination.

## 7.0 CONCLUSIONS

7.1 From review of the historical plans, the site has remained undeveloped until the present day aside from the two pylons on site. Due to the following reasons, there is considered to be a low/moderate risk of ground contamination on site:

- Probable shallow coal, shale and sandstone working on site.
- Infilled former quarry on the southern boundary of the site.
- Two former wells, probably infilled, in the east of the site.
- Potential localised lead contamination from painting of the pylons.
- Possible ground gas migration from shallow workings and infill material to the former quarry and wells.

These features are indicated on the survey in Appendix A.

7.2 Considering the above, we would recommend that Stage II Ground Investigation should be undertaken to confirm the foundation construction required for the proposed development and to identify any made ground or shallow workings.

7.3 Due to the potential for shallow coal mine workings, shale extraction and Elland Flag workings throughout the site, it is recommended that rotary boreholes are undertaken to a depth of 30m beneath the proposed footprint of the extension. Due to the size of the development, a minimum of six gas piezometers should be installed to allow gas monitoring to be undertaken to ensure this will not adversely affect the proposed development.

7.4 It is recommended that in addition to trial pitting to determine the nature of the founding strata on site, that trial trenches and site scrapes are undertaken to determine the location of the inferred fault lines, the former quarry and the wells indicated on site.

7.5 It should be noted that investigation works, in particular the rotary borehole investigation works, will be restricted by the presence of the overhead pylons.

7.6 Samples should be taken from any suspected areas of contamination and tested for metals, metalloids, EPA 16 PAHS and asbestos.

7.7 Samples of any clays encountered should be submitted for geotechnical analysis to determine the volume change potential and effect it will have on the proposed foundations.

7.8 If any contamination is found, a site remediation report should outline the most effective method of dealing with the contamination and any validation requirements.

Prepared by

REDACTED

M. Dean. BSc (Hons) HND

Checked by

REDACTED

M. Huddleston. MEng

September 2021

This report is subject to the provisions of the Copyright Acts and is for the sole benefit of 2SH Developments Ltd in respect of the proposals described.

# APPENDIX A

# LOCATION PLAN

# EXISTING SITE SURVEY

# PLANNING LAYOUT

**Haigh Huddleston & Associates**
Civil Structural Engineering Consultants
**t** 01924 464342 **f** 01924 450662
**e** martin@haighhuddleston.co.uk

Firth Building
99-101 Leeds Road
Dewsbury
WF12 7BU

| | |
|---|---|
| Client : | 2SH Developments Ltd |
| Job Title: | Lindley Moor Road, Huddersfield |
| Job Number : | E21/7768 |

# LOCATION PLAN

**OS Grid Reference : SE 109190**
**Easting : 410924**
**Northing : 419016**

**Topographical Survey carried out using GPS.**

N



OVERHEAD LINES

OVERHEAD LINES

OVERHEAD LINES

SITE SCRAPE AND TRIAL TRENCHES TO BE UNDERTAKEN TO LOCATE HISTORIC WELLS

APPROX LOCATION OF HISTORICAL WELLS

SITE INVESTIGATION RESTRICTED BY OVERHEAD LINES.

APPROX LOCATION OF FAULT LINE

TRIAL TRENCHES TO BE UNDERTAKEN TO CONFIRM LOCATION OF FAULT LINE.

SITE INVESTIGATION RESTRICTED BY OVERHEAD LINES.

OVERHEAD LINES

TRIAL TRENCHES TO BE UNDERTAKEN TO CONFIRM LOCATION OF COAL OUTCROP.

APPROX LOCATION OF COAL OUTCROP

APPROX LOCATION OF COAL OUTCROP

TRIAL TRENCHES TO BE UNDERTAKEN TO CONFIRM LOCATION OF COAL OUTCROP.

APPROX LOCATION OF FAULT LINE

FORMER QUARRY

SITE SCRAPE AND TRIAL TRENCHES TO BE UNDERTAKEN TO LOCATE FORMER QUARRY.


Haigh Huddleston & Associates

Civil Structural Engineering Consultants

Firth Buildings, 99 - 101 Leeds Rd, Dewsbury, WF12 7BU t 01924 464342 f 01924 450662

e martin@haighhuddleston.co.uk


| | |
|---|---|
| Client | 2SH Developments Ltd |
| Project | Lindley Moor Road, Huddersfield |
| Detail | Existing Site Features |

| Scale | Dwn | Chkd | Date | Dwg No. |
|---|---|---|---|---|
| 1:1000 | MD | | Sep'21 | E20/7768/03/02 |




| | | | | |
|---|---|---|---|---|
| P4 | Redesigned to show unit P amendments | MR | | 16/08/21 |
| P3 | Redesign for Building A & added fence boundaries | MM | MR | 21/12/20 |
| P2 | Updated class uses & inclusion of acoustic fence | MM | MR | 01/10/20 |
| P1 | Issued | MJR | MW | 15/09/20 |
| Rev | Description | Drawn | Checked | Date |

Document Status : **S2**

Purpose of Issue: **FOR INFORMATION**


MARTIN WALSH ARCHITECTURAL

Firth Buildings, 99 - 103 Leeds Rd, Dewsbury, WF12 7BU t: 01924 464342

e: info@martinwalsh.co.uk w: www.martinwalsh.co.uk


Project
Proposed Development at Lindley Moor Road, Lindley Huddersfield

Title
Proposed Scheme

Client
2SH Developments

| MWA Project Ref | Scale | Original Paper Size | Paper Orientation | Drawn |
|---|---|---|---|---|
| 6194 | 1:500 | @A1 | Landscape | MJR |

File Identifier

| Project | Originator | Volume | Level | Type | Role | Number | Revision |
|---|---|---|---|---|---|---|---|
| LMSH - | MWA - | 01 - | XX - | DR - | A - | 0003 | P4 |


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Schedule

| | Fast Food | | Supermarket | | Restaurant | | Cafe /Take away | | Warehouse | | Office | | Industrial | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class Use | A3/ A5 | | A1 | | A3 | | A3 / A5 | | B8 | | B1 | | B2 | | | |
| 2020 Class Use | E(b) / A5 | | E(a) | | E(b) | | A3 / A5 | | B8 | | E(g) | | B2 | | | |
| | sq/m | sq/ft | sq/m | sq/ft | sq/m | sq/ft | sq/m | sq/ft | sq/m | sq/ft | sq/m | sq/ft | sq/m | sq/ft | Total sq/m | Total sq/ft |
| A | 336 | 3616 | | | | | | | | | | | | | 336 | 3616 |
| B | | | 377 | 4058 | | | | | | | | | | | 377 | 4058 |
| C | | | | | 908 | 9774 | | | | | | | | | 908 | 9774 |
| D | | | | | | | 391 | 4208 | | | | | | | 391 | 4208 |
| E | | | | | | | 525 | 5651 | | | | | | | 525 | 5651 |
| F | | | | | | | | | 2330 | 25079 | 242 | 2605 | | | 2572 | 27684 |
| G | | | | | | | | | 2615 | 28147 | 192 | 2066 | | | 2807 | 30213 |
| H | | | | | | | | | 314 | 3379 | | | 157 | 1689 | 471 | 5068 |
| I | | | | | | | | | 314 | 3379 | | | 157 | 1689 | 471 | 5068 |
| J | | | | | | | | | 314 | 3379 | | | 157 | 1689 | 471 | 5068 |
| K | | | | | | | | | 314 | 3379 | | | 157 | 1689 | 471 | 5068 |
| L | | | | | | | | | 314 | 3379 | | | 157 | 1689 | 471 | 5068 |
| M | | | | | | | | | 614 | 6609 | | | 232 | 2498 | 846 | 9107 |
| N | | | | | | | | | 307 | 3304 | | | 614 | 6609 | 921 | 9913 |
| P | | | | | | | | | 1394 | 15000 | 325 | 3500 | 2787 | 30000 | 4506 | 48500 |
| | | | | | | | | | | | | | | | | |
| Total | 336 | 3616 | 377 | 4058 | 908 | 9774 | 916 | 9859 | 8830 | 95034 | 759 | 8171 | 4418 | 47552 | 16544 | 178064 |

# APPENDIX B

# COAL AUTHORITY REPORT

The Coal Authority

# CON29M
## coal mining report

LINDLEY MOOR ROAD, LINDLEY MOOR, HUDDERSFIELD, KIRKLEES, HD3 3TB

### Known or potential coal mining risks


| | |
|---|---|
| Past underground coal mining | Page 4 |
| Future underground coal mining | Page 4 |
| Mine entries | Page 5 |


### Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www.groundstability.com

### Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see page 3 for further details on Future development.

Your reference: MWA 7768
Our reference: 51002634543001
Date: 27 August 2021

Client name: HAIGH HUDDLESTON & ASSOCIATES

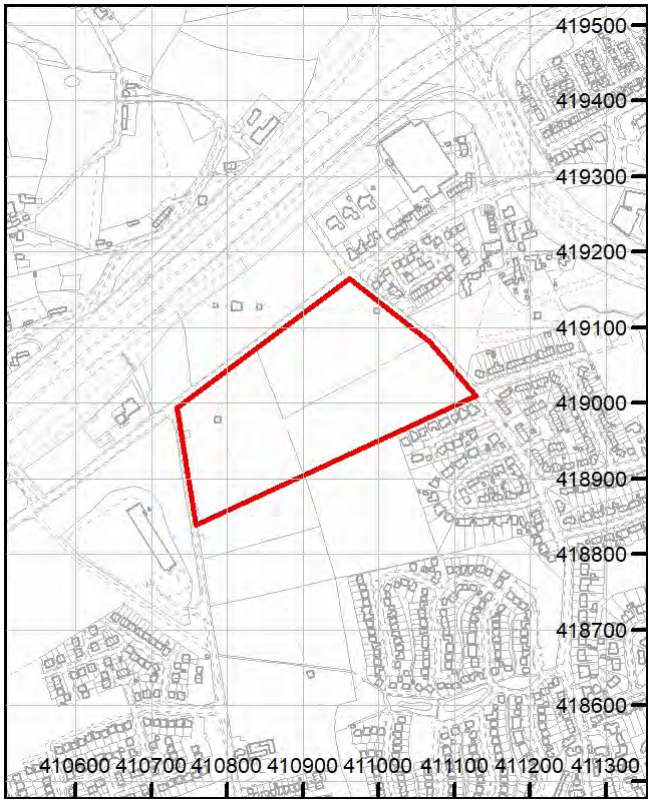
If you require any further assistance please contact our experts on:
0345 762 6848
groundstability@coal.gov.uk

The Law Society

# Enquiry boundary

## Key

Approximate position of enquiry boundary shown




We can confirm that the location is **on the coalfield**

Map data

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

## Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

# Professional opinion

## Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

# Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

The Coal Authority owns the copyright in this report and the information used to produce this report is protected by our database rights. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

## 1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at 80m to 90m depth, and last worked in 1857.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

## 2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

## 3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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

## 4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

## 5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

## 6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

## 7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

## 8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

## 9 Coal mining subsidence

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

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

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

## 10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

## 11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

## 12 Withdrawal of support

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

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

## 13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

## 14 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.

# Statutory cover



## Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



## Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 01623 646 333. Further information can be found on our website: www.gov.uk/coalauthority.

# Glossary

## Key terms

**adit** - horizontal or sloped entrance to a mine

**coal mining subsidence** - ground movement caused by the removal of coal by underground mining

**Coal Mining Subsidence Act 1991** - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

**coal mining subsidence damage** - damage to land, buildings or structures caused by the removal of coal by underground mining

**coal seams** - bed of coal of varying thickness

**future opencast coal mining** - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

**future underground coal mining** - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

**mine entries** - collective name for shafts and adits

**payments to owners of former copyhold land** - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

**shaft** - vertical entry into a mine

**site investigation** - investigations of coal mining risks carried out with the Coal Authority's permission

**stop notice** - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

**subsidence claim** - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

**withdrawal of support** - a historic notice informing landowners that the coal beneath their property was going to be worked

**working facilities orders** - a court order which gave permission, restricted or prevented coal mine workings

# APPENDIX C

# GROUNDSURE REPORT

# HISTORICAL MAPS

Groundsure
LOCATION INTELLIGENCE

# Enviro+Geo Insight

## LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

## Order Details

**Date:** 31/08/2021

**Your ref:** MWA_7768

**Our Ref:** GS-8157480

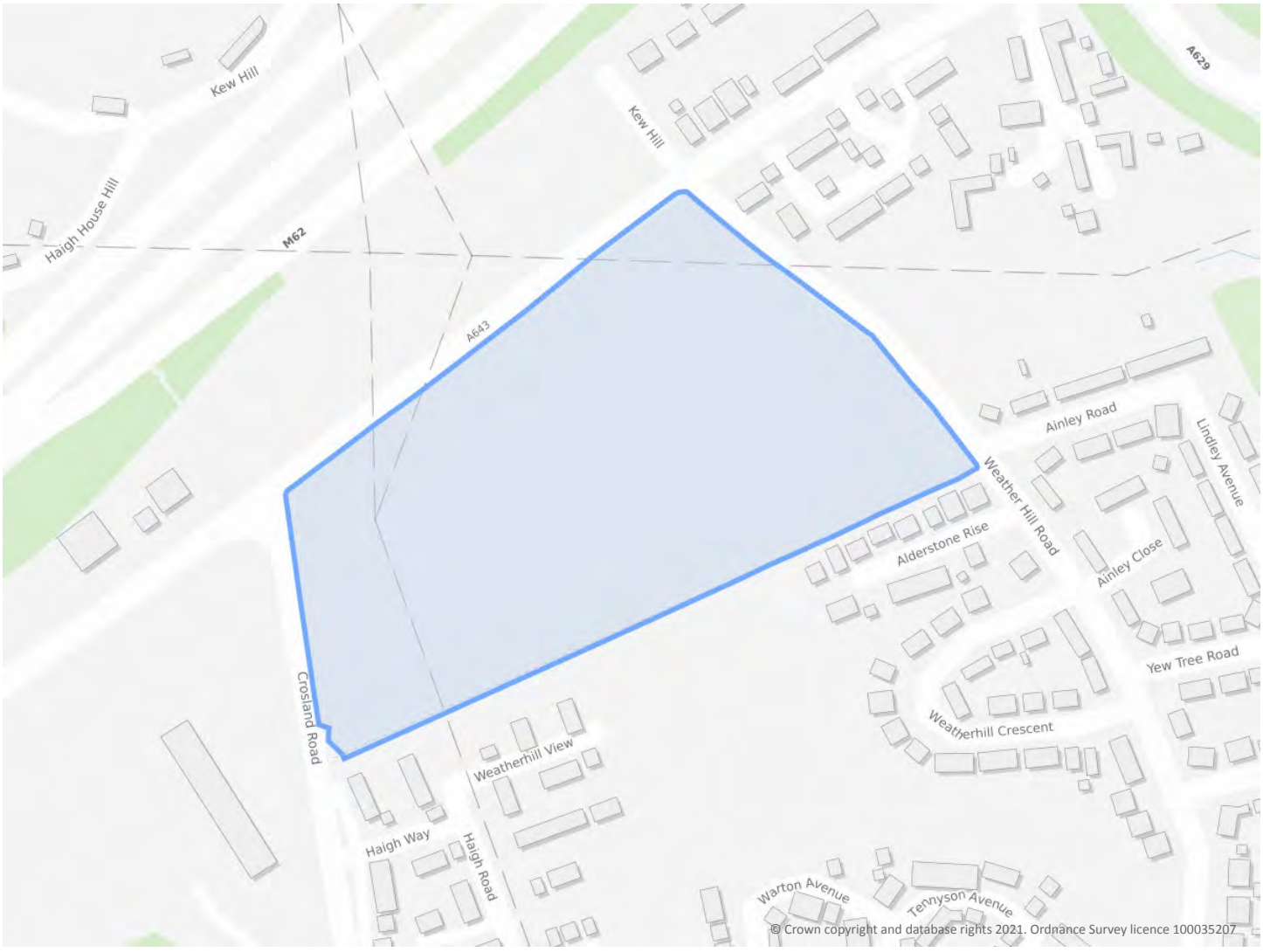
**Client:** Haigh Huddleston & Associates

## Site Details

**Location:** 410924 419016

**Area:** 6.33 ha

**Authority:** Kirklees Council





**Summary of findings** p. 2

**OS MasterMap site plan** p.12

**Aerial image** p. 8

**groundsure.com/insightuserguide**



Contact us with any questions at:
info@groundsure.com
08444 159 000

# Summary of findings

| Page | Section | Past land use | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| 13 | 1.1 | Historical industrial land uses | 0 | 2 | 10 | 18 | - |
| 15 | 1.2 | Historical tanks | 0 | 0 | 1 | 1 | - |
| 15 | 1.3 | Historical energy features | 0 | 0 | 2 | 3 | - |
| 16 | 1.4 | Historical petrol stations | 0 | 0 | 0 | 0 | - |
| 16 | 1.5 | Historical garages | 0 | 2 | 0 | 1 | - |
| 16 | 1.6 | Historical military land | 0 | 0 | 0 | 0 | - |
| Page | Section | Past land use - un-grouped | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 17 | 2.1 | Historical industrial land uses | 0 | 3 | 18 | 23 | - |
| 19 | 2.2 | Historical tanks | 0 | 0 | 2 | 1 | - |
| 20 | 2.3 | Historical energy features | 0 | 0 | 3 | 6 | - |
| 20 | 2.4 | Historical petrol stations | 0 | 0 | 0 | 0 | - |
| 20 | 2.5 | Historical garages | 0 | 4 | 0 | 2 | - |
| Page | Section | Waste and landfill | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 22 | 3.1 | Active or recent landfill | 0 | 0 | 0 | 0 | - |
| 22 | 3.2 | Historical landfill (BGS records) | 0 | 0 | 0 | 0 | - |
| 23 | 3.3 | Historical landfill (LA/mapping records) | 0 | 0 | 0 | 1 | - |
| 23 | 3.4 | Historical landfill (EA/NRW records) | 0 | 0 | 0 | 0 | - |
| 23 | 3.5 | Historical waste sites | 0 | 0 | 0 | 0 | - |
| 23 | 3.6 | Licensed waste sites | 0 | 0 | 0 | 0 | - |
| 23 | 3.7 | Waste exemptions | 0 | 0 | 0 | 8 | - |
| Page | Section | Current industrial land use | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 25 | 4.1 | Recent industrial land uses | 2 | 2 | 14 | - | - |
| 27 | 4.2 | Current or recent petrol stations | 0 | 0 | 0 | 0 | - |
| 27 | 4.3 | Electricity cables | 0 | 0 | 0 | 0 | - |
| 27 | 4.4 | Gas pipelines | 0 | 0 | 0 | 0 | - |
| 27 | 4.5 | Sites determined as Contaminated Land | 0 | 0 | 0 | 0 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27 | 4.6 | Control of Major Accident Hazards (COMAH) | 0 | 0 | 0 | 0 | - |
| 28 | 4.7 | Regulated explosive sites | 0 | 0 | 0 | 0 | - |
| 28 | 4.8 | Hazardous substance storage/usage | 0 | 0 | 0 | 0 | - |
| 28 | 4.9 | Historical licensed industrial activities (IPC) | 0 | 0 | 0 | 0 | - |
| 28 | 4.10 | Licensed industrial activities (Part A(1)) | 0 | 0 | 0 | 0 | - |
| 28 | 4.11 | Licensed pollutant release (Part A(2)/B) | 0 | 0 | 0 | 0 | - |
| 29 | 4.12 | Radioactive Substance Authorisations | 0 | 0 | 0 | 0 | - |
| **29** | **4.13** | **Licensed Discharges to controlled waters** | 0 | 0 | 4 | 2 | - |
| 30 | 4.14 | Pollutant release to surface waters (Red List) | 0 | 0 | 0 | 0 | - |
| 30 | 4.15 | Pollutant release to public sewer | 0 | 0 | 0 | 0 | - |
| 30 | 4.16 | List 1 Dangerous Substances | 0 | 0 | 0 | 0 | - |
| 31 | 4.17 | List 2 Dangerous Substances | 0 | 0 | 0 | 0 | - |
| **31** | **4.18** | **Pollution Incidents (EA/NRW)** | 0 | 0 | 1 | 7 | - |
| 32 | 4.19 | Pollution inventory substances | 0 | 0 | 0 | 0 | - |
| 32 | 4.20 | Pollution inventory waste transfers | 0 | 0 | 0 | 0 | - |
| 32 | 4.21 | Pollution inventory radioactive waste | 0 | 0 | 0 | 0 | - |

| Page | Section | Hydrogeology | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| 33 | 5.1 | Superficial aquifer | None (within 500m) | | | | |
| **34** | **5.2** | **Bedrock aquifer** | Identified (within 500m) | | | | |
| **35** | **5.3** | **Groundwater vulnerability** | Identified (within 50m) | | | | |
| 36 | 5.4 | Groundwater vulnerability- soluble rock risk | None (within 0m) | | | | |
| 36 | 5.5 | Groundwater vulnerability- local information | None (within 0m) | | | | |
| **37** | **5.6** | **Groundwater abstractions** | 0 | 0 | 0 | 2 | 12 |
| **41** | **5.7** | **Surface water abstractions** | 0 | 0 | 0 | 0 | 4 |
| 42 | 5.8 | Potable abstractions | 0 | 0 | 0 | 0 | 0 |
| **42** | **5.9** | **Source Protection Zones** | 0 | 0 | 0 | 1 | - |
| 42 | 5.10 | Source Protection Zones (confined aquifer) | 0 | 0 | 0 | 0 | - |

| Page | Section | Hydrology | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| **43** | **6.1** | **Water Network (OS MasterMap)** | 0 | 0 | 2 | - | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **44** | **6.2** | **Surface water features** | 0 | 0 | 2 | - | - |
| **44** | **6.3** | **WFD Surface water body catchments** | 1 | - | - | - | - |
| **44** | **6.4** | **WFD Surface water bodies** | 0 | 0 | 0 | - | - |
| **45** | **6.5** | **WFD Groundwater bodies** | 1 | - | - | - | - |

| Page | Section | River and coastal flooding | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| 46 | 7.1 | Risk of Flooding from Rivers and Sea (RoFRaS) | None (within 50m) | | | | |
| 46 | 7.2 | Historical Flood Events | 0 | 0 | 0 | - | - |
| 46 | 7.3 | Flood Defences | 0 | 0 | 0 | - | - |
| 46 | 7.4 | Areas Benefiting from Flood Defences | 0 | 0 | 0 | - | - |
| 47 | 7.5 | Flood Storage Areas | 0 | 0 | 0 | - | - |
| 48 | 7.6 | Flood Zone 2 | None (within 50m) | | | | |
| 48 | 7.7 | Flood Zone 3 | None (within 50m) | | | | |

| Page | Section | Surface water flooding | |
|---|---|---|---|
| 49 | 8.1 | Surface water flooding | Negligible (within 50m) |

| Page | Section | Groundwater flooding | |
|---|---|---|---|
| **50** | **9.1** | **Groundwater flooding** | Negligible (within 50m) |

| Page | Section | Environmental designations | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| **51** | **10.1** | **Sites of Special Scientific Interest (SSSI)** | 0 | 0 | 0 | 0 | 1 |
| 52 | 10.2 | Conserved wetland sites (Ramsar sites) | 0 | 0 | 0 | 0 | 0 |
| 52 | 10.3 | Special Areas of Conservation (SAC) | 0 | 0 | 0 | 0 | 0 |
| 52 | 10.4 | Special Protection Areas (SPA) | 0 | 0 | 0 | 0 | 0 |
| 52 | 10.5 | National Nature Reserves (NNR) | 0 | 0 | 0 | 0 | 0 |
| 53 | 10.6 | Local Nature Reserves (LNR) | 0 | 0 | 0 | 0 | 0 |
| **53** | **10.7** | **Designated Ancient Woodland** | 0 | 0 | 0 | 0 | 4 |
| 53 | 10.8 | Biosphere Reserves | 0 | 0 | 0 | 0 | 0 |
| 54 | 10.9 | Forest Parks | 0 | 0 | 0 | 0 | 0 |
| 54 | 10.10 | Marine Conservation Zones | 0 | 0 | 0 | 0 | 0 |
| **54** | **10.11** | **Green Belt** | 0 | 1 | 1 | 0 | 1 |
| 54 | 10.12 | Proposed Ramsar sites | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 55 | 10.13 | Possible Special Areas of Conservation (pSAC) | 0 | 0 | 0 | 0 | 0 |
| 55 | 10.14 | Potential Special Protection Areas (pSPA) | 0 | 0 | 0 | 0 | 0 |
| 55 | 10.15 | Nitrate Sensitive Areas | 0 | 0 | 0 | 0 | 0 |
| 55 | 10.16 | Nitrate Vulnerable Zones | 0 | 0 | 0 | 0 | 0 |
| **56** | **10.17** | **SSSI Impact Risk Zones** | 1 | - | - | - | - |
| **57** | **10.18** | **SSSI Units** | 0 | 0 | 0 | 0 | 1 |
| Page | Section | Visual and cultural designations | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 58 | 11.1 | World Heritage Sites | 0 | 0 | 0 | - | - |
| 59 | 11.2 | Area of Outstanding Natural Beauty | 0 | 0 | 0 | - | - |
| 59 | 11.3 | National Parks | 0 | 0 | 0 | - | - |
| **59** | **11.4** | **Listed Buildings** | 0 | 2 | 5 | - | - |
| 60 | 11.5 | Conservation Areas | 0 | 0 | 0 | - | - |
| 60 | 11.6 | Scheduled Ancient Monuments | 0 | 0 | 0 | - | - |
| 60 | 11.7 | Registered Parks and Gardens | 0 | 0 | 0 | - | - |
| Page | Section | Agricultural designations | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| **61** | **12.1** | **Agricultural Land Classification** | Grade 3b (within 250m) | | | | |
| 62 | 12.2 | Open Access Land | 0 | 0 | 0 | - | - |
| **63** | **12.3** | **Tree Felling Licences** | 0 | 0 | 26 | - | - |
| 64 | 12.4 | Environmental Stewardship Schemes | 0 | 0 | 0 | - | - |
| **64** | **12.5** | **Countryside Stewardship Schemes** | 0 | 0 | 1 | - | - |
| Page | Section | Habitat designations | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| **65** | **13.1** | **Priority Habitat Inventory** | 0 | 0 | 3 | - | - |
| 66 | 13.2 | Habitat Networks | 0 | 0 | 0 | - | - |
| 66 | 13.3 | Open Mosaic Habitat | 0 | 0 | 0 | - | - |
| 66 | 13.4 | Limestone Pavement Orders | 0 | 0 | 0 | - | - |
| Page | Section | Geology 1:10,000 scale | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| **67** | **14.1** | **10k Availability** | Identified (within 500m) | | | | |
| **68** | **14.2** | **Artificial and made ground (10k)** | 0 | 0 | 2 | 7 | - |
| 70 | 14.3 | Superficial geology (10k) | 0 | 0 | 0 | 0 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 70 | 14.4 | Landslip (10k) | 0 | 0 | 0 | 0 | - |
| 71 | 14.5 | Bedrock geology (10k) | 7 | 2 | 7 | 24 | - |
| 73 | 14.6 | Bedrock faults and other linear features (10k) | 2 | 1 | 3 | 15 | - |
| Page | Section | Geology 1:50,000 scale | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 75 | 15.1 | 50k Availability | Identified (within 500m) | | | | |
| 76 | 15.2 | Artificial and made ground (50k) | 0 | 0 | 0 | 1 | - |
| 77 | 15.3 | Artificial ground permeability (50k) | 0 | 0 | - | - | - |
| 78 | 15.4 | Superficial geology (50k) | 0 | 0 | 0 | 0 | - |
| 78 | 15.5 | Superficial permeability (50k) | None (within 50m) | | | | |
| 78 | 15.6 | Landslip (50k) | 0 | 0 | 0 | 0 | - |
| 78 | 15.7 | Landslip permeability (50k) | None (within 50m) | | | | |
| 79 | 15.8 | Bedrock geology (50k) | 7 | 1 | 8 | 24 | - |
| 81 | 15.9 | Bedrock permeability (50k) | Identified (within 50m) | | | | |
| 82 | 15.10 | Bedrock faults and other linear features (50k) | 2 | 1 | 3 | 14 | - |
| Page | Section | Boreholes | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 84 | 16.1 | BGS Boreholes | 0 | 0 | 16 | - | - |
| Page | Section | Natural ground subsidence | | | | | |
| 86 | 17.1 | Shrink swell clays | Very low (within 50m) | | | | |
| 87 | 17.2 | Running sands | Negligible (within 50m) | | | | |
| 88 | 17.3 | Compressible deposits | Negligible (within 50m) | | | | |
| 89 | 17.4 | Collapsible deposits | Very low (within 50m) | | | | |
| 90 | 17.5 | Landslides | Low (within 50m) | | | | |
| 92 | 17.6 | Ground dissolution of soluble rocks | Negligible (within 50m) | | | | |
| Page | Section | Mining, ground workings and natural cavities | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
| 93 | 18.1 | Natural cavities | 0 | 0 | 0 | 0 | - |
| 94 | 18.2 | BritPits | 0 | 0 | 0 | 4 | - |
| 95 | 18.3 | Surface ground workings | 0 | 1 | 16 | - | - |
| 95 | 18.4 | Underground workings | 0 | 0 | 0 | 0 | 17 |
| 96 | 18.5 | Historical Mineral Planning Areas | 1 | 0 | 0 | 1 | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **97** | **18.6** | **Non-coal mining** | 1 | 0 | 1 | 1 | 8 |
| **98** | **18.7** | **Mining cavities** | 0 | 0 | 0 | 0 | 4 |
| 99 | 18.8 | JPB mining areas | None (within 0m) | | | | |
| **99** | **18.9** | **Coal mining** | Identified (within 0m) | | | | |
| 99 | 18.10 | Brine areas | None (within 0m) | | | | |
| 99 | 18.11 | Gypsum areas | None (within 0m) | | | | |
| 100 | 18.12 | Tin mining | None (within 0m) | | | | |
| 100 | 18.13 | Clay mining | None (within 0m) | | | | |

| Page | Section | Radon | |
|---|---|---|---|
| **101** | **19.1** | **Radon** | Less than 1% (within 0m) |

| Page | Section | Soil chemistry | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| **102** | **20.1** | **BGS Estimated Background Soil Chemistry** | 15 | 3 | - | - | - |
| 103 | 20.2 | BGS Estimated Urban Soil Chemistry | 0 | 0 | - | - | - |
| 103 | 20.3 | BGS Measured Urban Soil Chemistry | 0 | 0 | - | - | - |

| Page | Section | Railway infrastructure and projects | On site | 0-50m | 50-250m | 250-500m | 500-2000m |
|---|---|---|---|---|---|---|---|
| 104 | 21.1 | Underground railways (London) | 0 | 0 | 0 | - | - |
| 104 | 21.2 | Underground railways (Non-London) | 0 | 0 | 0 | - | - |
| 104 | 21.3 | Railway tunnels | 0 | 0 | 0 | - | - |
| 104 | 21.4 | Historical railway and tunnel features | 0 | 0 | 0 | - | - |
| 104 | 21.5 | Royal Mail tunnels | 0 | 0 | 0 | - | - |
| 105 | 21.6 | Historical railways | 0 | 0 | 0 | - | - |
| 105 | 21.7 | Railways | 0 | 0 | 0 | - | - |
| 105 | 21.8 | Crossrail 1 | 0 | 0 | 0 | 0 | - |
| 105 | 21.9 | Crossrail 2 | 0 | 0 | 0 | 0 | - |
| 105 | 21.10 | HS2 | 0 | 0 | 0 | 0 | - |

## Recent aerial photograph




Capture Date: 01/07/2018

Site Area: 6.33ha

# Recent site history - 2012 aerial photograph




Capture Date: 26/03/2012

Site Area: 6.33ha

# Recent site history - 2000 aerial photograph




Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2021. All Rights Reserved.

