GEO-ENVIRONMENTAL CONSULTING

SITE 1 – LAND OFF GREENSIDE ROAD, MIRFIELD

Phase 1 – Preliminary Risk Assessment



Report Ref: BEK-26035-1

Date: April 2026

GEO-ENVIRONMENTAL CONSULTING

Project Quality Assurance Information Sheet

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REVISION STATUS / HISTORY

Rev	Date	Issue / Comment	Prepared	Checked

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1. INTRODUCTION

1.1 Appointment

1.1.1 BEK Enviro (BEK) has been commissioned by The Moravian Union Incorporated to prepare a Phase 1 Preliminary Risk Assessment (PRA) for an area of land (Site 1) located off Greenside Road, Mirfield (hereafter referred to as 'the site'). The PRA will assess the potential risks associated with contamination, ground gas and other geo-environmental hazards considering the change of use to residential.

1.1.2 The site location is shown on BEK Drawing No 26035-1 and the general site layout is shown on BEK Drawing No 26035-2. These drawings are presented in Appendix F.

1.2 Proposed Development

1.2.1 The site (Site 1) is part of a larger residential development. Site 1 includes erection of seven residential houses with private gardens with associated access roads and parking.

1.2.2 The 'Proposed Site Layout Concept' showing both Site 1 and 2 of the development is presented in Appendix F (Matt Wood Architect Drawing No: 344SAA08, dated 2025) and an extract is shown below:



***Figure 1**: Proposed Site Plan – Site 1 (blue line) and Site 2 (red line)*

1.2.3 A separate Preliminary Risk Assessment for Site 2 has been prepared by BEK (Report Ref: BEK-26035-2, dated March 2026).

1.3 Objective & Scope of Work

1.3.1 The objective of this report is to provide a qualitative assessment of the potential risks from contamination and other geo-environmental hazards that could impact on the redevelopment of the site for residential end use.

1.3.2 To achieve the objective BEK will undertake the following:

- Carry out a site inspection and collect photographs
- Review the available relevant background information for the site, including:
  - Recent Ordnance Survey Maps
  - Site Specific GroundSure Reports
  - Site Specific Historical Maps
  - Available Google Earth Images
  - Matt Wood Architecture Drawings
  - BGS Borehole Information
  - UXO Information
  - Information obtained from the local EHO
- Develop a preliminary conceptual site model in accordance with guidance to identify potentially significant pollutant linkages specific to the proposed development
- Establish areas of potential concern based on identified risks and/or potential risks
- Identify any actions required to assess or reduce the risks identified

1.4 Limitations

1.4.1 The conclusions and recommendations presented in this report are the result of our professional interpretation of the information currently available. BEK reserves the right to amend the conclusions and recommendations if further information becomes available.

1.4.2 However, it should be noted that much of the information has been derived from reports written by others and BEK takes no responsibility for the accuracy of that information. Notwithstanding the above, the reports reviewed have all been written by professional environmental consultants with a duty of care to provide relevant and accurate information.

1.4.3 Issues associated with invasive plant species are outside the remit of this assessment.

2. SITE DESCRIPTION

2.1 Site Location

2.1.1 The site is located to the east of Greenside Road, approximately 0.8 km north-east of Mirfield and some 7.6 km north-east of Huddersfield.

2.1.2 The National Grid Reference for the approximate centre of the site is 420633, 421120. The site location is shown on BEK Drawing No 26035-1, presented in Appendix F.

2.2 Site Layout & Description

2.2.1 A site walkover was undertaken by BEK in March 2026. The site layout is shown on BEK Drawing No 26035-2, presented in Appendix F and on Figure 2 below. Photographs illustrating the existing site layout are presented in Appendix F.

2.2.2 The site occupies an area of land of approximately 2,065 m^2 essentially comprising of a well kempt grassed public open space area.

2.2.3 Some mature trees were located in along the northern site boundary of the site and in the north-east of the site. An area of singed ground was noted in the center of the grasses area on site. The site boundaries consisted of stone walls. Access is gained via a wooden field gate along the northern site boundary.



Figure 2: Site Layout

2.3 Surrounding Land Use

2.3.1 Greenside Road is located immediately west of the site. Wellhouse Lane is located immediately north of the site. Wellhouse Lane is located immediately east of the site. Residential dwelling surrounding wider areas around the site.

3. SITE HISTORY

3.1 The history of the site has been established using historical OS maps supplied by Groundsure and Google Earth Images.

3.2 It is noted that the historical maps were purchased for both Site 1 and Site 2. The information below applies to Site 1 only.

3.3 The reviewed OS maps are presented in Appendix A and are summarised below:

1854-1855

3.4 The earliest maps show the site (Site 1) to be vacant and forms part of grounds belonging to Wellhouse Chapel which is located some 10 m east of the site. A Well is located immediately east of then site. An unmarked road is located along the western site boundary, along which are a several residential dwellings. A burial ground is located some 15 m south-east of the site and Wellhouse Village is located some 40 m north of the site, located in which are several residential dwellings and a Sunday School. A sandstone quarry is located some 70 m east of the site and Little London City is located some 100 m south-west of the site. A colliery is located some 200 m north of the site and a Sandstone Quarry is located some 240 m south of the site (see Figure 3).

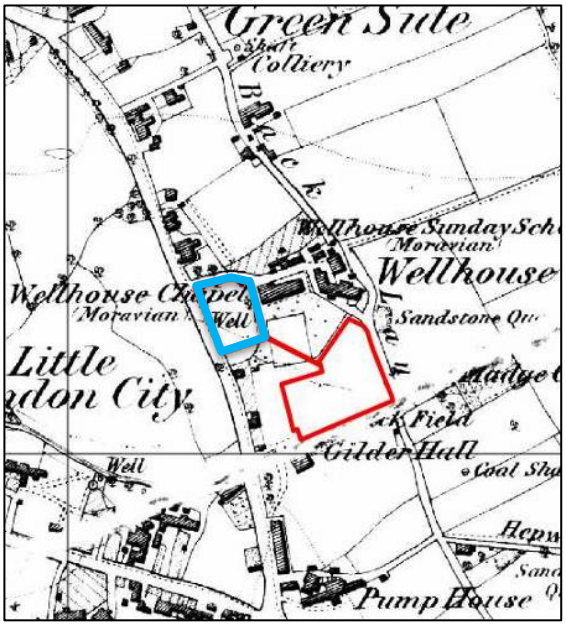


Figure 3: *Extract From 1854-1855 Map (Site 1 blue line).*

1892 - 2003

3.5 These maps show the site to still remain vacant. The Well is no longer immediately east of the site and the road immediately west of the site is marked as Greenside Road. There has been significant widespread residential development taken in the areas surrounding the site.

3.6 A Works is located some 65 m south-west of the site. Wellhouse Farm is now located some 70 m east of the site. The sandstone quarries are no longer present on the maps (presumably infilled/restored). A football recreational ground and a youth centre are located some 90 m south of the site. Wellhouse First School and Middle School are located beyond 110 m north-east of the site (see Figure 4).

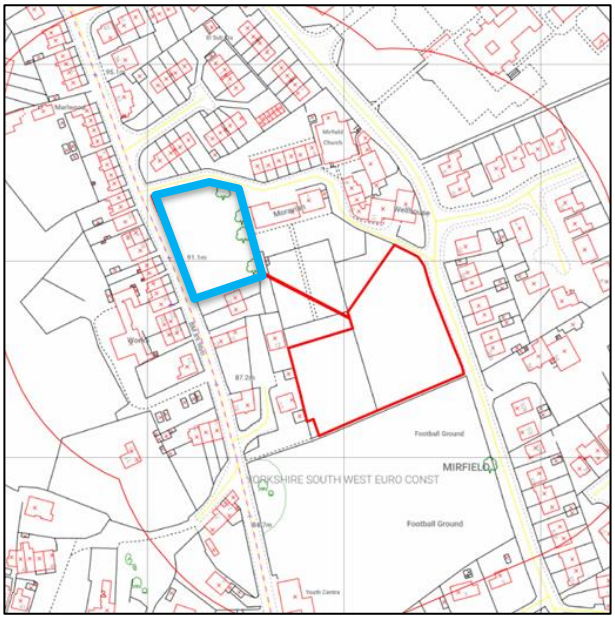


Figure 4: Extract From 2003 Map (Site 1 blue line).

2010-2025

3.6 More recent maps show no significant changes to the site or surrounding area, with the exception of further residential development in the wider areas surrounding the site.

4. ENVIRONMENTAL SETTING

4.0.1 An Enviro+GeoInsight Report has been obtained from Groundsure and information provided in these reports has been used within this section. A copy of the report is presented in Appendix B.

4.0.2 It is noted that the Enviro+GeoInsight Report was purchased for both Site 1 and Site 2). The information below applies to Site 1 only.

4.1 Geology

4.1.1 The site geology is illustrated in the Enviro+GeoInsight Report which has sourced data from several sources including British Geological Society (BGS), BRITPITS database and the Coal Authority.

4.1.2 In addition, BEK has sought site investigation information from the BGS website and there are three within 250 m of the site (see Figure 5):

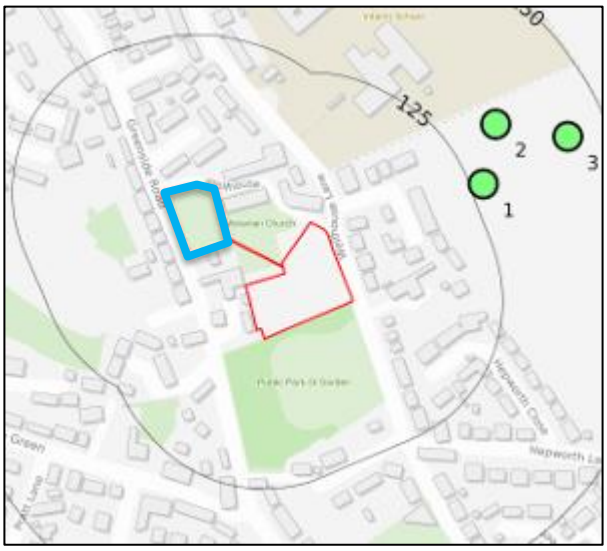


Figure 5: *BGS Borehole Locations (Site 1 blue line).*

4.1.3 The strata encountered within the closest three boreholes is summarised in Table 1 below:

Distance/direction from site	Depth (m)	Strata
166 m East	0 – 0.2	Topsoil
	0.2 – 1.3	Orange brown fine to medium grained highly weathered SANDSTONE
	1.3 – 13.2	Light brown fine to medium grained SANDSTONE . . . . becoming grey below 7.1 m.
	13.2 – 17.9	Grey silty MUDSTONE
	17.9 – 18.7	Black bright COAL
	18.7 – 30	Dark grey silty MUDSTONE with occasional sandstone band
197 m East	0 – 0.2	Topsoil
	0.2 – 9.5	Orange brown SANDSTONE . . . . becoming light brown below 1.5 m and grey below 5.5 m.
	9.5 – 13.1	Grey silty MUDSTONE
	13.1 – 13.9	COAL
	13.9 – 23.5	Grey silty MUDSTONE with sandstone bands
246 m East	0 – 0.2	Topsoil
	0.2 – 8.2	Orange brown SANDSTONE . . . . becoming light brown below 1.2 m and grey below 7.5 m
	8.2 – 1.1	Grey silty MUDSTONE
	11.1 – 11.9	VOID
	11.9 – 13	SOLID DRILLING – No Returns

***Table 1**: Summary of Closest Three Boreholes Within 250 m Vicinity of the Site.*

4.1.4 Copies of the three BGS boreholes records are provided within Appendix C.

Made Ground

4.1.5 According to the Enviro+GeoInsight Report there is one artificial deposit of made ground some 170 m west of the site.

Superficial Geology

4.1.6 Information on the Enviro & GeoInsight Report indicates that there are superficial deposits located beneath the site or the immediate surrounding area.

Bedrock

4.1.7 The Enviro+GeoInsight Report indicates that the bedrock geology below the eastern half of the site is Falhouse Rock which is dominated by sandstone. The western bedrock geology is classified as Pennie Lower Coal Measures Formation which is dominated by mudstone, siltstone and sandstone (see Figure 6). These strata's have a low to high permeability.

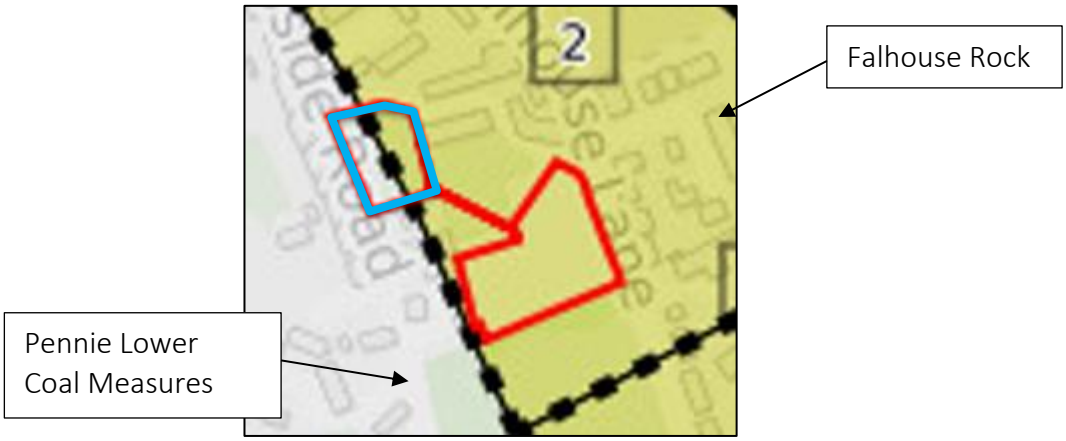


Figure 6: *Bedrock Geology Below Site (Site 1 blue line).*

Faults & Linear Features

4.1.8 There is one inferred fault running through the centre of the site and is orientated north to south (See Figure 6). There are a further five faults and linear features located within 250 m of the site. The closest of which is an inferred fault located some 47 m south-east of the site

4.2 Mining & Ground Stability

Coal Mining

4.2.1 Information in the Enviro+GeoInsight Report indicates that the site is located within an area which could have been affected by coal mining. Moreover, a review of the Coal Authority Interactive Map indicates that the site is located within a designated 'Development High Risk Area' and an area of 'Probable Shallow Coal Mine Workings'.

4.2.2 A Desktop Coal Mining Risk Assessment has been completed by BEK for the site in order to assess the potential risks from subsidence associated with historical coal mining ((Report ref: BEK/26035/260402/MWT/1, dated April 2026).

4.2.3 The preparation of the report involved the purchase of a Coal Authority Consultants Coal Mining Report the report recommends intrusive investigation works are undertaken on site to fully quantify risks from historic coal mining at the site.

4.2.4 There are two off-site BritPits within 250 m. The closest of which is some 35 m south-east of the site, which involved the extraction of sandstone. The statues of which is now ceased. There is a further ceased sandstone BriPit some 187 m south-east of the site.

4.2.5 There are two surface ground workings within 250 m of the site. The closest referred to an 'Unspecified Pit' some 188 m south-east of the site dating 1892.

4.2.6 The Enviro+GeoInsight Report provides hazard ratings associated with natural ground subsidence at the site, as summarised below:

Shrink-Swell Clay:	Negligible/Very Low
Running Sands:	Negligible
Compressible Deposits:	Negligible
Collapsible Deposits:	Very Low
Landslides:	Very Low
Ground Dissolution of Soluble Rocks:	Negligible

4.2.7 The site is unlikely to be affected by natural ground instability.

4.3 Hydrogeology

4.3.1 There is no recorded superficial aquifer beneath the site.

4.3.2 The underlying bedrock is classified by the EA as a 'Secondary A Aquifer' which are described as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.'

4.3.3 The Enviro+GeoInsight Report indicates that the site is not located within a groundwater Source Protection Zone.

4.3.4 There are no surface or groundwater abstractions within 250 m of the site.

4.4 Hydrology

4.4.1 There are four surface water features located within 250 m of the site. The closest of which is located some 103 m south-west of the site.

4.4.2 There are no registered licensed discharge consents within 250 m of the site.

4.4.3 The site is not considered to be at risk from flooding.

4.5 Contaminated Land & Landfill Activities

4.5.1 Information provided in the Enviro+GeoInsight Report indicates that there are no historic/current landfill sites located within 250 m of the site.

4.5.2 The information presented in the Enviro+GeoInsight Report indicates that there is one licensed waste site located some 213 m south. It originates under the name 'Valley House Transfer and Treatment Facility' with the address 'Valley House Transfer and Treatment Facility' and the type of site is classified as 'Physico-Chemical Treatment Facility'. The licensed waste sites was operational from 2005, and no surrender date is provide.

4.5.3 There are no waste exemptions within 250 m of the site.

4.5.4 There has been no EA recorded pollution incidents within 250 m of the site.

4.5.5 There are no NIHHS or COMAH sites, recorded Part A(1), Part A(2), Part B or IPPC Authorised Activities within 250 m of the site.

4.5.6 There are five historical tanks located within 250 m of the site. The closest of refers to an 'Unspecified Tank' some 219 m south-east of the site, dating from 1958 to 1973.

4.5.7 There are fourteen historical energy features located within 250 m of the site. The closest of which refers to an 'Electrical Substation' some 75 m north of the site dating from 1969.

4.5.8 There are twelve recorded historical potentially contaminative land uses within 250 m of the site. The closest of which refers to an Unspecified Works' some 57 m south of the site dating from 1974 to 1988.

4.5.9 There are four recent industrial land uses located within 250 m of the site. The closest of which refers to an 'Electrical Substation' some 74 m north of the site.

4.6 Sensitive Land Uses

4.6.1 The site is not affected by any of the ecological systems identified as a statutory receptor in the DETR Circular 01/2006.

4.7 Radon

4.7.1 The Enviro+GeoInsight Report indicates that for the majority site between 1% and 3% home are affected by radon and a small section in the west of the site less than 1% of homes are estimated to be affected by radon and no radon protective measures are necessary.

4.8 Unexploded Ordnance

4.8.1 The regional unexploded bomb risk map from Zetica indicates that the site is in an area of LOW risk from Unexploded Ordnance (UXO) resulting from the Second World War.

4.8.2 BEK do not consider any further assessment to be required with respect to UXO.

5. POTENTIAL POLLUTANT LINKAGES

5.1 General

5.1.1 This section identifies the potential sources of contamination along with specific contaminants of concern, pathways and receptors that may be associated with the site based on its known history and the current condition and with respect to the re-development of the site for residential use.

5.1.2 This information is used to develop a preliminary conceptual model which is a qualitative description of potential sources of environmental pollutants, the pathways by which they are transported and the receptors:

i) Potential sources of contamination: these include any actual or potentially contaminating materials and activities, located either on or in the vicinity of the site

ii) Potential pathways for contamination migration: these comprise the routes or mechanisms by which contaminants may migrate from the source to the receptor including environmental migration pathways and human health exposure pathways

iii) Potential receptors of contamination: these include future land users, ecological systems, water resources and property

5.2 Potential Contaminants of Concern

5.2.1 Based on reviewed historical maps, the site remains vacant and forms part of grounds belonging to Wellhouse Chapel, the site remains vacant until present.

5.2.2 Given the history of the site, the potential for significant contamination to be present is considered to be very low.

5.2.3 Limited site investigation will be required to ensure shallow ground conditions are as anticipated and that the soils are suitable for re-use in a residential setting.

5.3 Potential Sources of Ground Gas

5.3.1 An infilled quarry mapped some 70 m to the east of the site on historic maps. The nature of which material used to infill this feature is unknown and it could represent a significant source of ground gas. However, the feature was infilled prior to 1892 and gas risks are considered to be negligible.

5.3.2 However, coal gas associated with the underlying coal measures represent a possible risk.

5.3.3 The Coal Mining Risk Assessment prepared by BEK for the site has identified the area of probable workings across the site, possibly associated with the mine entry circa 150 m north of the site. In addition, there is an inferred fault that runs through the centre of the site which could provide a preferential migration pathway for any gas produced by the coal mine workings. BEK considers it prudent to further assess the risks from coal mine gas at the site using the recent CL:AIRE publication 'Good Practice for Risk Assessment for Coal Mine Gas Emissions'.

Further Assessment - Coal Mine Gas

5.3.4 Using Figure 13.1 of CL:AIRE 'Good Practice for Risk Assessment for Coal Mine Gas Emissions' (See Figure 7), the site cannot be designated as 'No Mine Gas Risk' as it is located within a Coal Mining Reporting Area.

5.3.5 The site can also not be designated as being located within a 'Negligible Risk Zone' as, although the majority of statements which would support this designation are true, the presence of probable shallow coal mine working across the majority of the site does remain a gas source risk as workings could be present at <150 m depth beneath the site.

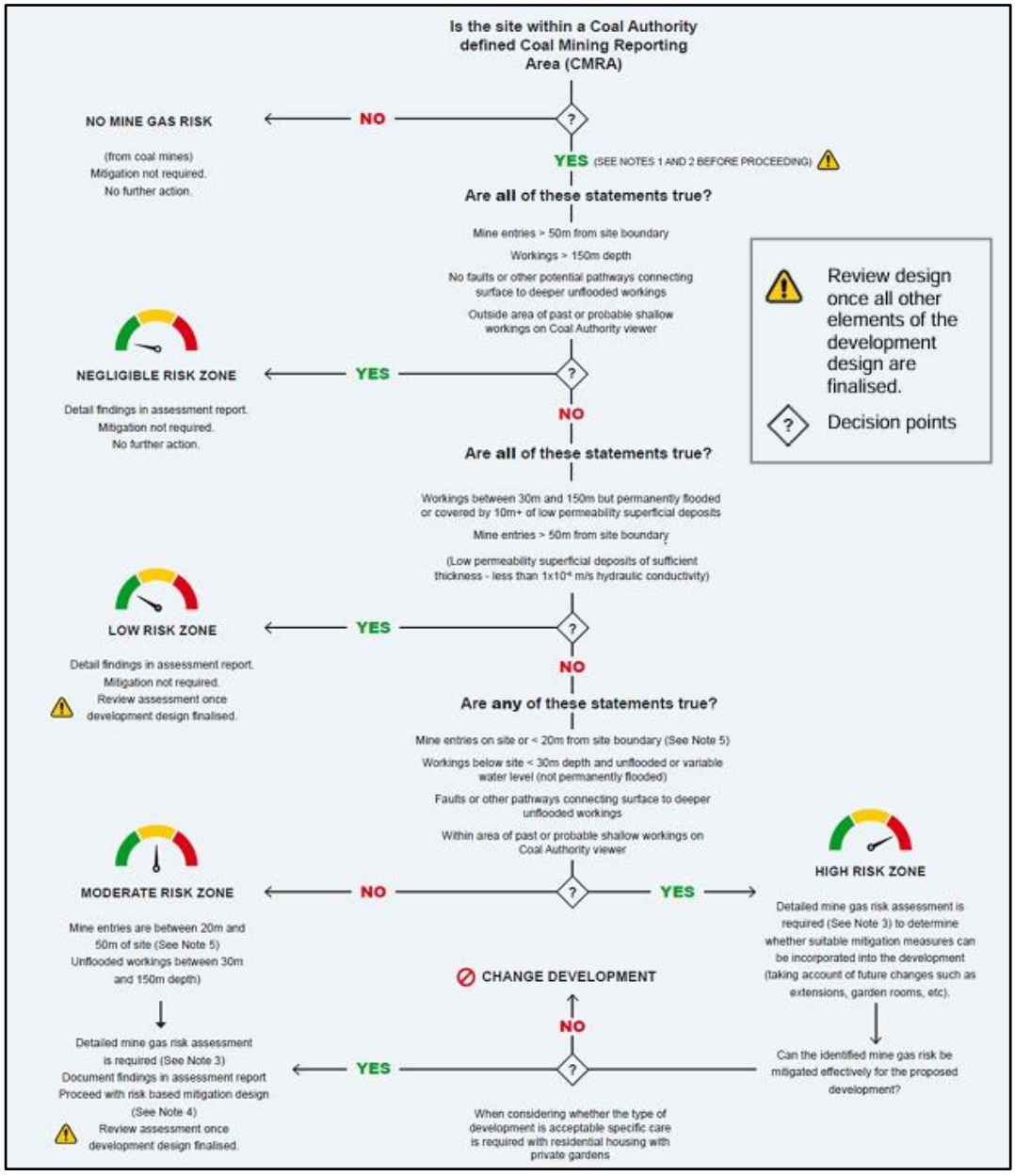


Figure 7: Extract from Figure 13.1 of CL:AIRE 'Good Practice for Risk Assessment for Coal Mine Gas Emissions'

5.3.6 The site cannot be designated as a 'Low Risk Zone' as currently there is no evidence that low permeability superficial deposits (e.g. Boulder Clay) of >10 m thickness are present at the site. The fault that transects the site also needs to be considered in the risk assessment.

5.3.7 A detailed quantitative coal mining risk assessment will be required.

5.4 Potential Pathways

5.4.1 The pathways through which contaminants may reach receptors are in part dependent by the nature and behaviour of the contaminant and the intended end use of the site.

5.4.2 The following potential pathways have been identified with respect to the existing site condition, the environmental setting and the proposals for residential dwellings with gardens, all of which are assessed in the conceptual model:

- Ingestion of contaminated soil/home grown vegetables (landscaped areas only)
- Inhalation of contaminative dust including asbestos fibres
- Dermal contact (landscaped areas only)
- Indoor inhalation of organic vapours and ground gas
- Dissolution or suspension (leaching) of contaminants into pore waters affecting plant growth
- Dissolution or suspension (leaching) of contaminants from site soils leading to lateral migration within perched waters to off-site receptors. Potential significant pathways include more permeable layers within the made ground, underground services and piles/foundations.
- Dissolution or suspension (leaching) of contaminants from site soils leading to contamination of groundwater
- Contamination affecting the integrity of service pipelines by direct contact
- Buildings affected by direct contact with elevated concentrations of sulphate and/or extreme pH

5.5 Receptors

5.5.1 Potential site specific receptors that may be affected by contamination at the site are listed below:

Future Site Users

5.5.2 Future occupants of the site could be at risk from contamination present at the site.

5.5.3 Potential risks are associated with ingestion of soil and home grown vegetables as well as inhalation of contaminated dust and/or asbestos and dermal contact with contaminants of concern. These risks are all associated with the garden/landscaped areas of the new development.

5.5.4 There are also risks associated with indoor inhalation of organic vapours/ground gas.

Construction Workers

5.5.5 The primary risks to construction workers are associated with shallow excavations as asbestos could be present. Asbestos fibers (if present) can be released into the atmosphere during earthworks.

5.5.6 Standard personal protective equipment and site specific risk assessments and method statements should reduce risks associated with other contaminants of concern due to short exposure duration.

Off Site Receptors

5.5.7 Off site receptors include nearby home owners, business owners, employees and walkers. Human health could be at risk if asbestos fibres are released during the re-development.

Flora

5.5.8 Heavy metals can be phytotoxic and if present can represent a potential risk to flora in the garden areas.

Buildings & Services

5.5.9 The integrity of service pipes can be affected by concentrations of organic contamination.

Buildings & Services

5.5.10 The integrity of service pipes can be affected by concentrations of organic contamination.

Controlled Waters

5.5.11 There are four surface water features located within 250 m of the site. The closest is some 103 m south of the site.

5.5.12 There is no recorded superficial aquifer beneath the site.

5.5.13 The bedrock is classified as a Secondary A Aquifer which represents a significant receptor.

5.6 Preliminary Conceptual Model

5.6.1 The identified potential sources of contaminants, pathways and receptors have been assessed to establish plausible pollutant linkages. All potentially significant pollutant linkages are detailed in Table B, in Appendix D.

5.7 Potentially Significant Pollutant Linkages

5.7.1 A number of possible 'significant pollutant linkages' have been identified associated with the site:

5.7.2 Potential risks relating to the potential harm to the health of humans and/or domestic pets both on and off site due to the potential for direct contact with contaminants in the made ground and the ingestion of contaminated soil/dust **(Link 1).**

5.7.3 There is also the possibility of windblown particulates being inhaled by people/animals both on and off site **(Link 2).**

5.7.4 Home grown produce could be affected by ground contamination **(Link 3)** and human health could be at risk by the ingestion of home grown produce affected by contamination **(Link 4).**

5.7.5 Human health could be at risk by the inhalation of ground gases **(Link 5)** and/or volatile contamination migrating into properties on site **(Link 6).**

5.7.6 Property (including services, flora and fauna) could be affected by direct contact to high concentrations of contaminants **(Link 7).**

5.7.7 Dissolution or suspension (leaching) of contaminants from site soils leading to lateral migration of contaminants to surface waters **(Link 8)**.

5.7.8 Dissolution or suspension (leaching) of contaminants from site soils leading to impact on the underlying Aquifers within the bedrock **(Link 9).**

5.7.9 Site investigation is required to identify site specific conditions and assess the risks associated with each identified plausible pollutant linkage.

6. CONCLUSIONS & RECOMMENDATIONS

6.1 Based on the findings of the Preliminary Risk Assessment herein, the majority of the site is considered to be greenfield and represents negligible risk from contamination.

6.2 Site investigation is required to characterise the shallow ground conditions across the site and as a minimum, recover samples of the overlying topsoil to ensure suitability for re-use in a residential setting. The site investigation is also required to support a geotechnical assessment to inform foundation design and possibly to inform surface water drainage options.

6.3 Risks from mine gas have been identified and risks will need to be quantified through site investigation work.

6.4 The following works are recommended. These include the recommendations set out in the Coal Mining Risk Assessment.

Site Investigation

6.5 The site investigation should comprise the drilling of a series of window sample boreholes across the site to characterise the shallow ground conditions.

6.6 The investigation should provide a good spread across the site to confirm ground conditions are as anticipated and assess the suitability of the topsoil for re-use.

6.7 In-situ strength tests should be carried out where possible during the site investigation works (depending on ground conditions) to provide additional geotechnical information.

6.8 Gas and groundwater monitoring probes will be installed within 3 selected boreholes to facilitate a gas risk assessment and assess groundwater levels.

6.9 The site investigation should be supervised by an experienced engineer who will be responsible for recording ground conditions encountered.

6.10 The engineer will recover representative samples for laboratory testing. All samples recovered for chemical testing will be stored in appropriate sampling vessels in a precooled cool box and dispatched to the laboratory within 24 hours.

Coal Mining Investigation

6.11 Intrusive investigation works will be required in order to determine any potential risks from subsidence. The investigation will also serve to quantify any potential risks from coal mine gas.

6.12 This should comprise the drilling of 3 rotary open-hole boreholes to a depth of 30 m to investigate the 'Development High Risk Area'.

Laboratory Testing

6.13 Following a review of the ground conditions encountered, a selection of samples will be tested for the contaminants of concern listed in Table 2 of this report. If visual or olfactory evidence of contamination is encountered during the site investigation then it may be necessary to undertake additional testing.

6.14 In addition, if soils or made ground materials are to be removed from site to facilitate the development works then it may be necessary to test soils/made ground for Waste Acceptance Criteria (WAC) and/or for Waste Duty of Care purposes.

6.15 Depending on ground conditions encountered, samples may also be tested for geotechnical properties to inform foundation design.

6.16 All testing will be carried out by a UKAS accredited laboratory to MCERTS standard (where applicable).

Risks from Ground Gas

6.17 A detailed quantitative gas risk assessment will be required for the site when further information for the ground conditions are known.

Environmental Monitoring (including groundwater)

6.18 To comply with current guidance, gas monitoring of borehole installations should be completed on 6 occasions over a 3-month period (with monitoring of each installation to take place over a 20 minute period on each occasion). Monitoring will include gas flow rates, carbon dioxide, methane and oxygen concentrations, barometric pressure and water levels. Monitoring should be undertaken during periods of low or falling barometric pressure where possible.

6.19 Continuous monitoring may be required at the site depending on depending on the outcome of the detailed quantitative coal mine gas risk assessment.

Risk Assessment

6.20 The investigation findings will be assessed as part of a quantitative risk assessment to amend the conceptual site model and identify any potential significant pollutant linkages and provide recommendations for foundation design.

6.21 The assessment will be undertaken in accordance with current UK guidance and policy.

Reporting

6.22 The investigation findings should be assessed in accordance with current UK policy and guidance to identify any potential significant pollutant linkages and determine the requirements for mitigation and/or remediation.

6.23 The works undertaken will be detailed in a Site Investigation & Ground Assessment report along with full justifications for the assessment and the conclusions/recommendations.

Other Considerations

6.24 We would also recommend that consideration is given to the requirements of the water supply service provider and the completion of the UKWIR risk assessment for water pipe selection.

6.25 In order to determine if subsidence could be an issue for the proposed new build, it is also recommended within the Coal Mining Risk Assessment that 3 rotary open-hole boreholes are drilled to a depth of 30 m.

6.26 The appropriateness of the proposed gas risk assessment should be considered further when ground conditions are fully understood.

APPENDIX A

Historical OS Maps

Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	County Series
Map date:	1892
Scale:	1:2,500
Printed at:	1:2,500

N
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Date: 1892
Surveyed: 1892
Revised: 1892

Contact us with any questions at:
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01273 257 755

Map legend available at:
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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

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

N
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Date: 1907
Surveyed: 1907
Revised: 1907

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	County Series
Map date:	1922
Scale:	1:2,500
Printed at:	1:2,500

N W E S

Date: 1922
Surveyed: 1922
Revised: 1922

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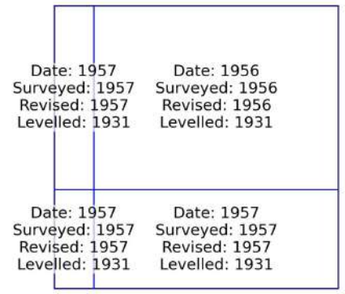
Map legend available at:
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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1956-1957
Scale:	1:1,250
Printed at:	1:2,000

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1958
Scale:	1:1,250
Printed at:	1:2,000

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Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1958
Scale:	1:2,500
Printed at:	1:2,500

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Date: 1958
Surveyed: 1957
Revised: 1957
Copyright: 1958
Levelled: 1931

Date: 1958
Surveyed: 1957
Revised: 1957
Copyright: 1958
Levelled: 1931

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420400 420500 420600 420700 420800 420900

421300 421200 421100 421000 420900 420800

250m
100m
100m

Green Side Estate
Allotment Gardens
Wellhouse
Moravian Church
Moravian Sunday School
Wellhouse Farm
Madge Croft
Football Ground
Lee Green C of E School
Shoulder of Mutton Inn (PH)
Holmdene
Cricket Ground
Allotment Gardens
Tank
Townsgate Working Men's Club & Institute
GREENSIDE ROAD
HEPWORTH LANE
GROVE STREET
FUMEROUSE LANE

0m 100m

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1966-1969
Scale:	1:1,250
Printed at:	1:2,000

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Date: 1966 Surveyed: 1957 Revised: 1965 Copyright: 1966 Levelled: 1962	Date: 1969 Surveyed: 1957 Revised: 1968 Copyright: 1969 Levelled: 1962
Date: 1968 Surveyed: 1957 Revised: 1967 Copyright: 1968 Levelled: 1962	Date: 1968 Surveyed: 1957 Revised: 1967 Copyright: 1968 Levelled: 1962

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1969-1971
Scale:	1:2,500
Printed at:	1:2,500

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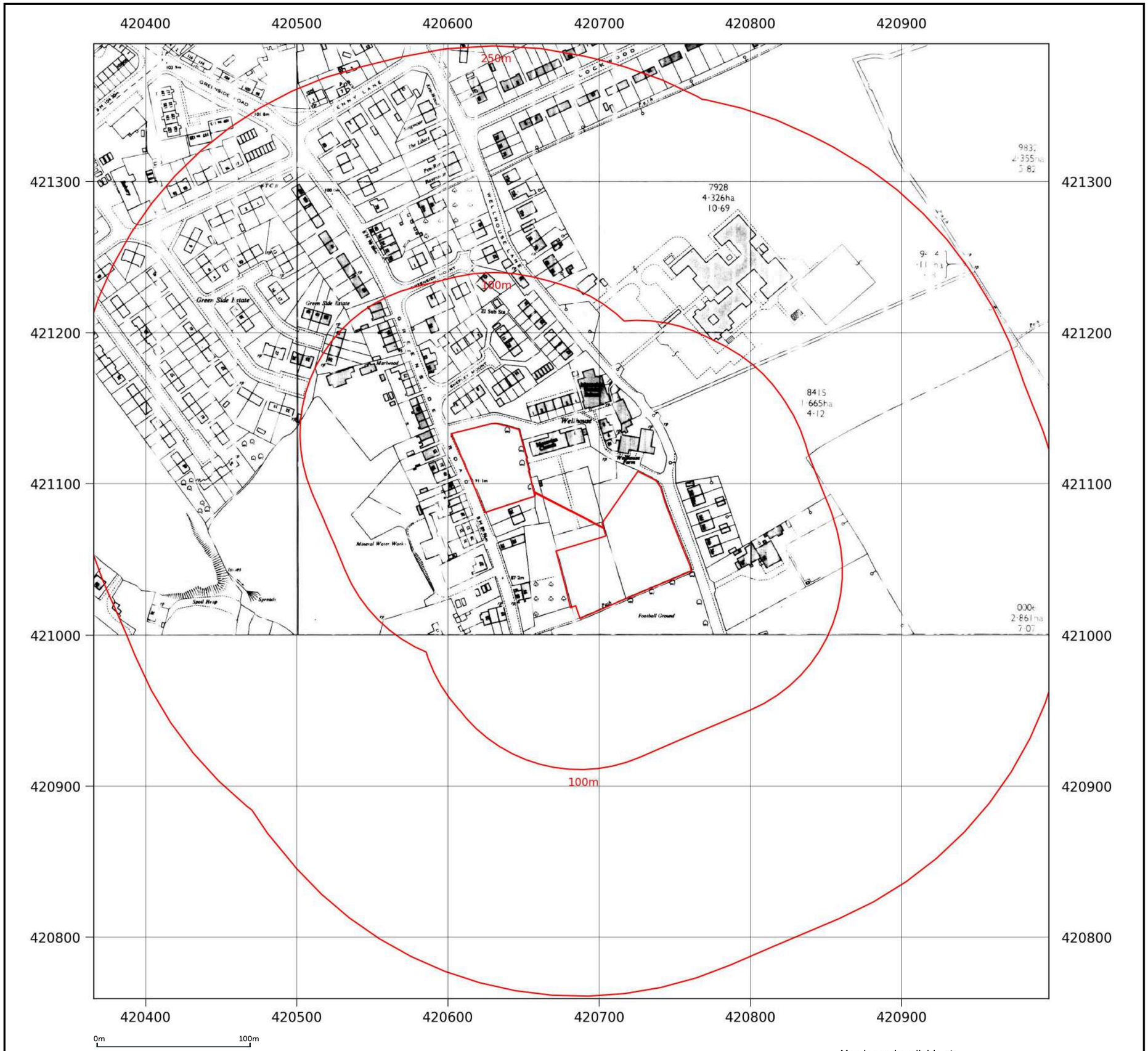
Date: 1971
Surveyed: 1957
Revised: 1969
Copyright: 1971
Levelled: 1962

Date: 1969
Surveyed: 1967
Revised: 1967
Copyright: 1969
Levelled: 1962

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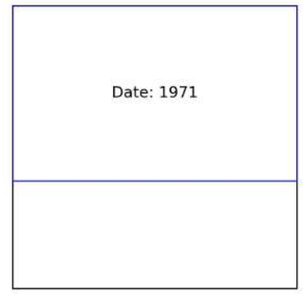
Map legend available at:
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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1971
Scale:	1:2,500
Printed at:	1:2,500

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Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1973-1978
Scale:	1:1,250
Printed at:	1:2,000

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Date: 1974
Surveyed: 1957
Revised: 1974
Copyright: 1974
Levelled: 1962

Date: 1978

Date: 1974
Surveyed: 1957
Revised: 1973
Copyright: 1974
Levelled: 1962

Date: 1973
Surveyed: 1957
Revised: 1972
Copyright: 1973
Levelled: 1962

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1980-1985
Scale:	1:1,250
Printed at:	1:2,000

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Date: 1983
Copyright: 1983
Levelled: 1962

Date: 1985
Surveyed: 1962
Revised: 1985
Copyright: 1985
Levelled: 1962

Date: 1980
Surveyed: 1980
Revised: 1980
Copyright: 1980

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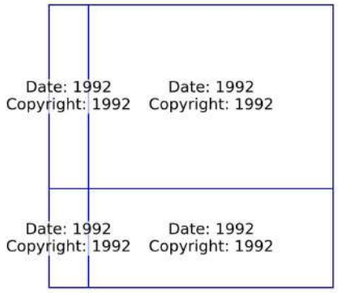
Map legend available at:
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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1992
Scale:	1:1,250
Printed at:	1:2,000

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1993
Scale:	1:1,250
Printed at:	1:2,000

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Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	National Grid
Map date:	1993
Scale:	1:1,250
Printed at:	1:2,000

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Map Insight

Site details:	SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN
Client ref:	8961-26035-MLM
Report ref:	GS-539-ZSX-PCC-DWG
Grid ref:	420689.89, 421073.51
Production date:	11 March 2026

Map name:	LandLine
Map date:	2003
Scale:	1:1,250
Printed at:	1:1,250

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Date: 2003

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APPENDIX B

Enviro+GeoInsight Report

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

SITE 1 and SITE 2, MIRFIELD, KIRKLEES, WF14 0AN

Order Details

Date: 11/03/2026

Your ref: 8961-26035-MLM

Our Ref: GS-67T-433-WIH-5RX

Site Details

Location: 420689 421073

Area: 0.67 ha

Authority: Kirklees Council ↗

Site plan



Quick Links

Summary of findings p. 2 >

OS MasterMap site plan p.13 >

Aerial image p. 9 >

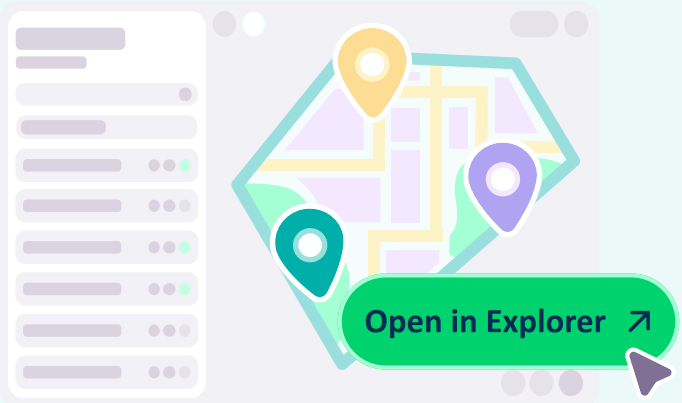
Insight User Guide ↗

Open this site in Explorer!