Capture Date: 25/08/2000

Site Area: 6.33ha

# Recent site history - 1999 aerial photograph

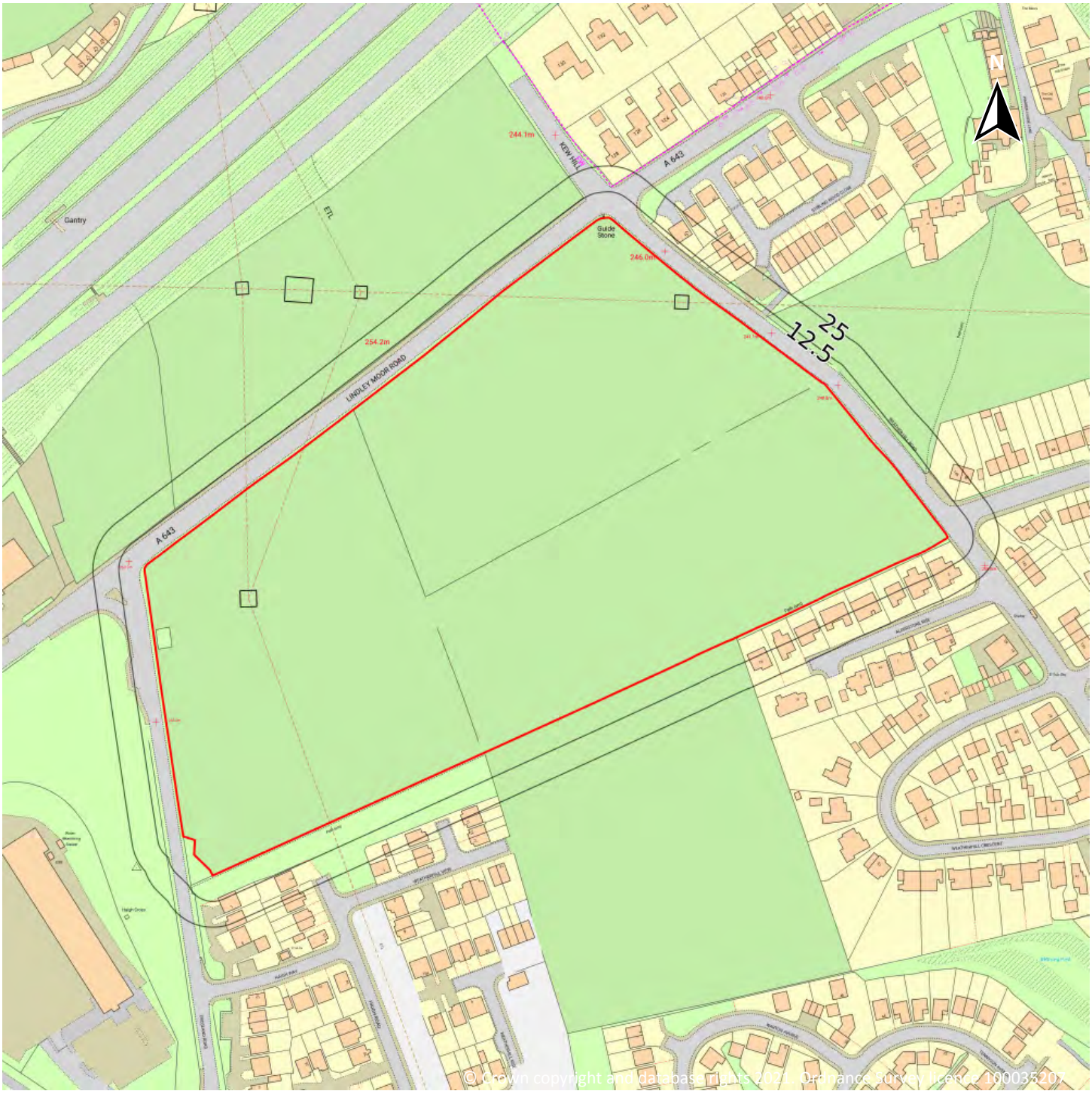



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2021. All Rights Reserved.

Capture Date: 05/09/1999

Site Area: 6.33ha

## OS MasterMap site plan

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Site Area: 6.33ha

# 1 Past land use




Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

## 1.1 Historical industrial land uses

| Records within 500m | 30 |
|---|---|

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| 1 | 17m NE | Cuttings | 1892 | 1409766 |

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| A | 39m W | Garage | 1975 - 1985 | 1542639 |
| 3 | 91m NW | Cuttings | 1975 - 1985 | 1554736 |
| B | 140m NE | Unspecified Works | 1975 - 1985 | 1531521 |
| 5 | 203m N | Cuttings | 1975 - 1985 | 1543183 |
| 6 | 207m NE | Cuttings | 1975 - 1985 | 1477860 |
| 7 | 213m N | Unspecified Pit | 1891 | 1452368 |
| 8 | 222m NE | Cuttings | 1975 - 1985 | 1492742 |
| C | 228m W | Unspecified Quarry | 1948 - 1956 | 1475231 |
| D | 230m NE | Cuttings | 1975 - 1985 | 1477396 |
| C | 237m W | Cuttings | 1930 | 1409758 |
| C | 242m W | Cuttings | 1975 - 1985 | 1463706 |
| F | 278m SE | Unspecified Heap | 1966 - 1975 | 1517132 |
| F | 279m SE | Unspecified Heap | 1985 | 1504318 |
| C | 283m W | Unspecified Pit | 1905 - 1930 | 1528961 |
| E | 290m NE | Unspecified Depot | 1975 - 1985 | 1542774 |
| C | 300m W | Unspecified Quarry | 1930 | 1524895 |
| F | 311m SE | Unspecified Ground Workings | 1948 | 1412119 |
| 10 | 345m NE | Cuttings | 1975 - 1985 | 1465643 |
| 12 | 380m NE | Cuttings | 1975 - 1985 | 1463895 |
| G | 458m SE | Disused Brewery | 1938 - 1948 | 1529781 |
| G | 458m SE | Disused Brewery | 1905 | 1532923 |
| H | 471m W | Unspecified Heap | 1891 | 1415057 |
| I | 474m W | Brewery | 1948 | 1535761 |
| I | 484m W | Brewery | 1892 | 1554551 |
| I | 491m W | Unspecified Works | 1966 | 1438153 |
| I | 496m W | Brewery | 1905 | 1525420 |
| H | 496m W | Unspecified Quarry | 1891 | 1426672 |
| I | 496m W | Brewery | 1956 | 1552944 |

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| I | 498m W | Brewery | 1930 | 1547741 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.2 Historical tanks

| Records within 500m | 2 |
|---|---|

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| 4 | 156m N | Unspecified Tank | 1973 - 1991 | 249658 |
| 11 | 367m W | Unspecified Tank | 1893 | 222959 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.3 Historical energy features

| Records within 500m | 5 |
|---|---|

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| 2 | 69m SE | Electricity Substation | 1972 - 1986 | 135655 |
| B | 229m NE | Electricity Substation | 1973 | 128910 |
| D | 284m NE | Electricity Substation | 1973 - 1991 | 143350 |
| 9 | 319m E | Electricity Substation | 1972 - 1986 | 143505 |
| 13 | 421m SE | Electricity Substation | 1972 - 1986 | 137638 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.4 Historical petrol stations

| Records within 500m | 0 |
|---|---|

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.5 Historical garages

| Records within 500m | 3 |
|---|---|

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

| ID | Location | Land use | Dates present | Group ID |
|---|---|---|---|---|
| A | 38m W | Garage | 1961 - 1987 | 46869 |
| A | 39m W | Garage | 1978 - 1993 | 44904 |
| E | 266m NE | Maintenance Depot | 1973 - 1991 | 45820 |

*This data is sourced from Ordnance Survey / Groundsure.*

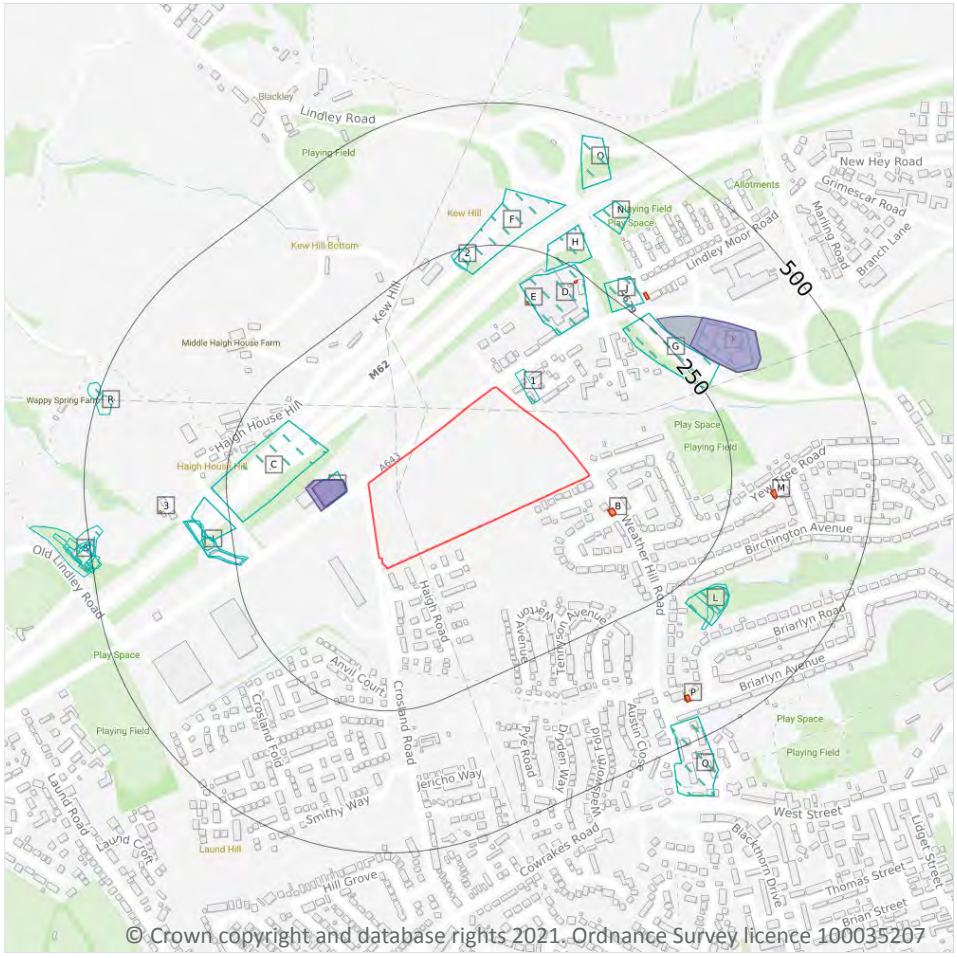
## 1.6 Historical military land

| Records within 500m | 0 |
|---|---|

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

*This data is sourced from Ordnance Survey / Groundsure / other sources.*

# 2 Past land use - un-grouped




## 2.1 Historical industrial land uses

| Records within 500m | 44 |
|---|---|

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 17**

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| 1 | 17m NE | Cuttings | 1892 | 1409766 |
| A | 39m W | Garage | 1975 | 1542639 |
| A | 39m W | Garage | 1985 | 1542639 |

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| C | 91m NW | Cuttings | 1975 | 1554736 |
| C | 91m NW | Cuttings | 1985 | 1554736 |
| D | 140m NE | Unspecified Works | 1975 | 1531521 |
| D | 140m NE | Unspecified Works | 1985 | 1531521 |
| F | 203m N | Cuttings | 1975 | 1543183 |
| F | 203m N | Cuttings | 1985 | 1543183 |
| G | 207m NE | Cuttings | 1975 | 1477860 |
| G | 207m NE | Cuttings | 1985 | 1477860 |
| 2 | 213m N | Unspecified Pit | 1891 | 1452368 |
| H | 222m NE | Cuttings | 1975 | 1492742 |
| H | 222m NE | Cuttings | 1985 | 1492742 |
| I | 228m W | Unspecified Quarry | 1956 | 1475231 |
| J | 230m NE | Cuttings | 1975 | 1477396 |
| J | 230m NE | Cuttings | 1985 | 1477396 |
| I | 231m W | Unspecified Quarry | 1948 | 1475231 |
| I | 237m W | Cuttings | 1930 | 1409758 |
| I | 242m W | Cuttings | 1975 | 1463706 |
| I | 242m W | Cuttings | 1985 | 1463706 |
| L | 278m SE | Unspecified Heap | 1975 | 1517132 |
| L | 278m SE | Unspecified Heap | 1966 | 1517132 |
| L | 279m SE | Unspecified Heap | 1985 | 1504318 |
| I | 283m W | Unspecified Pit | 1905 | 1528961 |
| I | 283m W | Unspecified Pit | 1930 | 1528961 |
| K | 290m NE | Unspecified Depot | 1975 | 1542774 |
| K | 290m NE | Unspecified Depot | 1985 | 1542774 |
| I | 300m W | Unspecified Quarry | 1930 | 1524895 |
| L | 311m SE | Unspecified Ground Workings | 1948 | 1412119 |
| N | 345m NE | Cuttings | 1975 | 1465643 |

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| N | 345m NE | Cuttings | 1985 | 1465643 |
| O | 380m NE | Cuttings | 1975 | 1463895 |
| O | 380m NE | Cuttings | 1985 | 1463895 |
| Q | 458m SE | Disused Brewery | 1948 | 1529781 |
| Q | 458m SE | Disused Brewery | 1905 | 1532923 |
| R | 471m W | Unspecified Heap | 1891 | 1415057 |
| S | 474m W | Brewery | 1948 | 1535761 |
| S | 484m W | Brewery | 1892 | 1554551 |
| S | 491m W | Unspecified Works | 1966 | 1438153 |
| S | 496m W | Brewery | 1905 | 1525420 |
| R | 496m W | Unspecified Quarry | 1891 | 1426672 |
| S | 496m W | Brewery | 1956 | 1552944 |
| S | 498m W | Brewery | 1930 | 1547741 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.2 Historical tanks

| **Records within 500m** | **3** |
|---|---|

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 17**

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| E | 156m N | Unspecified Tank | 1973 | 249658 |
| E | 156m N | Unspecified Tank | 1991 | 249658 |
| 3 | 367m W | Unspecified Tank | 1893 | 222959 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.3 Historical energy features

| Records within 500m | 9 |
|---|---|

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 17**

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| B | 69m SE | Electricity Substation | 1986 | 135655 |
| B | 69m SE | Electricity Substation | 1972 | 135655 |
| D | 229m NE | Electricity Substation | 1973 | 128910 |
| J | 284m NE | Electricity Substation | 1991 | 143350 |
| J | 284m NE | Electricity Substation | 1973 | 143350 |
| M | 319m E | Electricity Substation | 1972 | 143505 |
| M | 319m E | Electricity Substation | 1986 | 143505 |
| P | 421m SE | Electricity Substation | 1986 | 137638 |
| P | 421m SE | Electricity Substation | 1972 | 137638 |

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.4 Historical petrol stations

| Records within 500m | 0 |
|---|---|

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.5 Historical garages

| Records within 500m | 6 |
|---|---|

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 17**

| ID | Location | Land Use | Date | Group ID |
|---|---|---|---|---|
| A | 38m W | Garage | 1987 | 46869 |
| A | 39m W | Garage | 1993 | 44904 |
| A | 39m W | Garage | 1961 | 46869 |
| A | 40m W | Garage | 1978 | 44904 |
| K | 266m NE | Maintenance Depot | 1991 | 45820 |
| K | 280m NE | Maintenance Depot | 1973 | 45820 |

*This data is sourced from Ordnance Survey / Groundsure.*

# 3 Waste and landfill




## 3.1 Active or recent landfill

| Records within 500m | 0 |
|---|---|

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 3.2 Historical landfill (BGS records)

| Records within 500m | 0 |
|---|---|

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

*This data is sourced from the British Geological Survey.*

## 3.3 Historical landfill (LA/mapping records)

| Records within 500m | 1 |
|---|---|

Landfill sites identified from Local Authority records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 22**

| ID | Location | Site address | Source | Data type |
|---|---|---|---|---|
| 2 | 380m NW | Refuse Tip | 1961 mapping | Polygon |

*This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.*

## 3.4 Historical landfill (EA/NRW records)

| Records within 500m | 0 |
|---|---|

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 3.5 Historical waste sites

| Records within 500m | 0 |
|---|---|

Waste site records derived from Local Authority planning records and high detail historical mapping.

*This data is sourced from Ordnance Survey/Groundsure and Local Authority records.*

## 3.6 Licensed waste sites

| Records within 500m | 0 |
|---|---|

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 3.7 Waste exemptions

| Records within 500m | 8 |
|---|---|

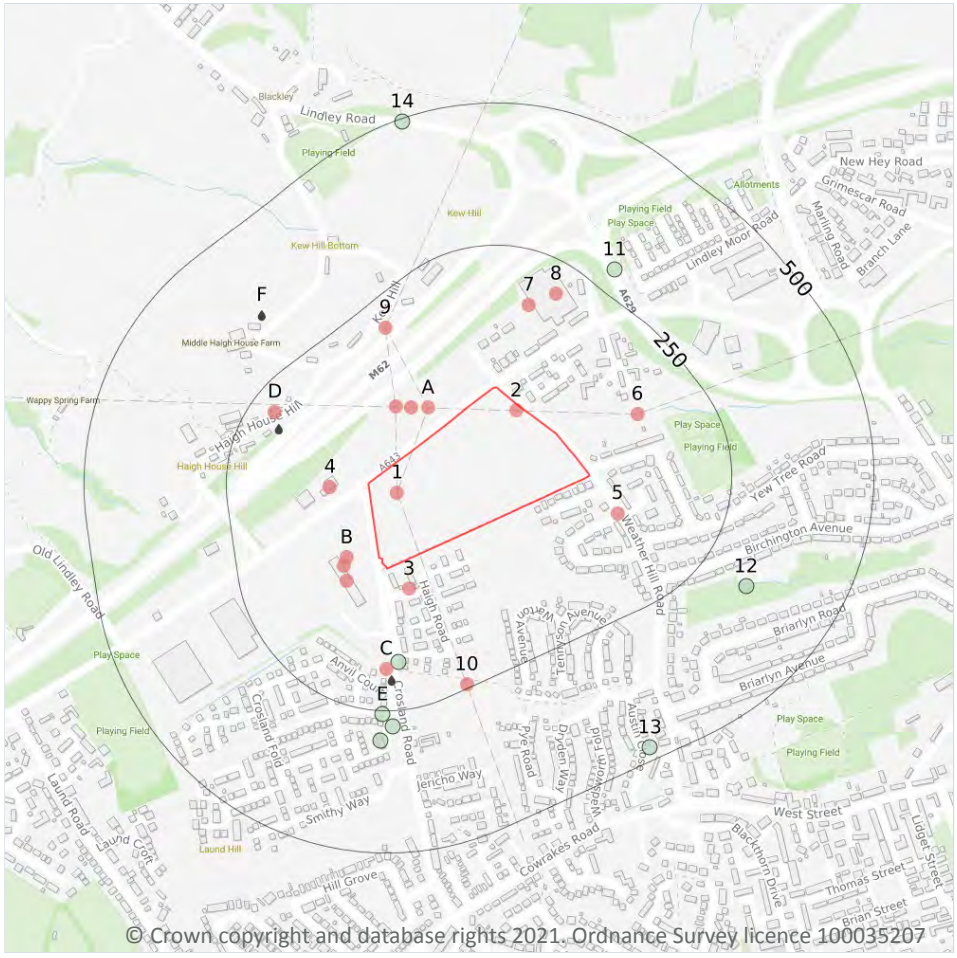
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 22**

| ID | Location | Site | Reference | Category | Sub-Category | Description |
|---|---|---|---|---|---|---|
| 1 | 288m W | - | WEX156692 | Using waste exemption | On a Farm | Use of waste in construction |
| 3 | 414m SE | Lindley Moor Weatherhill Road HD3 3LD | EPR/JH0974WS/A001 | Using waste exemption | Non-Agricultural Waste Only | Use of waste in construction |
| A | 418m NE | Residential Development-Farriers Croft, Lindley Moor, Huddersfield, HD3 3RT | WEX128350 | Storing waste exemption | Not on a farm | Storage of waste in a secure place |
| A | 418m NE | Residential Development-Farriers Croft, Lindley Moor, Huddersfield, HD3 3RT | WEX128350 | Using waste exemption | Not on a farm | Use of waste in construction |
| B | 425m NE | Motorway Maintenance Compound, Lindley Moor Road, Ainley, Huddersfield, HD33RH | WEX228885 | Storing waste exemption | Not on a farm | Storage of waste in secure containers |
| B | 425m NE | Motorway Maintenance Compound, Lindley Moor Road, Ainley, Huddersfield, HD33RH | WEX228885 | Storing waste exemption | Not on a farm | Storage of waste in a secure place |
| B | 425m NE | Motorway Maintenance Compound, Lindley Moor Road, Ainley, Huddersfield, HD33RH | WEX081824 | Storing waste exemption | Not on a farm | Storage of waste in secure containers |
| B | 425m NE | Motorway Maintenance Compound, Lindley Moor Road, Ainley, Huddersfield, HD33RH | WEX081824 | Storing waste exemption | Not on a farm | Storage of waste in a secure place |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

# 4 Current industrial land use




## 4.1 Recent industrial land uses

| Records within 250m | 18 |
|---|---|

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

| ID | Location | Company | Address | Activity | Category |
|---|---|---|---|---|---|
| **1** | **On site** | **Pylon** | **West Yorkshire, HD3** | **Electrical Features** | **Infrastructure and Facilities** |
| **2** | **On site** | **Pylon** | **West Yorkshire, HD3** | **Electrical Features** | **Infrastructure and Facilities** |
| A | 43m NW | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |

| ID | Location | Company | Address | Activity | Category |
|---|---|---|---|---|---|
| 3 | 48m SE | Electricity Sub Station | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| B | 56m W | Water Station | West Yorkshire, HD3 | Water Pumping Stations | Industrial Features |
| A | 62m NW | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| B | 63m W | Electricity Sub Station | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| 4 | 68m W | J P I Road Planing Ltd | Lindley Moor Garage, Lindley Moor Road, Huddersfield, West Yorkshire, HD3 3TB | Construction and Tool Hire | Hire Services |
| B | 70m SW | Mac's Truck Sales Ltd | Alexandra Park, Crosland Road, Huddersfield, West Yorkshire, HD3 3ZA | New Vehicles | Motoring |
| A | 80m NW | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| 5 | 82m SE | Electricity Sub Station | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| 6 | 132m NE | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| 7 | 156m N | Tank | West Yorkshire, HD3 | Tanks (Generic) | Industrial Features |
| C | 176m S | Electricity Sub Station | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| 8 | 195m NE | John Fredericks Plastics | Lindley Moor Road, Huddersfield, West Yorkshire, HD3 3RW | General Construction Supplies | Industrial Products |
| 9 | 200m NW | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |
| D | 208m NW | R M McGill Transport | 7, Haigh House Hill, Huddersfield, West Yorkshire, HD3 3SZ | Distribution and Haulage | Transport, Storage and Delivery |
| 10 | 243m SE | Pylon | West Yorkshire, HD3 | Electrical Features | Infrastructure and Facilities |

*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

| Records within 500m | 0 |
|---|---|

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

| Records within 500m | 0 |
|---|---|

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*

## 4.4 Gas pipelines

| Records within 500m | 0 |
|---|---|

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

| Records within 500m | 0 |
|---|---|

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

*This data is sourced from Local Authority records.*

## 4.6 Control of Major Accident Hazards (COMAH)

| Records within 500m | 0 |
|---|---|

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

*This data is sourced from the Health and Safety Executive.*

## 4.7 Regulated explosive sites

| Records within 500m | 0 |
|---|---|

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

*This data is sourced from the Health and Safety Executive.*

## 4.8 Hazardous substance storage/usage

| Records within 500m | 0 |
|---|---|

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

*This data is sourced from Local Authority records.*

## 4.9 Historical licensed industrial activities (IPC)

| Records within 500m | 0 |
|---|---|

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.10 Licensed industrial activities (Part A(1))

| Records within 500m | 0 |
|---|---|

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.11 Licensed pollutant release (Part A(2)/B)

| Records within 500m | 0 |
|---|---|

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

*This data is sourced from Local Authority records.*

## 4.12 Radioactive Substance Authorisations

| Records within 500m | 0 |
|---|---|

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.13 Licensed Discharges to controlled waters

| Records within 500m | 6 |
|---|---|

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 25**

| ID | Location | Address | Details | |
|---|---|---|---|---|
| D | 184m NW | HAIGH HOUSE HILL, OFF LINDLEY MOOR ROAD, LINDLEY MOOR, HUDDERSFIELD, WEST YORKSHIRE | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: WRA8864<br>Permit Version: 2<br>Receiving Water: GROUNDWATER VIA SOAKAWAY | Status: VARIED UNDER EPR 2010<br>Issue date: 26/07/2012<br>Effective Date: 26/07/2012<br>Revocation Date: - |
| D | 184m NW | HAIGH HOUSE HILL, OFF LINDLEY MOOR ROAD, LINDLEY MOOR, HUDDERSFIELD, WEST YORKSHIRE | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: WRA8864<br>Permit Version: 1<br>Receiving Water: GROUNDWATER VIA SOAKAWAY | Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995)<br>Issue date: 25/08/2005<br>Effective Date: 25/08/2005<br>Revocation Date: 25/07/2012 |
| C | 196m S | FARRIERS CROFT, CROSLAND ROAD, LINDLEY MOOR, HUDDERSFIELD, WEST YORKSHIRE, HD3 3SU | Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT<br>Permit Number: EPRDB3997NH<br>Permit Version: 1<br>Receiving Water: SW DRAIN TO GRIMESCAR DIKE | Status: SURRENDERED UNDER EPR 2010<br>Issue date: 27/06/2016<br>Effective Date: 27/06/2016<br>Revocation Date: 19/06/2020 |
| C | 196m S | CROSLAND ROAD PHASE 2, LINDLEY MOOR, HUDDERSFIELD | Effluent Type: TRADE DISCHARGES - SITE DRAINAGE<br>Permit Number: EPRNB3097AZ<br>Permit Version: 1<br>Receiving Water: TRIBUTARY OF GRIMESCAR DIKE | Status: NEW ISSUED UNDER EPR 2010<br>Issue date: 21/06/2019<br>Effective Date: 21/06/2019<br>Revocation Date: - |

| ID | Location | Address | Details | |
|---|---|---|---|---|
| F | 349m NW | MIDDLE HAIGH HOUSE FARM, LINDLEY, HUDDERSFIELD | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: WRA9307<br>Permit Version: 1<br>Receiving Water: GROUNDWATER VIA SOAKAWAY | Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995)<br>Issue date: 29/02/2008<br>Effective Date: 29/02/2008<br>Revocation Date: 25/07/2012 |
| F | 349m NW | MIDDLE HAIGH HOUSE FARM, LINDLEY, HUDDERSFIELD | Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY<br>Permit Number: WRA9307<br>Permit Version: 2<br>Receiving Water: GROUNDWATER VIA SOAKAWAY | Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995)<br>Issue date: 26/07/2012<br>Effective Date: 26/07/2012<br>Revocation Date: - |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.14 Pollutant release to surface waters (Red List)

| **Records within 500m** | **0** |
|---|---|

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.15 Pollutant release to public sewer

| **Records within 500m** | **0** |
|---|---|

Discharges of Special Category Effluents to the public sewer.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.16 List 1 Dangerous Substances

| **Records within 500m** | **0** |
|---|---|

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.17 List 2 Dangerous Substances

| Records within 500m | 0 |
|---|---|

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.18 Pollution Incidents (EA/NRW)

| Records within 500m | 8 |
|---|---|

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 25**

| ID | Location | Details | |
|---|---|---|---|
| C | 165m S | Incident Date: 14/12/2015<br>Incident Identification: 1394444<br>Pollutant: Contaminated Water<br>Pollutant Description: Suspended Solids | Water Impact: Category 1 (Major)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| E | 256m S | Incident Date: 30/11/2015<br>Incident Identification: 1391148<br>Pollutant: Contaminated Water<br>Pollutant Description: Suspended Solids | Water Impact: Category 1 (Major)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| E | 277m S | Incident Date: 22/12/2015<br>Incident Identification: 1396165<br>Pollutant: Contaminated Water<br>Pollutant Description: Suspended Solids | Water Impact: Category 2 (Significant)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| 11 | 292m NE | Incident Date: 11/11/2002<br>Incident Identification: 120044<br>Pollutant: Specific Waste Materials<br>Pollutant Description: Asbestos | Water Impact: Category 4 (No Impact)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| E | 301m S | Incident Date: 20/11/2015<br>Incident Identification: 1389399<br>Pollutant: Contaminated Water<br>Pollutant Description: Suspended Solids | Water Impact: Category 1 (Major)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| 12 | 337m SE | Incident Date: 22/11/2013<br>Incident Identification: 1178050<br>Pollutant: Inert Materials and Wastes<br>Pollutant Description: Soils and Clay | Water Impact: Category 1 (Major)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |

| ID | Location | Details | |
|---|---|---|---|
| 13 | 477m SE | Incident Date: 08/02/2018<br>Incident Identification: 1586591<br>Pollutant: Inert Materials and Wastes<br>Pollutant Description: Soils and Clay | Water Impact: Category 2 (Significant)<br>Land Impact: Category 4 (No Impact)<br>Air Impact: Category 4 (No Impact) |
| 14 | 494m N | Incident Date: 22/11/2007<br>Incident Identification: 546841<br>Pollutant: Inert Materials and Wastes<br>Pollutant Description: Other Inert Material or Waste | Water Impact: Category 4 (No Impact)<br>Land Impact: Category 2 (Significant)<br>Air Impact: Category 4 (No Impact) |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 4.19 Pollution inventory substances

| Records within 500m | 0 |
|---|---|

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 4.20 Pollution inventory waste transfers

| Records within 500m | 0 |
|---|---|

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

## 4.21 Pollution inventory radioactive waste

| Records within 500m | 0 |
|---|---|

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

*This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.*

# 5 Hydrogeology - Superficial aquifer

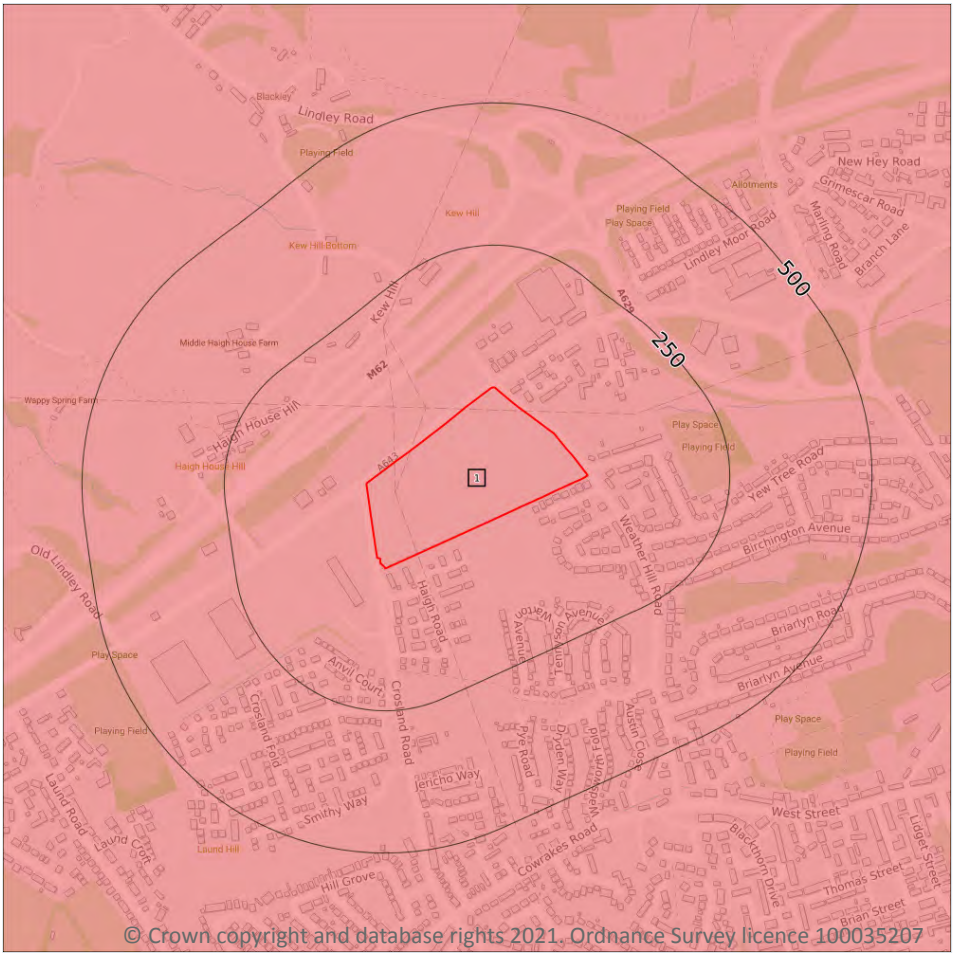
## 5.1 Superficial aquifer

| Records within 500m | 0 |
|---|---|

Aquifer status of groundwater held within superficial geology.