Access the data now in our interactive workspace.

- Map and interpret 130+ datasets across 170 years
- Generate insights and visuals quickly
- Revisit and collaborate with your team

Access to Groundsure Explorer requires an Insights account.
12 months access begins at purchase.



Contact us with any questions at:
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Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
14 >	1.1 >	Historical industrial land uses >	0	1	9	20	-
16 >	1.2 >	Historical tanks >	0	0	5	3	-
16 >	1.3 >	Historical energy features >	0	0	4	9	-
17	1.4	Historical petrol stations	0	0	0	0	-
17 >	1.5 >	Historical garages >	0	0	0	8	-
18	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
19 >	2.1 >	Historical industrial land uses >	0	3	9	31	-
21 >	2.2 >	Historical tanks >	0	0	5	3	-
22 >	2.3 >	Historical energy features >	0	0	14	21	-
23	2.4	Historical petrol stations	0	0	0	0	-
23 >	2.5 >	Historical garages >	0	0	0	13	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
25	3.1	Active or recent landfill	0	0	0	0	-
25	3.2	Historical landfill (BGS records)	0	0	0	0	-
26	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
26 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	2	-
26	3.5	Historical waste sites	0	0	0	0	-
27 >	3.6 >	Licensed waste sites >	0	0	1	0	-
27 >	3.7 >	Waste exemptions >	0	0	0	18	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
30 >	4.1 >	Recent industrial land uses >	0	0	4	-	-
31	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
31 >	4.3 >	Current or recent petrol stations >	0	0	0	1	-
31	4.4	Electricity cables	0	0	0	0	-
31	4.5	Gas pipelines	0	0	0	0	-

32	4.6	Sites determined as Contaminated Land	0	0	0	0	-
32	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
32	4.8	Regulated explosive sites	0	0	0	0	-
32	4.9	Hazardous substance storage/usage	0	0	0	0	-
32	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
33	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
33	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
33	4.13	Radioactive Substance Authorisations	0	0	0	0	-
33	4.14	Licensed Discharges to controlled waters	0	0	0	0	-
33	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
34	4.16	Pollutant release to public sewer	0	0	0	0	-
34	4.17	List 1 Dangerous Substances	0	0	0	0	-
34	4.18	List 2 Dangerous Substances	0	0	0	0	-
34	4.19	Pollution Incidents (EA/NRW)	0	0	0	0	-
34	4.20	Pollution inventory substances	0	0	0	0	-
35	4.21	Pollution inventory waste transfers	0	0	0	0	-
35	4.22	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
36	5.1	Superficial aquifer	None (within 500m)				
37 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
38 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
39	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
39	5.5	Groundwater vulnerability- local information	None (within 0m)				
40 >	**5.6 >**	**Groundwater abstractions >**	0	0	0	0	13
43 >	**5.7 >**	**Surface water abstractions >**	0	0	0	0	1
44	5.8	Potable abstractions	0	0	0	0	0
44	5.9	Source Protection Zones	0	0	0	0	-
44	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m

45 >	6.1 >	Water Network (OS MasterMap) >	0	0	5	-	-
46 >	6.2 >	Surface water features >	0	0	1	-	-
46 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
47 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
47 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
48 >	7.1 >	Risk of flooding from rivers and the sea >	Low (within 50m)				
49	7.2	Historical Flood Events	0	0	0	-	-
49	7.3	Flood Defences	0	0	0	-	-
49	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
49	7.5	Flood Storage Areas	0	0	0	-	-
50 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
51	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
52 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
54 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
55	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
56	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
56	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
56	10.4	Special Protection Areas (SPA)	0	0	0	0	0
56	10.5	National Nature Reserves (NNR)	0	0	0	0	0
57 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	2
57 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	2
57	10.8	Biosphere Reserves	0	0	0	0	0
58	10.9	Forest Parks	0	0	0	0	0
58	10.10	Marine Conservation Zones	0	0	0	0	0
58 >	10.11 >	Green Belt >	0	0	1	0	1

58	10.12	Proposed Ramsar sites	0	0	0	0	0
59	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
59	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
59	10.15	Nitrate Sensitive Areas	0	0	0	0	0
59 >	10.16 >	Nitrate Vulnerable Zones >	0	0	1	0	0
61 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
62	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	World Heritage Sites	0	0	0	-	-
64	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
64	11.3	National Parks	0	0	0	-	-
64 >	11.4 >	Listed Buildings >	0	1	0	-	-
65	11.5	Conservation Areas	0	0	0	-	-
65	11.6	Scheduled Ancient Monuments	0	0	0	-	-
65	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
67	12.2	Open Access Land	0	0	0	-	-
67	12.3	Tree Felling Licences	0	0	0	-	-
67	12.4	Environmental Stewardship Schemes	0	0	0	-	-
67	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
68	13.1	Priority Habitat Inventory	0	0	0	-	-
68	13.2	Habitat Networks	0	0	0	-	-
68	13.3	Open Mosaic Habitat	0	0	0	-	-
68	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
69 >	14.1 >	10k Availability >	Identified (within 500m)				
70 >	14.2 >	Artificial and made ground (10k) >	0	0	1	3	-

72	14.3	Superficial geology (10k)	0	0	0	0	-
72	14.4	Landslip (10k)	0	0	0	0	-
73 >	14.5 >	Bedrock geology (10k) >	2	1	1	7	-
74 >	14.6 >	Bedrock faults and other linear features (10k) >	1	1	2	3	-
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	0	-
76	15.3	Artificial ground permeability (50k)	0	0	-	-	-
77	15.4	Superficial geology (50k)	0	0	0	0	-
77	15.5	Superficial permeability (50k)	None (within 50m)				
77	15.6	Landslip (50k)	0	0	0	0	-
77	15.7	Landslip permeability (50k)	None (within 50m)				
78 >	15.8 >	Bedrock geology (50k) >	2	1	1	6	-
79 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
79 >	15.10 >	Bedrock faults and other linear features (50k) >	1	1	4	6	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
81 >	16.1 >	BGS Boreholes >	0	0	3	-	-
Page	Section	Natural ground subsidence >					
83 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
84 >	17.2 >	Running sands >	Negligible (within 50m)				
85 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
86 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
87 >	17.5 >	Landslides >	Very low (within 50m)				
88 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	18.1 >	BritPits >	1	0	1	2	-
92 >	18.2 >	Surface ground workings >	0	0	2	-	-
92 >	18.3 >	Underground workings >	0	0	0	0	4
92	18.4	Underground mining extents	0	0	0	0	-

93	18.5	Historical Mineral Planning Areas	0	0	0	0	-
93	18.6	Non-coal mining	0	0	0	0	0
93	18.7	JPB mining areas	None (within 0m)				
93	18.8	The Coal Authority non-coal mining	0	0	0	0	-
94	18.9	Researched mining	0	0	0	0	-
94	18.10	Mining record office plans	0	0	0	0	-
94	18.11	BGS mine plans	0	0	0	0	-
94 >	**18.12 >**	**Coal mining >**	Identified (within 0m)				
95	18.13	Brine areas	None (within 0m)				
95	18.14	Gypsum areas	None (within 0m)				
95	18.15	Tin mining	None (within 0m)				
95	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
96	19.1	Natural cavities	0	0	0	0	-
96	19.2	Mining cavities	0	0	0	0	0
96	19.3	Reported recent incidents	0	0	0	0	-
96	19.4	Historical incidents	0	0	0	0	-
Page	Section	**Radon >**					
98 >	**20.1 >**	**Radon >**	Between 1% and 3% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
100 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	2	7	-	-	-
101	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
102	22.3	Railway tunnels	0	0	0	-	-
102	22.4	Historical railway and tunnel features	0	0	0	-	-
102	22.5	Royal Mail tunnels	0	0	0	-	-

103	22.6	Historical railways	0	0	0	-	-
103	22.7	Railways	0	0	0	-	-
103	22.8	Crossrail 2	0	0	0	0	-
103	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 30/05/2021

Site Area: 0.67ha

Recent site history - 2018 aerial photograph



Capture Date: 01/07/2018

Site Area: 0.67ha

Recent site history - 2012 aerial photograph



Capture Date: 26/03/2012

Site Area: 0.67ha

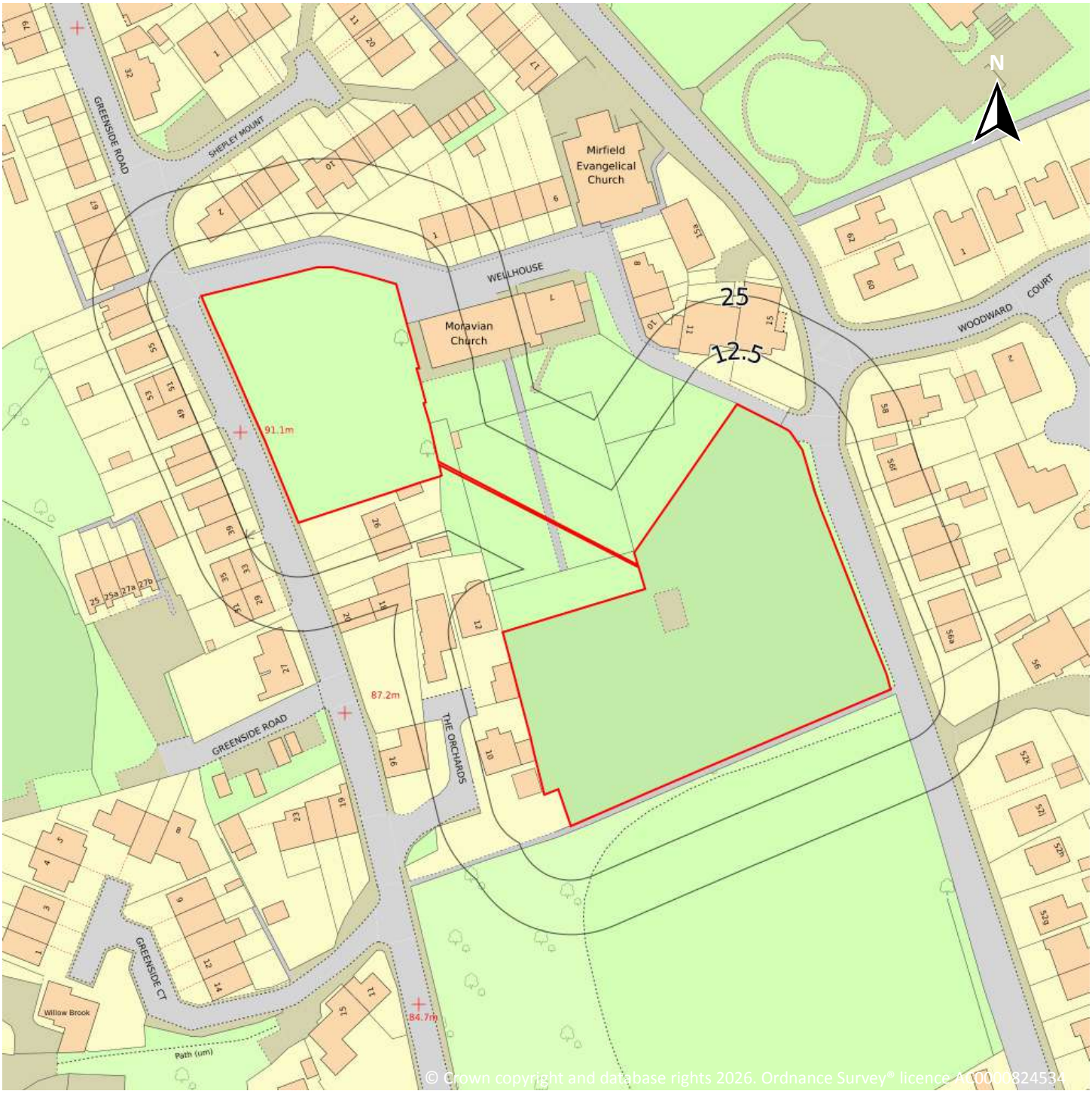
Recent site history - 1999 aerial photograph



Capture Date: 10/07/1999

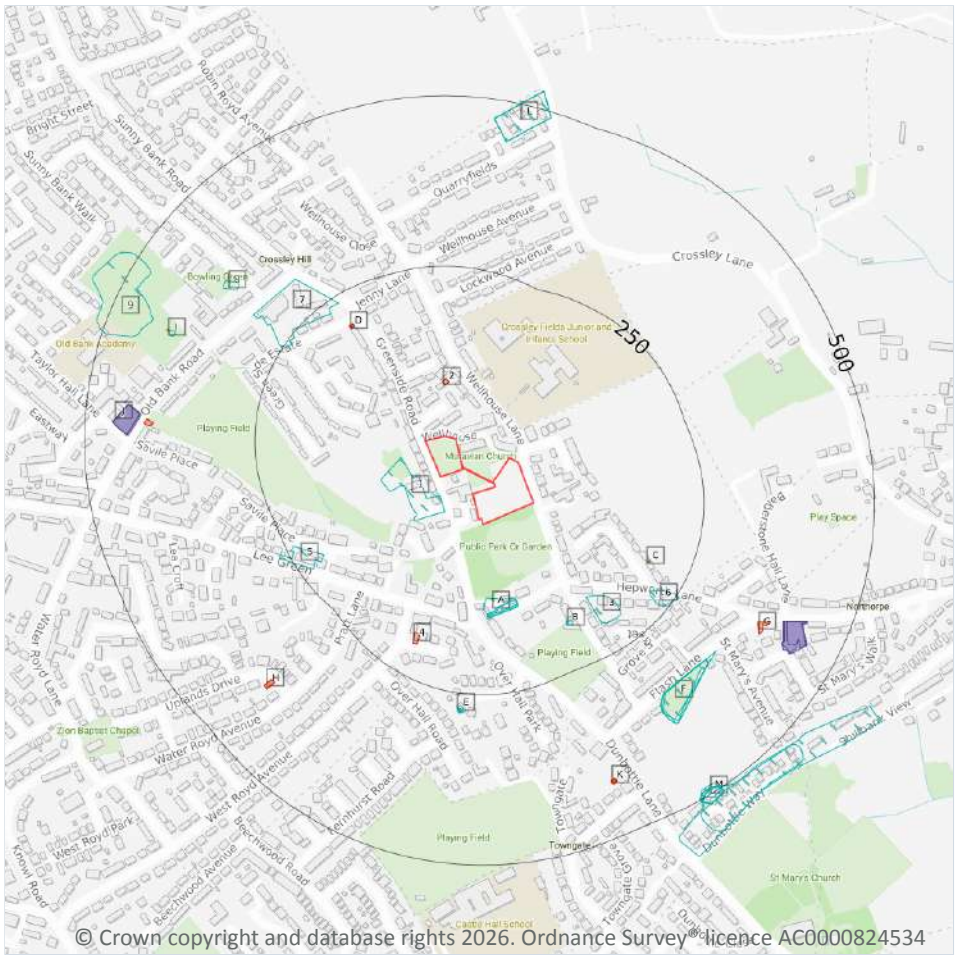
Site Area: 0.67ha

OS MasterMap site plan



Site Area: 0.67ha

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 14 >**

ID	Location	Land use	Dates present	Group ID
1	27m S	Unspecified Works	1974 - 1988	1534904

ID	Location	Land use	Dates present	Group ID
A	108m S	Pump House	1938	1575941
A	120m S	Pump House	1955	1580290
A	122m S	Pump House	1931	1520477
3	158m SE	Unspecified Pit	1892	1450182
B	178m SE	Pump House	1905	1491549
B	178m SE	Pump House	1948	1525855
5	206m SW	Smithy	1905	1454741
6	215m SE	Unspecified Pit	1905	1450181
7	233m NW	Unspecified Works	1988	1460164
E	268m S	Sewage Tank	1938	1581536
E	272m S	Sewage Tanks	1931	1561786
E	272m S	Sewage Tanks	1948	1582785
E	273m S	Sewage Tank	1955	1574208
F	337m SE	Unspecified Pit	1967	1514290
F	337m SE	Unspecified Pit	1974 - 1988	1507863
F	338m SE	Unspecified Pit	1948	1519122
F	338m SE	Unspecified Pit	1892 - 1931	1581846
8	355m NW	Unspecified Tanks	1948	1443523
I	399m NW	Chimney	1967	1475214
9	437m NW	Unspecified Pit	1892 - 1905	1581840
L	441m N	Unspecified Factory	1974	1479332
L	441m N	Unspecified Warehouse	1981 - 1988	1486699
M	487m SE	Unspecified Pit	1938	1520212
M	491m SE	Unspecified Pit	1905 - 1931	1506286
M	491m SE	Unspecified Pit	1948	1554232
M	492m SE	Unspecified Pit	1955	1483711
M	492m SE	Cuttings	1948 - 1955	1523793
M	494m SE	Unspecified Pits	1988	1477640

ID	Location	Land use	Dates present	Group ID
M	495m SE	Unspecified Pit	1967 - 1981	1512379

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m	8

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 14 >**

ID	Location	Land use	Dates present	Group ID
C	189m SE	Unspecified Tank	1969	256771
C	189m SE	Unspecified Tank	1958	258386
C	189m SE	Unspecified Tank	1957	252352
C	189m SE	Unspecified Tank	1968	255410
C	189m SE	Unspecified Tank	1973	255805
I	409m NW	Unspecified Tank	1892	241328
J	449m W	Unspecified Tank	1958	245249
J	450m W	Unspecified Tank	1957	261066

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m	13

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 14 >**

ID	Location	Land use	Dates present	Group ID
2	75m N	Electricity Substation	1969 - 1996	158060
4	187m SW	Electricity Substation	1968 - 1996	150182
D	198m NW	Electricity Substation	1993 - 1997	161878
D	199m NW	Electricity Substation	1974	147532
G	373m SE	Electricity Substation	1968 - 1994	158804
G	381m SE	Electricity Substation	1955 - 1956	155106
H	384m SW	Electricity Substation	1974	150967
H	384m SW	Electricity Substation	1968	160243
J	400m W	Electricity Substation	1974 - 1997	157417
K	418m SE	Electricity Substation	1969	146584
K	418m SE	Electricity Substation	1980 - 1996	155328
K	418m SE	Electricity Substation	1968	146038
K	418m SE	Electricity Substation	1973	155595

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	8

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 14 >**

ID	Location	Land use	Dates present	Group ID
G	405m SE	Garage	1994	52006
G	405m SE	Garage	1969	46730
G	407m SE	Garage	1979 - 1990	46241
G	410m SE	Garage	1968	47291
J	418m W	Garage	1983	51817
J	421m W	Garage	1971	49379
J	421m W	Garage	1974 - 1997	48166
J	421m W	Garage	1966	48340

This data is sourced from Ordnance Survey® / Groundsure.

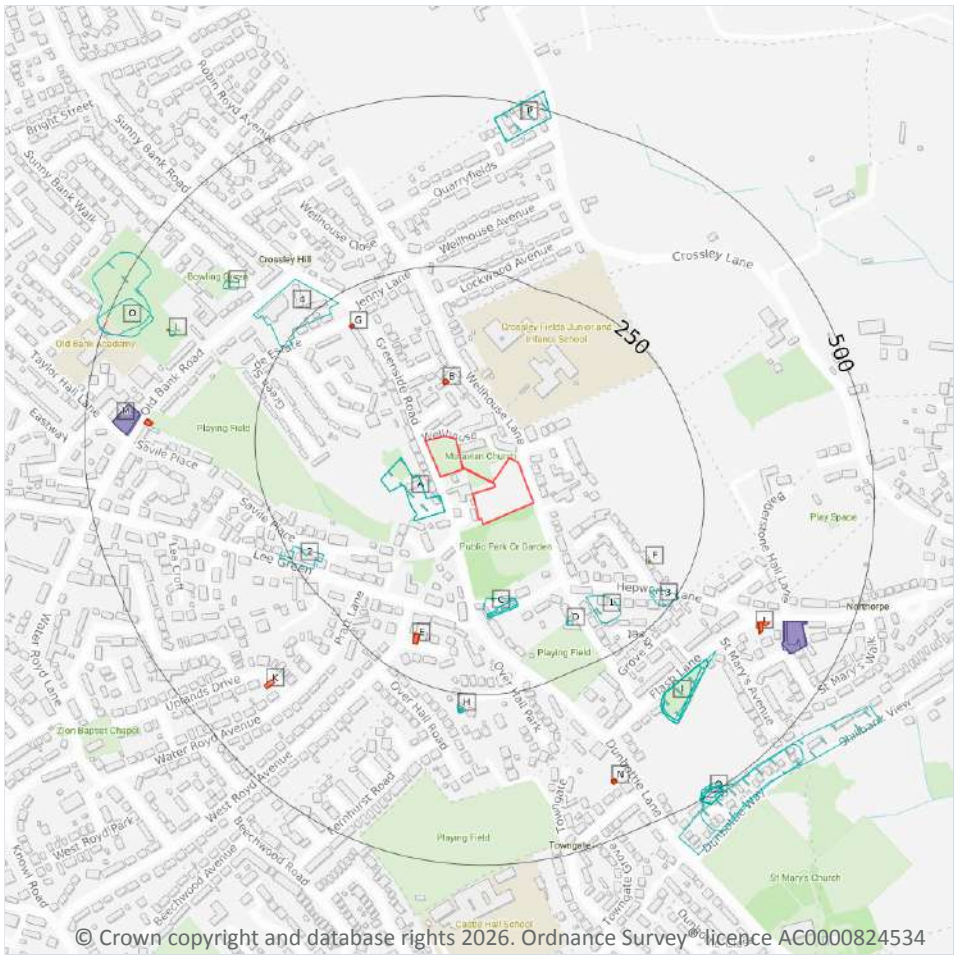
1.6 Historical military land

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



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	43

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 19 >**

ID	Location	Land Use	Date	Group ID
A	27m S	Unspecified Works	1988	1534904
A	27m S	Unspecified Works	1981	1534904
A	27m S	Unspecified Works	1974	1534904

ID	Location	Land Use	Date	Group ID
C	108m S	Pump House	1938	1575941
C	120m S	Pump House	1955	1580290
C	122m S	Pump House	1931	1520477
1	158m SE	Unspecified Pit	1892	1450182
D	178m SE	Pump House	1948	1525855
D	178m SE	Pump House	1905	1491549
2	206m SW	Smithy	1905	1454741
3	215m SE	Unspecified Pit	1905	1450181
4	233m NW	Unspecified Works	1988	1460164
H	268m S	Sewage Tank	1938	1581536
H	268m S	Sewage Tank	1938	1581536
H	272m S	Sewage Tanks	1948	1582785
H	272m S	Sewage Tanks	1931	1561786
H	273m S	Sewage Tank	1955	1574208
I	337m SE	Unspecified Pit	1967	1514290
I	337m SE	Unspecified Pit	1988	1507863
I	337m SE	Unspecified Pit	1981	1507863
I	337m SE	Unspecified Pit	1974	1507863
I	338m SE	Unspecified Pit	1948	1519122
I	338m SE	Unspecified Pit	1905	1581846
I	338m SE	Unspecified Pit	1892	1581846
I	338m SE	Unspecified Pit	1931	1581846
5	355m NW	Unspecified Tanks	1948	1443523
L	399m NW	Chimney	1967	1475214
O	437m NW	Unspecified Pit	1892	1581840
P	441m N	Unspecified Warehouse	1988	1486699
P	441m N	Unspecified Warehouse	1981	1486699
P	441m N	Unspecified Factory	1974	1479332

ID	Location	Land Use	Date	Group ID
O	444m NW	Unspecified Pit	1905	1581840
Q	487m SE	Unspecified Pit	1938	1520212
Q	487m SE	Unspecified Pit	1938	1520212
Q	491m SE	Unspecified Pit	1948	1554232
Q	491m SE	Unspecified Pit	1905	1506286
Q	491m SE	Unspecified Pit	1931	1506286
Q	492m SE	Cuttings	1955	1523793
Q	492m SE	Unspecified Pit	1955	1483711
Q	494m SE	Unspecified Pits	1988	1477640
Q	495m SE	Unspecified Pit	1981	1512379
Q	495m SE	Unspecified Pit	1974	1512379
Q	495m SE	Unspecified Pit	1967	1512379

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m	**8**

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 19 >**

ID	Location	Land Use	Date	Group ID
F	189m SE	Unspecified Tank	1958	258386
F	189m SE	Unspecified Tank	1969	256771
F	189m SE	Unspecified Tank	1973	255805
F	189m SE	Unspecified Tank	1968	255410
F	189m SE	Unspecified Tank	1957	252352
L	409m NW	Unspecified Tank	1892	241328
M	449m W	Unspecified Tank	1958	245249
M	450m W	Unspecified Tank	1957	261066

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m	**35**

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 19 >**

ID	Location	Land Use	Date	Group ID
B	75m N	Electricity Substation	1969	158060
B	76m N	Electricity Substation	1985	158060
B	76m N	Electricity Substation	1971	158060
B	77m N	Electricity Substation	1996	158060
E	187m SW	Electricity Substation	1969	150182
E	187m SW	Electricity Substation	1996	150182
E	187m SW	Electricity Substation	1993	150182
E	187m SW	Electricity Substation	1973	150182
E	187m SW	Electricity Substation	1968	150182
E	187m SW	Electricity Substation	1980	150182
G	198m NW	Electricity Substation	1997	161878
G	198m NW	Electricity Substation	1995	161878
G	198m NW	Electricity Substation	1993	161878
G	199m NW	Electricity Substation	1974	147532
J	373m SE	Electricity Substation	1969	158804
J	373m SE	Electricity Substation	1994	158804
J	373m SE	Electricity Substation	1968	158804
J	374m SE	Electricity Substation	1979	158804
J	374m SE	Electricity Substation	1990	158804
J	374m SE	Electricity Substation	1990	158804
J	381m SE	Electricity Substation	1956	155106

ID	Location	Land Use	Date	Group ID
J	381m SE	Electricity Substation	1955	155106
K	384m SW	Electricity Substation	1968	160243
K	384m SW	Electricity Substation	1974	150967
M	400m W	Electricity Substation	1983	157417
M	402m W	Electricity Substation	1997	157417
M	402m W	Electricity Substation	1995	157417
M	402m W	Electricity Substation	1993	157417
M	403m W	Electricity Substation	1974	157417
N	418m SE	Electricity Substation	1969	146584
N	418m SE	Electricity Substation	1980	155328
N	418m SE	Electricity Substation	1973	155595
N	418m SE	Electricity Substation	1968	146038
N	420m SE	Electricity Substation	1996	155328
N	420m SE	Electricity Substation	1993	155328

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	13

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 19 >**

ID	Location	Land Use	Date	Group ID
J	405m SE	Garage	1994	52006
J	405m SE	Garage	1969	46730
J	407m SE	Garage	1979	46241
J	407m SE	Garage	1990	46241
J	407m SE	Garage	1990	46241
J	410m SE	Garage	1968	47291
M	418m W	Garage	1983	51817
M	421m W	Garage	1971	49379
M	421m W	Garage	1997	48166
M	421m W	Garage	1995	48166
M	421m W	Garage	1993	48166
M	421m W	Garage	1966	48340
M	421m W	Garage	1974	48166

This data is sourced from Ordnance Survey® / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Licensed waste sites

Waste exemptions

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	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	2

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.

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Details		
2	463m NW	Site Address: Old Bank Road, Mirfield Licence Holder Address: -	Waste Licence: Yes Site Reference: 84 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 03/07/1978 Licence Surrender: 05/03/1993	Operator: - Licence Holder: Mr R Cooke First Recorded 01/01/1945 Last Recorded: 30/04/1993
4	493m SE	Site Address: Disused Railway cutting, Dunbottle Lane, Mirfield Licence Holder Address: Hinbros House, Ravenswharfe Terrace, Scout Hill, Dewsbury	Waste Licence: Yes Site Reference: 4700/0131,4700/0649 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 09/03/1988 Licence Surrender: -	Operator: - Licence Holder: Hinchcliffe Brothers Skip Hire 1985 Limited First Recorded - Last Recorded: -

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	1

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

Features are displayed on the Waste and landfill map on **page 25 >**

ID	Location	Details		
1	183m S	Site Name: Valley House Transfer And Treatment Facility Site Address: Valley House Transfer & Treatment Facility, Knowsthorpe Lane, Leeds, West Yorkshire, LS9 0PH Correspondence Address: -	Type of Site: Physico-Chemical Treatment Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000021 EPR reference: EA/EPR/XP3892ZH/V005 Operator: Silver Lining Industries Ltd Waste Management licence No: 65279 Annual Tonnage: 74999	Issue Date: 06/04/2005 Effective Date: - Modified: 25/07/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

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

3.7 Waste exemptions

Records within 500m	18

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 25 >**

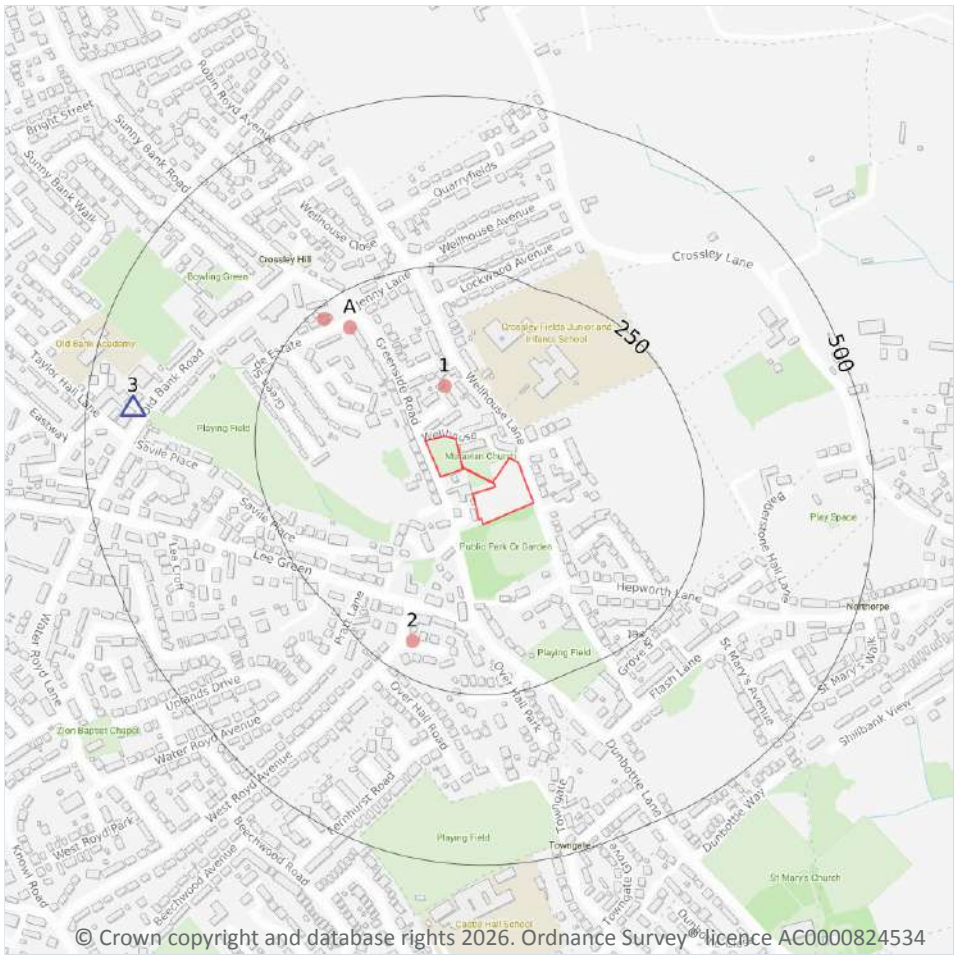
ID	Location	Site	Reference	Category	Sub-Category	Description
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Disposing of waste exemption	Non-agricultural waste only	Burning waste in the open
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste aerosol cans
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Screening and blending of waste

ID	Location	Site	Reference	Category	Sub-Category	Description
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Use of mulch
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Disposing of waste exemption	Non-agricultural waste only	Deposit of waste from dredging of inland waters
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste at a water treatment works
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Recovery of waste at a waste water treatment works
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Preparatory treatments (baling, sorting, shredding etc)
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Use of waste in construction
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Spreading waste on non-agricultural land to confer benefit

ID	Location	Site	Reference	Category	Sub-Category	Description
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Spreading of plant matter to confer benefit
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Use of baled end-of-life tyres in construction
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Use of waste derived biodiesel as fuel
A	459m S	Vokerstevin Site Towngate West Yorkshire Wf14 9jg	EPR/AE5053YD/A001	Using waste exemption	Non-agricultural waste only	Use of waste for a specified purpose
3	482m E	-	WEX414917	Using waste exemption	Not on a farm	Use of waste in construction

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

4 Current industrial land use



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Site Outline

Search buffers in metres (m)

Recent industrial land uses

Current or recent petrol stations

4.1 Recent industrial land uses

Records within 250m	4

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 30 >**

ID	Location	Company	Address	Activity	Category
1	74m N	Electricity Sub Station	West Yorkshire, WF14	Electrical Features	Infrastructure and Facilities
2	200m SW	Electricity Sub Station	West Yorkshire, WF14	Electrical Features	Infrastructure and Facilities
A	201m NW	Electricity Sub Station	West Yorkshire, WF14	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
A	232m NW	Solutions Security Systems	96, Greenside Estate, Mirfield, West Yorkshire, WF14 0BA	Electronic Equipment	Industrial Products

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m	0

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m	1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 30 >**

ID	Location	Company	Address	LPG	Status
3	432m W	OBSOLETE	Old Bank Road, Mirfield, West Yorkshire, WF14 0	Not Applicable	Obsolete

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 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.

4.7 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.

4.8 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.

4.9 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.

4.10 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.

4.11 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.

4.12 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.

4.13 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.

4.14 Licensed Discharges to controlled waters

Records within 500m	0

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

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

4.15 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.

4.16 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.

4.17 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.

4.18 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.

4.19 Pollution Incidents (EA/NRW)

Records within 500m	0

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

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

4.20 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.

4.21 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.

4.22 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

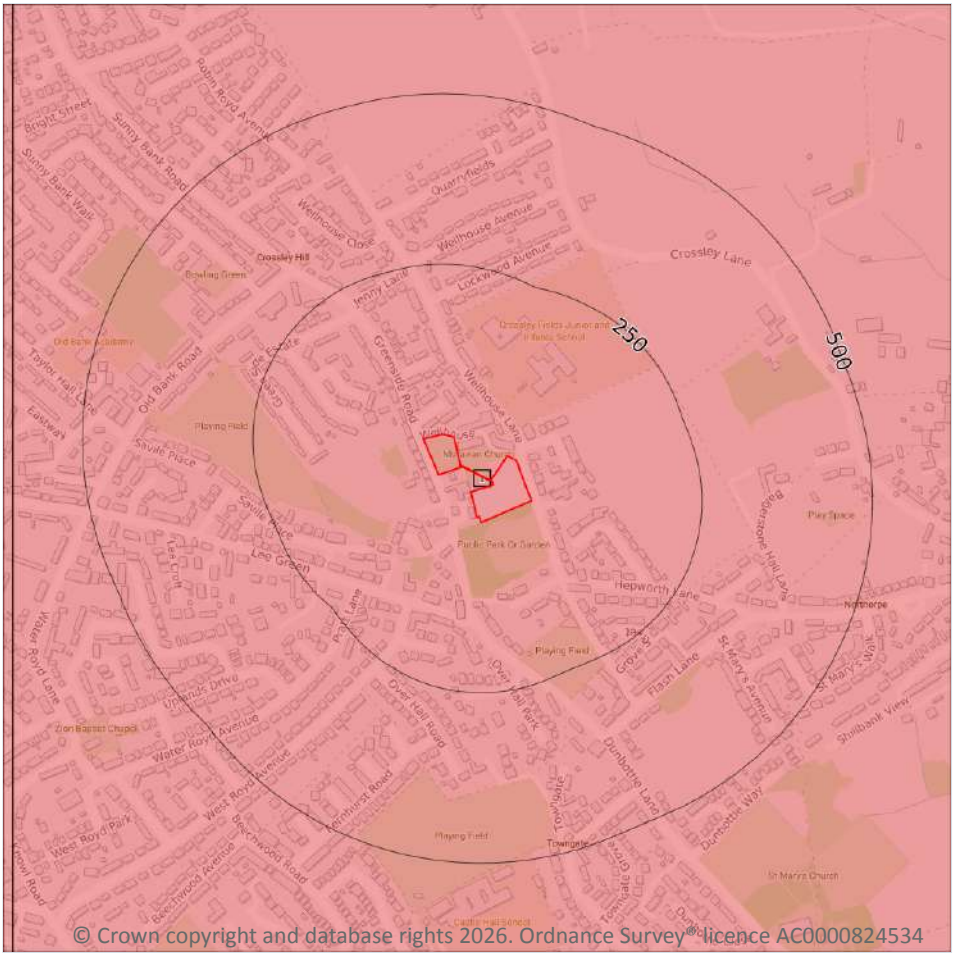
5.1 Superficial aquifer

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

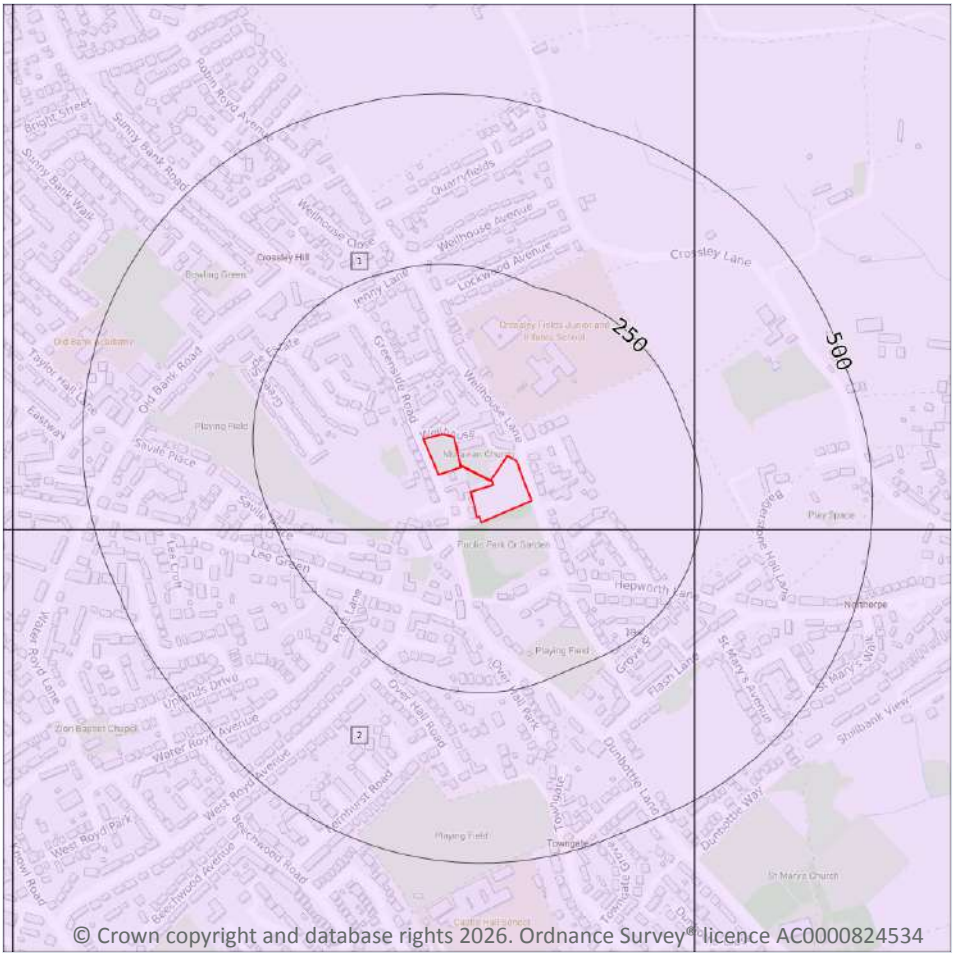
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 37 >**

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



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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 38 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	11m S	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium 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.