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

# Bedrock aquifer




Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

## 5.2 Bedrock aquifer

| Records within 500m | 1 |
|---|---|

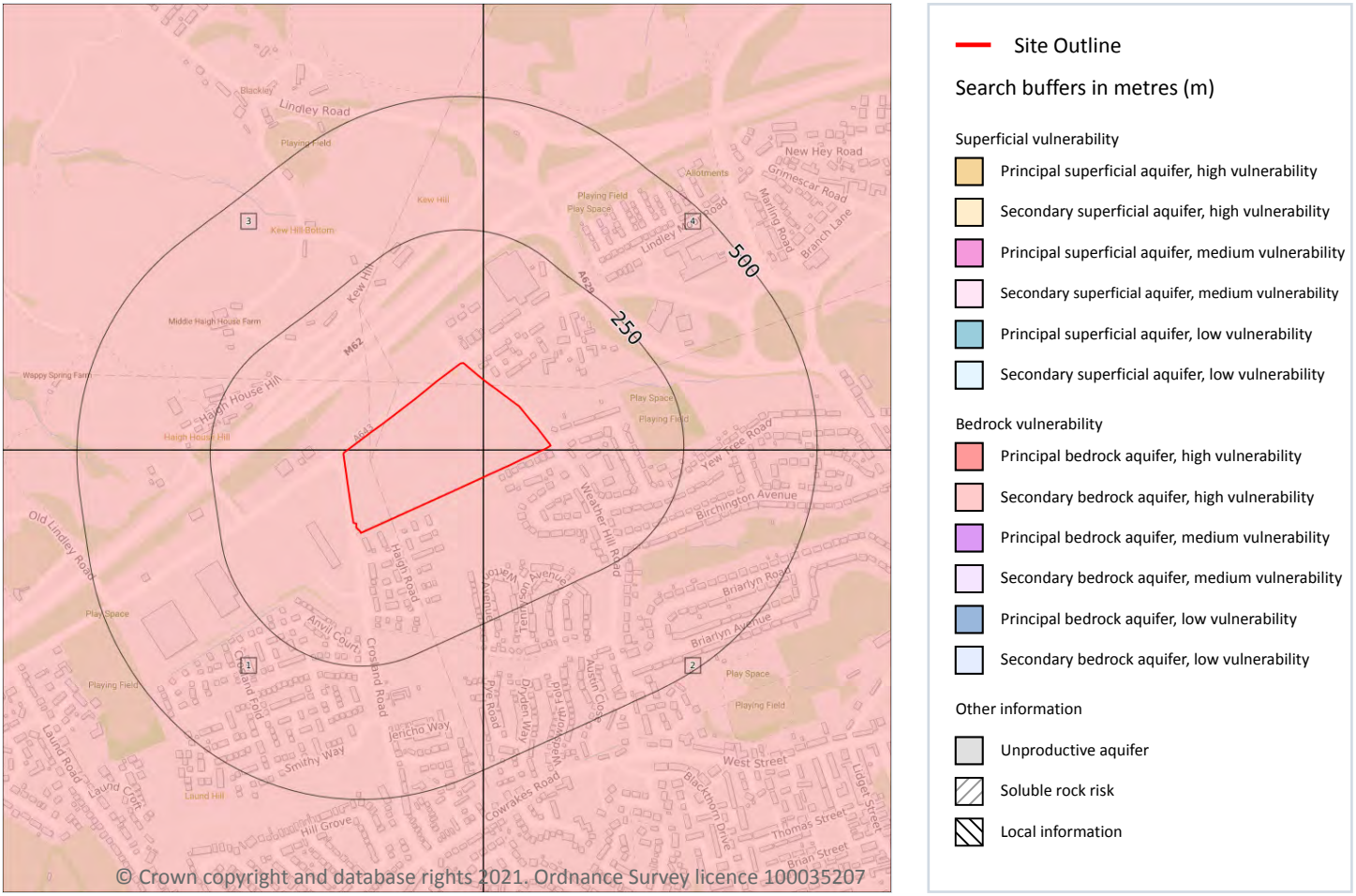
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 34**

| ID | Location | Designation | Description |
|---|---|---|---|
| **1** | **On site** | **Secondary A** | **Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers** |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

# Groundwater vulnerability




## 5.3 Groundwater vulnerability

| Records within 50m | 4 |
|---|---|

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 35**

| ID | Location | Summary | Soil / surface | Superficial geology | Bedrock geology |
|---|---|---|---|---|---|
| 1 | On site | Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer | Leaching class: High Infiltration value: >70% Dilution value: >550mm/year | Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data | Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures |
| 2 | On site | Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer | Leaching class: High Infiltration value: >70% Dilution value: >550mm/year | Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data | Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures |
| 3 | On site | Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer | Leaching class: Intermediate Infiltration value: >70% Dilution value: >550mm/year | Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data | Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures |
| 4 | On site | Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer | Leaching class: High Infiltration value: >70% Dilution value: >550mm/year | Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: No Data | Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures |

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

## 5.4 Groundwater vulnerability- soluble rock risk

| Records on site | 0 |
|---|---|

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## 5.5 Groundwater vulnerability- local information

| Records on site | 0 |
|---|---|

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

*This data is sourced from the British Geological Survey and the Environment Agency.*

# Abstractions and Source Protection Zones

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- Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

## 5.6 Groundwater abstractions

| Records within 2000m | 14 |
|---|---|

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

| ID | Location | Details | |
|---|---|---|---|
| A | 499m W | Status: Historical<br>Licence No: 2/27/12/191<br>Details: General Farming & Domestic<br>Direct Source: GROUNDWATERS<br>Point: SPRING<br>Data Type: Point<br>Name: BAIRSTOW<br>Easting: 410250<br>Northing: 418870 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 28/04/1966<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 28/04/1966<br>Version End Date: - |
| A | 499m W | Status: Historical<br>Licence No: 2/27/12/191<br>Details: General Farming & Domestic<br>Direct Source: GROUNDWATERS<br>Point: SPRING - HOLYWELL GREEN<br>Data Type: Point<br>Name: BAIRSTOW<br>Easting: 410250<br>Northing: 418870 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 28/04/1966<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 28/04/1966<br>Version End Date: - |
| - | 1120m SE | Status: Historical<br>Licence No: 2/27/11/058<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: SPRINGCATCHMENT AREA<br>Data Type: Point<br>Name: JOSEPH SYKES BROTHERS<br>Easting: 411400<br>Northing: 417900 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 20/01/1966<br>Version End Date: - |
| - | 1120m SE | Status: Historical<br>Licence No: 2/27/11/058<br>Details: Boiler Feed<br>Direct Source: GROUNDWATERS<br>Point: SPRINGCATCHMENT AREA<br>Data Type: Point<br>Name: JOSEPH SYKES BROTHERS<br>Easting: 411400<br>Northing: 417900 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 20/01/1966<br>Version End Date: - |
| - | 1120m SE | Status: Historical<br>Licence No: 2/27/11/058<br>Details: Boiler Feed<br>Direct Source: GROUNDWATERS<br>Point: SPRING - LINDLEY<br>Data Type: Point<br>Name: CALDERDALE & HUDDERSFIELD NHS TRUST<br>Easting: 411400<br>Northing: 417900 | Annual Volume ($m^3$): 24094<br>Max Daily Volume ($m^3$): 65.5<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 101<br>Version Start Date: 01/04/2008<br>Version End Date: - |

| ID | Location | Details | |
|---|---|---|---|
| - | 1120m SE | Status: Historical<br>Licence No: 2/27/11/058<br>Details: General Use Relating To Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: SPRING - LINDLEY<br>Data Type: Point<br>Name: CALDERDALE & HUDDERSFIELD NHS TRUST<br>Easting: 411400<br>Northing: 417900 | Annual Volume ($m^3$): 24094<br>Max Daily Volume ($m^3$): 65.5<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 101<br>Version Start Date: 01/04/2008<br>Version End Date: - |
| - | 1476m SE | Status: Historical<br>Licence No: 2/27/10/120<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE<br>Data Type: Point<br>Name: JOHN GLADSTONE & COMPANY LIMITED<br>Easting: 411600<br>Northing: 417600 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 21/01/1997<br>Expiry Date: 31/12/2001<br>Issue No: 100<br>Version Start Date: 21/01/1997<br>Version End Date: - |
| - | 1590m NW | Status: Historical<br>Licence No: 2/27/12/323<br>Details: Spray Irrigation - Direct<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE<br>Data Type: Point<br>Name: ELLAND GOLF CLUB<br>Easting: 409700<br>Northing: 420200 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 16/10/1998<br>Expiry Date: 31/10/2008<br>Issue No: 100<br>Version Start Date: 16/10/1998<br>Version End Date: - |
| - | 1590m NW | Status: Historical<br>Licence No: 2/27/12/323<br>Details: Spray Irrigation - Direct<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE - COAL MEASURES - ELLAND<br>Data Type: Point<br>Name: ELLAND GOLF CLUB<br>Easting: 409700<br>Northing: 420200 | Annual Volume ($m^3$): 6750<br>Max Daily Volume ($m^3$): 45<br>Original Application No: -<br>Original Start Date: 16/10/1998<br>Expiry Date: 31/10/2008<br>Issue No: 100<br>Version Start Date: 16/10/1998<br>Version End Date: - |
| - | 1590m NW | Status: Active<br>Licence No: 2/27/12/341<br>Details: Spray Irrigation - Direct<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE - COAL MEASURES - ELLAND<br>Data Type: Point<br>Name: ELLAND GOLF CLUB<br>Easting: 409700<br>Northing: 420200 | Annual Volume ($m^3$): 3,750<br>Max Daily Volume ($m^3$): 45<br>Original Application No: -<br>Original Start Date: 01/04/2009<br>Expiry Date: -<br>Issue No: 1<br>Version Start Date: 01/04/2009<br>Version End Date: - |

| ID | Location | Details | |
|---|---|---|---|
| - | 1783m SE | Status: Historical<br>Licence No: 2/27/11/186<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE-MILLSTONE GRIT-OAKES-HUDDERSFIELD<br>Data Type: Point<br>Name: T E NEWSHOLME LIMITED<br>Easting: 411940<br>Northing: 417420 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 10/06/2000<br>Expiry Date: 31/12/2009<br>Issue No: 1<br>Version Start Date: 10/06/2000<br>Version End Date: - |
| - | 1783m SE | Status: Historical<br>Licence No: 2/27/11/186<br>Details: General Use Relating To Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE - MILLSTONE GRIT- OAKES<br>Data Type: Point<br>Name: T E NEWSHOLME LTD<br>Easting: 411940<br>Northing: 417420 | Annual Volume ($m^3$): 35000<br>Max Daily Volume ($m^3$): 96<br>Original Application No: -<br>Original Start Date: 10/06/2000<br>Expiry Date: 31/12/2009<br>Issue No: 1<br>Version Start Date: 10/06/2000<br>Version End Date: - |
| - | 1935m W | Status: Historical<br>Licence No: 2/27/12/273<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE<br>Data Type: Point<br>Name: CLARIANT UK LIMITED<br>Easting: 408900<br>Northing: 419600 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 19/09/1973<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 22/01/1999<br>Version End Date: - |
| - | 1935m W | Status: Historical<br>Licence No: 2/27/12/273<br>Details: General Use Relating To Secondary Category (Medium Loss)<br>Direct Source: GROUNDWATERS<br>Point: BOREHOLE - MILLSTONE GRIT - STAINLAND<br>Data Type: Point<br>Name: RHODIA UK LTD<br>Easting: 408900<br>Northing: 419600 | Annual Volume ($m^3$): 182000<br>Max Daily Volume ($m^3$): 818<br>Original Application No: -<br>Original Start Date: 19/09/1973<br>Expiry Date: -<br>Issue No: 104<br>Version Start Date: 15/08/2011<br>Version End Date: - |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.7 Surface water abstractions

| Records within 2000m | 4 |
|---|---|

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

| ID | Location | Details | |
|---|---|---|---|
| - | 1935m W | Status: Historical<br>Licence No: 2/27/12/125<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: SURFACE WATER<br>Point: STREAM<br>Data Type: Point<br>Name: CLARIANT UK LIMITED<br>Easting: 408900<br>Northing: 419600 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 100<br>Version Start Date: 22/01/1999<br>Version End Date: - |
| - | 1935m W | Status: Historical<br>Licence No: 2/27/12/125<br>Details: General Use Relating To Secondary Category (Medium Loss)<br>Direct Source: SURFACE WATER<br>Point: STREAM - STAINLAND<br>Data Type: Point<br>Name: RHODIA UK LTD<br>Easting: 408900<br>Northing: 419600 | Annual Volume ($m^3$): 182000<br>Max Daily Volume ($m^3$): 818<br>Original Application No: -<br>Original Start Date: 20/01/1966<br>Expiry Date: -<br>Issue No: 104<br>Version Start Date: 15/08/2011<br>Version End Date: - |
| - | 1979m S | Status: Historical<br>Licence No: 2/27/11/115<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: SURFACE WATER<br>Point: CLAY WOOD BROOK/OAKSCAR RESERVOIR<br>Data Type: Point<br>Name: PARKWOOD MILLS CO LTD<br>Easting: 410400<br>Northing: 416900 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 28/04/1966<br>Expiry Date: -<br>Issue No: 101<br>Version Start Date: 22/04/2002<br>Version End Date: - |

| ID | Location | Details | |
|---|---|---|---|
| - | 1984m S | Status: Historical<br>Licence No: 2/27/11/123<br>Details: General use relating to Secondary Category (Medium Loss)<br>Direct Source: SURFACE WATER<br>Point: CLAY WOOD BROOK-PARKWOOD ROAD-LONGWOOD<br>Data Type: Point<br>Name: PARKWOOD MILLS CO LTD<br>Easting: 410330<br>Northing: 416910 | Annual Volume ($m^3$): -<br>Max Daily Volume ($m^3$): -<br>Original Application No: -<br>Original Start Date: 26/05/1966<br>Expiry Date: -<br>Issue No: 102<br>Version Start Date: 30/08/2002<br>Version End Date: - |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.8 Potable abstractions

| Records within 2000m | 0 |
|---|---|

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.9 Source Protection Zones

| Records within 500m | 1 |
|---|---|

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

Features are displayed on the Abstractions and Source Protection Zones map on **page 37**

| ID | Location | Type | Description |
|---|---|---|---|
| 1 | 311m W | 2 | Outer catchment |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

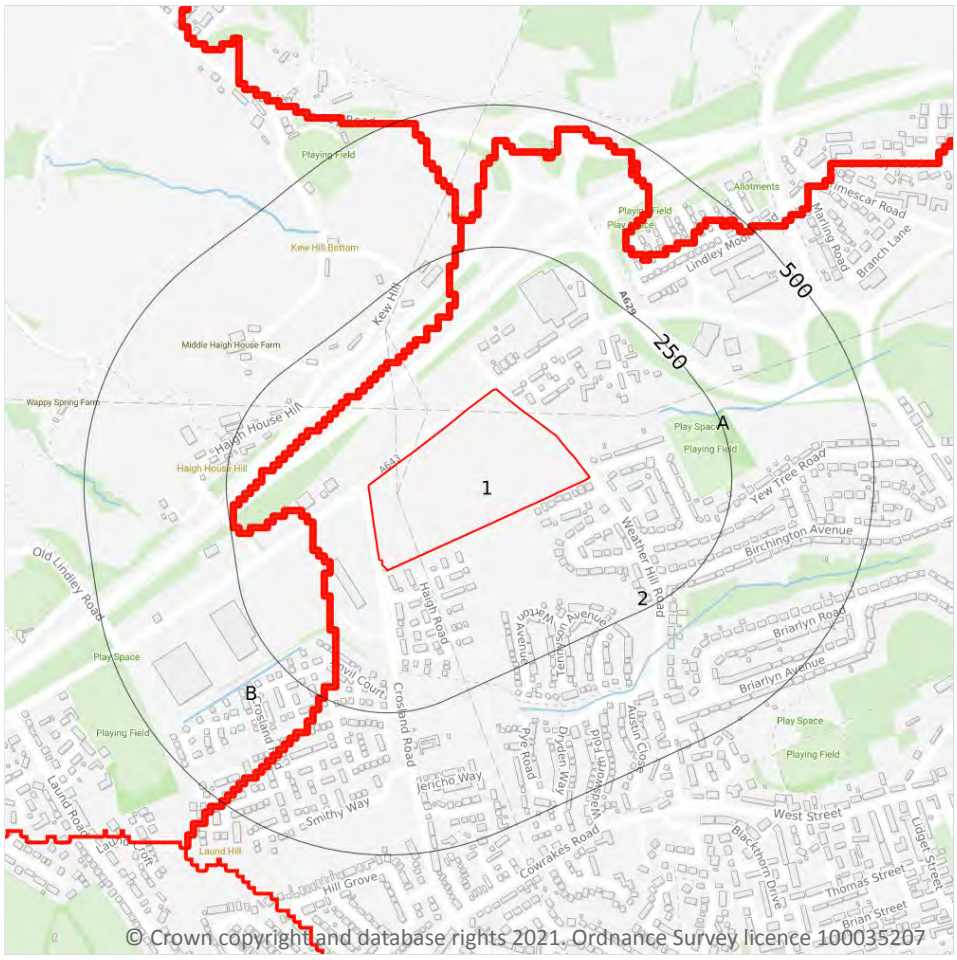
## 5.10 Source Protection Zones (confined aquifer)

| Records within 500m | 0 |
|---|---|

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

# 6 Hydrology




## 6.1 Water Network (OS MasterMap)

| Records within 250m | 2 |
|---|---|

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type of water feature | Ground level | Permanence | Name |
|---|---|---|---|---|---|
| A | 166m NE | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | - |

| ID | Location | Type of water feature | Ground level | Permanence | Name |
|---|---|---|---|---|---|
| B | 202m SW | Inland river not influenced by normal tidal action. | On ground surface | Watercourse contains water year round (in normal circumstances) | - |

*This data is sourced from the Ordnance Survey.*

## 6.2 Surface water features

| **Records within 250m** | **2** |
|---|---|

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 43**

*This data is sourced from the Ordnance Survey.*

## 6.3 WFD Surface water body catchments

| **Records on site** | **1** |
|---|---|

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type | Water body catchment | Water body ID | Operational catchment | Management catchment |
|---|---|---|---|---|---|---|
| **2** | **On site** | **River WB catchment** | **Colne from River Holme to River Calder** | **GB104027062550** | **Colne and Holme** | **Aire and Calder** |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 6.4 WFD Surface water bodies

| **Records identified** | **1** |
|---|---|

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the

water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Type | Name | Water body ID | Overall rating | Chemical rating | Ecological rating | Year |
|---|---|---|---|---|---|---|---|---|
| - | 573m NE | River | Colne from River Holme to River Calder | GB104027062550 | Moderate | Good | Moderate | 2016 |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 6.5 WFD Groundwater bodies

| **Records on site** | **1** |
|---|---|

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 43**

| ID | Location | Name | Water body ID | Overall rating | Chemical rating | Quantitative | Year |
|---|---|---|---|---|---|---|---|
| **1** | **On site** | **Aire & Calder Carb Limestone / Millstone Grit / Coal Measures.** | **GB40402G700400** | **Poor** | **Poor** | **Good** | **2015** |

*This data is sourced from the Environment Agency and Natural Resources Wales.*

# 7 River and coastal flooding

## 7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

| Records within 50m | 0 |
|---|---|

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.2 Historical Flood Events

| Records within 250m | 0 |
|---|---|

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.3 Flood Defences

| Records within 250m | 0 |
|---|---|

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.4 Areas Benefiting from Flood Defences

| Records within 250m | 0 |
|---|---|

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.5 Flood Storage Areas

| Records within 250m | 0 |
|---|---|

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

# River and coastal flooding - Flood Zones

## 7.6 Flood Zone 2

| Records within 50m | 0 |
|---|---|

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 7.7 Flood Zone 3

| Records within 50m | 0 |
|---|---|

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

# 8 Surface water flooding

## 8.1 Surface water flooding

| | |
|---|---|
| **Highest risk on site** | **Negligible** |
| **Highest risk within 50m** | **Negligible** |

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

| Return period | Maximum modelled depth |
|---|---|
| 1 in 1000 year | Negligible |
| 1 in 250 year | Negligible |
| 1 in 100 year | Negligible |
| 1 in 30 year | Negligible |

*This data is sourced from Ambiental Risk Analytics.*

# 9 Groundwater flooding




Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

## 9.1 Groundwater flooding

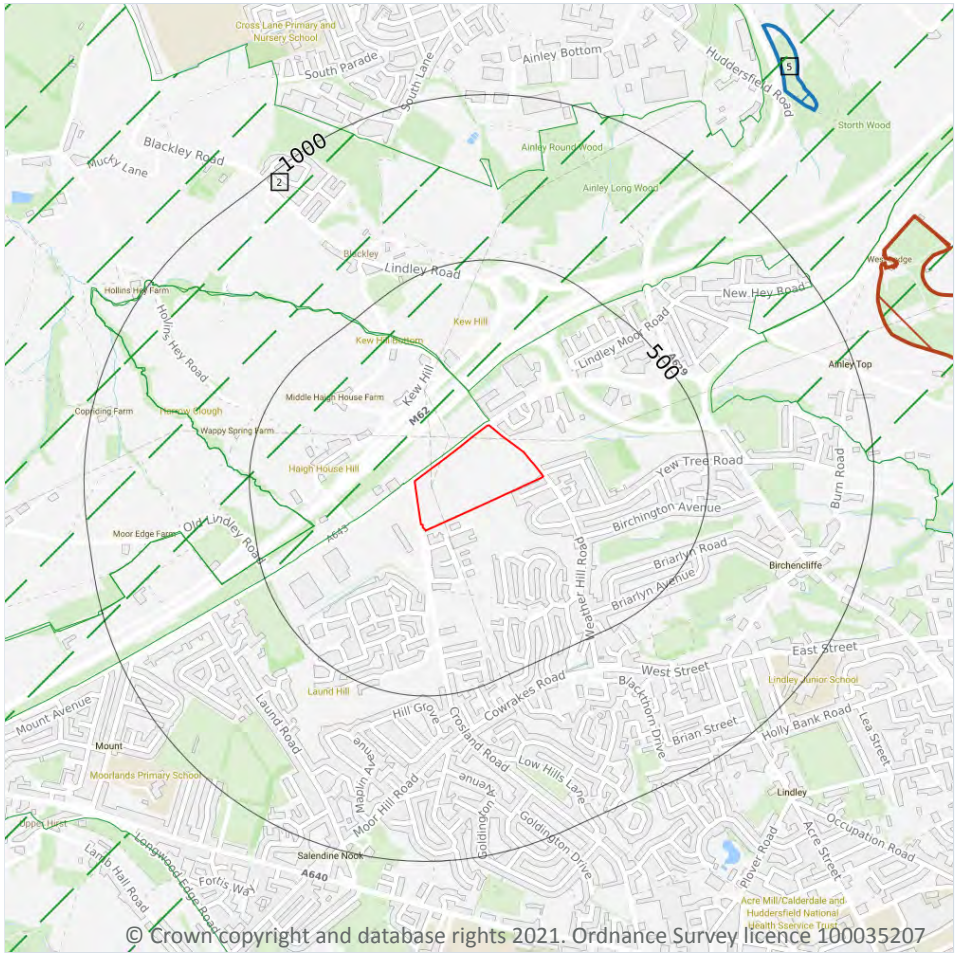
| | |
|---|---|
| **Highest risk on site** | **Negligible** |
| **Highest risk within 50m** | **Negligible** |

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 50**

*This data is sourced from Ambiental Risk Analytics.*

# 10 Environmental designations




## 10.1 Sites of Special Scientific Interest (SSSI)

| Records within 2000m | 1 |
|---|---|

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 51**

| ID | Location | Name | Data source |
|---|---|---|---|
| 5 | 1348m NE | Elland Bypass Cutting | Natural England |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.2 Conserved wetland sites (Ramsar sites)

| Records within 2000m | 0 |
|---|---|

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.3 Special Areas of Conservation (SAC)

| Records within 2000m | 0 |
|---|---|

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.4 Special Protection Areas (SPA)

| Records within 2000m | 0 |
|---|---|

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.5 National Nature Reserves (NNR)

| Records within 2000m | 0 |
|---|---|

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.6 Local Nature Reserves (LNR)

| Records within 2000m | 0 |
|---|---|

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.7 Designated Ancient Woodland

| Records within 2000m | 4 |
|---|---|

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 51**

| ID | Location | Name | Woodland Type |
|---|---|---|---|
| 4 | 1132m NE | Gernhill Wood | Ancient Replanted Woodland |
| - | 1448m E | Grimescar Wood | Ancient Replanted Woodland |
| - | 1476m E | Grimescar Wood | Ancient Replanted Woodland |
| - | 1772m SW | Unknown | Ancient Replanted Woodland |

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.8 Biosphere Reserves

| Records within 2000m | 0 |
|---|---|

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.9 Forest Parks

| Records within 2000m | 0 |
|---|---|

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

*This data is sourced from the Forestry Commission.*

## 10.10 Marine Conservation Zones

| Records within 2000m | 0 |
|---|---|

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 10.11 Green Belt

| Records within 2000m | 3 |
|---|---|

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on **page 51**

| ID | Location | Name | Local Authority name |
|---|---|---|---|
| 1 | 11m NW | South and West Yorkshire | Kirklees |
| 2 | 118m NW | South and West Yorkshire | Calderdale |
| 3 | 547m E | South and West Yorkshire | Kirklees |

*This data is sourced from the Ministry of Housing, Communities and Local Government.*