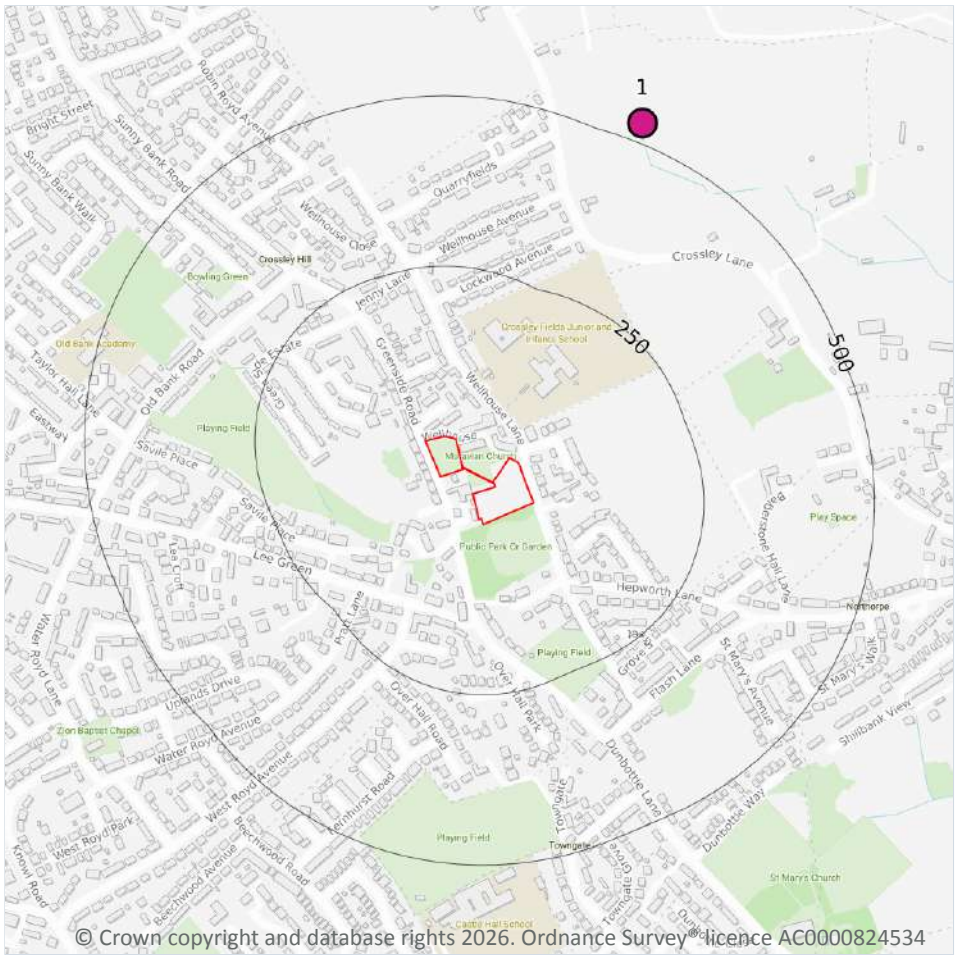
5.5 Groundwater vulnerability- local information

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



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	13

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 40 >**

ID	Location	Details	
1	529m N	Status: Historical Licence No: 2/27/13/231 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: JOHN L BARBER & SON Easting: 420920 Northing: 421600	Annual Volume (m^3): 25000 Max Daily Volume (m^3): 103 Original Application No: - Original Start Date: 08/09/2008 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 08/09/2008 Version End Date: -
-	1338m SE	Status: Historical Licence No: 2/27/13/063 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL Data Type: Point Name: BROOK Easting: 421600 Northing: 420000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/01/1972 Version End Date: -
-	1338m SE	Status: Historical Licence No: 2/27/13/063 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL - COAL MEASURES - MIRFIELD Data Type: Point Name: BROOK Easting: 421600 Northing: 420000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 12/01/1972 Version End Date: -
-	1626m SE	Status: Active Licence No: NE/027/0013/014 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: Dr Reddy's Laboratories (EU) Ltd Easting: 421401 Northing: 419548	Annual Volume (m^3): 13800 Max Daily Volume (m^3): 80 Original Application No: NPS/WR/042866 Original Start Date: 08/07/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 25/06/2024 Version End Date: -
-	1626m SE	Status: Active Licence No: NE/027/0013/014 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: Dr Reddy's Laboratories (EU) Ltd Easting: 421401 Northing: 419548	Annual Volume (m^3): 13800 Max Daily Volume (m^3): 80 Original Application No: NPS/WR/042866 Original Start Date: 08/07/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 25/06/2024 Version End Date: -

ID	Location	Details	
-	1670m SE	Status: Historical Licence No: 2/27/13/192 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MITCHELL COTTS CHEMICALS LIMITED Easting: 421400 Northing: 419500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/09/1997 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 03/09/1997 Version End Date: -
-	1670m SE	Status: Historical Licence No: 2/27/13/192 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE Data Type: Point Name: MITCHELL COTTS CHEMICALS LIMITED Easting: 421400 Northing: 419500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/09/1997 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 03/09/1997 Version End Date: -
-	1670m SE	Status: Historical Licence No: 2/27/13/192 Details: General use relating to Secondary Category (Medium Loss) Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: MITCHELL COTTS CHEMICALS LTD Easting: 421400 Northing: 419500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/09/1997 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 03/09/1997 Version End Date: -
-	1670m SE	Status: Historical Licence No: 2/27/13/192 Details: Non-Evaporative Cooling Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - MIRFIELD Data Type: Point Name: MITCHELL COTTS CHEMICALS LTD Easting: 421400 Northing: 419500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 03/09/1997 Expiry Date: 31/12/2006 Issue No: 100 Version Start Date: 03/09/1997 Version End Date: -
-	1858m SE	Status: Historical Licence No: 2/27/13/215 Details: Process water Direct Source: GROUNDWATERS Point: BOREHOLE-COAL MEASURES-RAVENSTHORPE,DEWSBURY Data Type: Point Name: DEWSBURY DYEING CO LTD Easting: 422390 Northing: 420150	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 24/12/2003 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 24/12/2003 Version End Date: -

ID	Location	Details	
-	1858m SE	Status: Historical Licence No: 2/27/13/215 Details: Process Water Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - RAVENSTHORPE - DEWSBURY Data Type: Point Name: DEWSBURY DYEING CO LTD Easting: 422390 Northing: 420150	Annual Volume (m^3): 65000 Max Daily Volume (m^3): 270 Original Application No: - Original Start Date: 24/12/2003 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 24/12/2003 Version End Date: -
-	1909m SW	Status: Historical Licence No: 2/27/13/090 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: -- WELL Data Type: Point Name: DEWS Easting: 419300 Northing: 419700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/03/1974 Version End Date: -
-	1909m SW	Status: Historical Licence No: 2/27/13/090 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: WELL - COAL MEASURES - COLNSBRIDGE BRADLEY Data Type: Point Name: DEWS Easting: 419300 Northing: 419700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/03/1974 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	**1**

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 40 >**

ID	Location	Details	
-	1815m S	Status: Active Licence No: 2/27/13/050 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: SURFACE WATER Point: RIVER CALDER - HOLME BANK MILLS Data Type: Point Name: New Hall Properties (Hagg Lane) Limited Easting: 420800 Northing: 419200	Annual Volume (m^3): 36368 Max Daily Volume (m^3): 227.3 Original Application No: NPS/WR/038642 Original Start Date: 20/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 21/03/2023 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	0

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

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

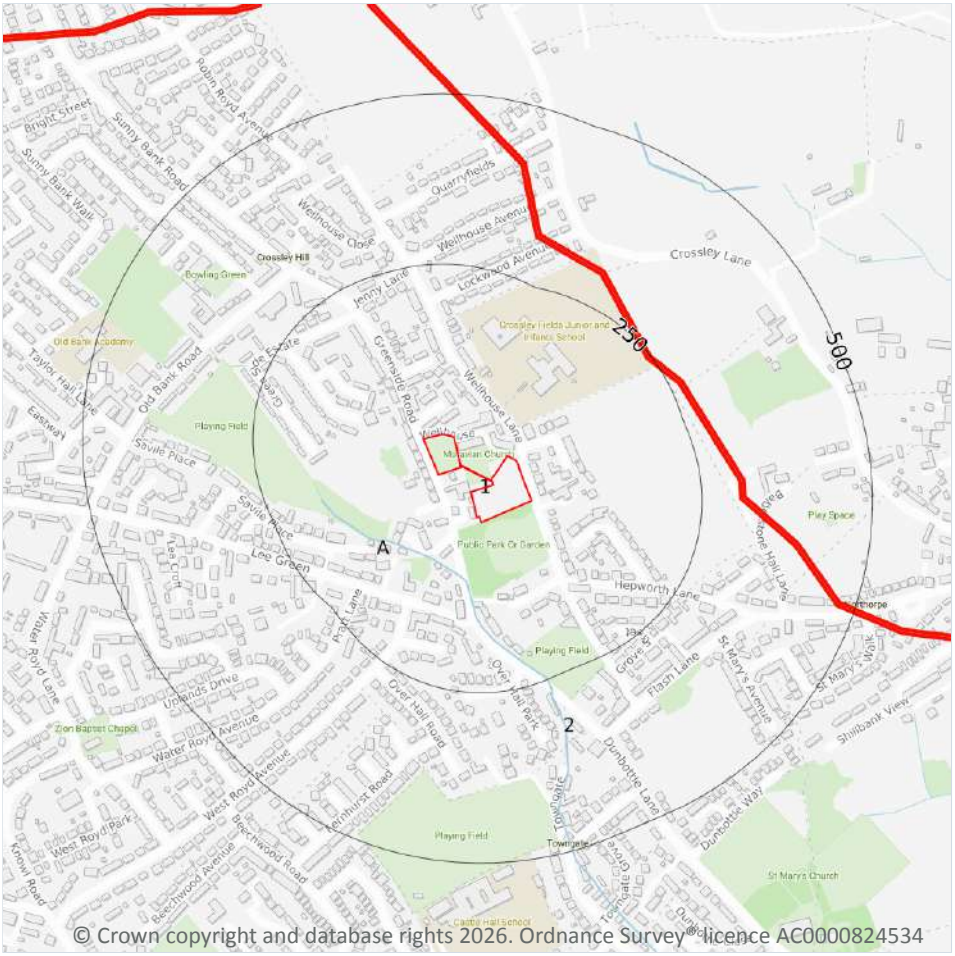
5.10 Source Protection Zones (confined aquifer)

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



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	**5**

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 45 >**

ID	Location	Type of water feature	Ground level	Permanence	Name
2	83m SW	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
A	130m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	138m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	165m W	Marsh. An area that is predominantly waterlogged by freshwater.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	166m W	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	**1**

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 45 >**

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 45 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Calder from River Colne to River Chald**	**GB104027062631**	**Calder Lower**	**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 45 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1345m SW	River	Calder from River Colne to River Chald	GB104027062631 ↗	Moderate	Fail	Moderate	2019

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 45 >**

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**	**2019**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	1

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; 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). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 48 >**

Distance	Flood risk category
On site	**N/A**
0 - 50m	Low

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.

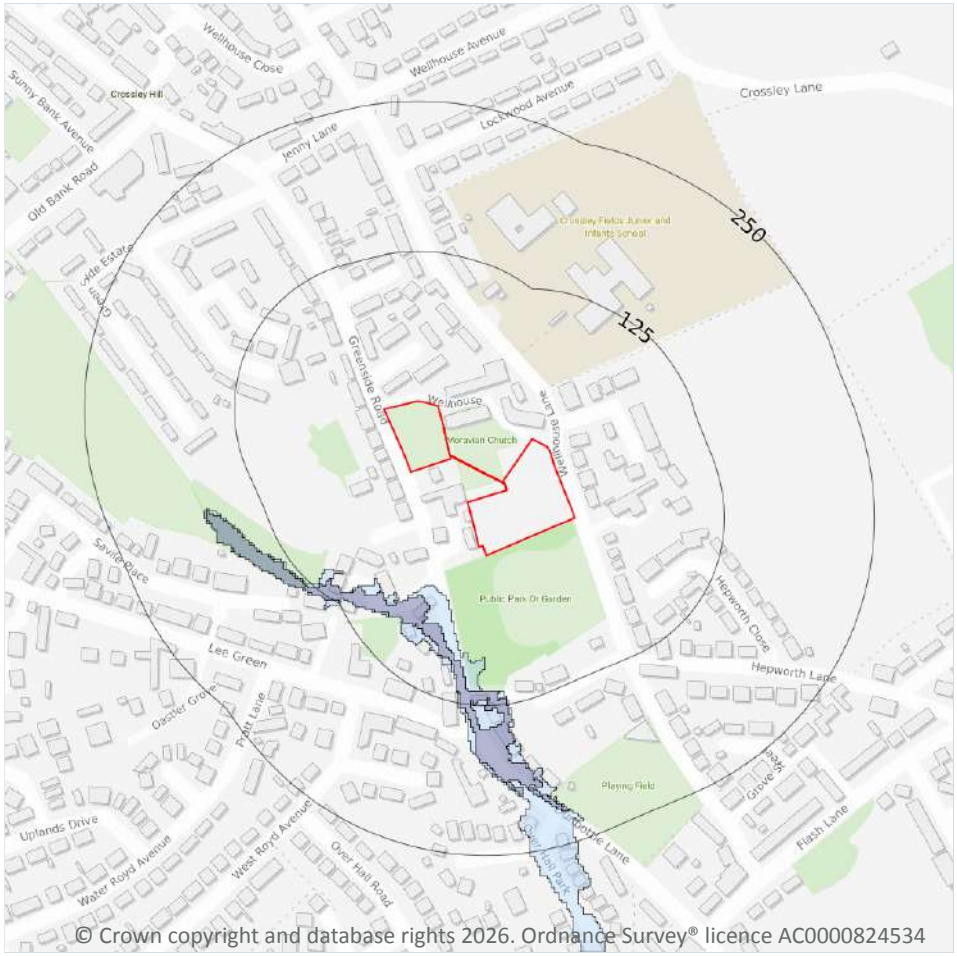
7.5 Flood Storage Areas

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



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on **page 48 >**

Location	Type
47m SW	Zone 2 - (Fluvial /Tidal Models)

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



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

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.

Features are displayed on the Surface water flooding map on **page 52 >**

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

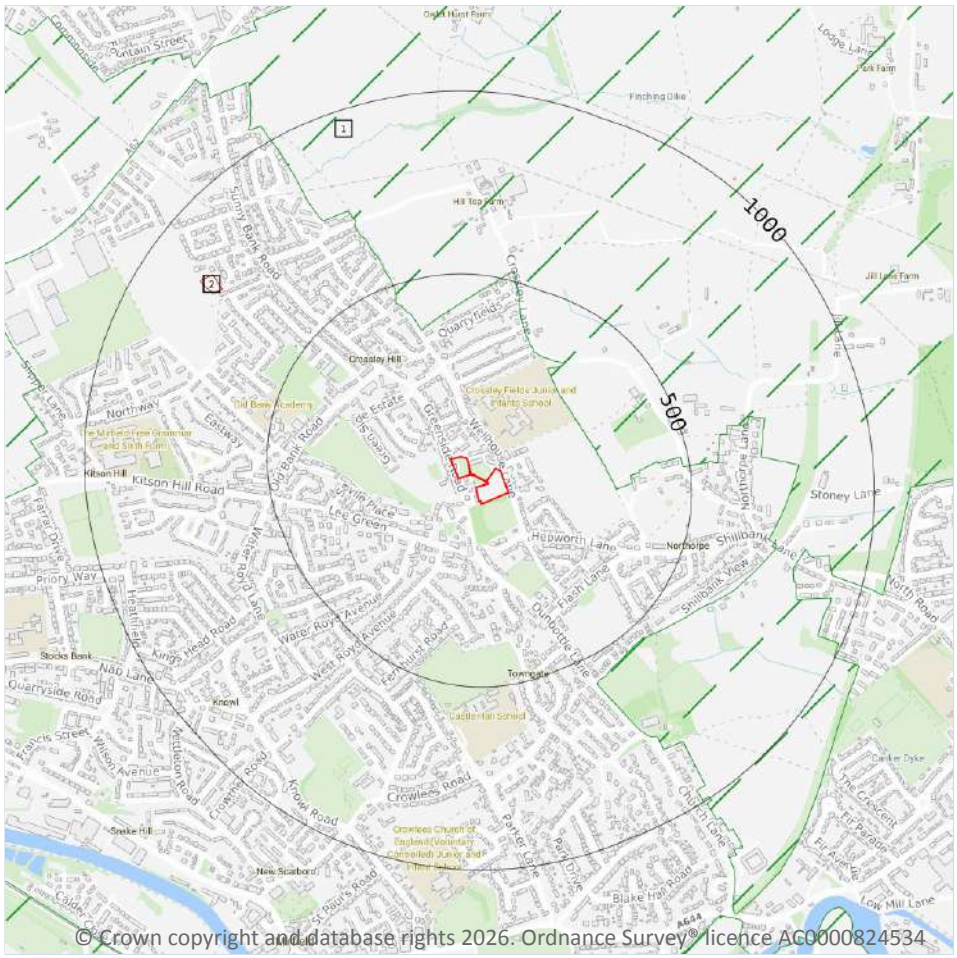
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 54 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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.

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	2

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.

Features are displayed on the Environmental designations map on **page 55 >**

ID	Location	Name	Data source
2	777m NW	Sunny Bank Ponds	Natural England
-	1829m E	Lower Spen Wildlife Area	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	2

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 55 >**

ID	Location	Name	Woodland Type
-	1992m S	Whitley Wood/hagg Wood	Ancient Replanted Woodland
-	1992m S	Hagg Wood	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	2

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

Features are displayed on the Environmental designations map on **page 55 >**

ID	Location	Name	Local Authority name
1	250m NE	South and West Yorkshire Green Belt	Kirklees
3	1292m SE	South and West Yorkshire Green Belt	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

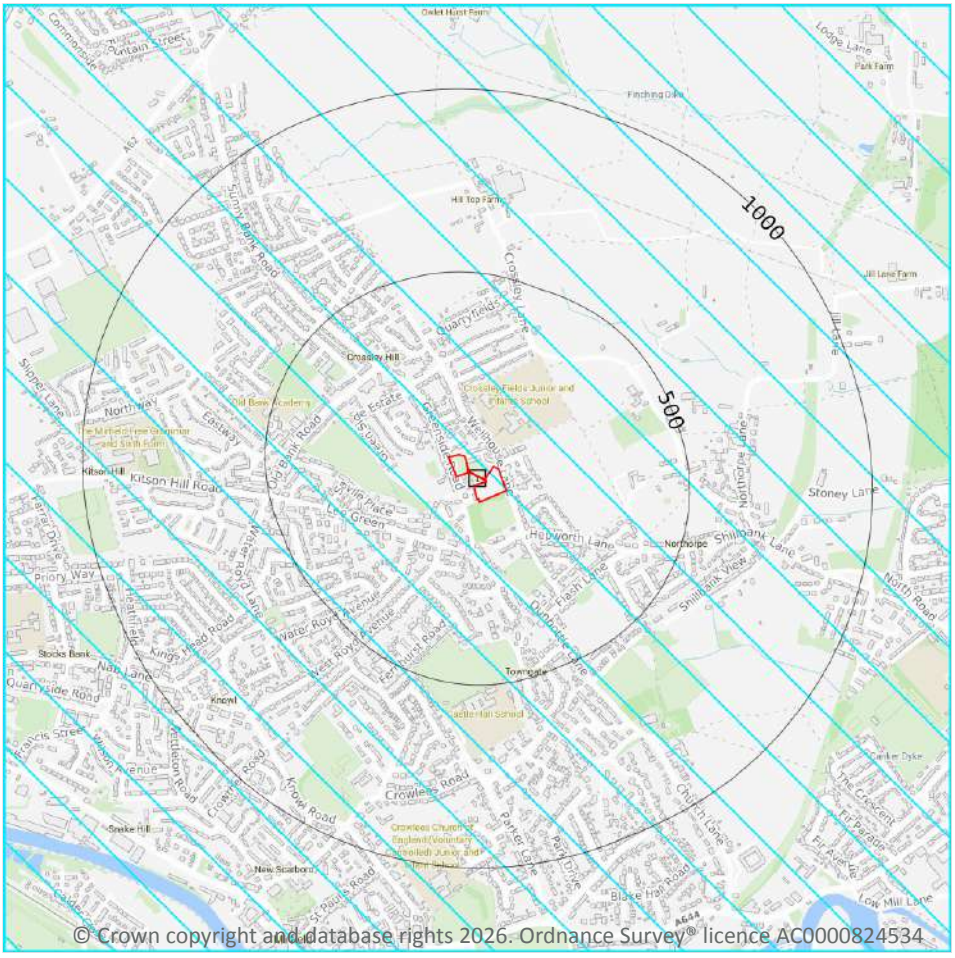
Records within 2000m	1

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.

Location	Name	Type	NVZ ID	Status
228m NE	Spen Beck from Source to River Calder NVZ	Surface Water	271	Existing

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

SSSI Impact Zones and Units



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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 61 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0000000630000&notes=&location=424739,422878%20(IRZ%20polygon%20centre)**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

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.

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	1

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 63 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	19m N	Wellhouse Farmhouse	II	1134692	14/03/1966

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.

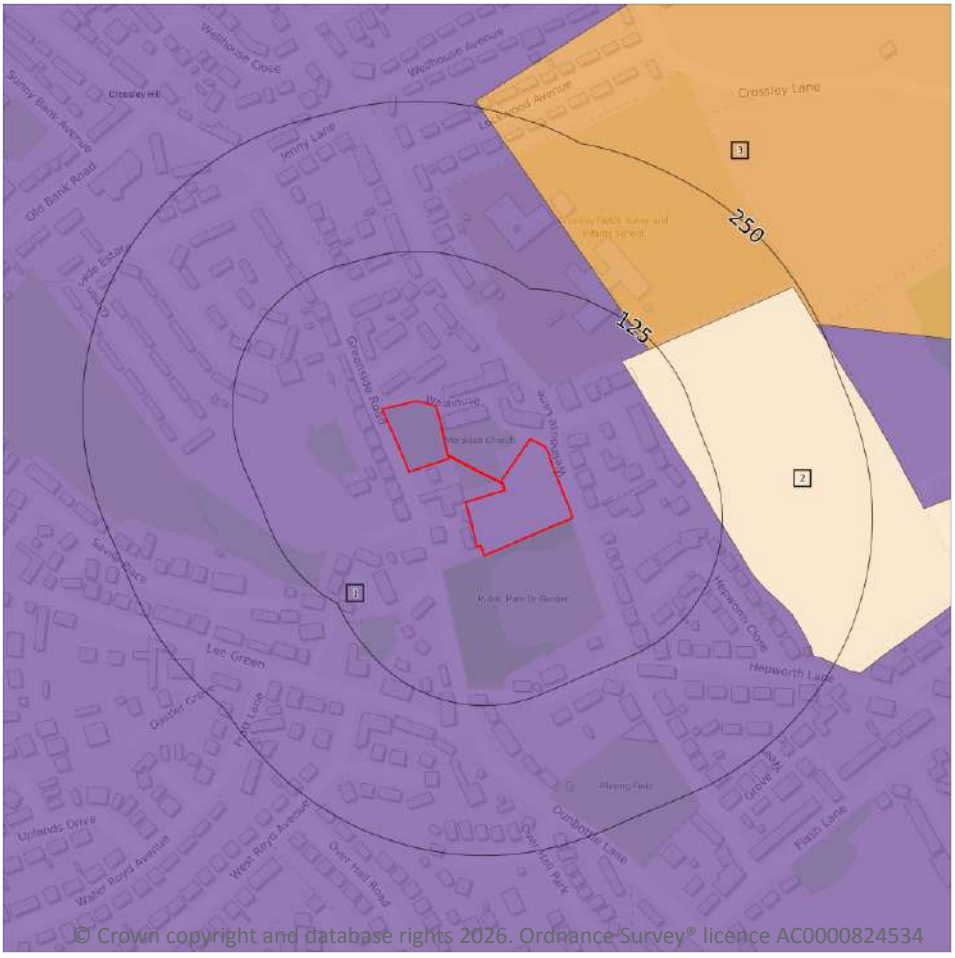
11.7 Registered Parks and Gardens

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	3

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 66 >**

ID	Location	Classification	Description
1	**On site**	**Urban**	**Non-agricultural/no quality assigned**
2	92m NE	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	118m NE	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

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	0

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.

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	0

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.

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m	0

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

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.

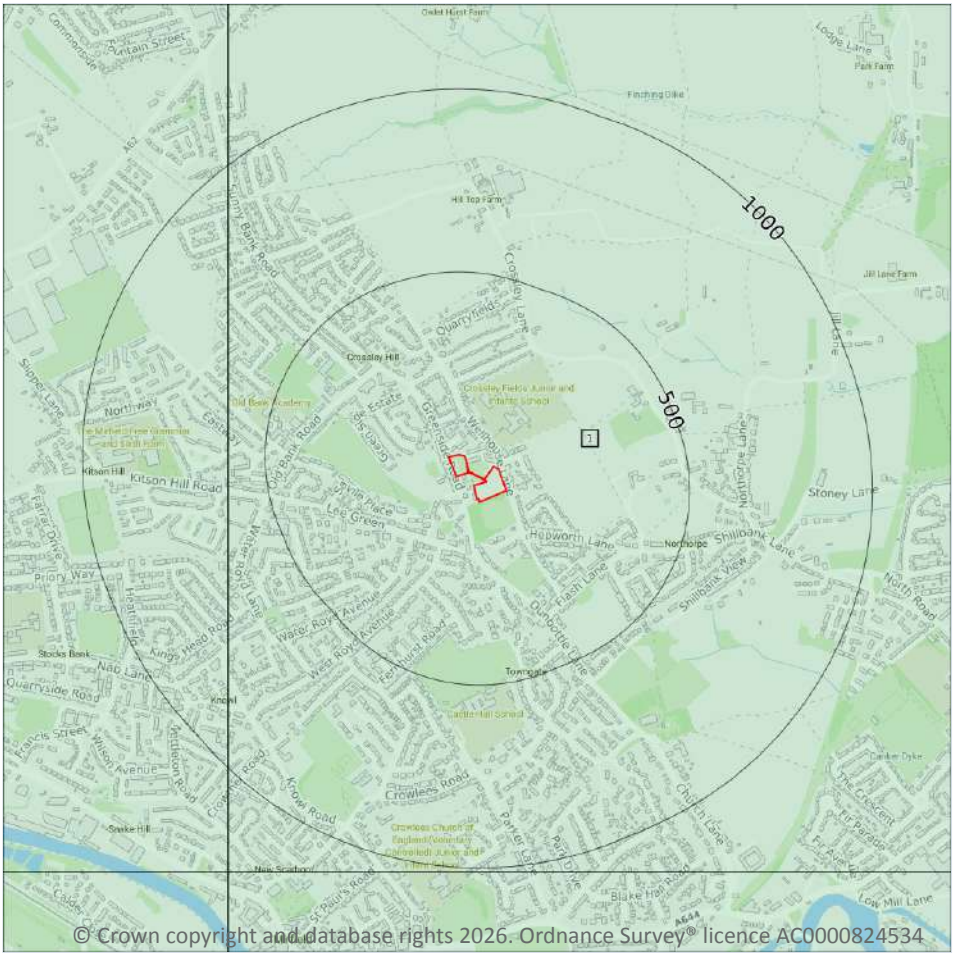
13.4 Limestone Pavement Orders

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



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

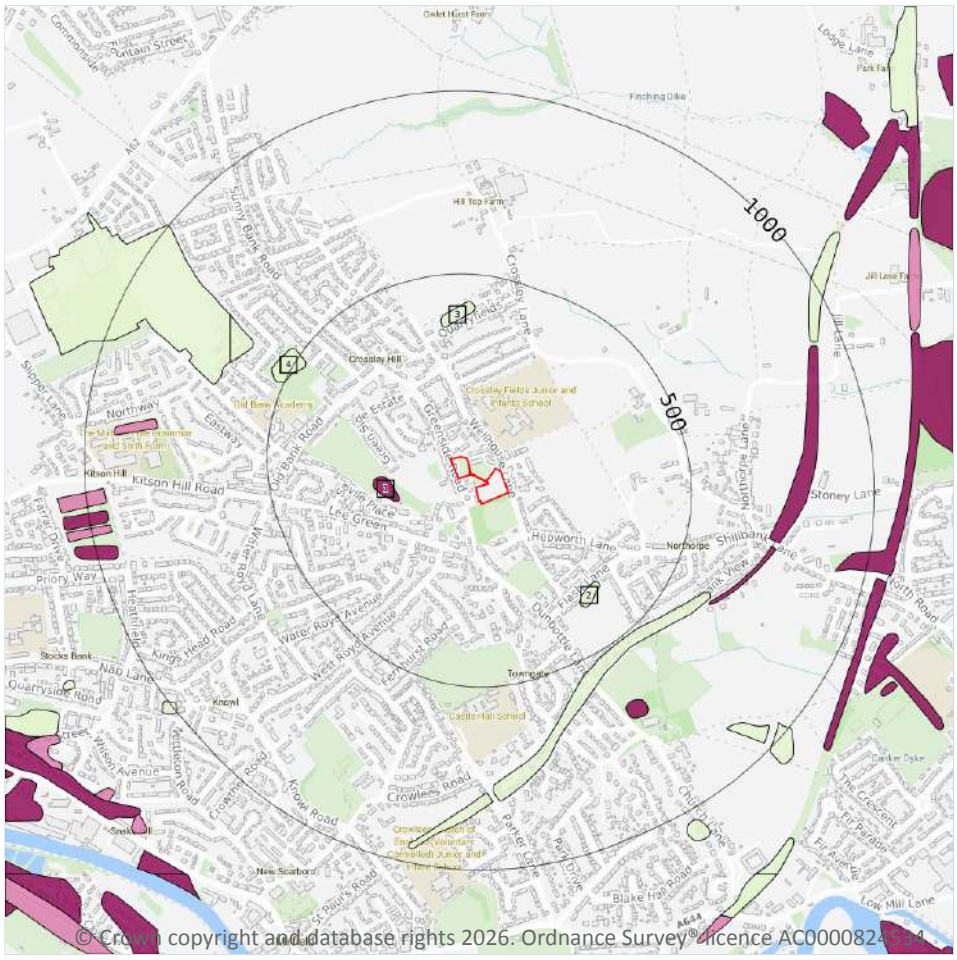
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 69 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SE22SW**

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	4

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 70 >**

ID	Location	LEX Code	Description	Rock description
1	170m W	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
2	338m SE	WMGR-ARTDP	Infilled Ground	Artificial deposit
3	357m N	WMGR-ARTDP	Infilled Ground	Artificial deposit
4	471m NW	WMGR-ARTDP	Infilled Ground	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.

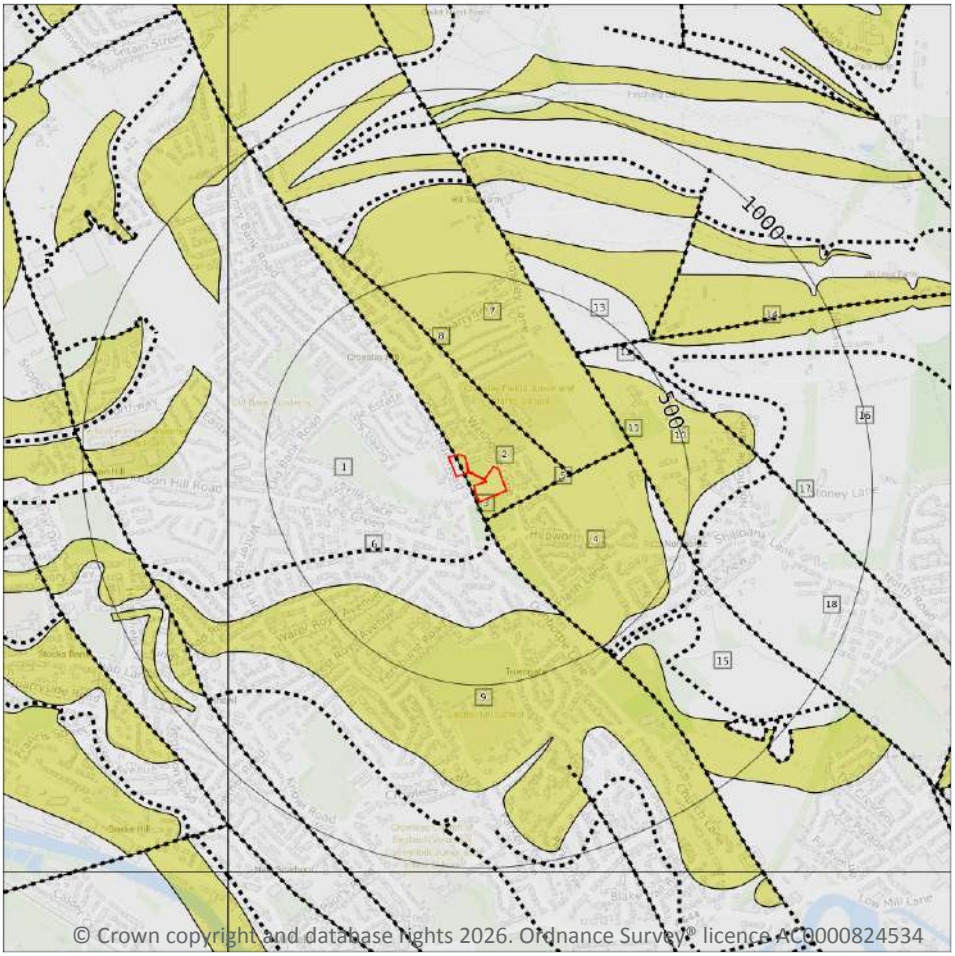
14.4 Landslip (10k)

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	11

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 73 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PLCM-MDSS**	**Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone**	**Westphalian**
2	**On site**	**FHR-SDST**	**Falhouse Rock-Sandstone**	**Westphalian**
4	45m SE	FHR-SDST	Falhouse Rock-Sandstone	Westphalian

ID	Location	LEX Code	Description	Rock age
7	122m NE	FHR-SDST	Falhouse Rock-Sandstone	Westphalian
9	312m S	FHR-SDST	Falhouse Rock-Sandstone	Westphalian
10	347m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
12	366m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
13	380m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
15	382m E	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
16	478m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
18	498m E	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **7**

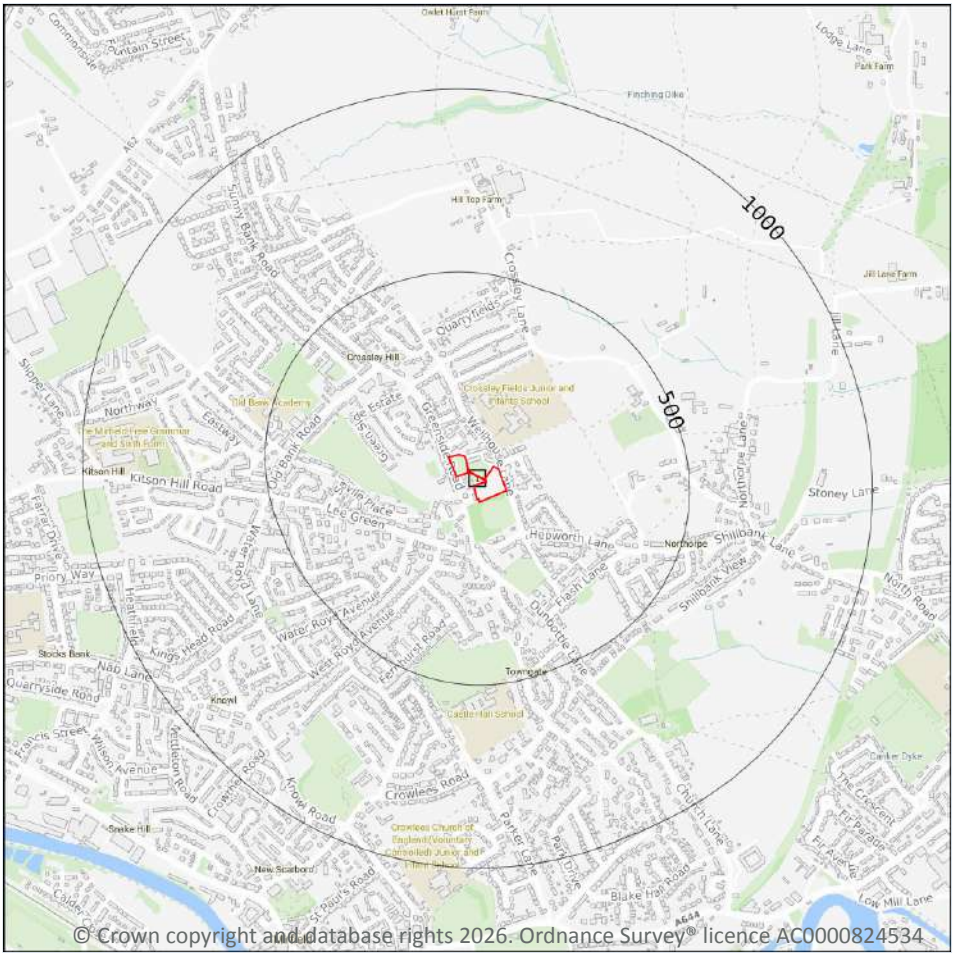
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 73 >**

ID	Location	Category	Description
3	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
5	45m SE	FAULT	Fault, inferred, displacement unknown
6	72m S	ROCK	Coal seam, inferred
8	122m NE	FAULT	Fault, inferred, displacement unknown
11	347m NE	FAULT	Fault, inferred, displacement unknown
14	380m NE	FAULT	Fault, inferred, displacement unknown
17	478m NE	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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.

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.

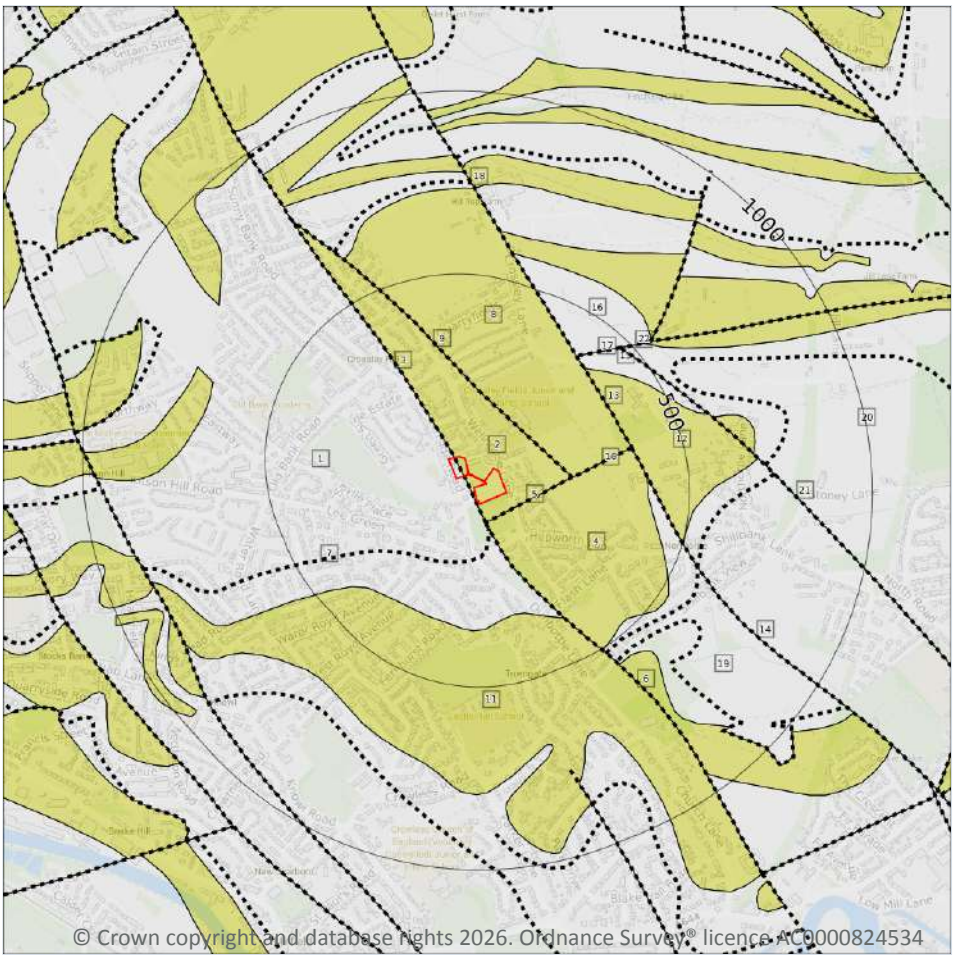
15.7 Landslip permeability (50k)

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	10

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 78 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PLCM-MDSS**	**Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone**	**Westphalian**
2	**On site**	**FHR-SDST**	**Falhouse Rock-Sandstone**	**Westphalian**
4	47m SE	FHR-SDST	Falhouse Rock-Sandstone	Westphalian

ID	Location	LEX Code	Description	Rock age
8	125m NE	FHR-SDST	Falhouse Rock-Sandstone	Westphalian
11	316m S	FHR-SDST	Falhouse Rock-Sandstone	Westphalian
12	347m NE	PLCM-SDST	Pennine Lower Coal Measures Formation-Sandstone	Westphalian
15	366m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
16	380m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
19	386m E	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
20	474m NE	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	**2**

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**	**Moderate**	**Low**
On site	**Fracture**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**12**

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.