## 10.12 Proposed Ramsar sites

| Records within 2000m | 0 |
|---|---|

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.13 Possible Special Areas of Conservation (pSAC)

| Records within 2000m | 0 |
|---|---|

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

*This data is sourced from Natural England and Natural Resources Wales.*

## 10.14 Potential Special Protection Areas (pSPA)

| Records within 2000m | 0 |
|---|---|

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

*This data is sourced from Natural England.*

## 10.15 Nitrate Sensitive Areas

| Records within 2000m | 0 |
|---|---|

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

*This data is sourced from Natural England.*

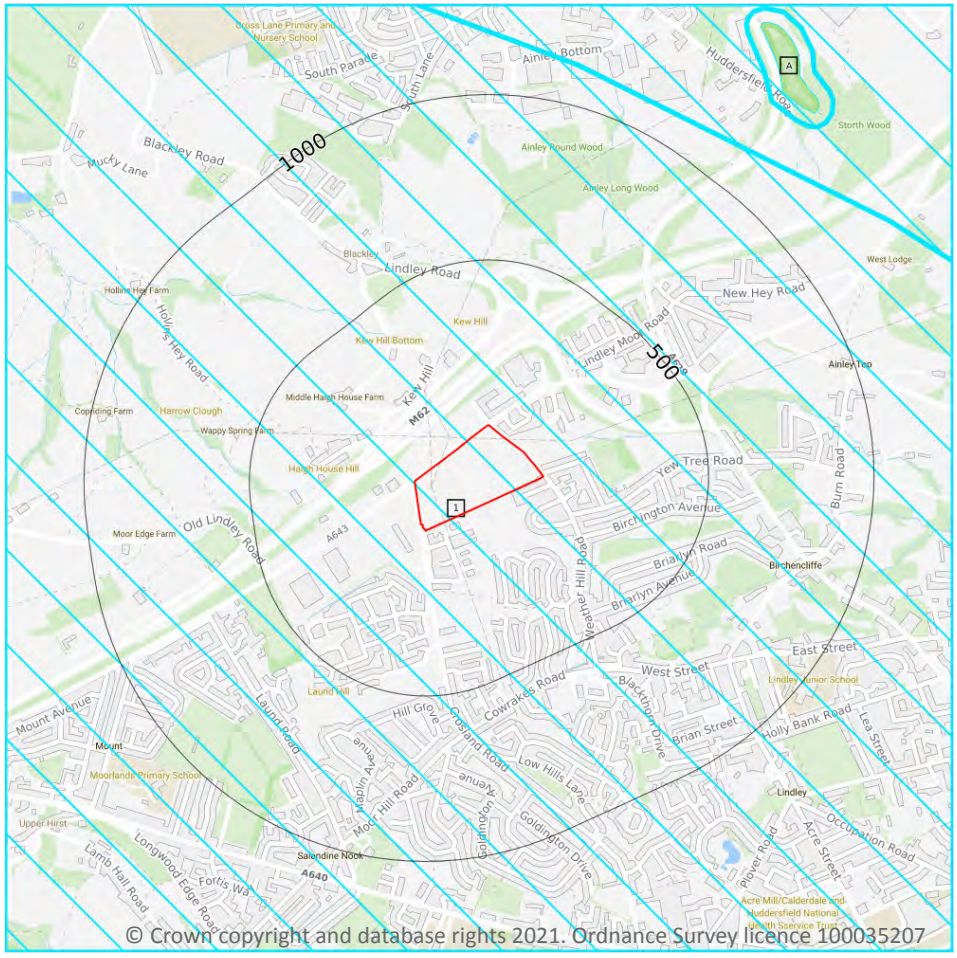
## 10.16 Nitrate Vulnerable Zones

| Records within 2000m | 0 |
|---|---|

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

*This data is sourced from Natural England and Natural Resources Wales.*

# SSSI Impact Zones and Units




Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

## 10.17 SSSI Impact Risk Zones

| Records on site | 1 |
|---|---|

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 56**

| ID | Location | Type of developments requiring consultation |
|---|---|---|
| **1** | **On site** | **Infrastructure - Airports, helipads and other aviation proposals.<br>Minerals, Oil and Gas - Oil & gas exploration/extraction.<br>Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m².<br>Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion** |

*This data is sourced from Natural England.*

## 10.18 SSSI Units

| **Records within 2000m** | **1** |
|---|---|

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

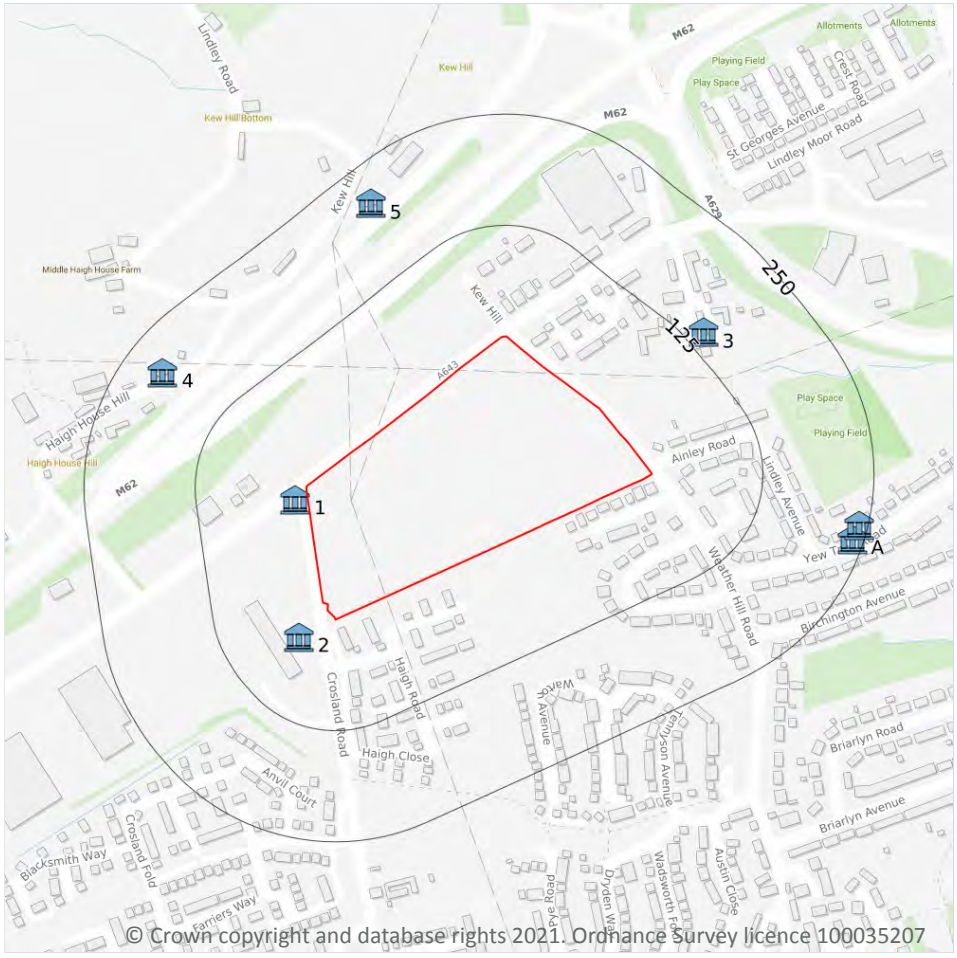
Features are displayed on the SSSI Impact Zones and Units map on **page 56**

ID: A
Location: 1348m NE
SSSI name: Elland Bypass Cutting
Unit name: Elland Bypass Cutting
Broad habitat: Earth Heritage
Condition: Favourable
Reportable features:

| Feature name | Feature condition | Date of assessment |
|---|---|---|
| ED - Westphalian | Favourable | 11/02/2009 |

*This data is sourced from Natural England and Natural Resources Wales.*

# 11 Visual and cultural designations




Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

## 11.1 World Heritage Sites

| Records within 250m | 0 |
|---|---|

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.2 Area of Outstanding Natural Beauty

| Records within 250m | 0 |
|---|---|

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

*This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.*

## 11.3 National Parks

| Records within 250m | 0 |
|---|---|

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

*This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.*

## 11.4 Listed Buildings

| Records within 250m | 7 |
|---|---|

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 58**

| ID | Location | Name | Grade | Reference Number | Listed date |
|---|---|---|---|---|---|
| 1 | 14m W | C18 Guide Stoop (Signpost) At Junction Of Crosland Road And Lindley Moor Road, Lindley, Kirklees, HD3 | II* | 1403442 | 09/08/2011 |
| 2 | 44m SW | Haigh Cross, Lindley, Kirklees, HD3 | II | 1134307 | 03/03/1952 |
| 3 | 145m NE | Nos 10, 11 And 12 And Barn Adjoining On North Side, Lindley, Kirklees, HD3 | II | 1266921 | 29/09/1978 |
| 4 | 206m NW | 7 And 9, Haigh House Hill, Lindley, Kirklees, HD3 | II | 1134216 | 29/09/1978 |
| 5 | 208m NW | 1 And 1A, Kew Hill, Lindley, Kirklees, HD3 | II | 1134294 | 29/09/1978 |

| ID | Location | Name | Grade | Reference Number | Listed date |
|---|---|---|---|---|---|
| A | 237m E | 25 Yew Tree Road, Lindley, Kirklees, HD3 | II | 1432654 | 29/09/1978 |
| A | 240m E | Yew Tree, Lindley, Kirklees, HD3 | II | 1432672 | 29/09/1978 |

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.5 Conservation Areas

| Records within 250m | 0 |
|---|---|

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

## 11.6 Scheduled Ancient Monuments

| Records within 250m | 0 |
|---|---|

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

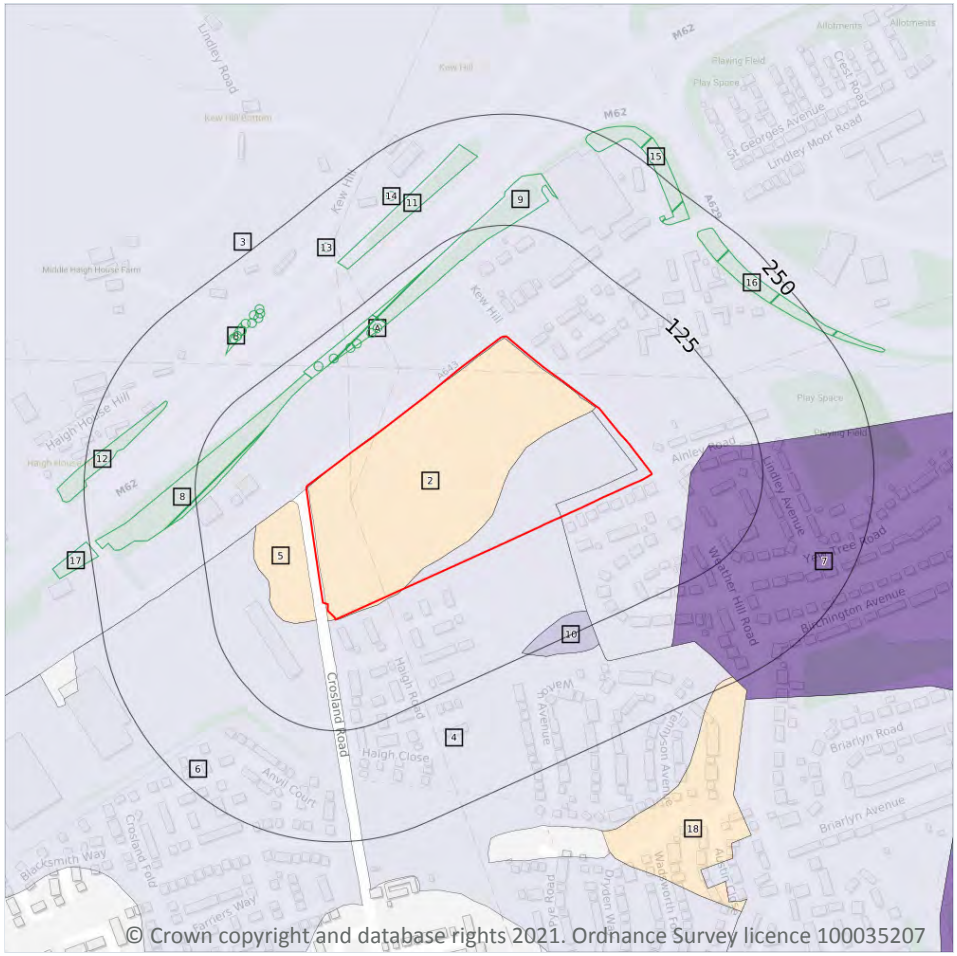
## 11.7 Registered Parks and Gardens

| Records within 250m | 0 |
|---|---|

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

*This data is sourced from Historic England, Cadw and Historic Environment Scotland.*

# 12 Agricultural designations




Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

## 12.1 Agricultural Land Classification

| Records within 250m | 8 |
|---|---|

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 61**

| ID | Location | Classification | Description |
|---|---|---|---|
| **2** | **On site** | **Grade 3b** | **Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.** |

| ID | Location | Classification | Description |
|---|---|---|---|
| **3** | **On site** | **Grade 4** | **Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.** |
| **4** | **On site** | **Grade 4** | **Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.** |
| 5 | 10m W | Grade 3b | Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year. |
| 6 | 16m SW | Grade 4 | Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land. |
| 7 | 44m E | Urban | - |
| 10 | 103m SE | Grade 5 | Very poor quality agricultural land. Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops. |
| 18 | 243m SE | Grade 3b | Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year. |

*This data is sourced from Natural England.*

## 12.2 Open Access Land

| **Records within 250m** | **0** |
|---|---|

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

*This data is sourced from Natural England and Natural Resources Wales.*

## 12.3 Tree Felling Licences

| **Records within 250m** | **26** |
|---|---|

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

Features are displayed on the Agricultural designations map on **page 61**

| ID | Location | Description | Reference | Application date |
|---|---|---|---|---|
| 8 | 77m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| A | 89m NW | Single Tree | 018/366/15-16 | - |
| A | 89m NW | Single Tree | 018/366/15-16 | - |
| A | 89m NW | Single Tree | 018/366/15-16 | - |
| A | 90m NW | Single Tree | 018/366/15-16 | - |
| 9 | 91m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| A | 91m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| A | 92m NW | Single Tree | 018/366/15-16 | - |
| A | 95m NW | Single Tree | 018/366/15-16 | - |
| 11 | 166m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| B | 173m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| B | 177m NW | Single Tree | 018/366/15-16 | - |
| B | 177m NW | Single Tree | 018/366/15-16 | - |
| B | 178m NW | Single Tree | 018/366/15-16 | - |
| B | 179m NW | Single Tree | 018/366/15-16 | - |
| B | 179m NW | Single Tree | 018/366/15-16 | - |
| B | 182m NW | Single Tree | 018/366/15-16 | - |
| B | 182m NW | Single Tree | 018/366/15-16 | - |
| 12 | 182m NW | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| B | 184m NW | Single Tree | 018/366/15-16 | - |
| B | 186m NW | Single Tree | 018/366/15-16 | - |
| 13 | 196m NW | Single Tree | 018/366/15-16 | - |
| 14 | 196m NW | Single Tree | 018/366/15-16 | - |

| ID | Location | Description | Reference | Application date |
|---|---|---|---|---|
| 15 | 211m NE | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| 16 | 211m NE | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |
| 17 | 242m W | Selective Fell/Thin (Unconditional) | 018/366/15-16 | - |

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

| **Records within 250m** | **0** |
|---|---|

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

*This data is sourced from Natural England.*

## 12.5 Countryside Stewardship Schemes

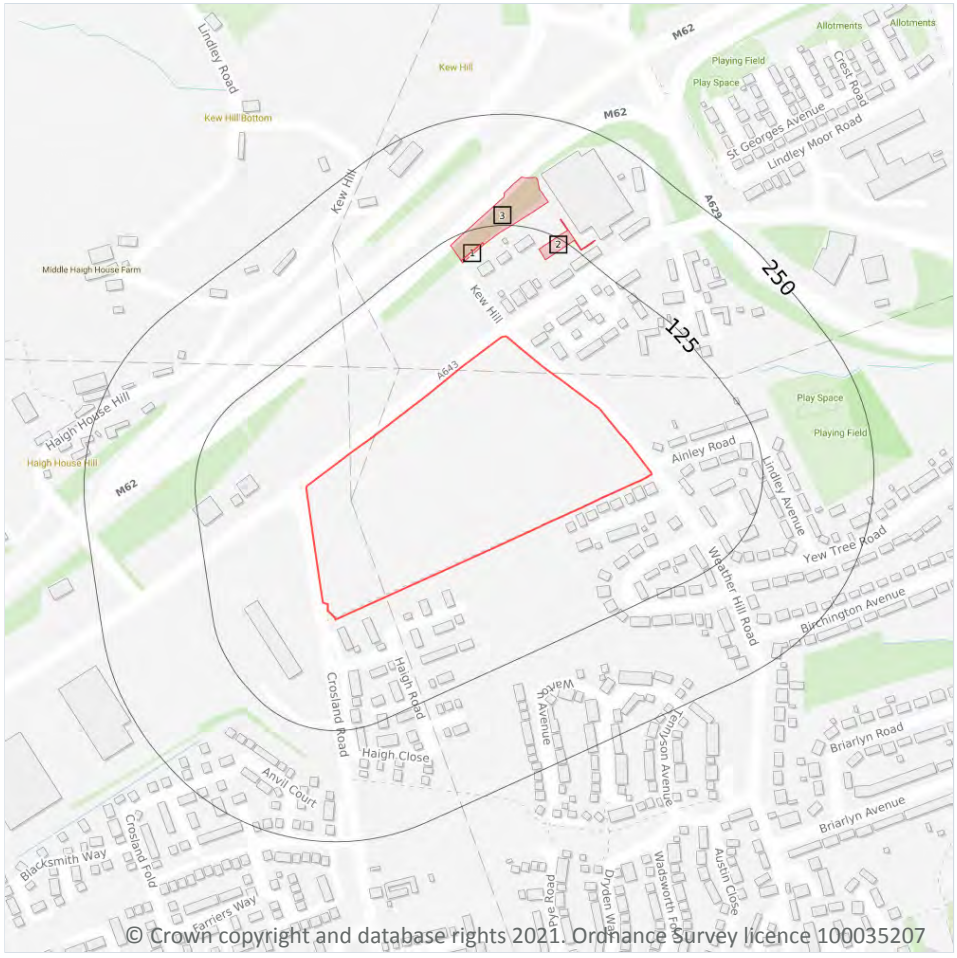
| **Records within 250m** | **1** |
|---|---|

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

| Location | Reference | Scheme | Start Date | End Date |
|---|---|---|---|---|
| 221m NW | 646742 | Countryside Stewardship (Middle Tier) | 01/01/2019 | 31/12/2023 |

*This data is sourced from Natural England.*

# 13 Habitat designations




Site Outline

Search buffers in metres (m)

- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders

Habitat Networks

- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

## 13.1 Priority Habitat Inventory

| Records within 250m | 3 |
|---|---|

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 65**

| ID | Location | Main Habitat | Other habitats |
|---|---|---|---|
| 1 | 94m NW | Deciduous woodland | Main habitat: DWOOD (INV > 50%) |
| 2 | 97m NE | Deciduous woodland | Main habitat: DWOOD (INV > 50%) |
| 3 | 97m NW | Deciduous woodland | Main habitat: DWOOD (INV > 50%) |

*This data is sourced from Natural England.*

## 13.2 Habitat Networks

| Records within 250m | 0 |
|---|---|

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

*This data is sourced from Natural England.*

## 13.3 Open Mosaic Habitat

| Records within 250m | 0 |
|---|---|

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

*This data is sourced from Natural England.*

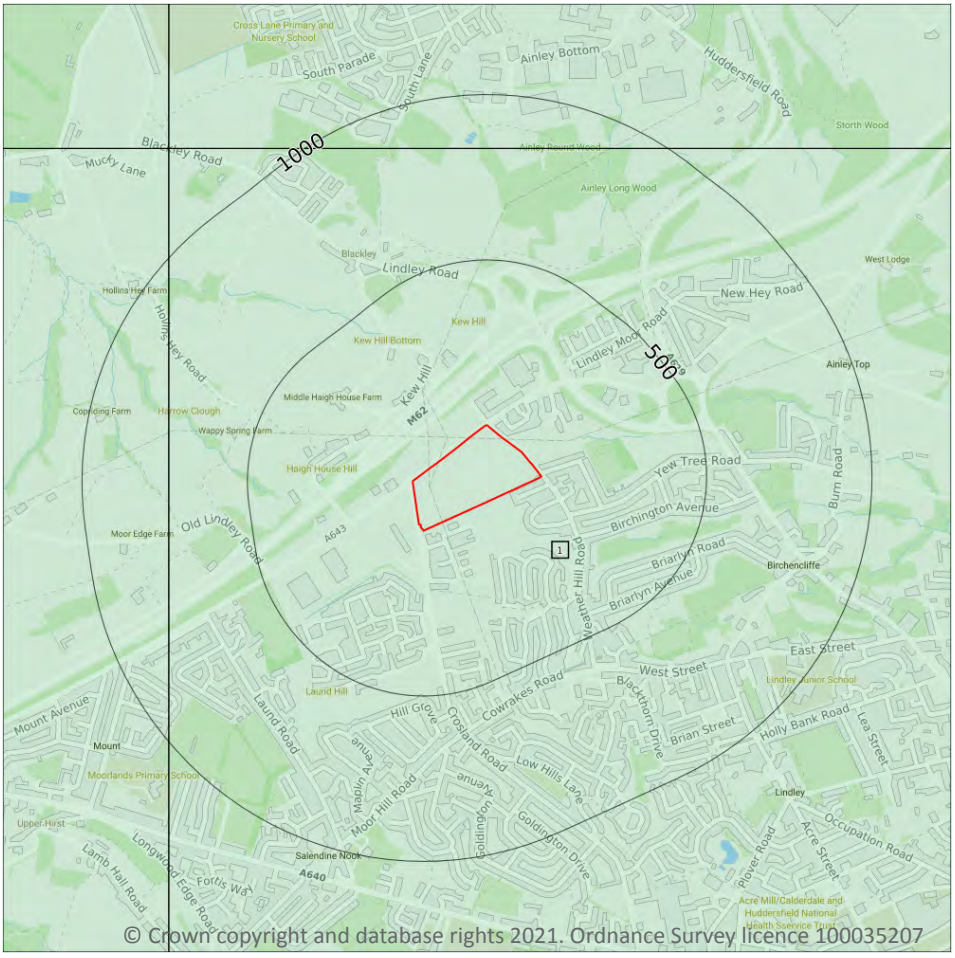
## 13.4 Limestone Pavement Orders

| Records within 250m | 0 |
|---|---|

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

*This data is sourced from Natural England.*

# 14 Geology 1:10,000 scale - Availability




## 14.1 10k Availability

| Records within 500m | 1 |
|---|---|

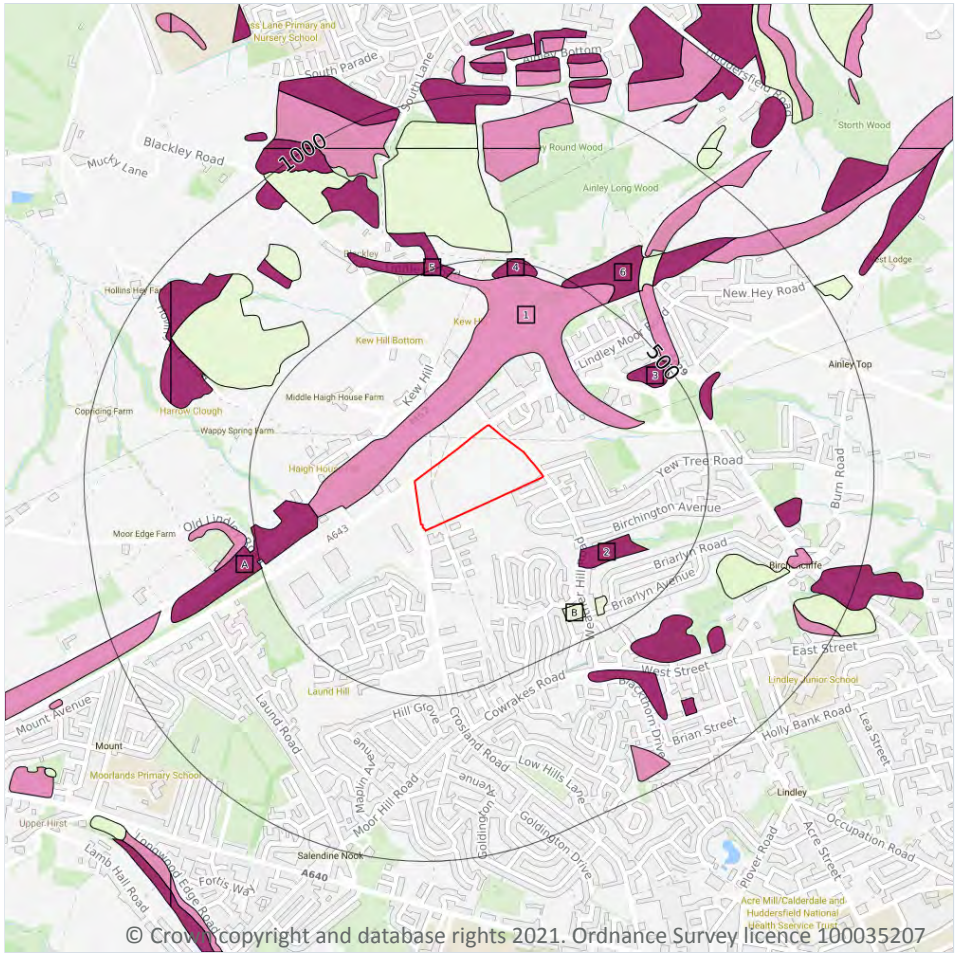
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 67**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|---|---|---|---|---|---|---|
| **1** | **On site** | **Full** | **Full** | **Full** | **Full** | **SE11NW** |

*This data is sourced from the British Geological Survey.*

# Geology 1:10,000 scale - Artificial and made ground




Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

## 14.2 Artificial and made ground (10k)

| Records within 500m | 9 |
|---|---|

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 68**

| ID | Location | LEX Code | Description | Rock description |
|---|---|---|---|---|
| 1 | 76m NW | WGR-VOID | Worked Ground (Undivided) | Void |
| 2 | 248m SE | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| A | 305m W | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| 3 | 384m NE | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |

| ID | Location | LEX Code | Description | Rock description |
|---|---|---|---|---|
| B | 387m SE | WMGR-ARTDP | Infilled Ground | Artificial Deposit |
| B | 401m SE | WMGR-ARTDP | Infilled Ground | Artificial Deposit |
| 4 | 444m N | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| 5 | 464m N | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |
| 6 | 474m NE | MGR-ARTDP | Made Ground (Undivided) | Artificial Deposit |

*This data is sourced from the British Geological Survey.*

# Geology 1:10,000 scale - Superficial

## 14.3 Superficial geology (10k)

| Records within 500m | 0 |
|---|---|

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

*This data is sourced from the British Geological Survey.*

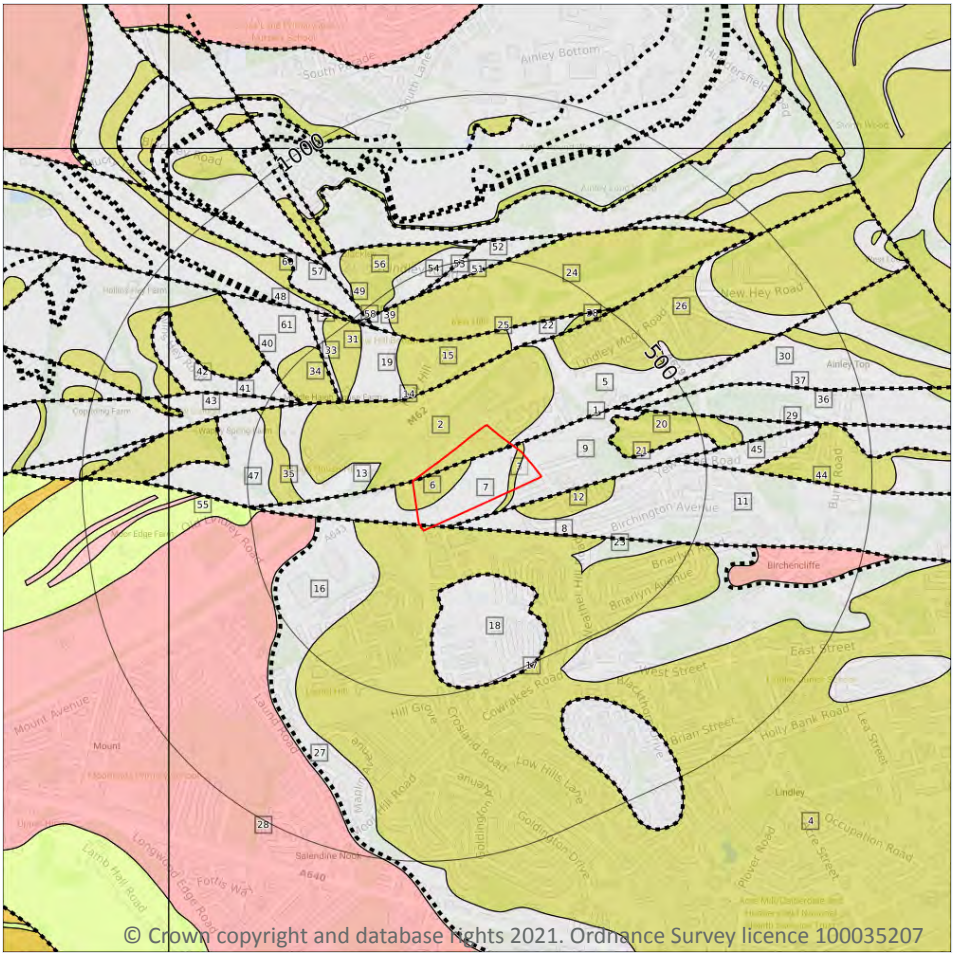
## 14.4 Landslip (10k)

| Records within 500m | 0 |
|---|---|

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*

# Geology 1:10,000 scale - Bedrock




Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

## 14.5 Bedrock geology (10k)

| Records within 500m | 40 |
|---|---|

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 71**

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| 2 | On site | EF-SDST | Elland Flags - Sandstone | Langsettian Sub-age |
| 3 | On site | FEYR-SDST | 48 Yard Rock - Sandstone | Langsettian Sub-age |
| 4 | On site | SBF-SDST | Soft Bed Flags - Sandstone | Langsettian Sub-age |

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| **5** | **On site** | **PLCM-MDSS** | **Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone** | **Langsettian Sub-age** |
| **6** | **On site** | **EYR-SDST** | **80 Yard Rock - Sandstone** | **Langsettian Sub-age** |
| **7** | **On site** | **PLCM-MDSS** | **Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone** | **Langsettian Sub-age** |
| **9** | **On site** | **PLCM-MDSS** | **Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone** | **Langsettian Sub-age** |
| 11 | 20m SE | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 12 | 49m SE | STNR-SDST | Stanningley Rock - Sandstone | Langsettian Sub-age |
| 13 | 111m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 15 | 170m NW | EF-SDST | Elland Flags - Sandstone | Langsettian Sub-age |
| 16 | 170m SW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 18 | 184m SE | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 19 | 206m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 20 | 230m NE | STNR-SDST | Stanningley Rock - Sandstone | Langsettian Sub-age |
| 22 | 238m N | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 23 | 253m SE | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 24 | 272m N | EF-SDST | Elland Flags - Sandstone | Langsettian Sub-age |
| 26 | 291m NE | EF-SDST | Elland Flags - Sandstone | Langsettian Sub-age |
| 28 | 305m W | RR-SDST | Rough Rock - Sandstone | Yeadonian Sub-age |
| 30 | 306m NE | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 31 | 311m NW | EYR-SDST | 80 Yard Rock - Sandstone | Langsettian Sub-age |
| 32 | 320m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 34 | 325m NW | EYR-SDST | 80 Yard Rock - Sandstone | Langsettian Sub-age |
| 35 | 330m W | EYR-SDST | 80 Yard Rock - Sandstone | Langsettian Sub-age |