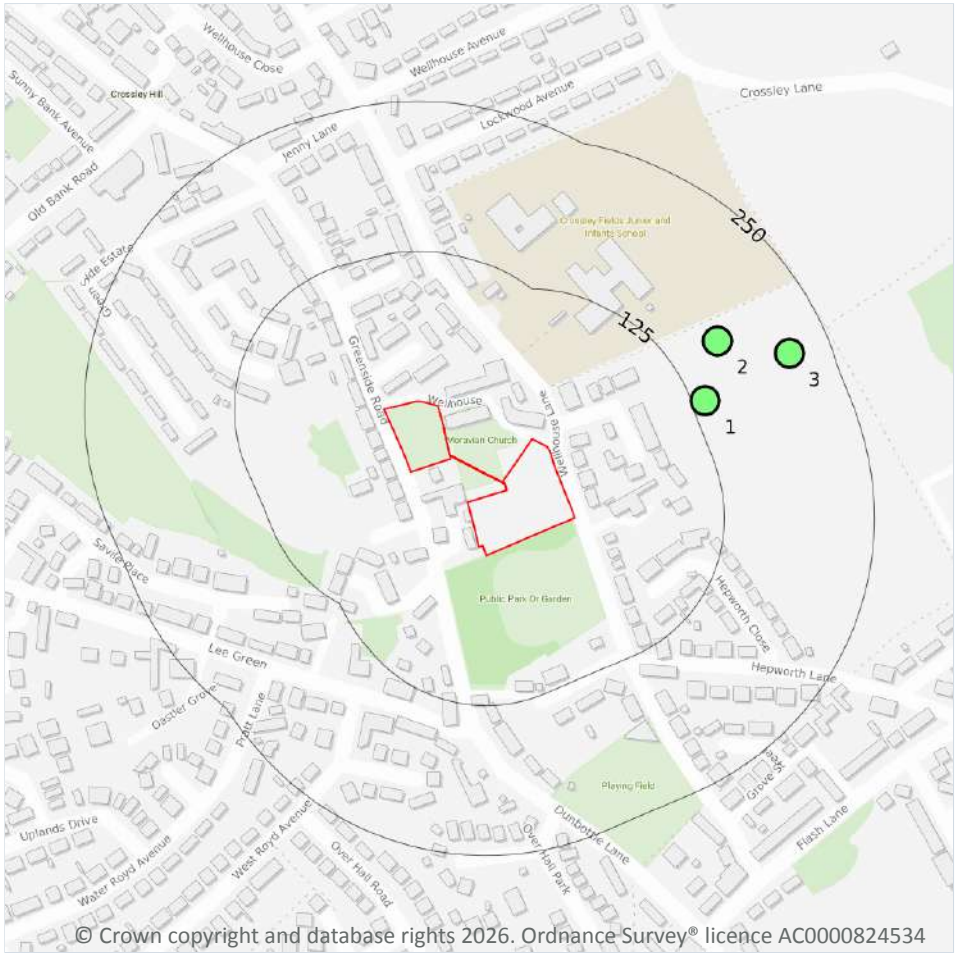
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 78 >**

ID	Location	Category	Description
3	**On site**	**FAULT**	**Fault, inferred, crossmark on downthrow side, throw in metres**

ID	Location	Category	Description
5	47m SE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
6	54m S	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
7	71m S	ROCK	Coal seam, inferred
9	125m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
10	185m E	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
13	347m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
14	363m E	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
17	380m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
18	380m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
21	474m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
22	474m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	3

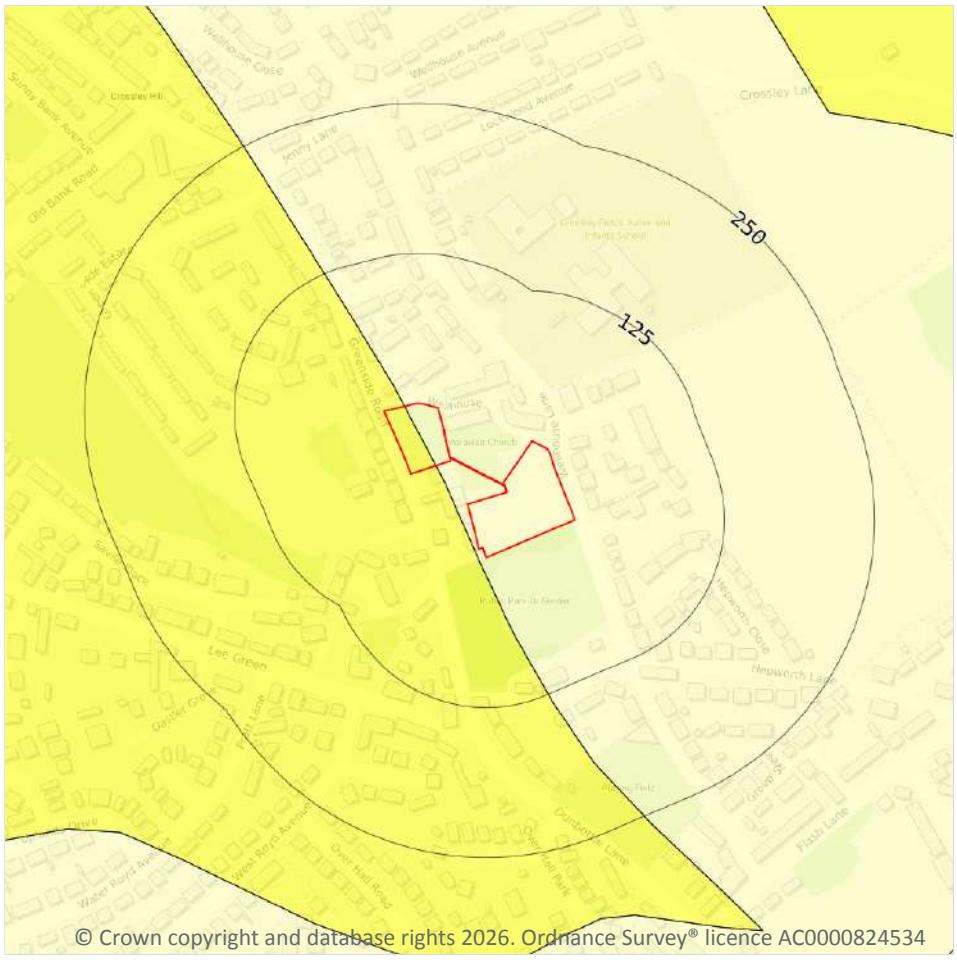
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

Features are displayed on the Boreholes map on **page 81 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	136m E	420870 421140	BALDERSTONE HALL MIRFIELD 1	30.0	N	78274 ↗
2	167m NE	420880 421190	BALDERSTONE HALL MIRFIELD 2	23.0	N	78275 ↗
3	216m E	420940 421180	BALDERSTONE HALL MIRFIELD 3	13.0	N	78276 ↗

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

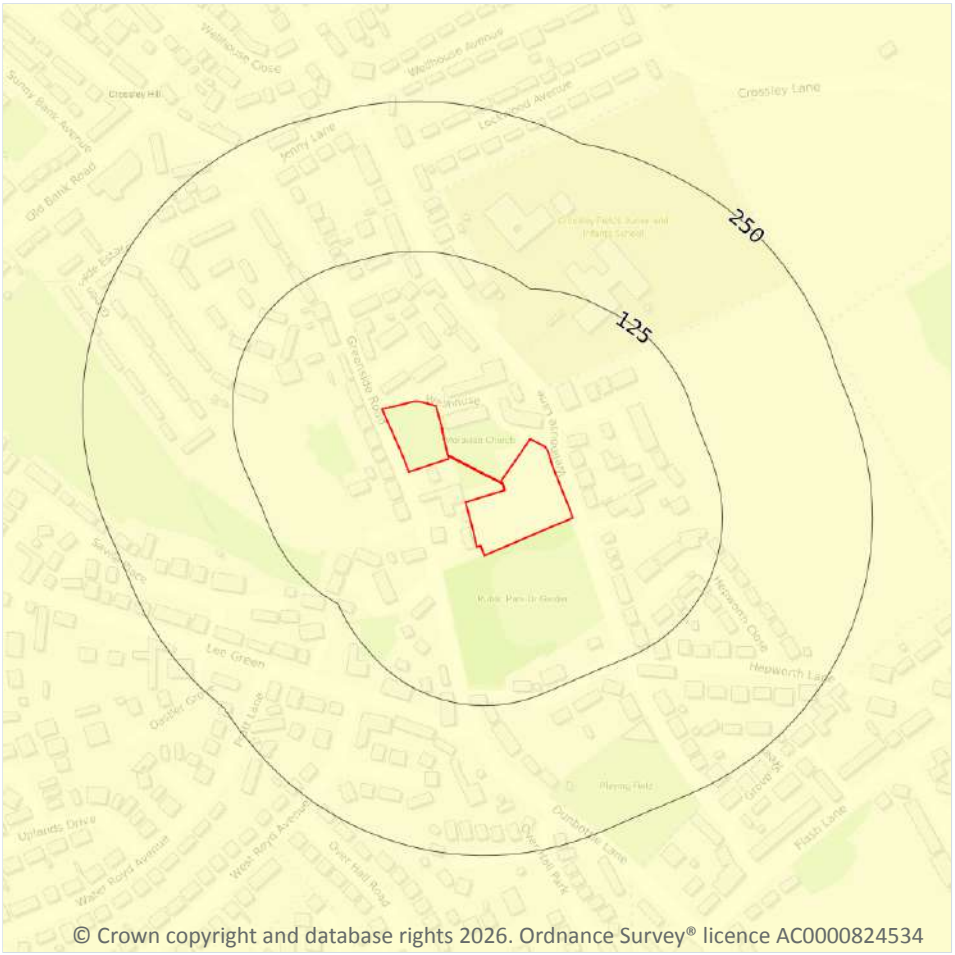
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 83 >**

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



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Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

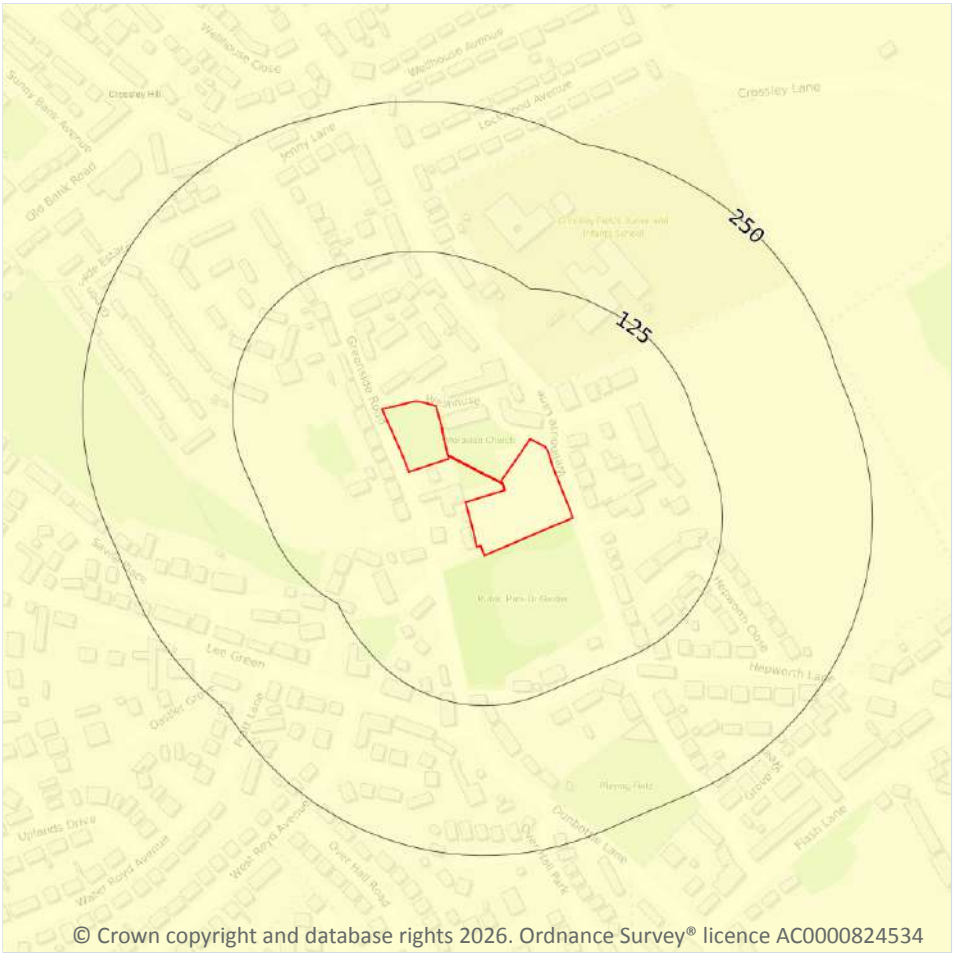
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 84 >**

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

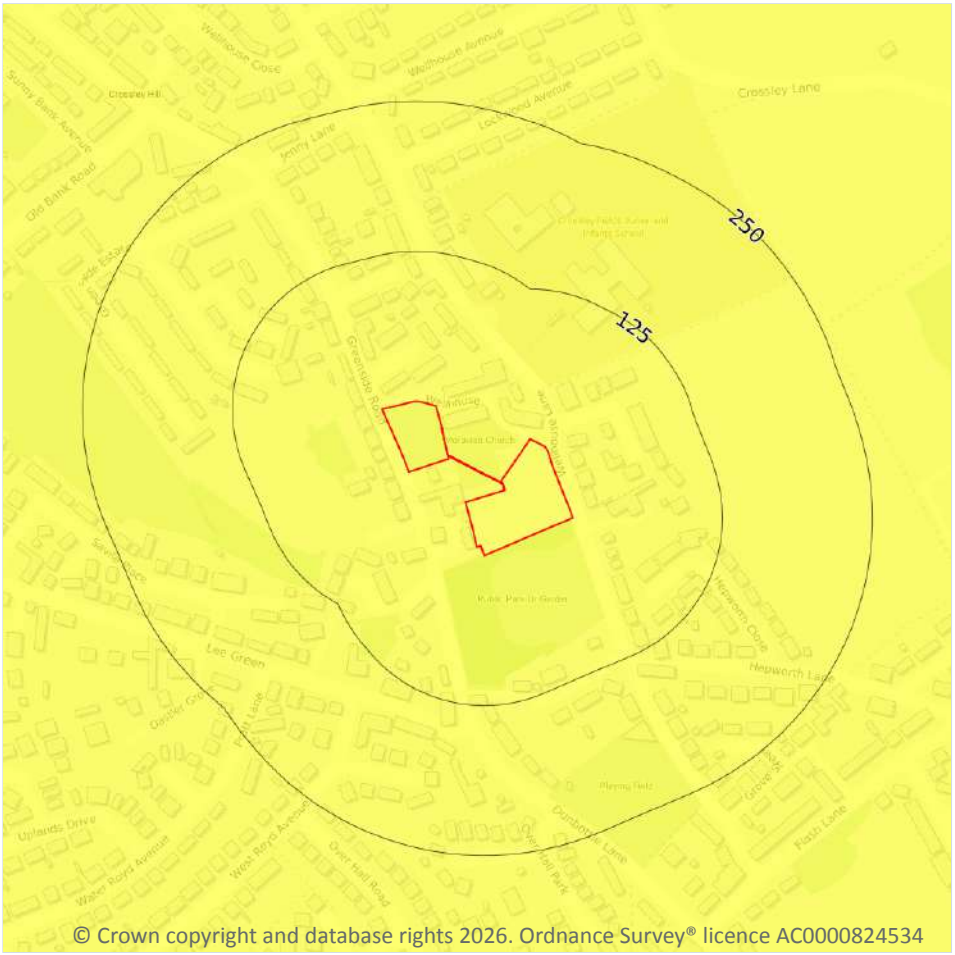
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 85 >**

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



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Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

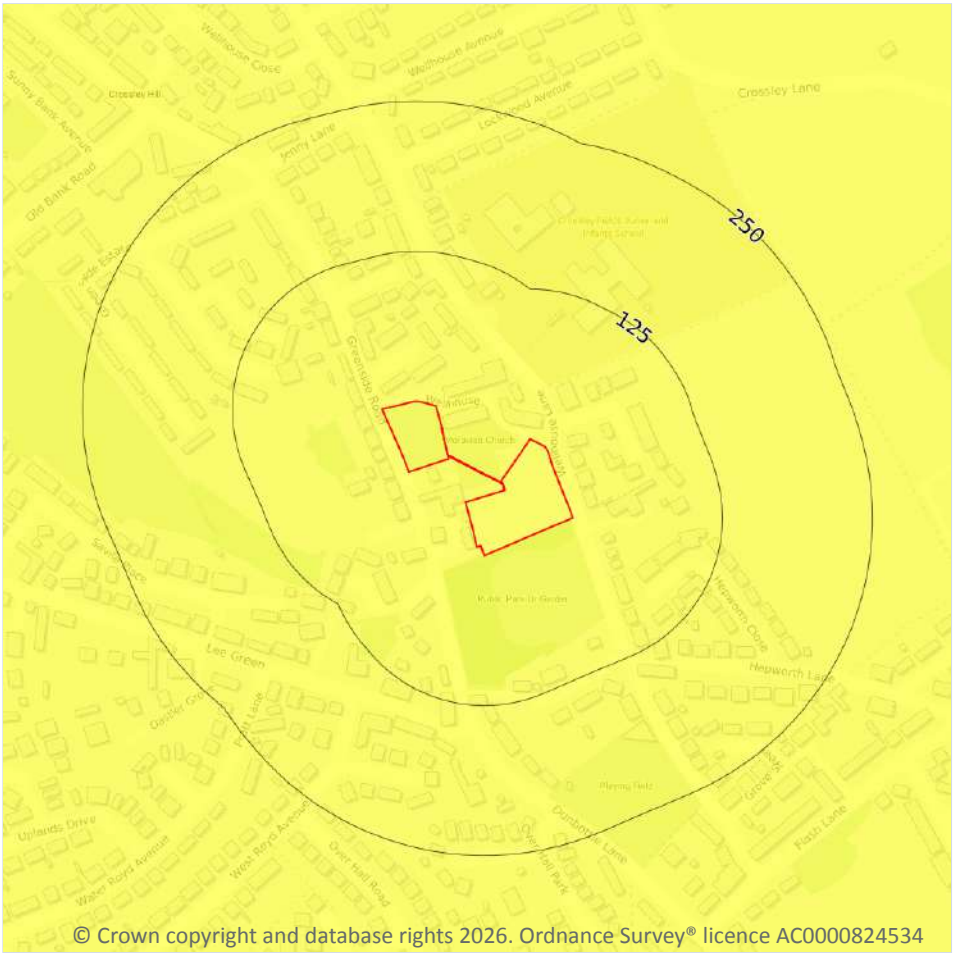
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 86 >**

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	1

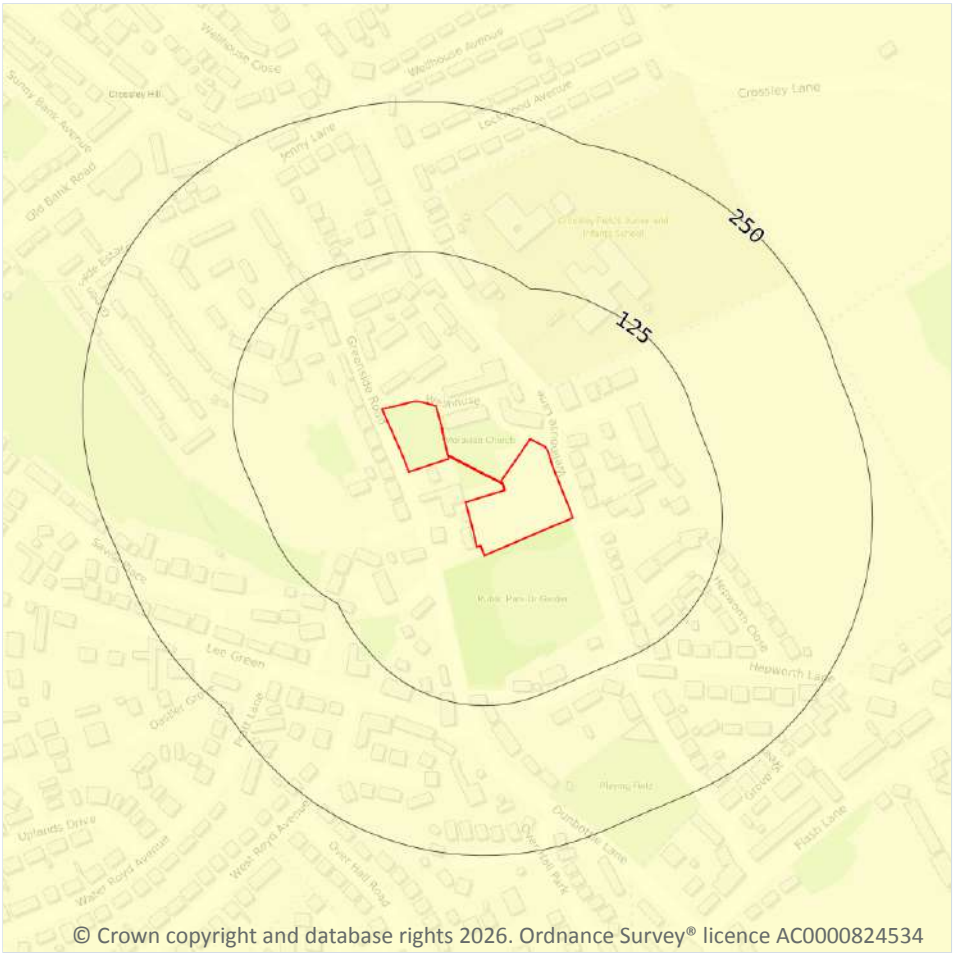
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 87 >**

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.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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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