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| 36 | 348m NE | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 38 | 361m NE | EF-SDST | Elland Flags - Sandstone | Langsettian Sub-age |
| 39 | 384m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 42 | 406m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 43 | 406m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 45 | 408m E | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 47 | 412m W | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 50 | 440m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 52 | 441m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 54 | 442m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 55 | 456m W | MG-MDSS | Millstone Grit Group [see Also Migr] - Mudstone, Siltstone And Sandstone | Namurian Age |
| 56 | 463m NW | EYR-SDST | 80 Yard Rock - Sandstone | Langsettian Sub-age |
| 57 | 477m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |
| 60 | 485m NW | STNR-SDST | Stanningley Rock - Sandstone | Langsettian Sub-age |
| 61 | 487m NW | PLCM-MDSS | Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone | Langsettian Sub-age |

*This data is sourced from the British Geological Survey.*

## 14.6 Bedrock faults and other linear features (10k)

| **Records within 500m** | **21** |
|---|---|

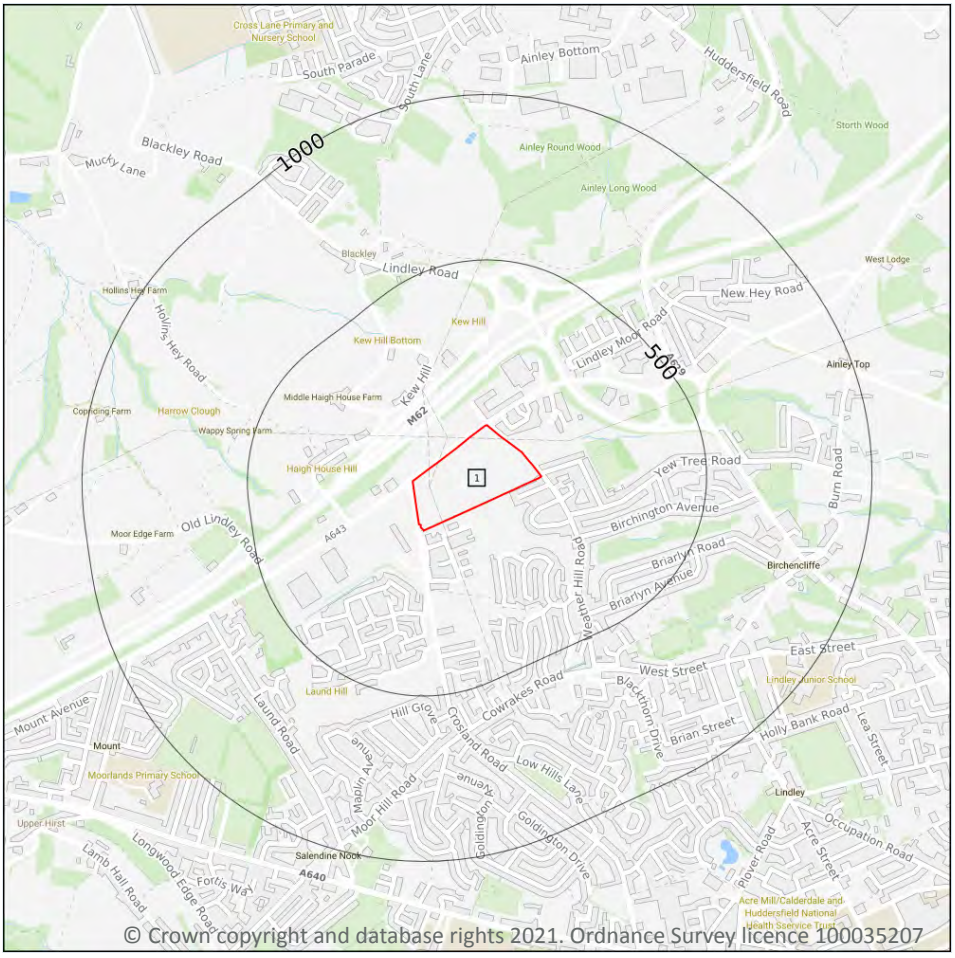
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 71**

| ID | Location | Category | Description |
|---|---|---|---|
| **1** | **On site** | **FAULT** | **Normal fault, inferred; crossmarks on downthrow side** |
| **8** | **On site** | **FAULT** | **Normal fault, inferred; crossmarks on downthrow side** |
| 10 | 20m SE | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 14 | 170m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 17 | 184m SE | ROCK | Coal seam, inferred |
| 21 | 230m NE | ROCK | Coal seam, inferred |
| 25 | 272m N | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 27 | 296m W | FOSSIL_HORIZON | Fossil horizon, marine band |
| 29 | 306m NE | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 33 | 325m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 37 | 348m NE | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 40 | 406m NW | FAULT | Normal fault, inferred; downthrow not specified |
| 41 | 406m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 44 | 408m E | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 46 | 408m E | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 48 | 440m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 49 | 440m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 51 | 441m NW | FAULT | Normal fault, inferred; downthrow not specified |
| 53 | 442m NW | FAULT | Normal fault, inferred; crossmarks on downthrow side |
| 58 | 477m NW | FAULT | Normal fault, inferred; downthrow not specified |
| 59 | 485m NW | ROCK | Coal seam, inferred |

*This data is sourced from the British Geological Survey.*

# 15 Geology 1:50,000 scale - Availability




## 15.1 50k Availability

| Records within 500m | 1 |
|---|---|

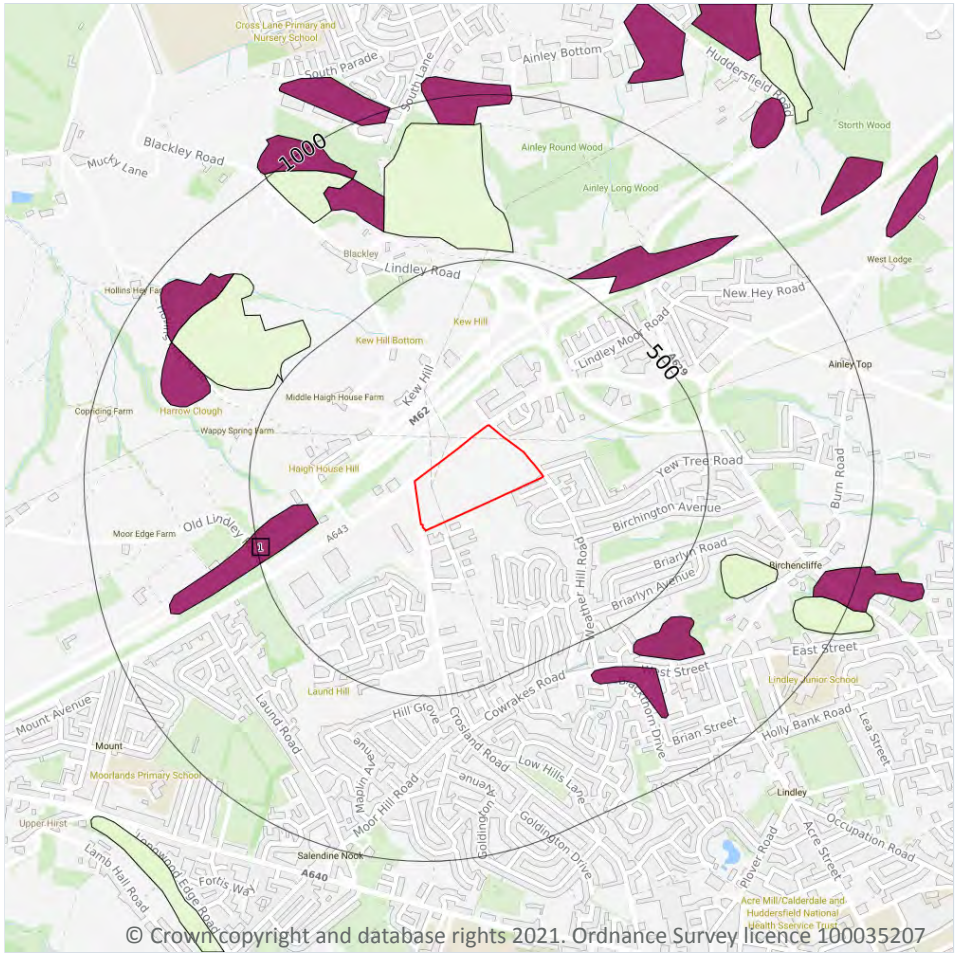
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 75**

| ID | Location | Artificial | Superficial | Bedrock | Mass movement | Sheet No. |
|---|---|---|---|---|---|---|
| **1** | **On site** | **Full** | **Full** | **Full** | **Full** | **EW077_huddersfield_v4** |

*This data is sourced from the British Geological Survey.*

# Geology 1:50,000 scale - Artificial and made ground




Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

## 15.2 Artificial and made ground (50k)

| Records within 500m | 1 |
|---|---|

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 76**

| ID | Location | LEX Code | Description | Rock description |
|---|---|---|---|---|
| 1 | 307m W | MGR-ARTDP | MADE GROUND (UNDIVIDED) | ARTIFICIAL DEPOSIT |

*This data is sourced from the British Geological Survey.*

## 15.3 Artificial ground permeability (50k)

| Records within 50m | 0 |
|---|---|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

# Geology 1:50,000 scale - Superficial

## 15.4 Superficial geology (50k)

| Records within 500m | 0 |
|---|---|

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

*This data is sourced from the British Geological Survey.*

## 15.5 Superficial permeability (50k)

| Records within 50m | 0 |
|---|---|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

## 15.6 Landslip (50k)

| Records within 500m | 0 |
|---|---|

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*

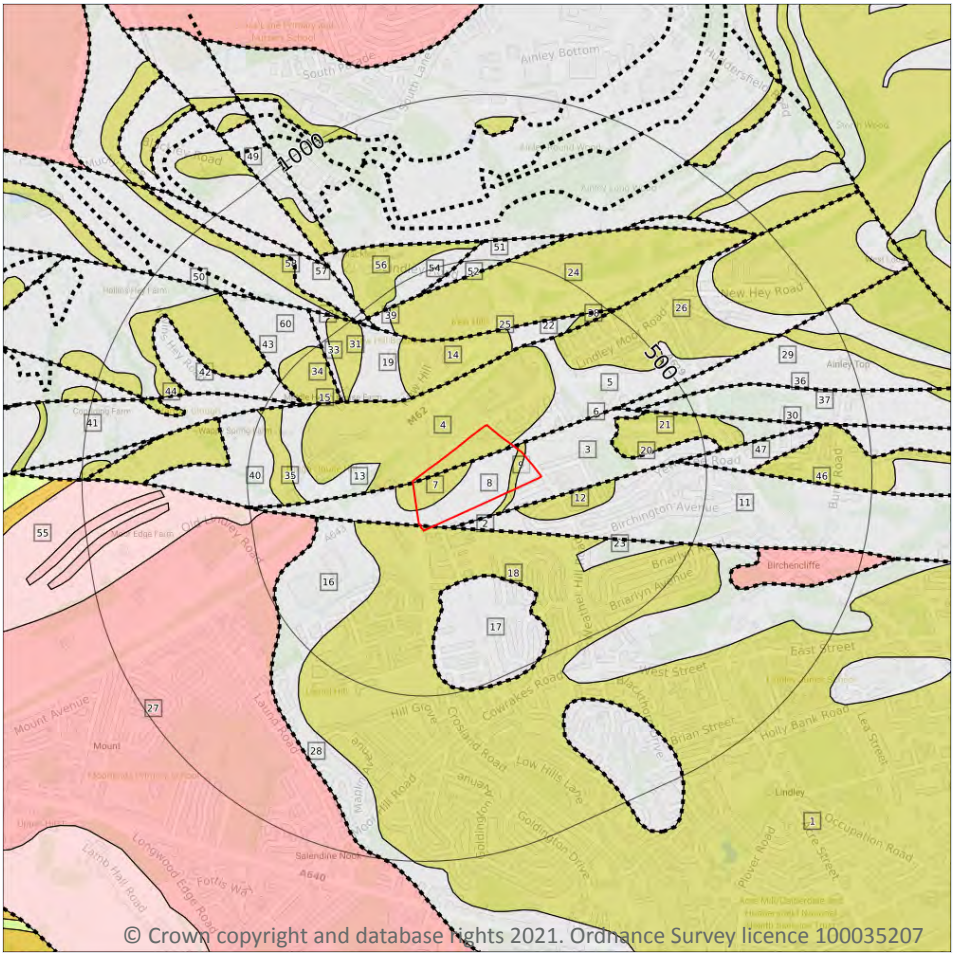
## 15.7 Landslip permeability (50k)

| Records within 50m | 0 |
|---|---|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

*This data is sourced from the British Geological Survey.*

# Geology 1:50,000 scale - Bedrock




Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

## 15.8 Bedrock geology (50k)

| Records within 500m | 40 |
|---|---|

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 79**

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| 1 | On site | SBF-SDST | SOFT BED FLAGS - SANDSTONE | WESTPHALIAN |
| 3 | On site | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 4 | On site | EF-SDST | ELLAND FLAGS - SANDSTONE | WESTPHALIAN |

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| **5** | **On site** | **PLCM-MDSS** | **PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE** | **WESTPHALIAN** |
| **7** | **On site** | **EYR-SDST** | **80 YARD ROCK - SANDSTONE** | **WESTPHALIAN** |
| **8** | **On site** | **PLCM-MDSS** | **PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE** | **WESTPHALIAN** |
| **9** | **On site** | **FEYR-SDST** | **48 YARD ROCK - SANDSTONE** | **WESTPHALIAN** |
| 11 | 26m SE | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 12 | 54m SE | STNR-SDST | STANNINGLEY ROCK - SANDSTONE | WESTPHALIAN |
| 13 | 112m W | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 14 | 165m NW | EF-SDST | ELLAND FLAGS - SANDSTONE | WESTPHALIAN |
| 16 | 169m SW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 17 | 186m SE | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 19 | 203m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 21 | 234m NE | STNR-SDST | STANNINGLEY ROCK - SANDSTONE | WESTPHALIAN |
| 22 | 238m N | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 23 | 259m SE | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 24 | 274m N | EF-SDST | ELLAND FLAGS - SANDSTONE | WESTPHALIAN |
| 26 | 294m NE | EF-SDST | ELLAND FLAGS - SANDSTONE | WESTPHALIAN |
| 27 | 303m W | RR-SDST | ROUGH ROCK - SANDSTONE | NAMURIAN |
| 29 | 306m NE | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 31 | 310m NW | EYR-SDST | 80 YARD ROCK - SANDSTONE | WESTPHALIAN |
| 32 | 314m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 34 | 321m NW | EYR-SDST | 80 YARD ROCK - SANDSTONE | WESTPHALIAN |
| 35 | 322m W | EYR-SDST | 80 YARD ROCK - SANDSTONE | WESTPHALIAN |

| ID | Location | LEX Code | Description | Rock age |
|---|---|---|---|---|
| 37 | 346m NE | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 38 | 364m NE | EF-SDST | ELLAND FLAGS - SANDSTONE | WESTPHALIAN |
| 39 | 381m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 40 | 396m W | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 41 | 400m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 42 | 400m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 47 | 408m E | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 48 | 437m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 51 | 439m N | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 54 | 442m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 55 | 455m W | ROSSE-MDSI | ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE | NAMURIAN |
| 56 | 463m NW | EYR-SDST | 80 YARD ROCK - SANDSTONE | WESTPHALIAN |
| 57 | 475m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |
| 58 | 483m NW | STNR-SDST | STANNINGLEY ROCK - SANDSTONE | WESTPHALIAN |
| 60 | 486m NW | PLCM-MDSS | PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE | WESTPHALIAN |

*This data is sourced from the British Geological Survey.*

## 15.9 Bedrock permeability (50k)

| **Records within 50m** | **5** |
|---|---|

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

| Location | Flow type | Maximum permeability | Minimum permeability |
|---|---|---|---|
| **On site** | **Fracture** | **High** | **Moderate** |
| **On site** | **Fracture** | **High** | **Moderate** |
| **On site** | **Fracture** | **High** | **Moderate** |
| **On site** | **Fracture** | **High** | **Moderate** |
| **On site** | **Fracture** | **High** | **Low** |

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

| **Records within 500m** | **20** |
|---|---|

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

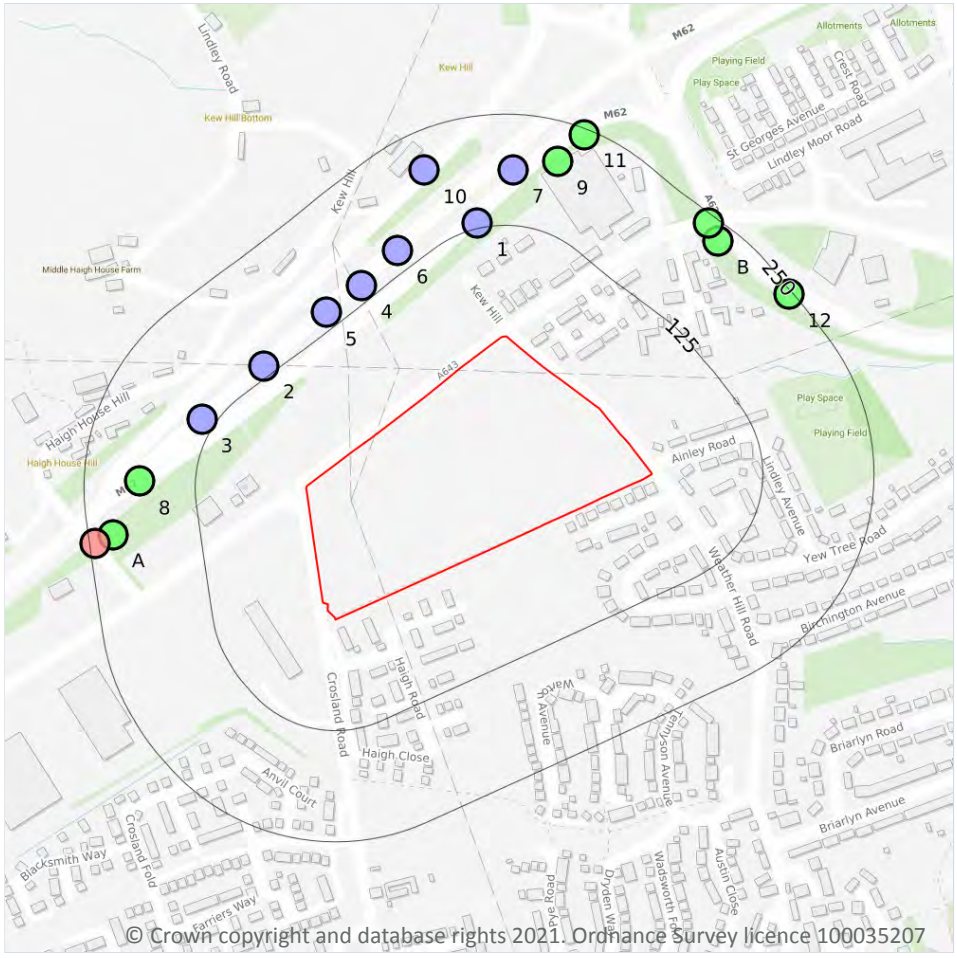
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 79**

| ID | Location | Category | Description |
|---|---|---|---|
| **2** | **On site** | **FAULT** | **Fault, inferred** |
| **6** | **On site** | **FAULT** | **Fault, inferred** |
| 10 | 26m SE | FAULT | Fault, inferred |
| 15 | 165m NW | FAULT | Fault, inferred |
| 18 | 186m SE | ROCK | Coal seam, inferred |
| 20 | 234m NE | ROCK | Coal seam, inferred |
| 25 | 274m N | FAULT | Fault, inferred |
| 28 | 303m W | FOSSIL_HORIZON | Marine band |
| 30 | 306m NE | FAULT | Fault, inferred |
| 33 | 321m NW | FAULT | Fault, inferred |
| 36 | 346m NE | FAULT | Fault, inferred |
| 43 | 400m NW | FAULT | Fault, inferred |
| 44 | 400m NW | FAULT | Fault, inferred |
| 45 | 408m E | FAULT | Fault, inferred |
| 46 | 408m E | FAULT | Fault, inferred |

| ID | Location | Category | Description |
|---|---|---|---|
| 49 | 437m NW | FAULT | Fault, inferred |
| 50 | 437m NW | FAULT | Fault, inferred |
| 52 | 439m N | FAULT | Fault, inferred, displacement unknown |
| 53 | 442m NW | FAULT | Fault, inferred |
| 59 | 483m NW | ROCK | Coal seam, inferred |

*This data is sourced from the British Geological Survey.*

# 16 Boreholes




## 16.1 BGS Boreholes

| Records within 250m | 16 |
|---|---|

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

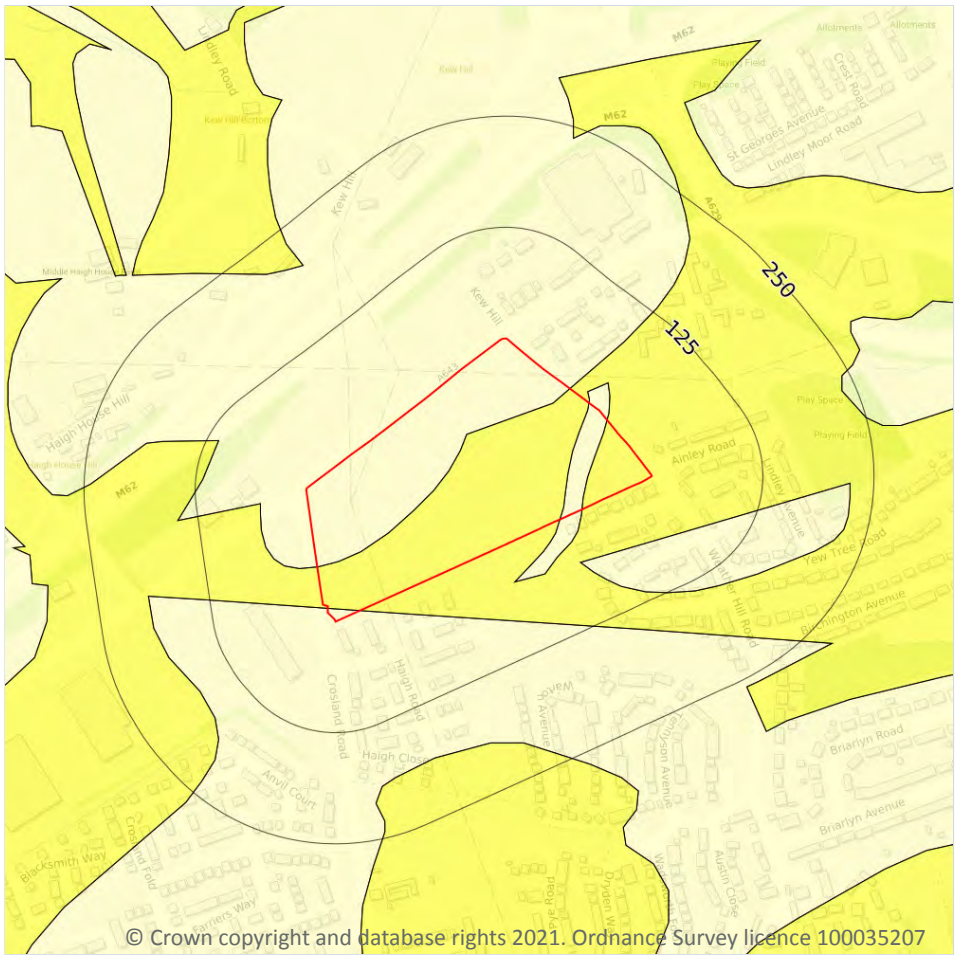
Features are displayed on the Boreholes map on **page 84**

| ID | Location | Grid reference | Name | Length | Confidential | Web link |
|---|---|---|---|---|---|---|
| 1 | 131m N | 410930 419290 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 70 | 9.14 | N | 18572814 |
| 2 | 137m NW | 410690 419130 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 62 | 4.57 | N | 18572809 |
| 3 | 140m NW | 410620 419070 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 61 | 7.62 | N | 18572808 |

| ID | Location | Grid reference | Name | Length | Confidential | Web link |
|---|---|---|---|---|---|---|
| 4 | 142m NW | 410800 419220 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 64 | 3.04 | N | 18572812 |
| 5 | 143m NW | 410760 419190 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 63 | 4.57 | N | 18572810 |
| 6 | 149m NW | 410840 419260 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 65 | 3.04 | N | 18572813 |
| 7 | 187m N | 410970 419350 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 71 | 6.09 | N | 18572816 |
| 8 | 188m W | 410550 419000 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 60 | 15.24 | N | 18572806 |
| 9 | 205m N | 411020 419360 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 71A | 18.28 | N | 18572817 |
| 10 | 207m NW | 410870 419350 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 69 | 3.04 | N | 18573558 |
| A | 223m W | 410520 418940 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 59A | 15.24 | N | 18572804 |
| B | 230m NE | 411200 419270 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 83 | 15.24 | N | 18573498 |
| B | 240m NE | 411190 419290 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 82 | 21.33 | N | 18573497 |
| 11 | 244m N | 411050 419390 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 72 | 16.76 | N | 18572818 |
| A | 244m W | 410500 418930 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 59 | 30.78 | N | 18573492 |
| 12 | 246m NE | 411280 419210 | LANCASHIRE YORKSHIRE MWAY CONTRACT E 88 | 12.19 | N | 18573519 |

*This data is sourced from the British Geological Survey.*

# 17 Natural ground subsidence - Shrink swell clays




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.1 Shrink swell clays

| Records within 50m | 2 |
|---|---|

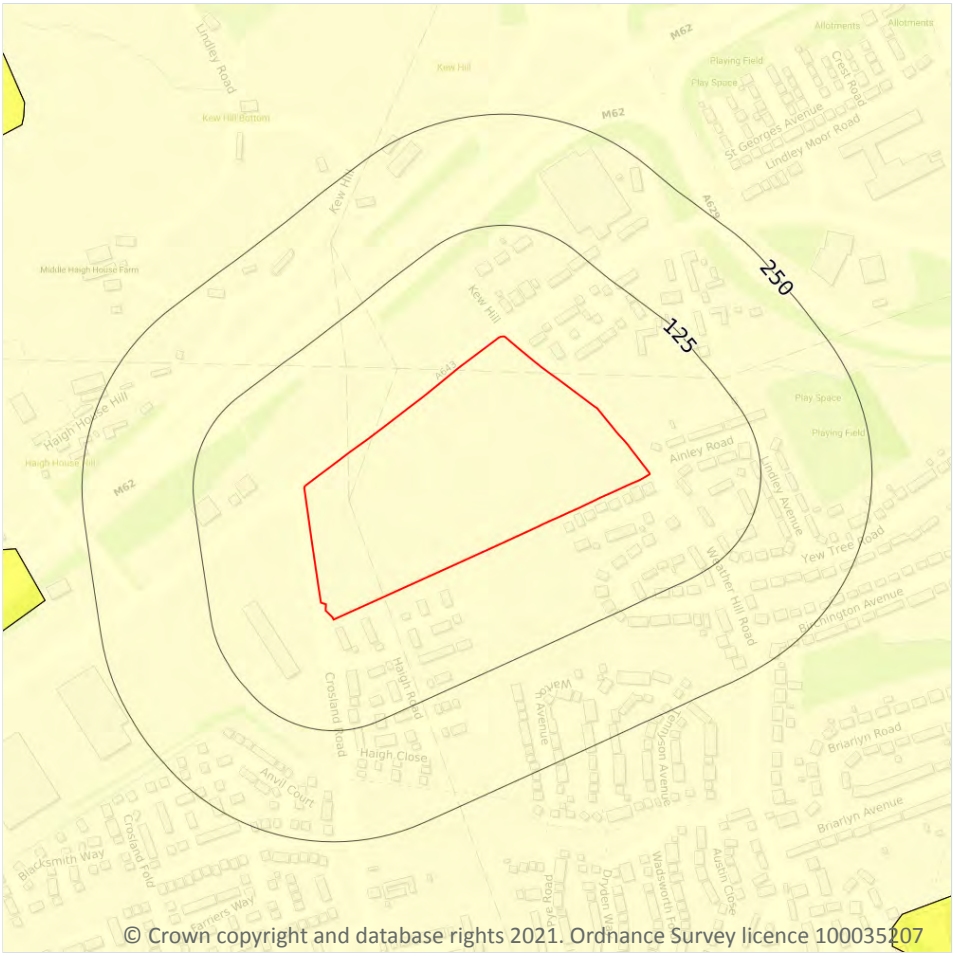
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 86**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Negligible** | **Ground conditions predominantly non-plastic.** |
| **On site** | **Very low** | **Ground conditions predominantly low plasticity.** |

*This data is sourced from the British Geological Survey.*

# Natural ground subsidence - Running sands




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.2 Running sands

| Records within 50m | 1 |
|---|---|

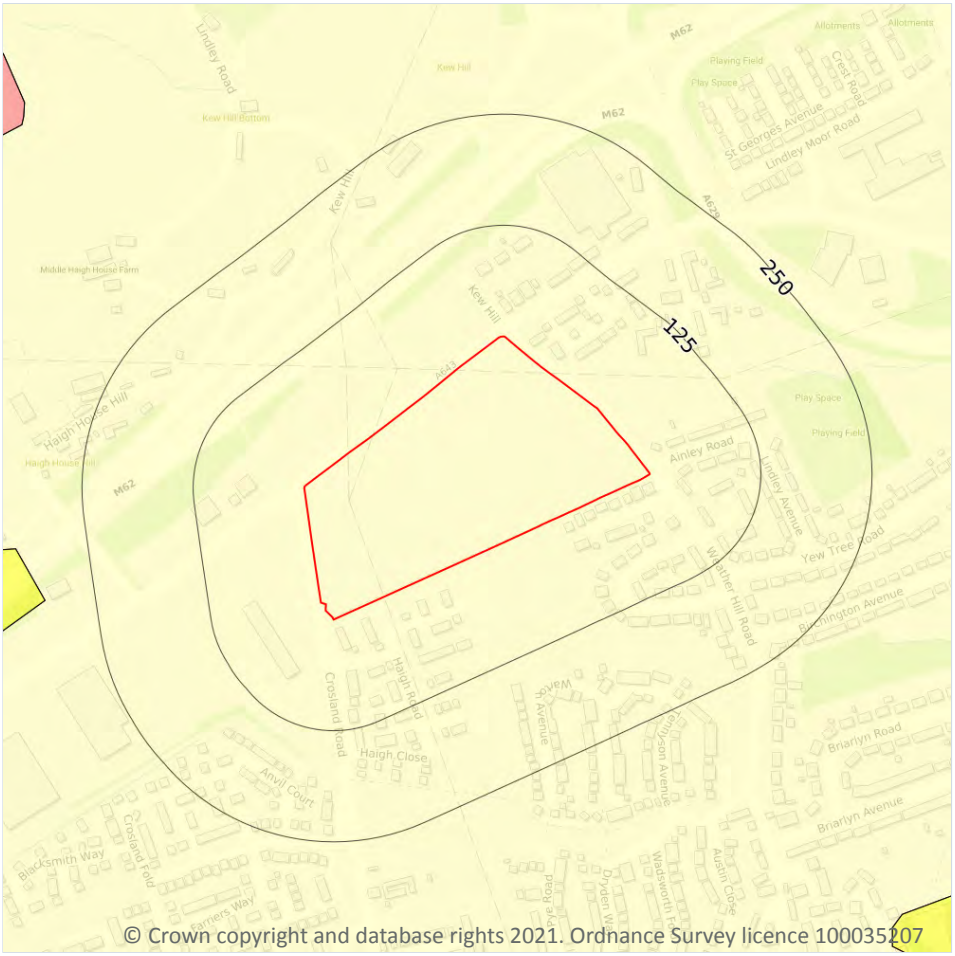
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 87**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Negligible** | **Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.** |

*This data is sourced from the British Geological Survey.*

# Natural ground subsidence - Compressible deposits




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.3 Compressible deposits

| Records within 50m | 1 |
|---|---|

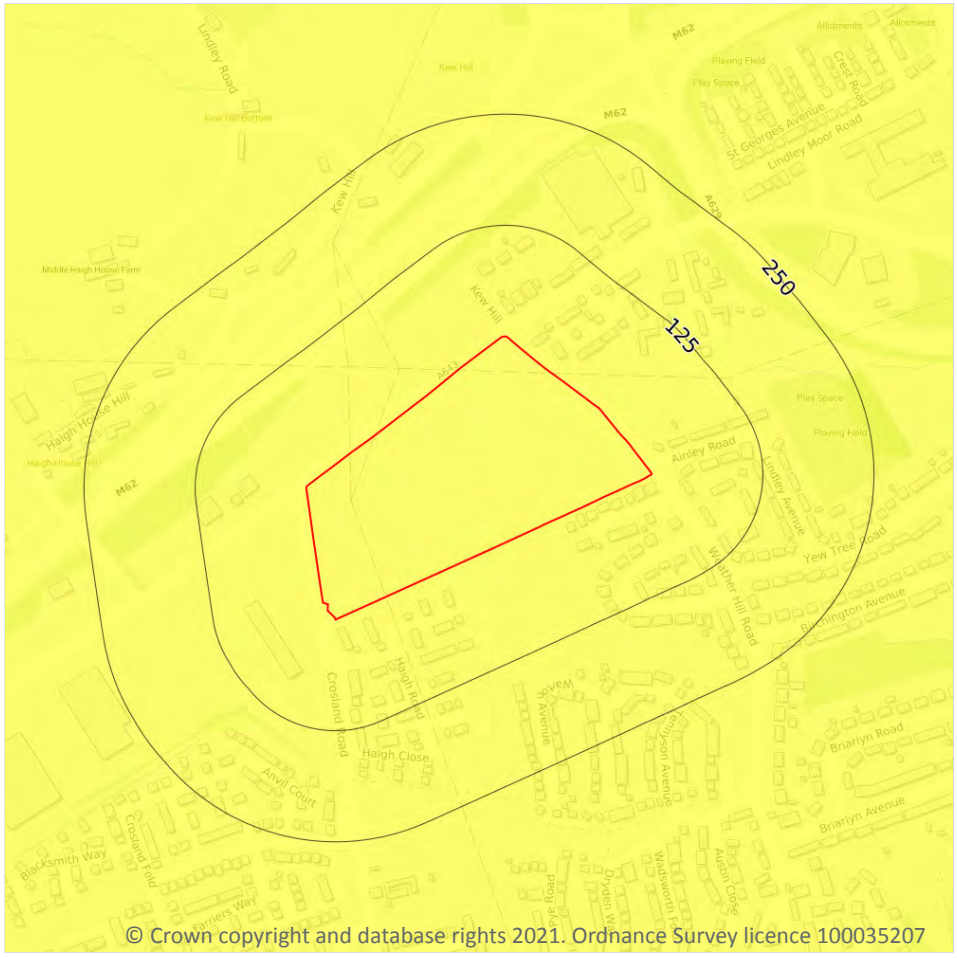
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 88**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Negligible** | **Compressible strata are not thought to occur.** |

*This data is sourced from the British Geological Survey.*

# Natural ground subsidence - Collapsible deposits




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.4 Collapsible deposits

| Records within 50m | 1 |
|---|---|

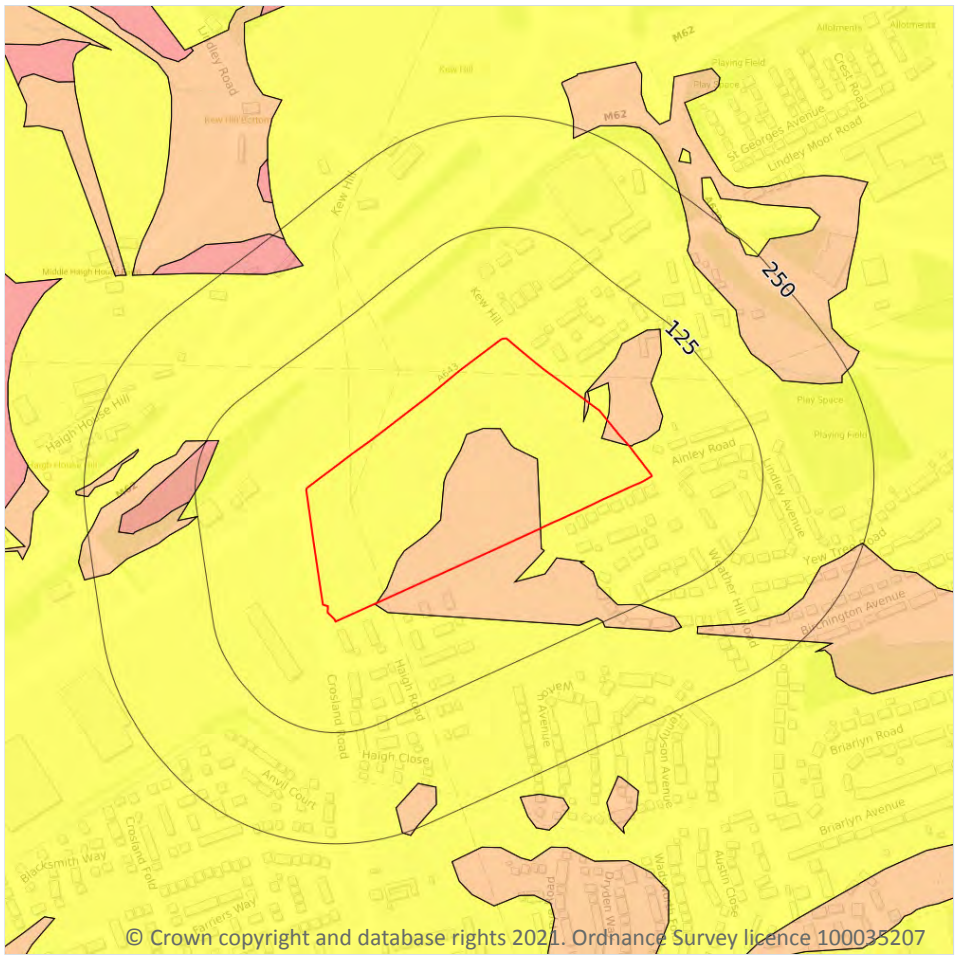
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 89**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Very low** | **Deposits with potential to collapse when loaded and saturated are unlikely to be present.** |

*This data is sourced from the British Geological Survey.*

# Natural ground subsidence - Landslides




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.5 Landslides

| Records within 50m | 2 |
|---|---|

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

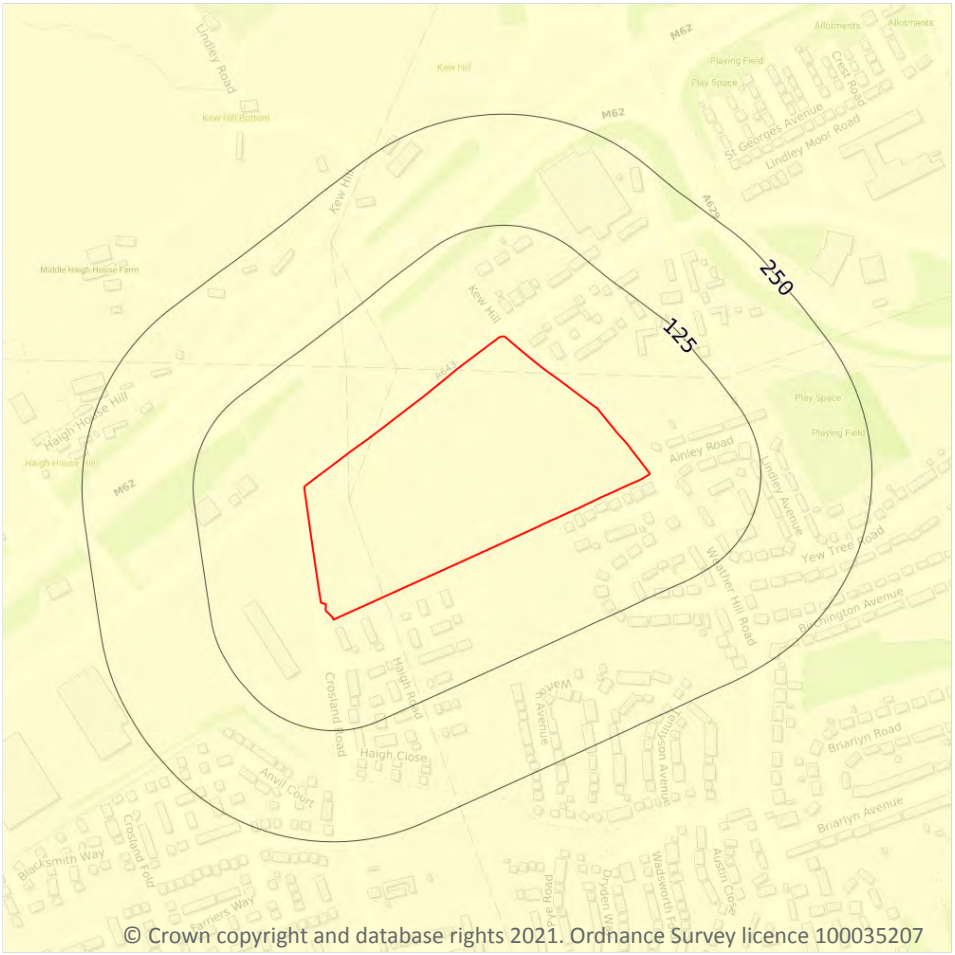
Features are displayed on the Natural ground subsidence - Landslides map on **page 90**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Very low** | **Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.** |

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Low** | **Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.** |

*This data is sourced from the British Geological Survey.*

# Natural ground subsidence - Ground dissolution of soluble rocks




Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

## 17.6 Ground dissolution of soluble rocks

| Records within 50m | 1 |
|---|---|

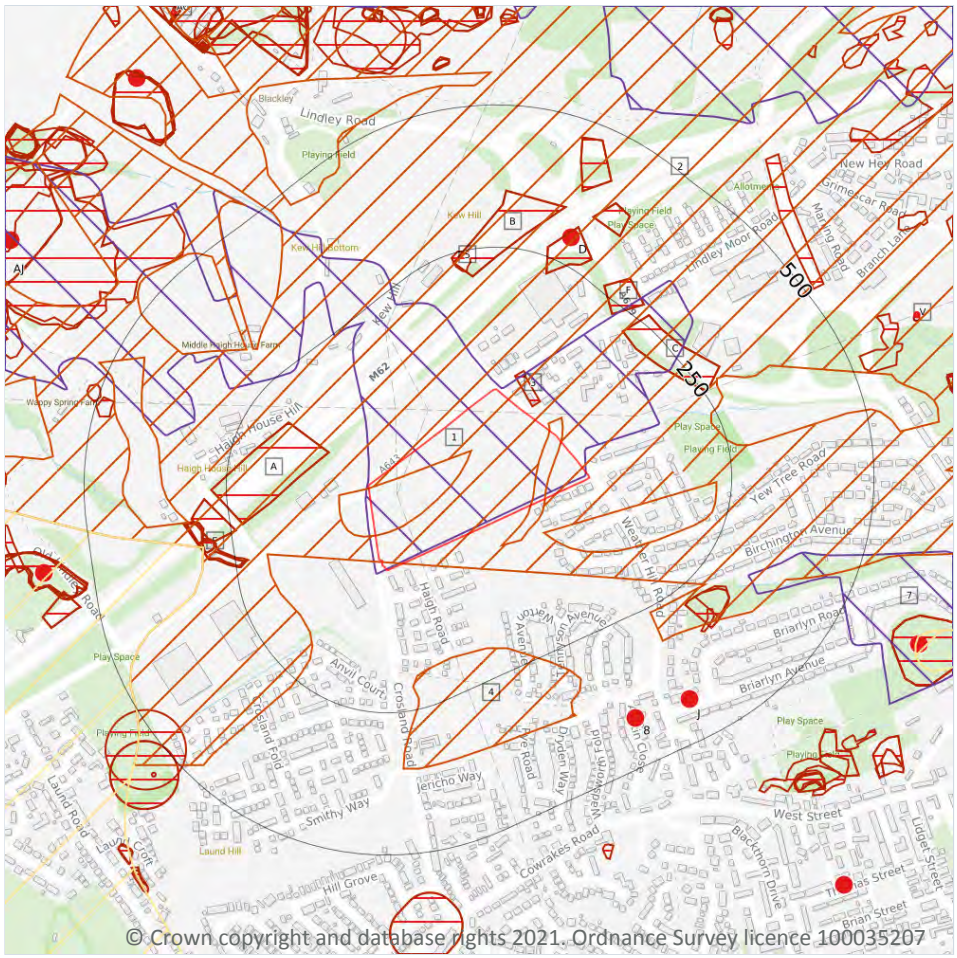
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 92**

| Location | Hazard rating | Details |
|---|---|---|
| **On site** | **Negligible** | **Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.** |

*This data is sourced from the British Geological Survey.*

# 18 Mining, ground workings and natural cavities




Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

## 18.1 Natural cavities

| Records within 500m | 0 |
|---|---|

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Stantec UK Ltd.*

## 18.2 BritPits

| Records within 500m | 4 |
|---|---|

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Details | Description |
|---|---|---|---|
| D | 297m NE | Name: Adkin Flats Colliery<br>Address: Brackley, ELLAND, West Yorkshire<br>Commodity: Coal, Deep<br>Status: Ceased | Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| 8 | 417m SE | Name: Weather Hill Quarries<br>Address: Weather Hill, Birchencliffe, HUDDERSFIELD, West Yorkshire<br>Commodity: Sandstone<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| J | 426m SE | Name: Weather Hill Quarries<br>Address: Weather Hill, Birchencliffe, HUDDERSFIELD, West Yorkshire<br>Commodity: Sandstone<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |
| J | 445m SE | Name: Weather Hill Quarries<br>Address: Weather Hill, Birchencliffe, HUDDERSFIELD, West Yorkshire<br>Commodity: Sandstone<br>Status: Ceased | Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site<br>Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority |

*This data is sourced from the British Geological Survey.*

## 18.3 Surface ground workings

| **Records within 250m** | **17** |
|---|---|

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Land Use | Year of mapping | Mapping scale |
|---|---|---|---|---|
| 3 | 17m NE | Cuttings | 1892 | 1:10560 |
| A | 91m NW | Cuttings | 1985 | 1:10000 |
| A | 91m NW | Cuttings | 1975 | 1:10000 |
| B | 203m N | Cuttings | 1985 | 1:10000 |
| B | 203m N | Cuttings | 1975 | 1:10000 |
| C | 207m NE | Cuttings | 1985 | 1:10000 |
| C | 207m NE | Cuttings | 1975 | 1:10000 |
| 5 | 213m N | Unspecified Pit | 1891 | 1:10560 |
| D | 222m NE | Cuttings | 1985 | 1:10000 |
| D | 222m NE | Cuttings | 1975 | 1:10000 |
| E | 228m W | Unspecified Quarry | 1956 | 1:10560 |
| F | 230m NE | Cuttings | 1985 | 1:10000 |
| F | 230m NE | Cuttings | 1975 | 1:10000 |
| E | 231m W | Unspecified Quarry | 1948 | 1:10560 |
| E | 237m W | Cuttings | 1930 | 1:10560 |
| E | 242m W | Cuttings | 1985 | 1:10000 |
| E | 242m W | Cuttings | 1975 | 1:10000 |

*This is data is sourced from Ordnance Survey/Groundsure.*

## 18.4 Underground workings

| **Records within 1000m** | **17** |
|---|---|

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Land Use | Year of mapping | Mapping scale |
|---|---|---|---|---|
| V | 634m NE | Unspecified Disused Shaft | 1966 | 1:10560 |
| V | 638m NE | Unspecified Old Shaft | 1930 | 1:10560 |
| V | 640m NE | Unspecified Old Shaft | 1951 | 1:10560 |
| AG | 864m NW | Unspecified Shaft | 1930 | 1:10560 |
| AG | 865m NW | Unspecified Shaft | 1951 | 1:10560 |
| - | 885m NE | Air Shaft | 1930 | 1:10560 |
| - | 885m NE | Air Shaft | 1975 | 1:10000 |
| - | 885m NE | Air Shaft | 1951 | 1:10560 |
| - | 885m NE | Air Shaft | 1966 | 1:10560 |
| - | 914m NW | Unspecified Shaft | 1905 | 1:10560 |
| - | 914m NW | Air Shaft | 1930 | 1:10560 |
| - | 915m NW | Air Shaft | 1951 | 1:10560 |
| - | 963m SE | Unspecified Shaft | 1905 | 1:10560 |
| - | 974m NE | Unspecified Disused Shaft | 1969 | 1:10560 |
| - | 994m NE | Unspecified Old Level | 1951 | 1:10560 |
| - | 995m NE | Unspecified Old Level | 1930 | 1:10560 |
| - | 1000m NE | Unspecified Level | 1951 | 1:10560 |

*This is data is sourced from Ordnance Survey/Groundsure.*

## 18.5 Historical Mineral Planning Areas

**Records within 500m** **2**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Site Name | Mineral | Type | Planning Status | Planning Status Date |
|---|---|---|---|---|---|---|
| **1** | **On site** | **Pea Wood Fireclay Mine** | **Shale** | **Mineral working is partly on the surface and partly underground** | **Valid** | **3/195** |

| ID | Location | Site Name | Mineral | Type | Planning Status | Planning Status Date |
|---|---|---|---|---|---|---|
| 7 | 328m SE | Birchencliffe | Brickearth | Surface mineral working | Valid | 11/11/48 |

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

| **Records within 1000m** | **11** |
|---|---|

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Name | Commodity | Class | Likelihood |
|---|---|---|---|---|---|
| **2** | **On site** | **Elland Flag Mines** | **Sandstone - Elland Flags** | **D** | **Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered** |
| 4 | 186m SE | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| 6 | 303m W | Not available | Vein Mineral | A | Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered |
| 14 | 642m SE | Not available | Vein Mineral | A | Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered |
| - | 738m W | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| - | 738m W | Not available | Vein Mineral | A | Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered |

| ID | Location | Name | Commodity | Class | Likelihood |
|---|---|---|---|---|---|
| - | 752m W | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| - | 772m W | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| - | 804m NW | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| - | 837m N | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |
| - | 850m W | Elland Flag Mines | Sandstone - Elland Flags | D | Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered |

*This data is sourced from the British Geological Survey.*

## 18.7 Mining cavities

| **Records within 1000m** | **4** |
|---|---|

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

| ID | Location | Mine Address | Mineral | Data source | Publisher |
|---|---|---|---|---|---|
| - | 754m N | Woodman, West Yorkshire | Clay | LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE. | UNPUBLISHED/DRAFT |
| AJ | 756m NW | Pea Wood, West Yorkshire | Shale | MINERIAL PLANNING RIGHTS APPLICATION RECORDS. | UNPUBLISHED |
| - | 912m NE | Robinsons, West Yorkshire | Clay | LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE. | UNPUBLISHED/DRAFT |
| - | 925m NW | Blackley And Woodman, West Yorkshire | Clay | LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE. | UNPUBLISHED/DRAFT |

*This data is sourced from Stantec UK Ltd.*

## 18.8 JPB mining areas

| Records on site | 0 |
|---|---|

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

*This data is sourced from Johnson Poole and Bloomer.*

## 18.9 Coal mining

| Records on site | 1 |
|---|---|

Areas which could be affected by past, current or future coal mining.

| Location | Details |
|---|---|
| **On site** | **The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.** |

*This data is sourced from the Coal Authority.*

## 18.10 Brine areas

| Records on site | 0 |
|---|---|

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

## 18.11 Gypsum areas

| Records on site | 0 |
|---|---|

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

## 18.12 Tin mining

| Records on site | 0 |
|---|---|

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Mining Searches UK.*

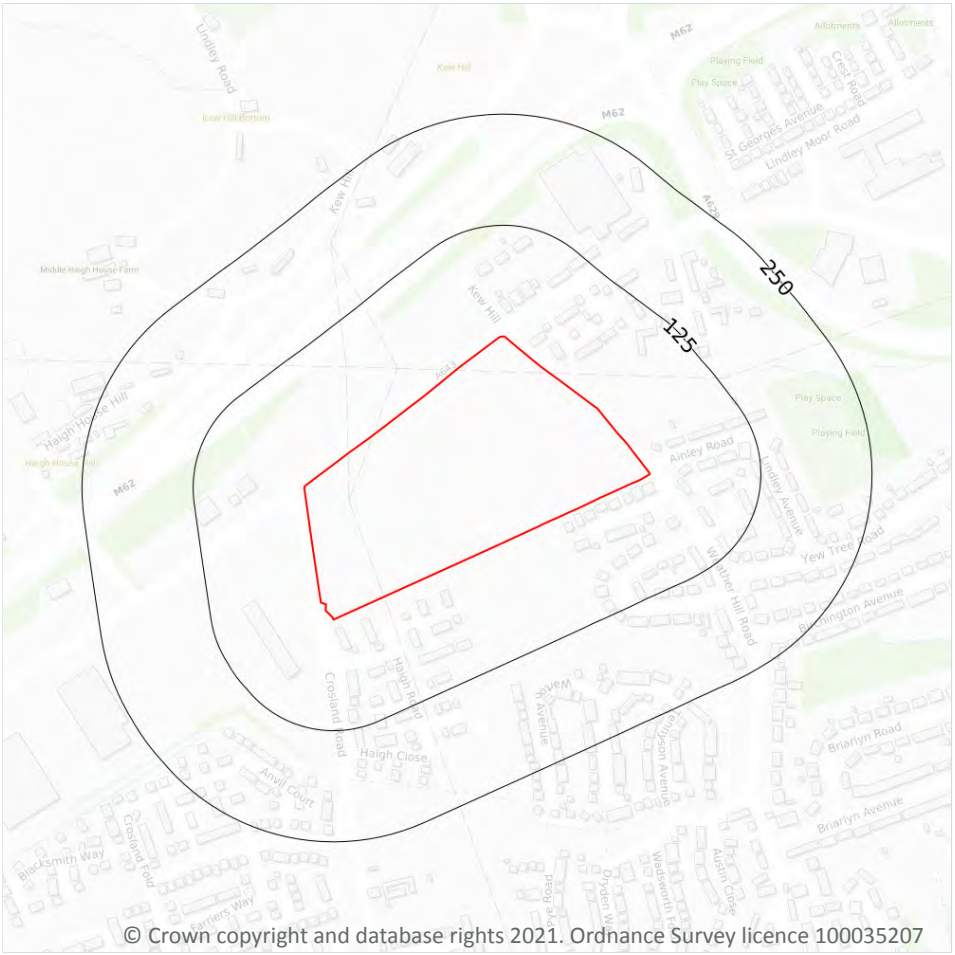
## 18.13 Clay mining

| Records on site | 0 |
|---|---|

Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*

# 19 Radon




Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

## 19.1 Radon

| Records on site | 1 |
|---|---|

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 101**

| Location | Estimated properties affected | Radon Protection Measures required |
|---|---|---|
| **On site** | **Less than 1%** | **None**** |

*This data is sourced from the British Geological Survey and Public Health England.*

# 20 Soil chemistry

## 20.1 BGS Estimated Background Soil Chemistry

| Records within 50m | 18 |
|---|---|

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 $km^2$. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 $km^2$; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

| Location | Arsenic | Bioaccessible Arsenic | Lead | Bioaccessible Lead | Cadmium | Chromium | Nickel |
|---|---|---|---|---|---|---|---|
| **On site** | **25 - 35 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 - 200 mg/kg** | **60 - 120 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 - 200 mg/kg** | **60 - 120 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **25 - 35 mg/kg** | **No data** | **100 - 200 mg/kg** | **60 - 120 mg/kg** | **1.8 mg/kg** | **90 - 120 mg/kg** | **15 - 30 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 - 200 mg/kg** | **60 - 120 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |

| Location | Arsenic | Bioaccessible Arsenic | Lead | Bioaccessible Lead | Cadmium | Chromium | Nickel |
|---|---|---|---|---|---|---|---|
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| **On site** | **15 mg/kg** | **No data** | **100 mg/kg** | **60 mg/kg** | **1.8 mg/kg** | **>180 mg/kg** | **30 - 45 mg/kg** |
| 26m S | 15 mg/kg | No data | 100 - 200 mg/kg | 60 - 120 mg/kg | 1.8 mg/kg | >180 mg/kg | 30 - 45 mg/kg |
| 27m SE | 25 - 35 mg/kg | No data | 100 - 200 mg/kg | 60 - 120 mg/kg | 1.8 mg/kg | 90 - 120 mg/kg | 15 - 30 mg/kg |
| 48m E | 15 mg/kg | No data | 100 mg/kg | 60 mg/kg | 1.8 mg/kg | >180 mg/kg | 30 - 45 mg/kg |

*This data is sourced from the British Geological Survey.*

## 20.2 BGS Estimated Urban Soil Chemistry

| **Records within 50m** | **0** |
|---|---|

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per $km^2$).

*This data is sourced from the British Geological Survey.*

## 20.3 BGS Measured Urban Soil Chemistry

| **Records within 50m** | **0** |
|---|---|

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per $km^2$.

*This data is sourced from the British Geological Survey.*

# 21 Railway infrastructure and projects

## 21.1 Underground railways (London)

| Records within 250m | 0 |
|---|---|

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

*This data is sourced from publicly available information by Groundsure.*

## 21.2 Underground railways (Non-London)

| Records within 250m | 0 |
|---|---|

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

*This data is sourced from publicly available information by Groundsure.*

## 21.3 Railway tunnels

| Records within 250m | 0 |
|---|---|

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

## 21.4 Historical railway and tunnel features

| Records within 250m | 0 |
|---|---|

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

*This data is sourced from Ordnance Survey/Groundsure.*

## 21.5 Royal Mail tunnels

| Records within 250m | 0 |
|---|---|

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

*This data is sourced from Groundsure/the Postal Museum.*

## 21.6 Historical railways

| Records within 250m | 0 |
|---|---|

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

*This data is sourced from OpenStreetMap.*

## 21.7 Railways

| Records within 250m | 0 |
|---|---|

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 21.8 Crossrail 1

| Records within 500m | 0 |
|---|---|

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

*This data is sourced from publicly available information by Groundsure.*

## 21.9 Crossrail 2

| Records within 500m | 0 |
|---|---|

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

*This data is sourced from publicly available information by Groundsure.*

## 21.10 HS2

| Records within 500m | 0 |
|---|---|

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

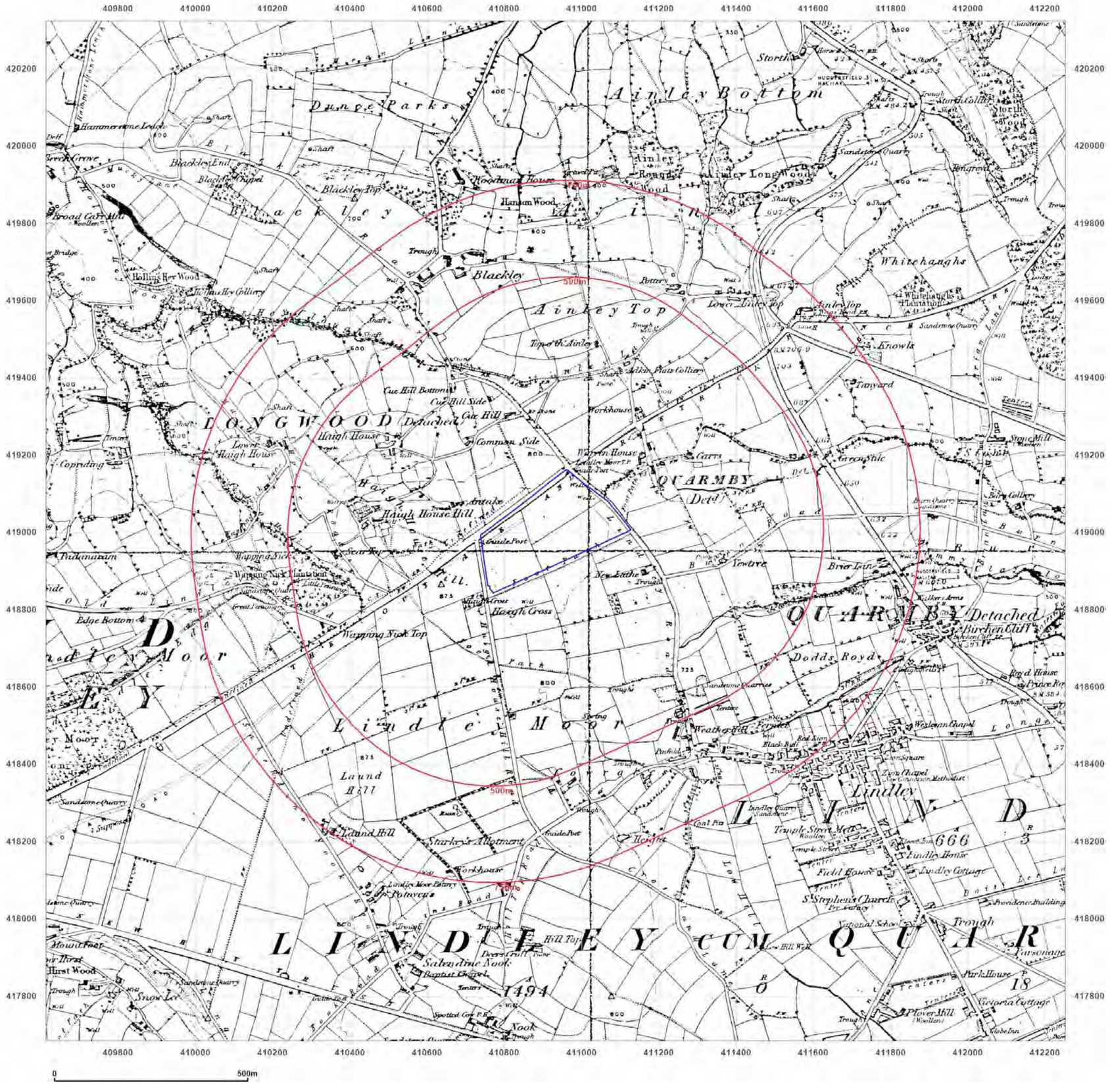
*This data is sourced from HS2 ltd.*

## Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

## Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.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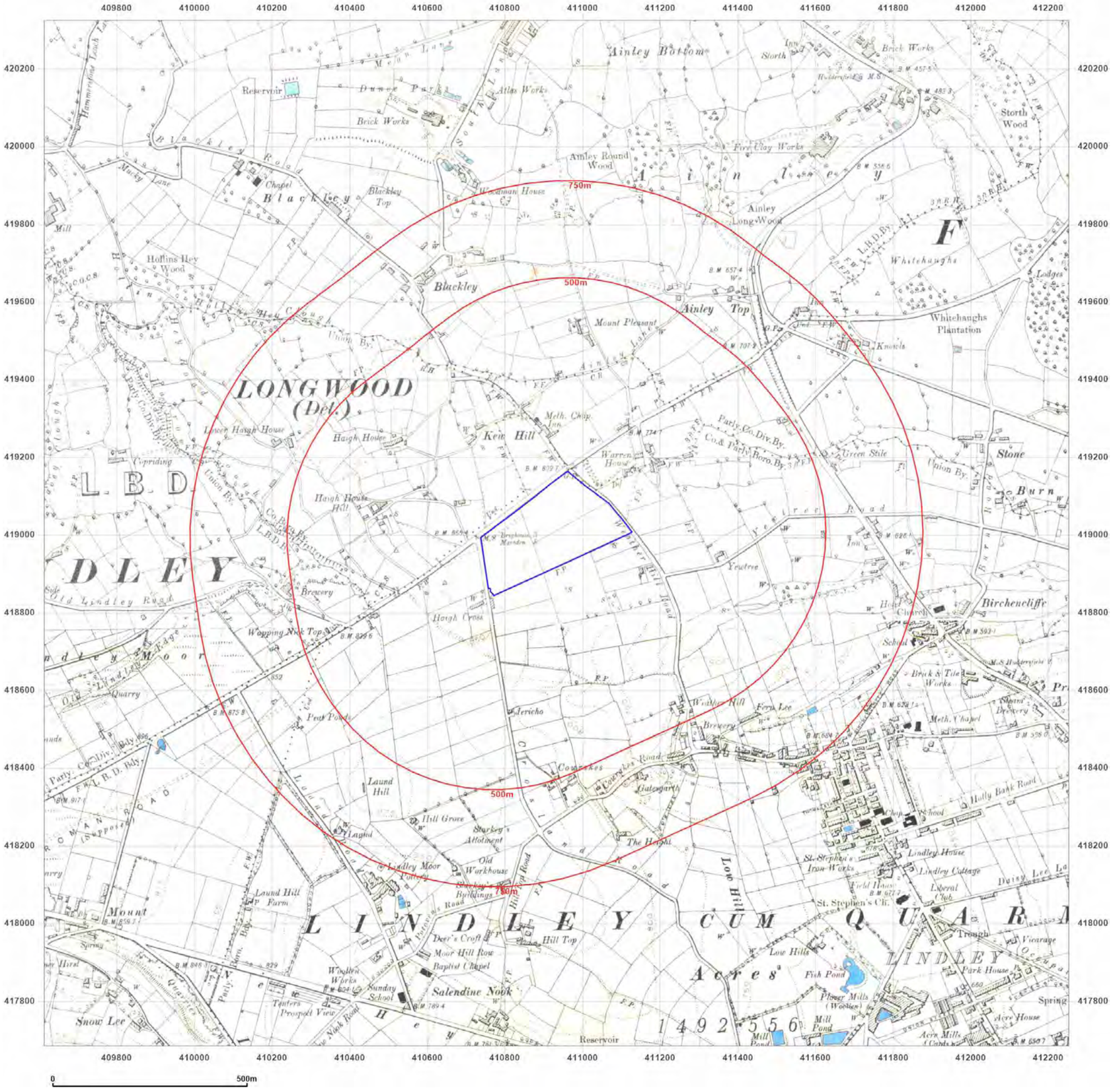
418200
418000
417800
Ainley Bottom
Dunce Parks
Blackley
Ainley Top
LONGWOOD Detached
QUARMBY
Detd
Whitehaughs
Knowls
Tinyard
Haigh House
Lower Haigh House
Haigh House Hill
Coppidan
Cue Hill Bottom
Cue Hill Side
Cue Hill
Common Side
Workhouse
Warren House
Garrs
Green Side
Top of the Ainley
Lower Ainley Top
Ainley Top
Potter
Blackley Top
Blackley End
Broad Carr Hill
Holling Hey Wood
Hanum Wood
Woodman House
Ainley Round Wood
Ainley Long Wood
Sandstone Quarry
Storth
Storth House
Storth Cliff
Longroyd
Trough
Shaft
Pump
Well
Tenters
Stone Mill
Dry Dock
Baker Colliery
Birch Cliff
Dodds Royd
Royd House
Prince Rd
Weather Hill
Wesleyan Chapel
Zion Chapel
Lindley
Lindley Quarry
Sandstone
Temple Street Mills
Lindley House
Lindley Cottage
Field House
St Stephen's Church
Vicarage
Parsonage
Clark House
Victoria Cottage
Plover Hill
Globe Inn
Providence Building
Lindley Moor
Laund Hill
Starkie's Allotment
Lindley Moor Colliery
Potovens
Hill Top
Deans Croft
Salendine Nook
Baptist Chapel
Nook
Hurst Wood
Mount Foot
Snow Lea
Sandstone Quarry
Edge Bottom
Wapping Nick Top
Wapping Nick Intake
Padanaram
Scar Top
Gaude Post
New Lathe
Brier Lane
Tewtre
Hough Cross
Spotted Cow P.H.
Kaiber Arms
Low Hill Lane
Lindley Moor Road
Lindley Moor Lane
Lindley Moor Colliery
Lindley Moor Quarry




Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** County Series

**Map date:** **1890-1892**

**Scale:** 1:10,560

**Printed at:** 1:10,560

N
W E
S

Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

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**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** County Series

**Map date:** **1905**

**Scale:** 1:10,560

**Printed at:** 1:10,560

N
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Surveyed 1892
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1905
Edition N/A
Copyright N/A
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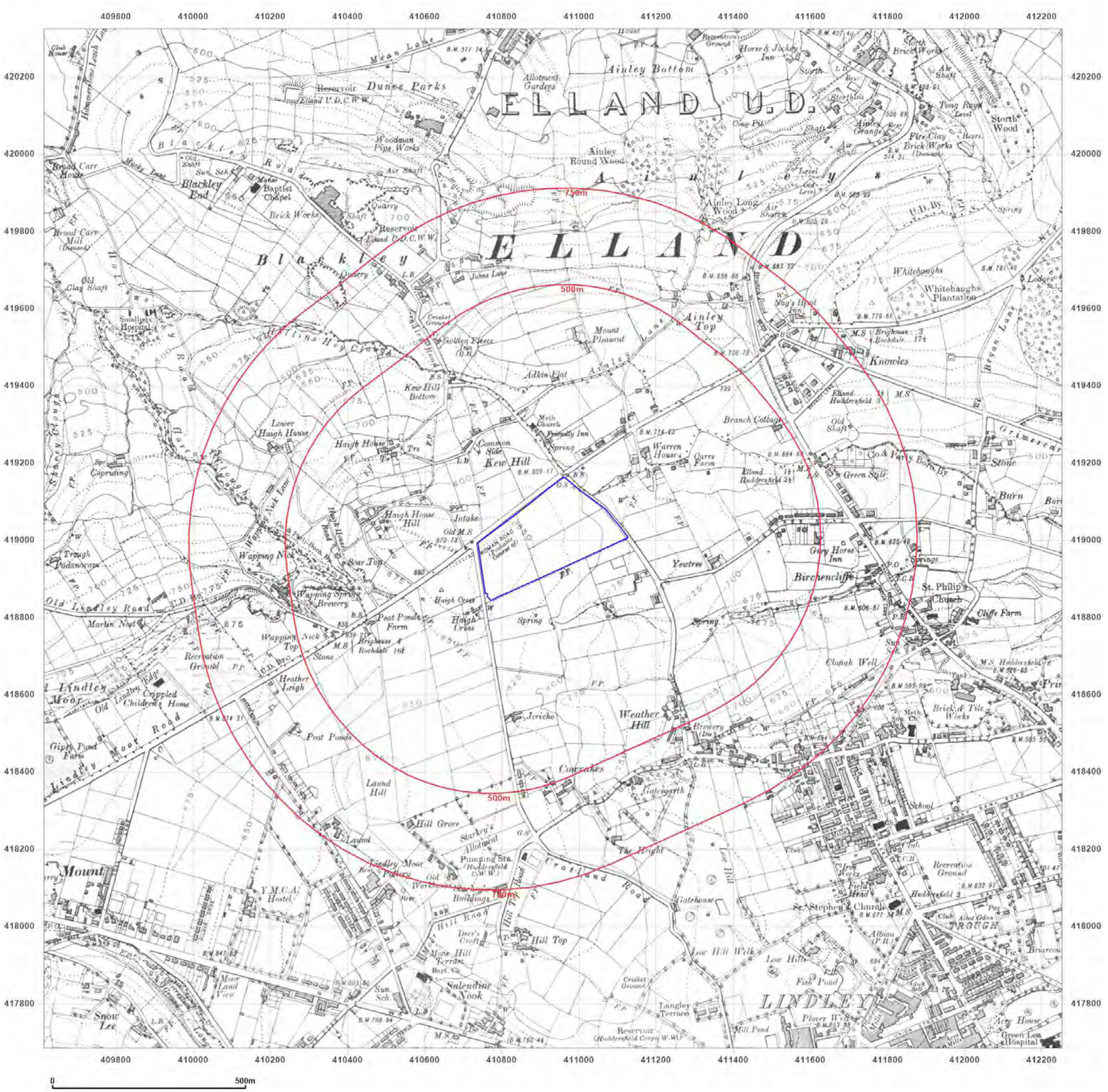


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** County Series

**Map date:** **1930**

**Scale:** 1:10,560

**Printed at:** 1:10,560

N
W E
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Surveyed 1849
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1849
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

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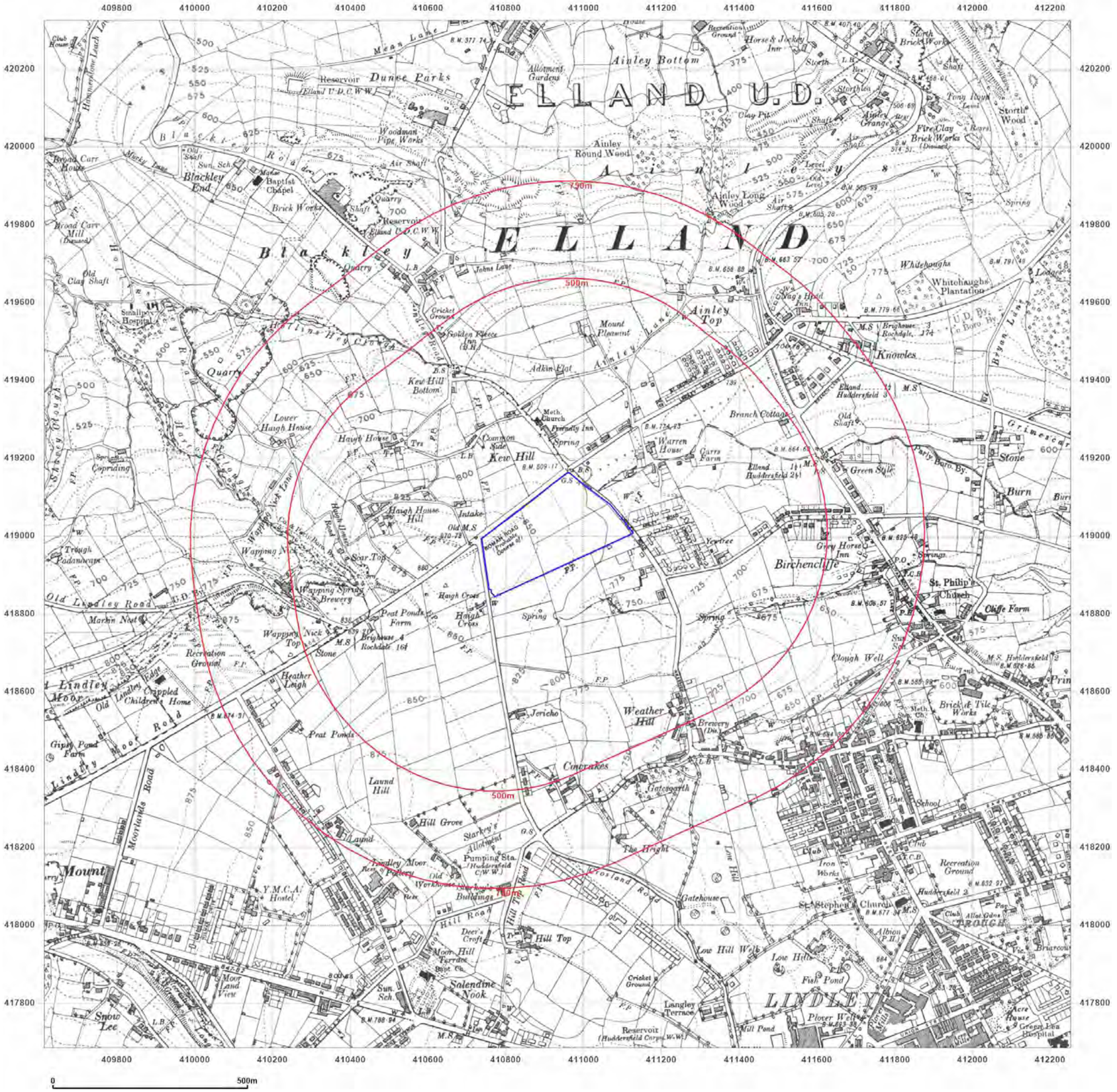


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** County Series

**Map date:** **1948**

**Scale:** 1:10,560

**Printed at:** 1:10,560

N
W E
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Surveyed 1849
Revised 1948
Edition 1948
Copyright N/A
Levelled N/A

Surveyed 1849
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

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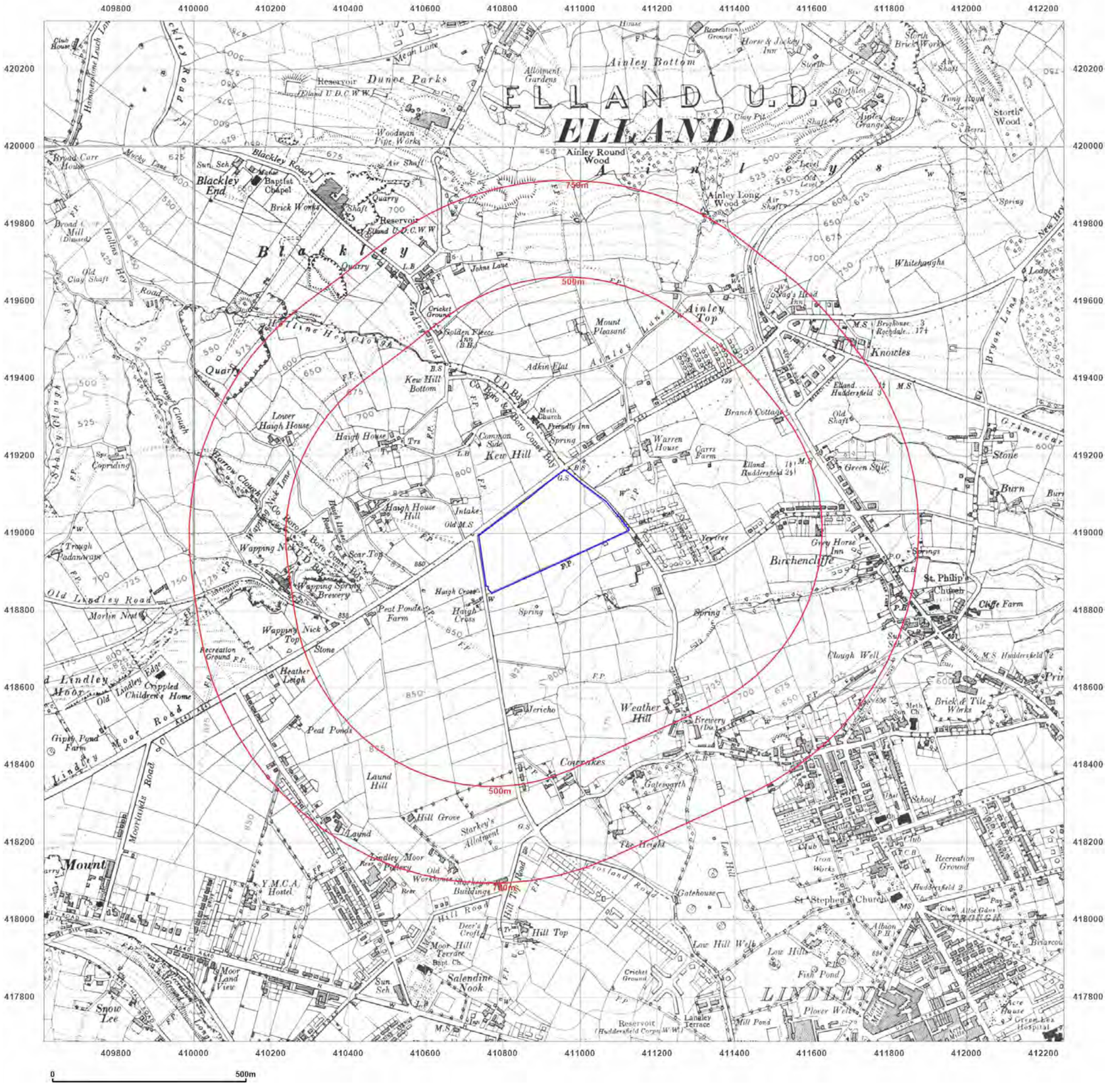


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** Provisional

**Map date:** **1955-1956**

**Scale:** 1:10,560

**Printed at:** 1:10,560

N
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Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright 1956
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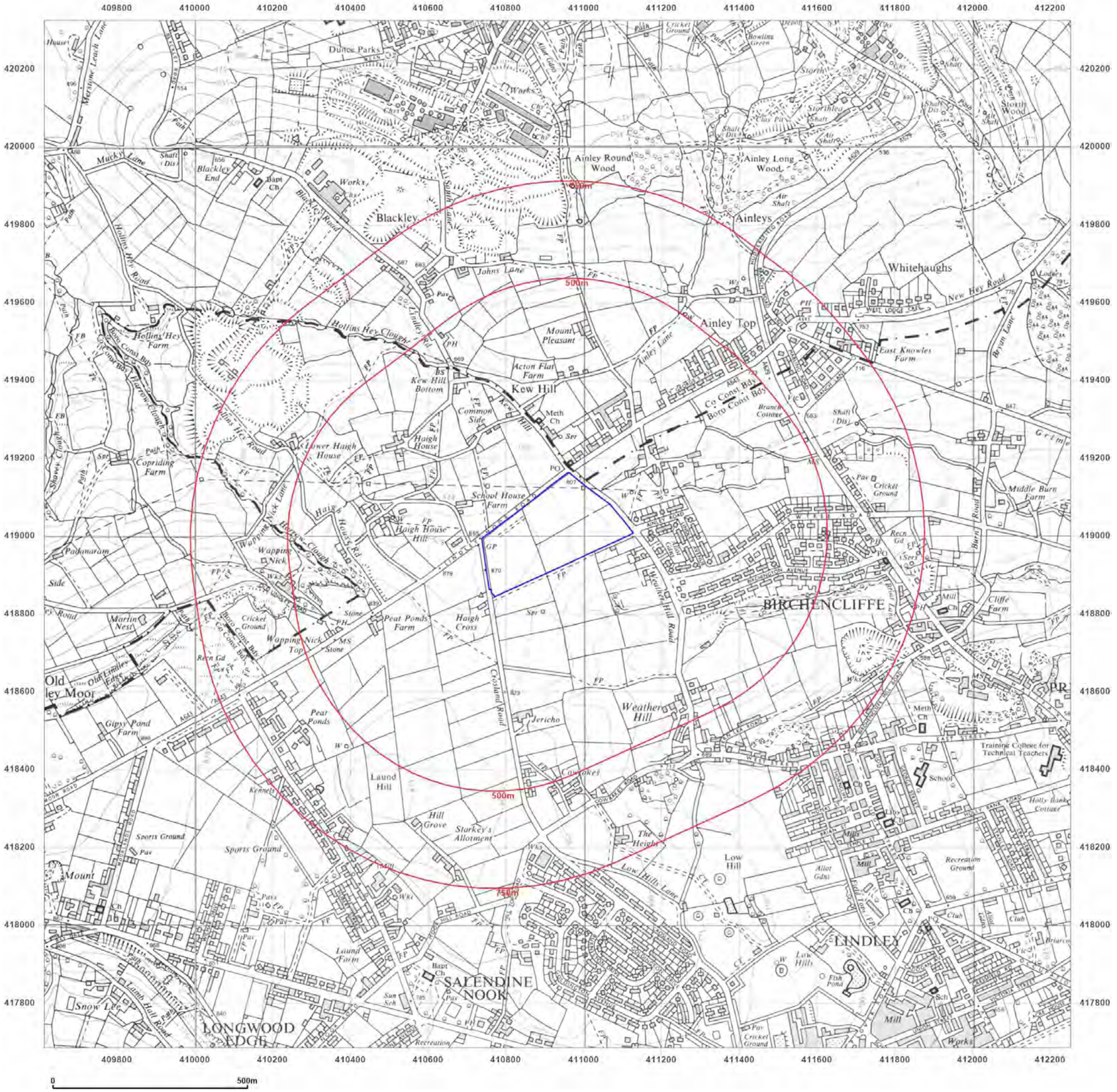


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** Provisional
**Map date:** **1966-1969**
**Scale:** 1:10,560
**Printed at:** 1:10,560

N
W E
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Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1966
Revised 1966
Edition N/A
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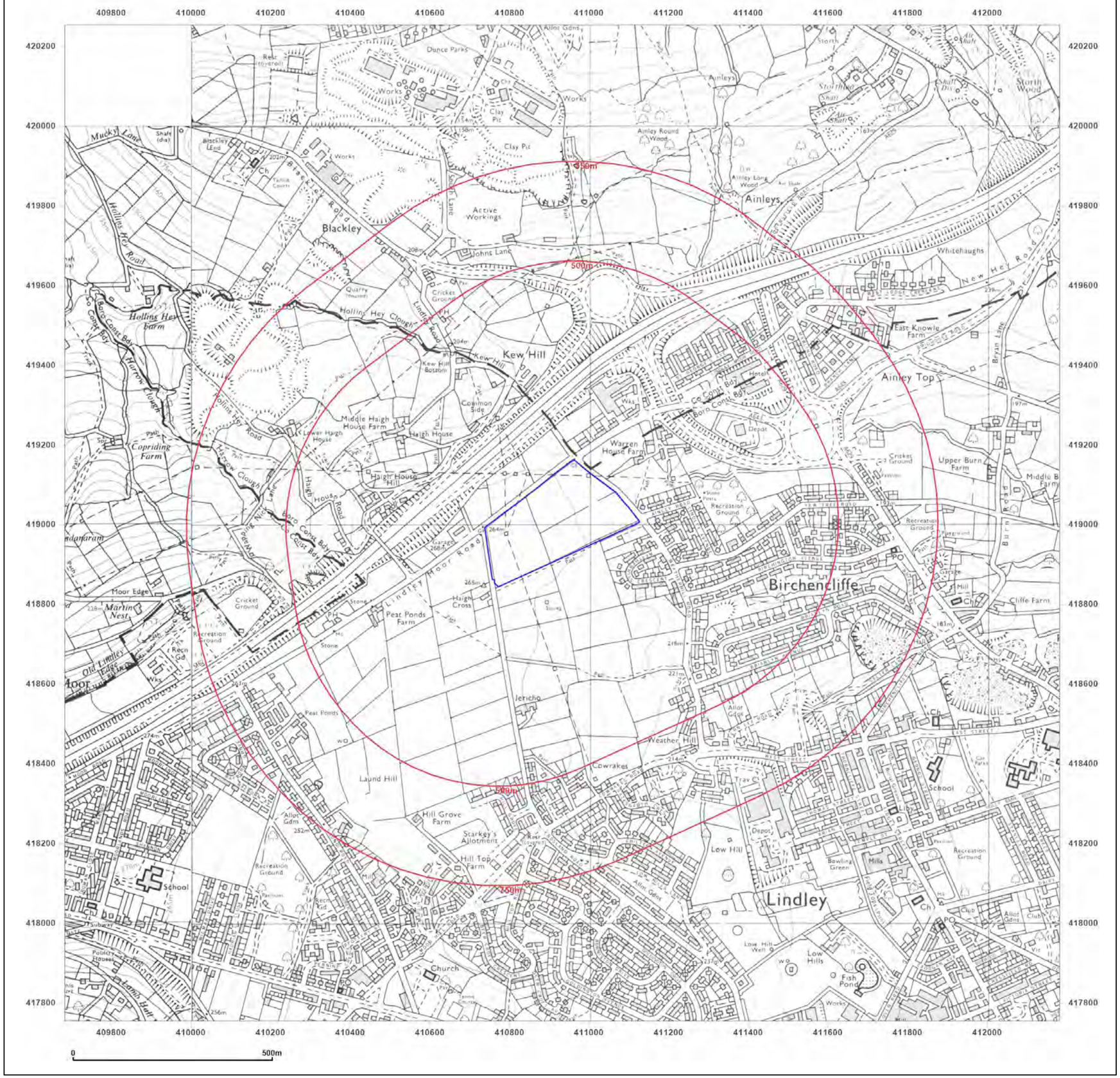


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** National Grid

**Map date:** **1975-1978**

**Scale:** 1:10,000

**Printed at:** 1:10,000

N
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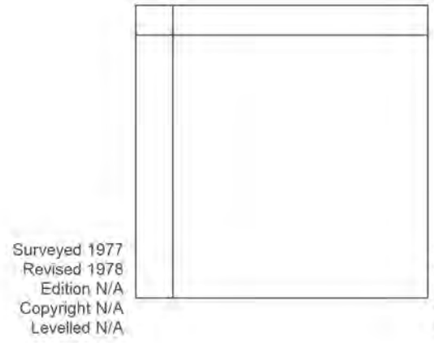


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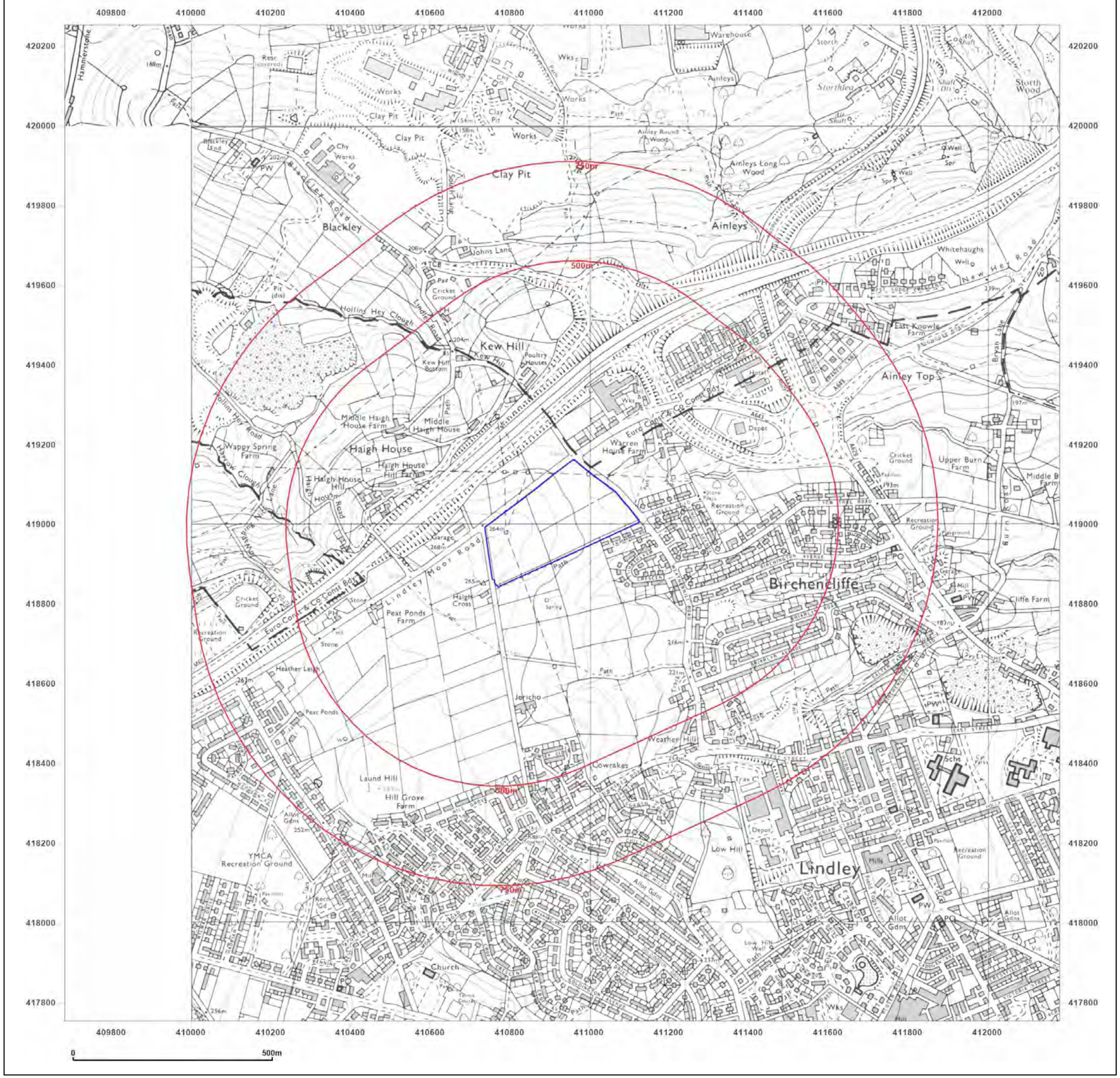


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** National Grid

**Map date:** **1981-1985**

**Scale:** 1:10,000

**Printed at:** 1:10,000

N
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Surveyed 1978
Revised 1981
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1981
Revised 1981
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1984
Revised 1985
Edition N/A
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**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** National Grid

**Map date:** **2001**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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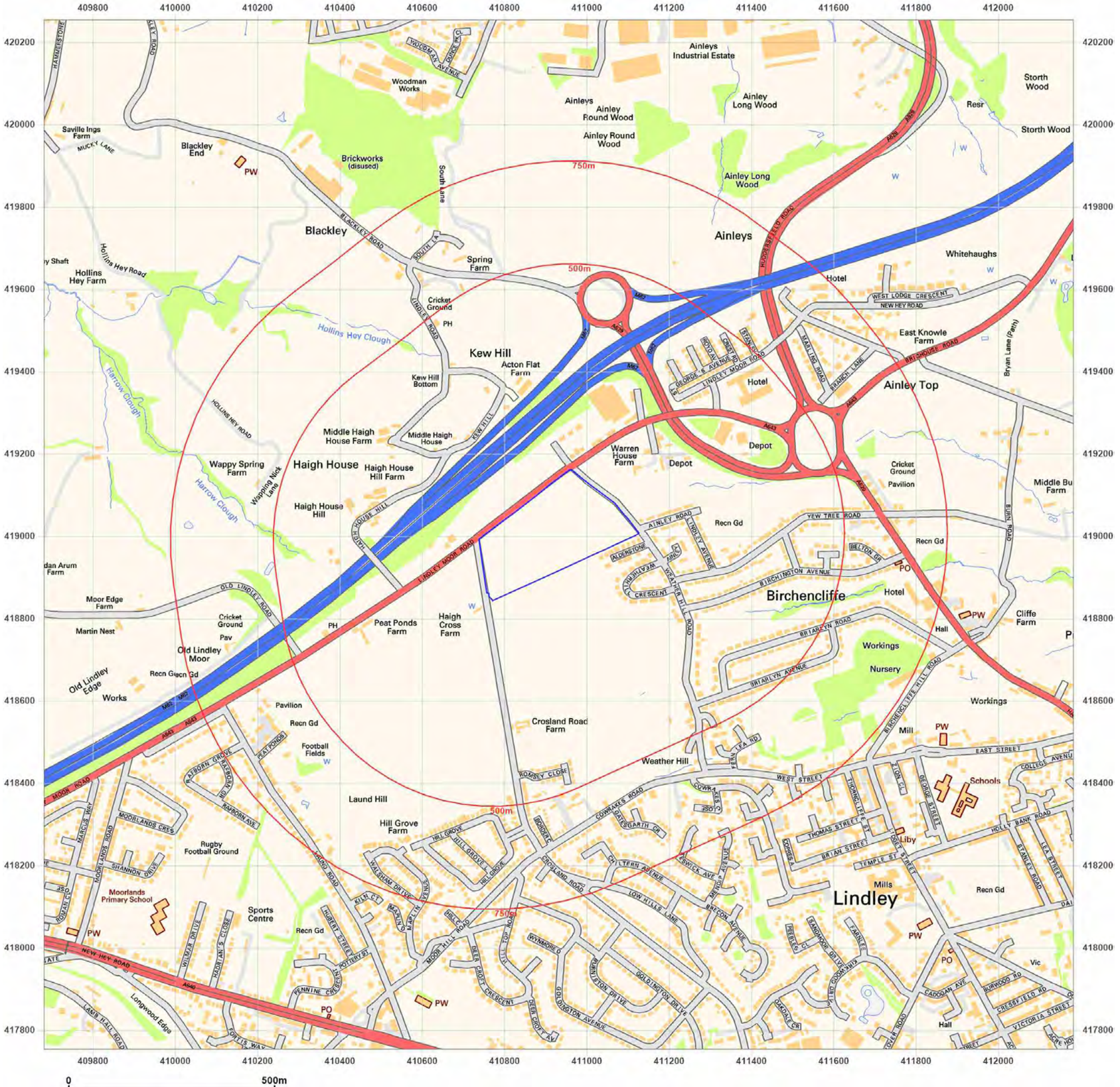


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**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** National Grid

**Map date:** **2010**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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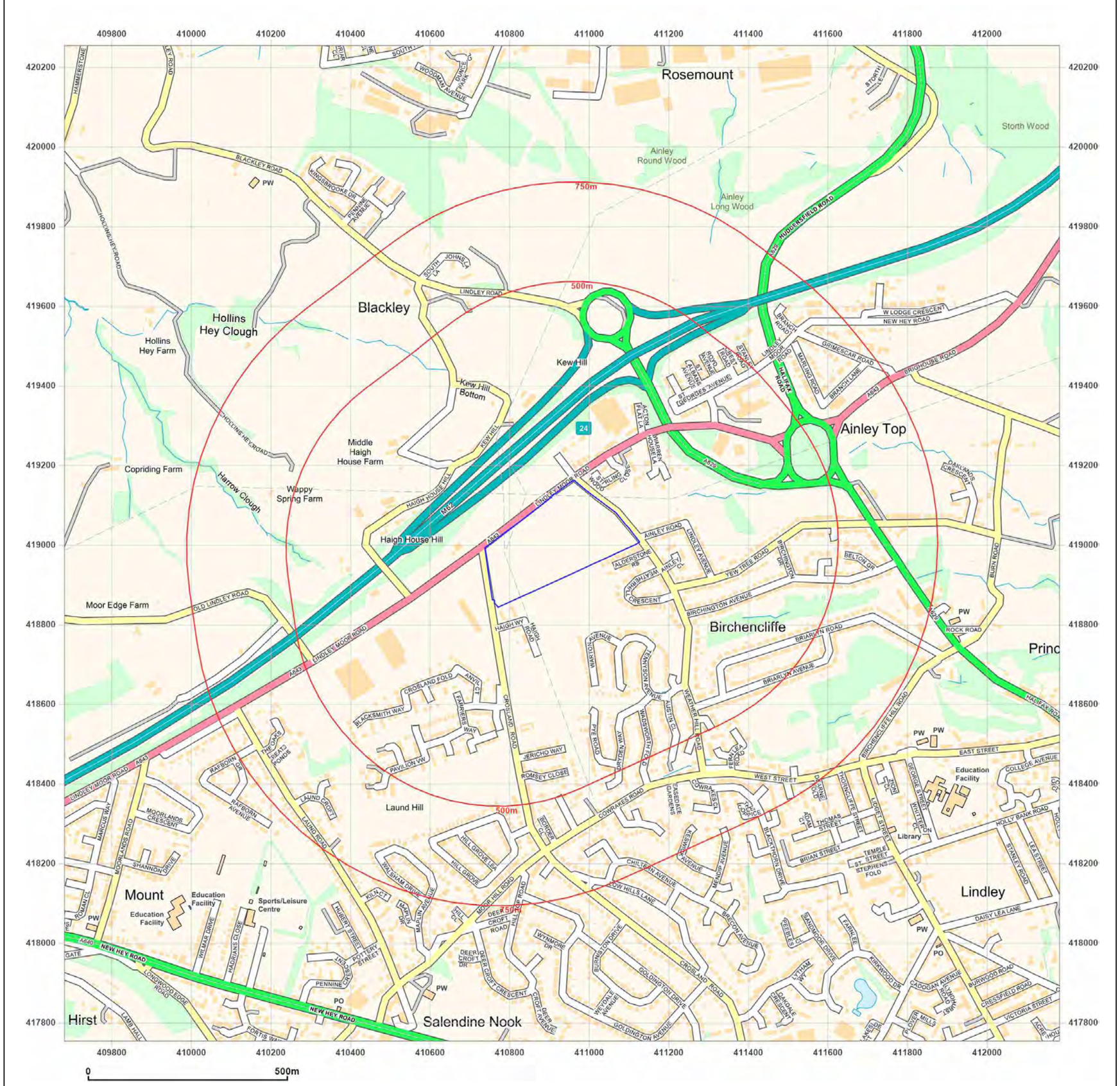


# Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479
**Grid Ref:** 410932, 419004

**Map Name:** National Grid
**Map date:** 2021
**Scale:** 1:10,000
**Printed at:** 1:10,000

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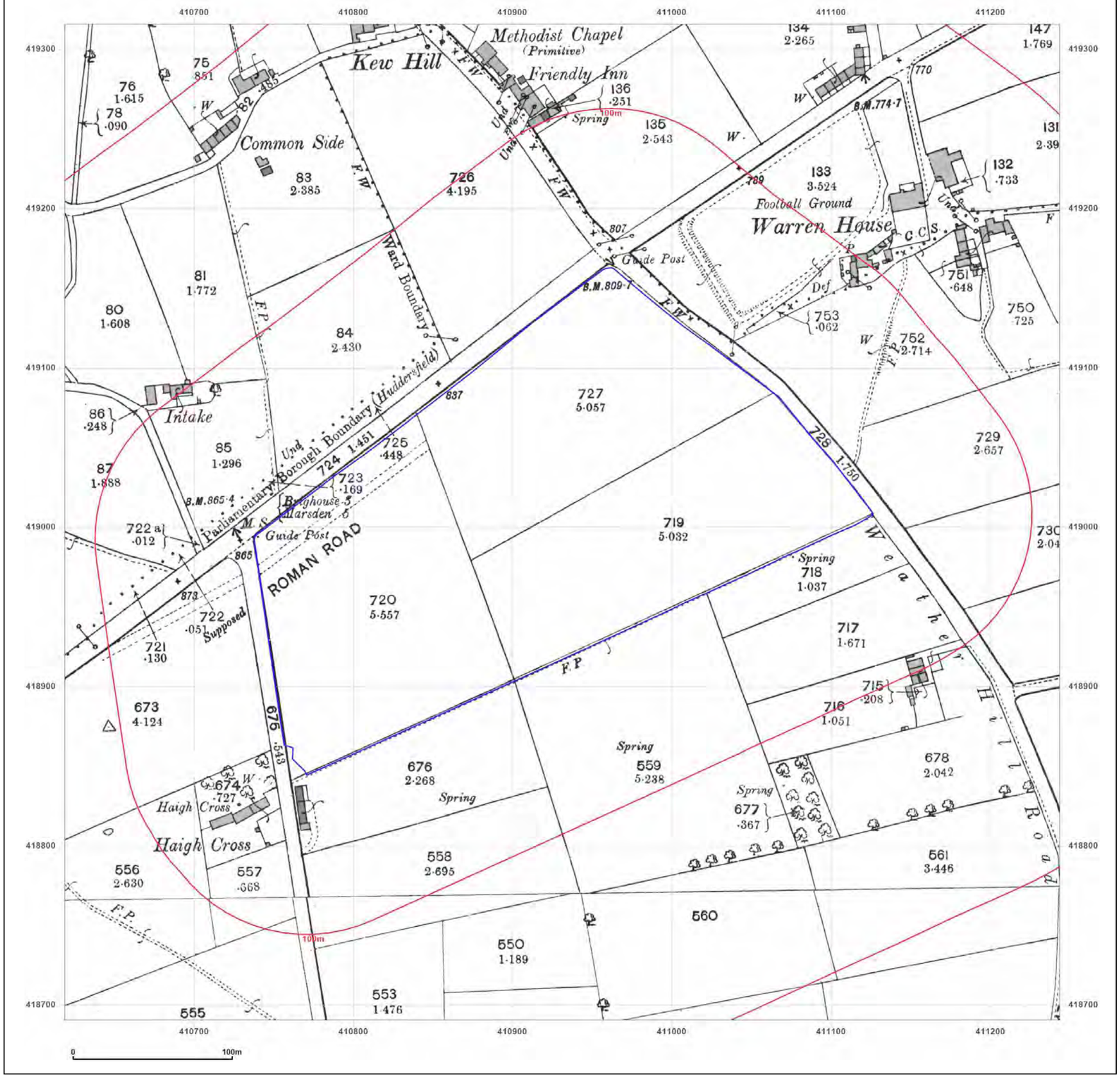


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479_LS_1_1
**Grid Ref:** 410931, 419003

**Map Name:** County Series
**Map date:** **1893**
**Scale:** 1:2,500
**Printed at:** 1:2,500

N
W E
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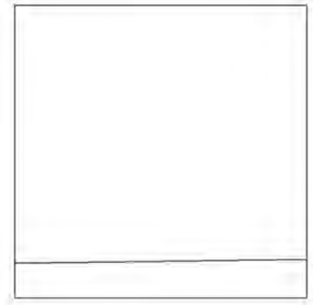
Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1893
Revised 1893
Edition N/A
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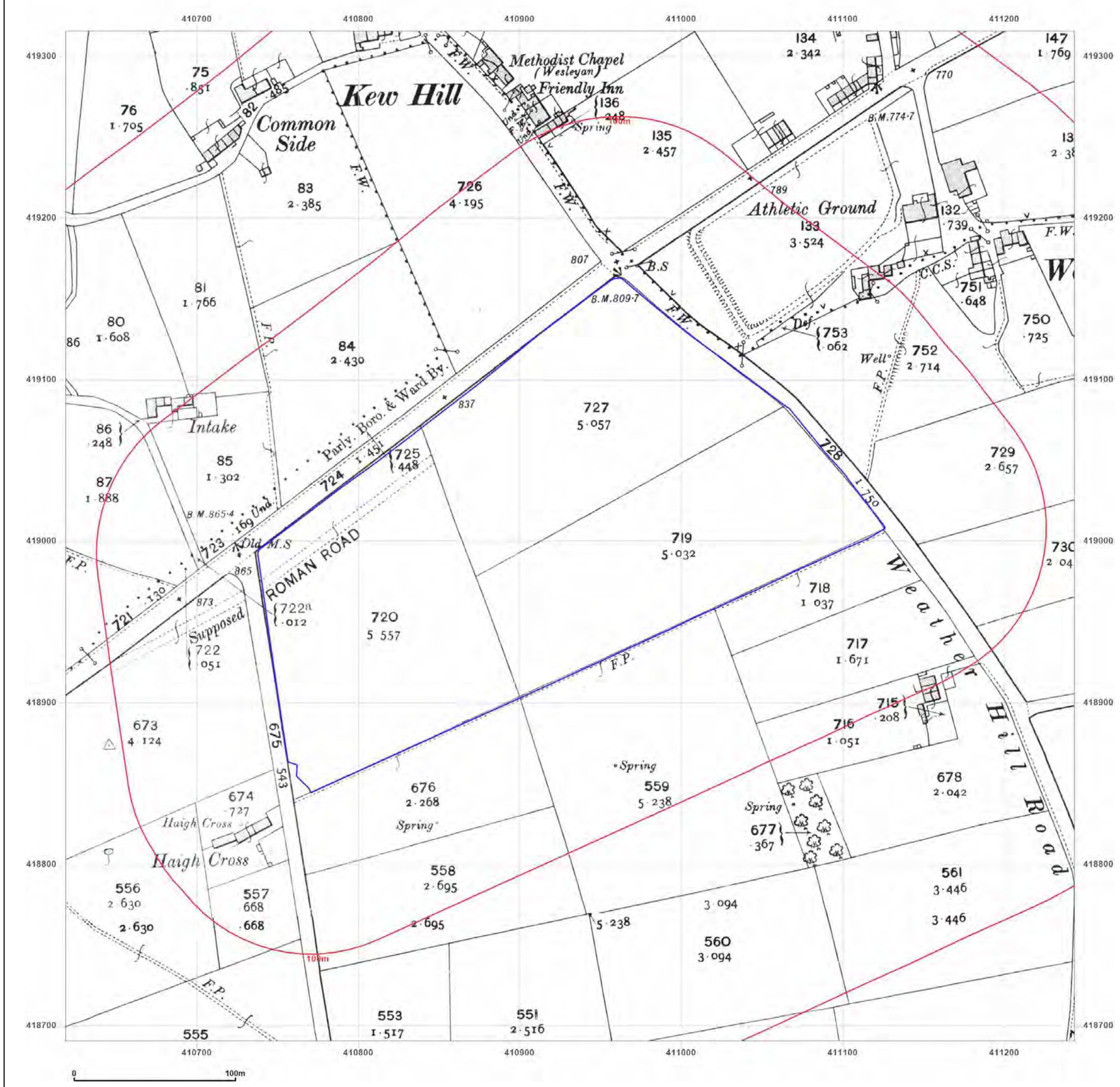


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**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479_LS_1_1
**Grid Ref:** 410931, 419003

**Map Name:** County Series
**Map date:** **1907**
**Scale:** 1:2,500
**Printed at:** 1:2,500

N
W E
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Surveyed 1907
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1907
Revised 1907
Edition N/A
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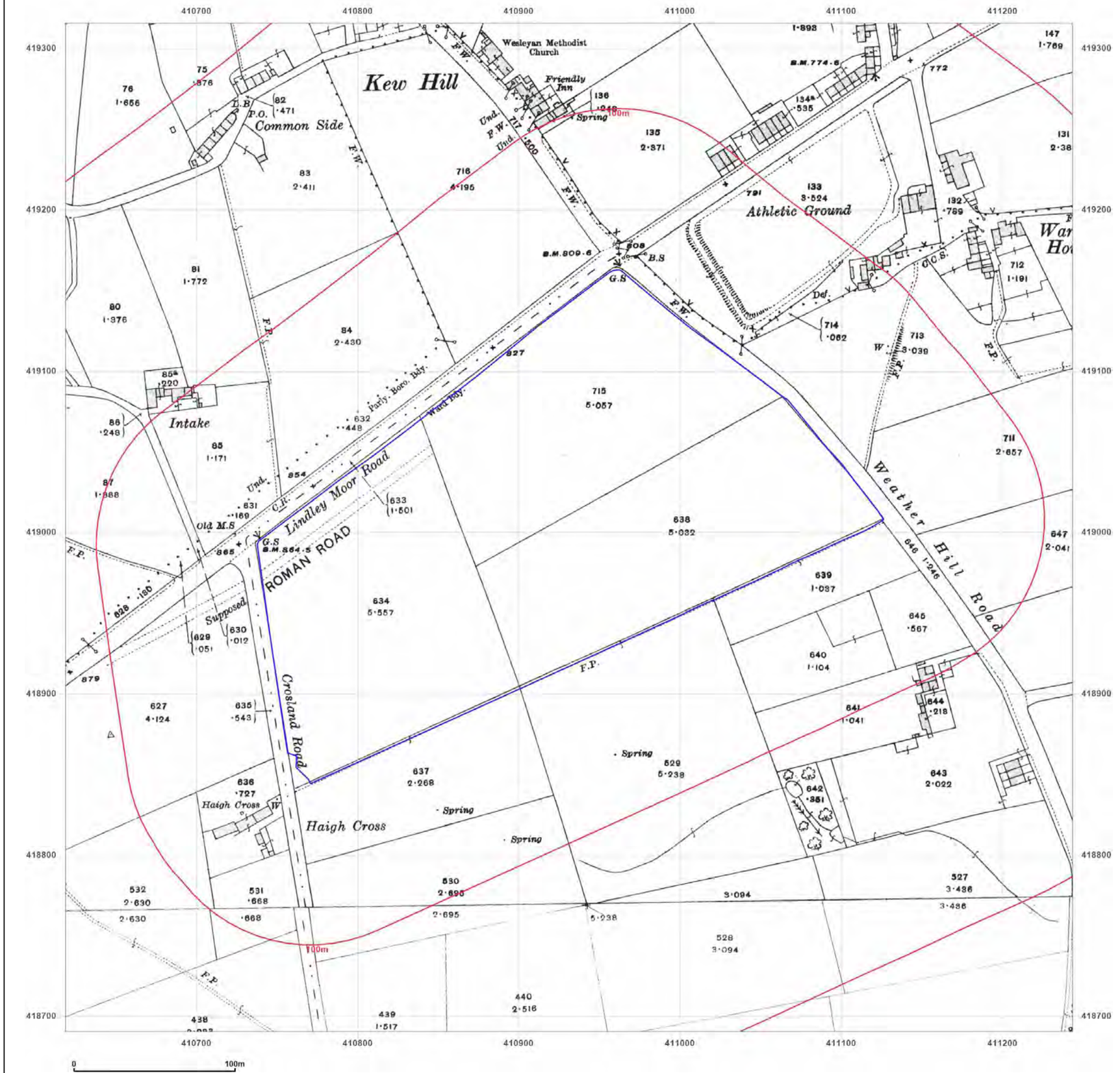


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**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479_LS_1_1
**Grid Ref:** 410931, 419003

**Map Name:** County Series
**Map date:** 1918
**Scale:** 1:2,500
**Printed at:** 1:2,500

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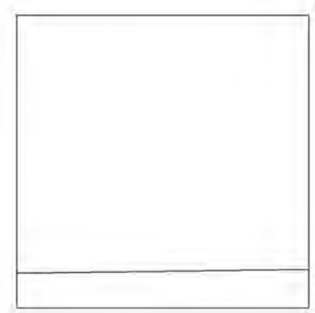


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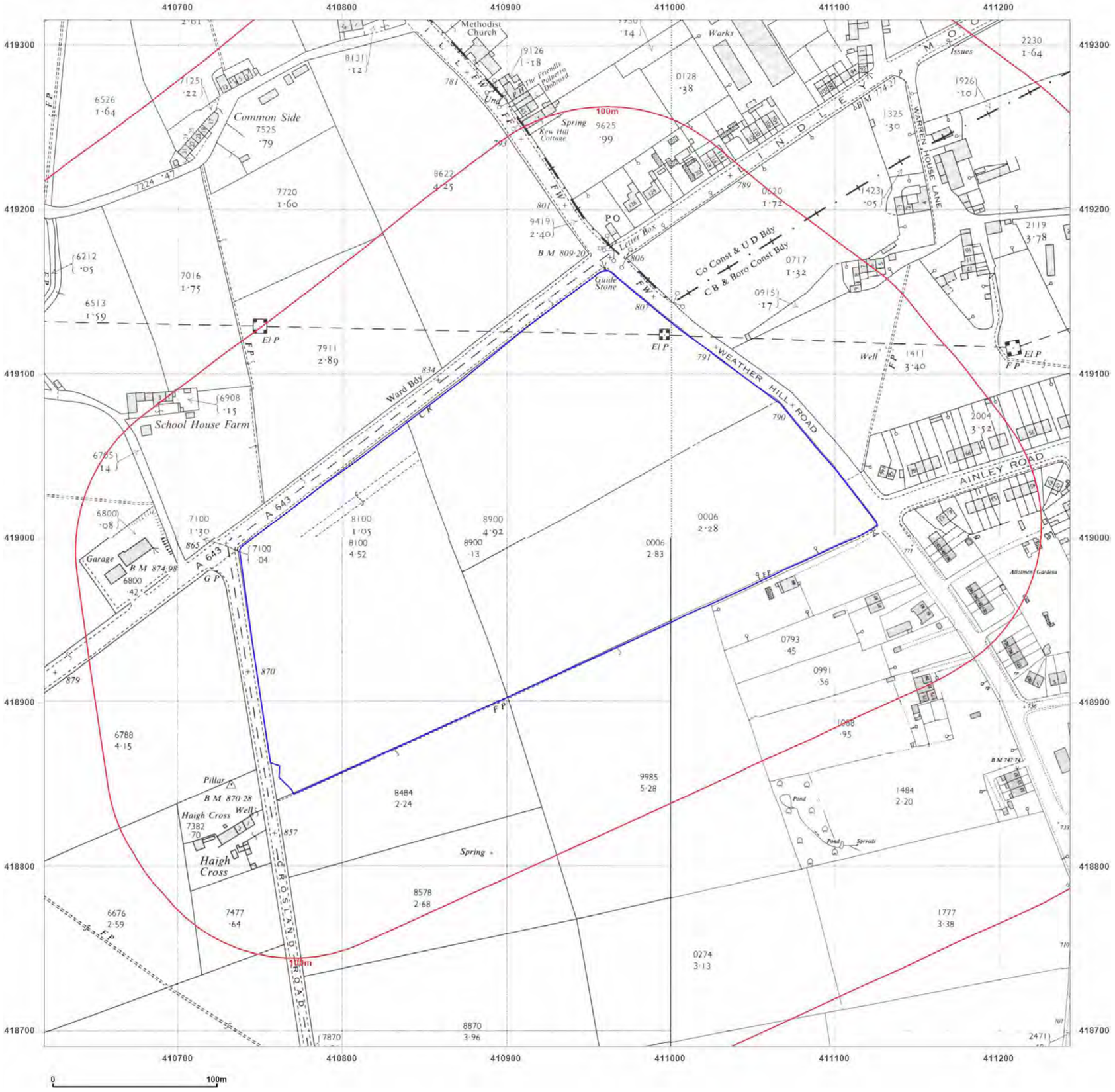


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479_LS_1_1
**Grid Ref:** 410931, 419003

**Map Name:** National Grid

**Map date:** **1961**

**Scale:** 1:2,500

**Printed at:** 1:2,500

N
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Surveyed 1961
Revised 1961
Edition N/A
Copyright 1963
Levelled 1959

Surveyed 1961
Revised 1961
Edition 1963
Copyright 1963
Levelled 1959

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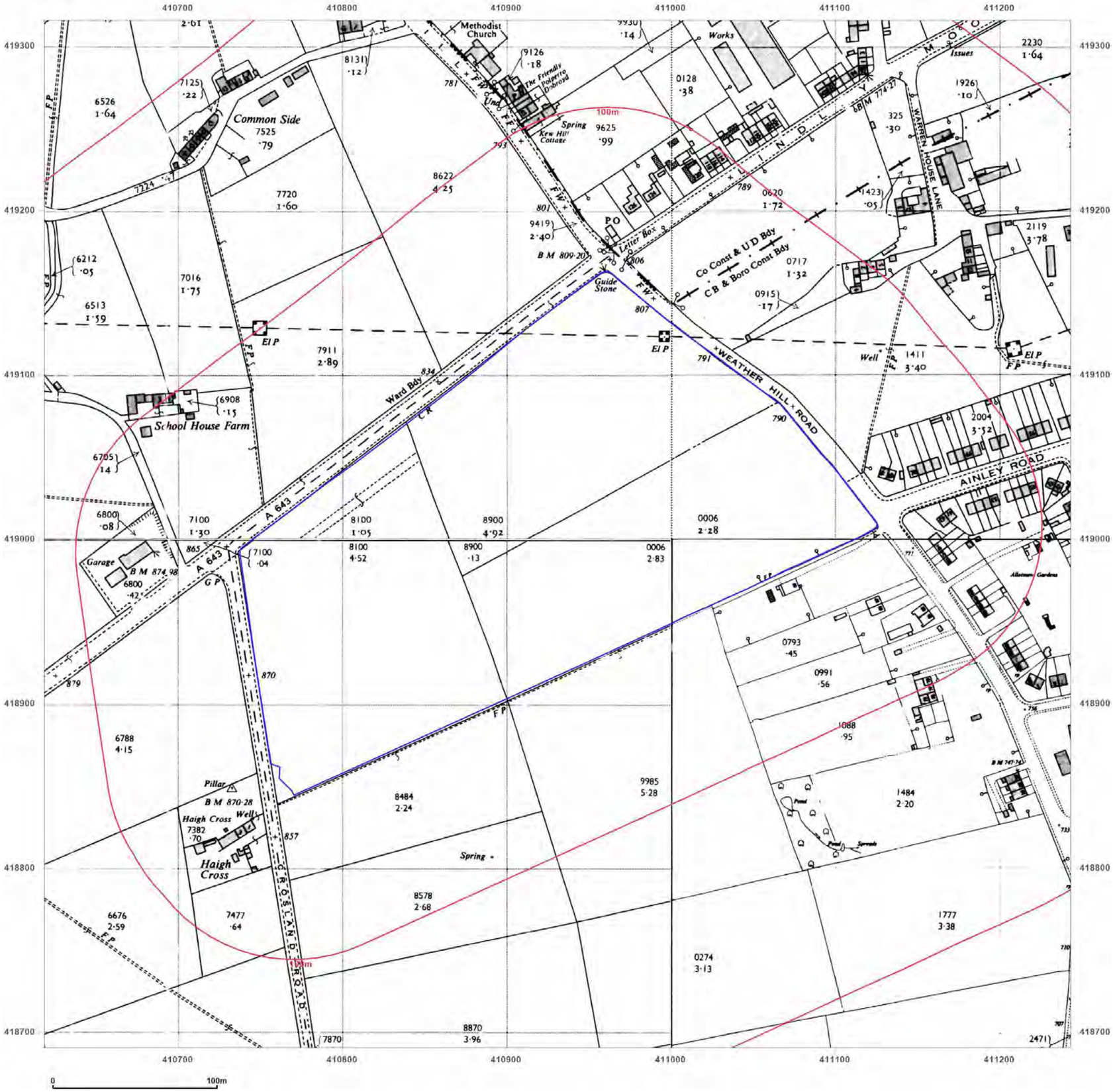


Groundsure INSIGHTS

**Site Details:**

LAND AT LINDLEY MOOR ROAD, LINDLEY, HUDDERSFIELD, HD3 3TB

**Client Ref:** MWA_7768
**Report Ref:** GS-8157479_LS_1_1
**Grid Ref:** 410931, 419003

**Map Name:** National Grid

**Map date:** **1963**

**Scale:** 1:2,500

**Printed at:** 1:2,500

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

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

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