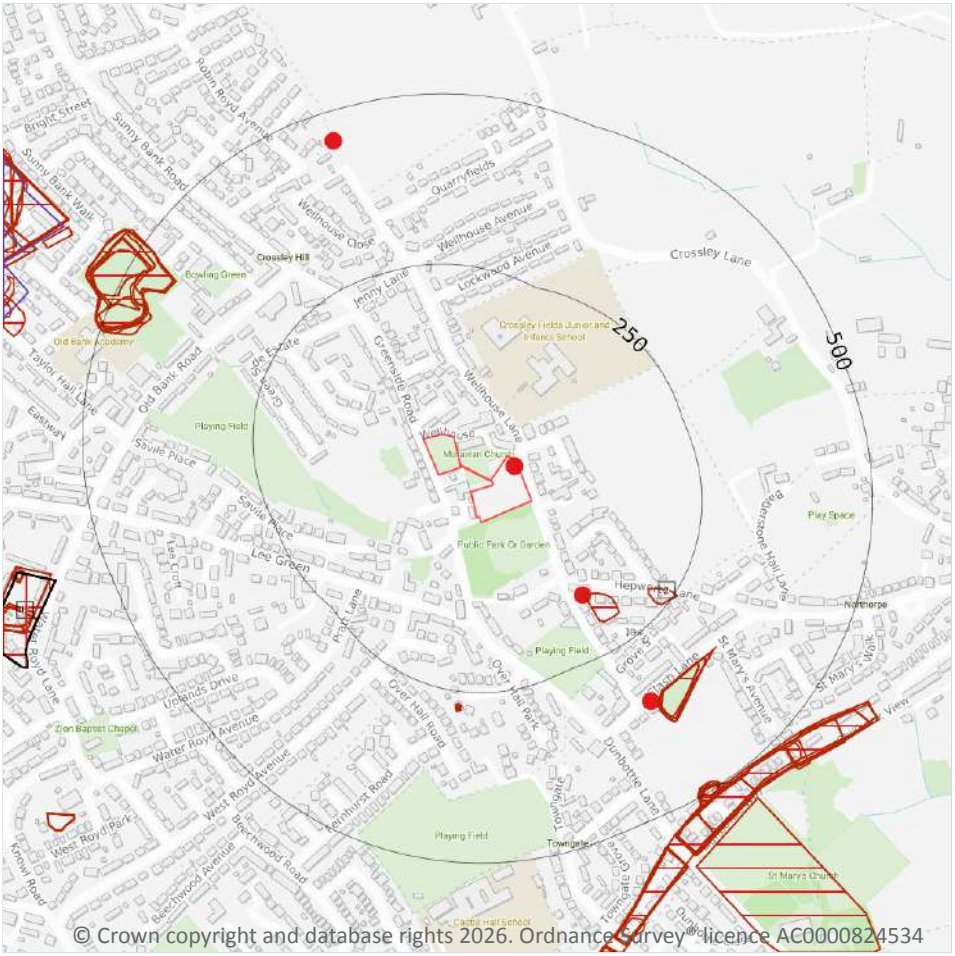
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 88 >**

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 and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

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 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 and ground workings map on **page 90 >**

ID	Location	Details	Description
1	**On site**	**Name: Wellhouse** **Address: Northorpe, MIRFIELD, West Yorkshire** **Commodity: Sandstone** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping.** **Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.**
A	157m SE	Name: Quarry Hole Address: Hepworth Lane, Northorpe, MIRFIELD, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
C	342m SE	Name: Dun Bottle Address: Northorpe, MIRFIELD, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
3	457m N	Name: Low Fold Address: Crossley, MIRFIELD, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	2

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 and ground workings map on **page 90 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	158m SE	Unspecified Pit	1892	1:10560
2	215m SE	Unspecified Pit	1905	1:10560

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

18.3 Underground workings

Records within 1000m	4

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 and ground workings map on **page 90 >**

ID	Location	Land Use	Year of mapping	Mapping scale
H	578m W	Colliery	1948	1:10560
H	578m W	Colliery	1905	1:10560
H	578m W	Colliery	1892	1:10560
H	578m W	Colliery	1931	1:10560

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

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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).

This data is sourced from the British Geological Survey.

18.7 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.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 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.

18.13 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.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 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 Ground cavities and sinkholes

19.1 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.

19.2 Mining cavities

Records within 1000m	0

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.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

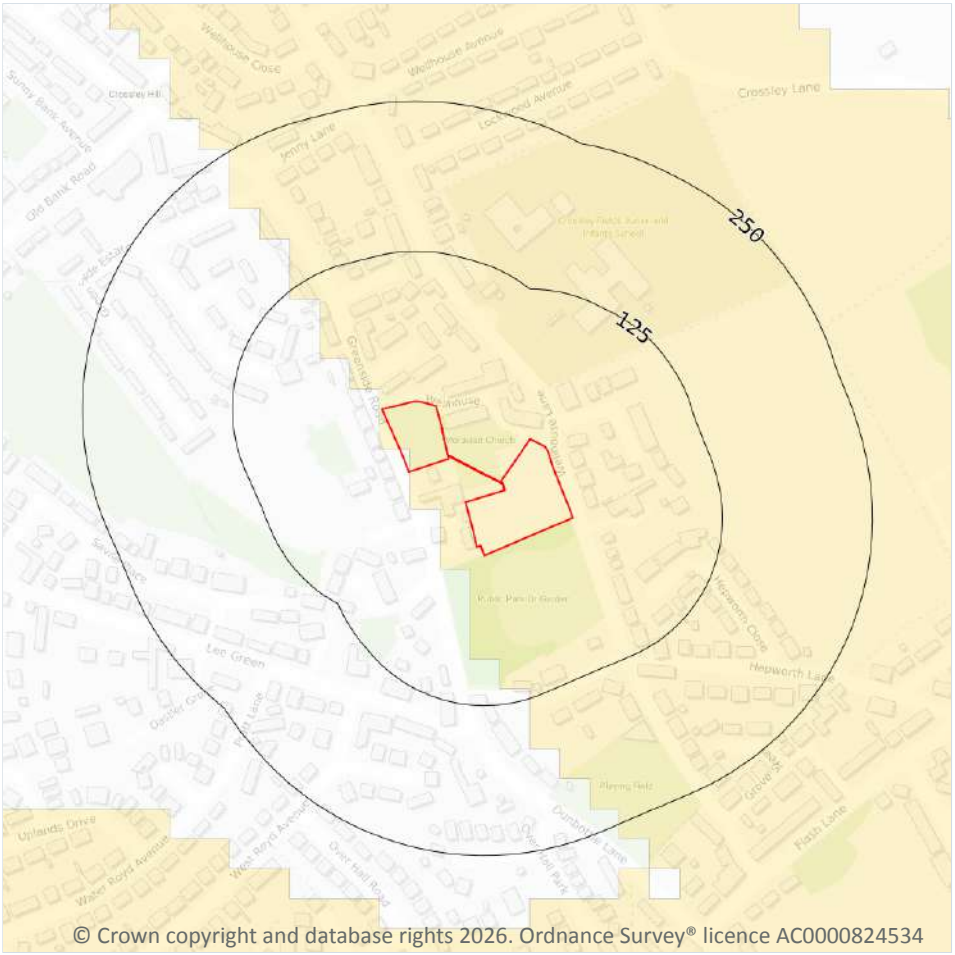
Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey® maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

20 Radon



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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%

20.1 Radon

Records on site	2

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 98 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**

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

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	**9**

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	**15 - 25 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**35 - 45 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**90 - 120 mg/kg**	**15 - 30 mg/kg**
11m S	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
11m S	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
11m S	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
11m S	35 - 45 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
47m SE	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m SE	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m SE	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 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.

21.3 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.

22 Railway infrastructure and projects

22.1 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.

22.2 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.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 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.

22.5 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.

22.6 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.

22.7 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.

22.8 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.

22.9 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: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

APPENDIX C

BGS Borehole Records

British Geological Survey

BGS ID: 78274 : BGS Reference: SE22SW790
British National Grid (27700) : 420870,421140

SE 22 SW 790

Contract : BALDERSTONE HALL
Client : Bellway Estates plc.

Coordinates :
Dates : 10/02/95

Equipment and Methods :
Rotary topdrive drilling rig with 75mm rock hammer and air flush.

Job Number : 48062
Borehole Number : 1
Location : Mirfield

Orientation : Vertical
Ground Level : 2087 2114

Daily Prog.	Water Level	In-Situ Tests	TCR	SCR	RQD	FI	Core Run	Depth m	Strata Description	Red. Level	Legend
								0.00			
								0.20	TOPSOIL		
								(1.10)	Orange brown fine to medium grained highly weathered SANDSTONE.		
								1.30	Light brown fine to medium grained SANDSTONE .... becoming grey below 7.10m.		
	10/02/95							(11.90)			
								13.20	Grey silty MUDSTONE.		
								(1.80)			
								15.00	Borehole Continued		

Follows
Cork

Key :

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
P Piston
J Jar
T Thin Wall
▮ No Recovery

In-Situ Tests
S SPT Value
C CPT Value
+ Seating Blows
‡ Inc. Seating Blows
Ⅹ No Penetration
+ Sampler Sank
V Vane Test
J Borehole Jack Test
k Permeability
Is Point Load Index
PB Plate Bearing Test
CBR In-Situ CBR Test

pp Pocket Penetrometer
so Soakaway Test
kP Packer Test
+ Single Test
‡ Double Test

General Remarks :
No voids or broken ground encountered.

Scale : 15m/sheet
Sheet No. 1 Of 2.
Depth 0 to 15 metres.
Operator : AIH
Appendix :
Figure No. :

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 78274 : BGS Reference: SE22SW790
British National Grid (27700) : 420870,421140

SE22SW 790

Contract : BALDERSTONE HALL
Client : Bellway Estates plc.

Coordinates :
Dates : 10/02/95

Equipment and Methods :
Rotary topdrive drilling rig with 75mm rock hammer and air flush.

Job Number : 48062
Borehole Number : 1
Location : Mirfield

Orientation : Vertical
Ground Level :

Daily Prog.	Water Level	In-Situ Tests	TCR	SCR	RQD	FI	Core Run	Depth m	Strata Description	Red. Level	Legend
								15.00	Grey silty MUDSTONE.		
								(4.70)			
								17.90	Black bright COAL. Blocking?		
								(0.80)			
								18.70	Dark grey to grey silty MUDSTONE with occasional sandstone band.		
								(11.30)			
								30.00	End Of Borehole		

Key :

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
P Piston
J Jar
T Thin Wall
X No Recovery

In-Situ Tests
S SPT Value
C CPT Value
* Seating Blows
‡ Inc. Seating Blows
X No Penetration
- Sampler Sank
V Vane Test
J Borehole Jack Test
k Permeability
Is Point Load Index
PB Plate Bearing Test
CBR In-Situ CBR Test

pp Pocket Penetrometer
so Soakaway Test
kP Packer Test
* Single Test
‡ Double Test

General Remarks :
No voids or broken ground encountered.

Scale : 15m/sheet
Sheet No. 2 Of 2.
Depth 15 to 30 metres.

Operator : RIH
Appendix :
Figure No. :

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 78275 : BGS Reference: SE22SW791
British National Grid (27700) : 420880,421190

SE22SW791

Contract : BALDERSTONE HALL.
Client : Bellway Estates plc.

Coordinates :
Dates : 11/02/95

Equipment and Methods :
Rotary topdrive drilling rig with 75mm rock hammer and air flush.

Job Number : 48062
Borehole Number : 2
Location : Mirfield.

Orientation : Vertical
Ground Level : 2088 2119

Daily Prog.	Water Level	In-Situ Tests	TCR	SCR	RQD	FI	Core Run	Depth m	Strata Description	Red. Level	Legend
								0.00			
								0.20	TOPSOIL		
									Orange brown SANDSTONE .... becoming light brown below 1.50m and grey below 5.50m.		
								(9.30)			
								9.50	Grey silty MUDSTONE.		
	11/02/95							(3.60)			
								13.10			
								(0.80)	COAL.		
								13.90			
								(9.60)	Grey silty MUDSTONE with sandstone bands.		
								15.00	Borehole Continued		

Key :

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
P Piston
J Jar
T Thin Wall
X No Recovery

In-Situ Tests
S SPT Value
C CPT Value
• Seating Blows
‡ Inc. Seating Blows
✱ No Penetration
◦ Sampler Sank
V Vane Test
J Borehole Jack Test
k Permeability
Is Point Load Index
PB Plate Bearing Test
CBR In-Situ CBR Test

pp Pocket Penetrometer
so Soakaway Test
kP Packer Test
+ Single Test
‡ Double Test

General Remarks :
No voids or broken ground encountered. All strata descriptions taken from drillers notes.

Scale : 15m/sheet
Sheet No. 1 Of 2.
Depth 0 to 15 metres.

Operator : RIH
Appendix :
Figure No. :

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 78275 : BGS Reference: SE22SW791
British National Grid (27700) : 420880,421190

SE22SW 791

Contract : BALDERSTONE HALL.
Client : Bellway Estates plc.

Coordinates :
Dates : 11/02/95

Equipment and Methods :
Rotary topdrive drilling rig with 75mm rock hammer and air flush.

Job Number : 48062
Borehole Number : 2
Location : Mirfield.

Orientation : Vertical
Ground Level : 2

Daily Prog.	Water Level	In-Situ Tests	TCR	SCR	RQD	FI	Core Run	Depth m	Strata Description	Red. Level	Legend
								15.00	Grey silty MUDSTONE with sandstone bands.		
								19.60			
								23.50	End Of Borehole		

Key

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
P Piston
J Jar
T Thin Wall
X No Recovery

In-Situ Tests
S SPT Value
C CPT Value
* Seating Blows
‡ Inc. Seating Blows
Ж No Penetration
+ Sampler Sank
V Vane Test
J Borehole Jack Test
k Permeability
Is Point Load Index
PB Plate Bearing Test
CBR In-Situ CBR Test

pp Pocket Penetrometer
so Soakaway Test
kP Packer Test
* Single Test
‡ Double Test

General Remarks :
No voids or broken ground encountered. All strata descriptions taken from drillers notes.

Scale : 15m/sheet
Sheet No. 2 Of 2.
Depth 15 to 30 metres.

Operator : RIH
Appendix :
Figure No. :

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 78276 : BGS Reference: SE22SW792
British National Grid (27700) : 420940,421180

SE 22 SW 792

Contract : BALDERSTONE HALL.
Client : Bellway Estates plc.

Coordinates :
Dates : 11/02/95

Equipment and Methods :
Rotary topdrive drilling rig with 75mm rock hammer and air flush.

Job Number : 48062
Borehole Number : 3
Location : Mirfield.

Orientation : Vertical
Ground Level : 2094 2118

Daily Prog.	Water Level	In-Situ Tests	TCR	SCR	RQD	FI	Core Run	Depth m	Strata Description	Rec. Level	Legend
								0.00			
								0.20	TOPSOIL		
									Orange brown SANDSTONE .... becoming light brown below 1.20m and grey below 7.50m.		
								(8.00)			
								8.20	Grey silty MUDSTONE.		
	11/02/95							(2.90)			
								11.10			
								(0.80)	VOID.		
								11.90			
								(1.10)	SOLID DRILLING - no returns.		
								13.00	End Of Borehole		

Key :

Sample Types
U Undisturbed
D Disturbed
B Bulk Disturbed
W Water
P Piston
J Jar
T Thin Wall
↕ No Recovery

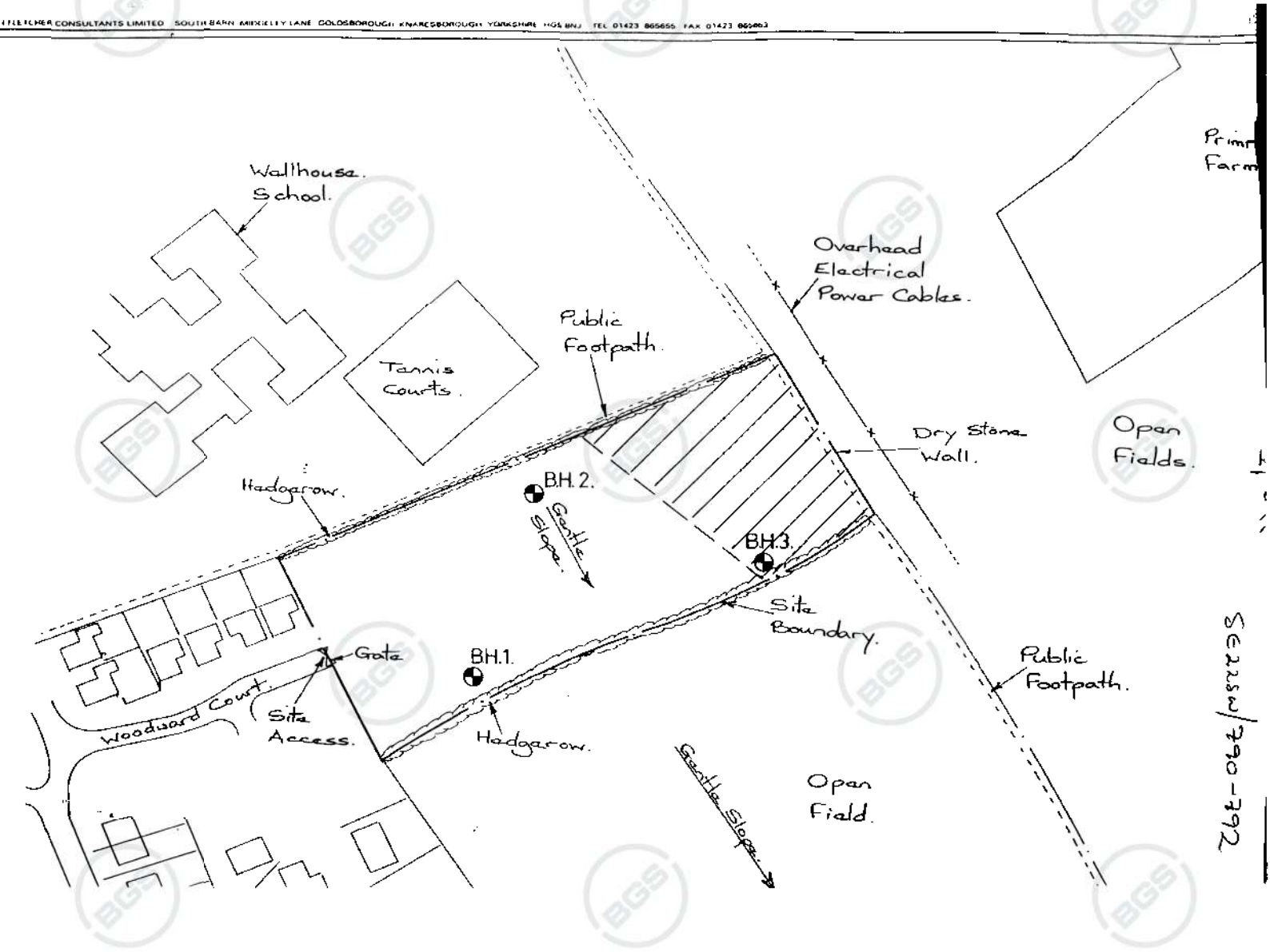
In-Situ Tests
S SPT Value
C CPT Value
* Seating Blows
‡ Inc. Seating Blows
Ξ No Penetration
+ Sampler Sank
V Vane Test
J Borehole Jack Test
k Permeability
Is Point Load Index
PB Plate Bearing Test
CBR In-Situ CBR Test

pp Pocket Penetrometer
sa Soakaway Test
kP Packer Test
* Single Test
‡ Double Test

General Remarks :
Void encountered at between 11.10 and 11.90m.
All strata descriptions taken from drillers notes.

Scale : 15m/sheet
Sheet No. 1 Of 1.
Depth 0 to 15 metres.
Operator : RIH
Appendix :
Figure No. :

Contact BGS: ngdc@bgs.ac.uk


FLETCHER CONSULTANTS LIMITED SOUTH BARN MIXELEY LANE COLOSBOROUGH KNARESBOROUGH YORKSHIRE HG5 8NJ TEL 01423 865655 FAX 01423 865863
Wallhouse School.
Tennis Courts.
Public Footpath.
Overhead Electrical Power Cables.
Dry Stone Wall.
Open Fields.
Hedgerow.
B.H.2.
Gentle Slope.
B.H.3.
Site Boundary.
Gate
B.H.1.
Woodyard Court.
Site Access.
Hedgerow.
Public Footpath.
Gentle Slope.
Open Field.
SE22SW/790-792

APPENDIX D

Potential Pollutant Linkages

POTENTIAL RECEPTOR	COMMENTS	Include in PCM
PROPERTY: Other		
On Site		
Crops	None anticipated on site	×
Domestic Produce	Possibly in residential gardens	✓
Livestock	None anticipated on site	×
Domestic Animals	Possibly belonging to residential end users	✓
Game	None anticipated on site	×
Off Site		
Crops	No fields surrounding the site	×
Domestic Produce	Possibly in residential properties close by	✓
Livestock	No fields surrounding the site	×
Domestic Animals	May belong to adjacent residents	✓
Game	No fields surrounding the site	×
PROPERTY: Buildings		
On Site		
	Residential Properties, services, flora	✓
Off Site		
	Services, flora	✓
HUMANS		
On Site		
Residents	Future Residents	✓
Construction workers	During ground excavations	✓
Employees	Landscape gardeners	✓
Surface water users	No current surface water abstractions located on site	×
Off Site		
Residents	No residential properties close by	×
Commercial	Recreational walkers	✓
Groundwater users	No current groundwater abstractions within 250 m.	×
Controlled Waters		
On Site		
Surface Waters	No surface water features on site	×
Groundwater	The Secondary A Aquifer within the bedrock represents a receptor	✓
Off Site		
Controlled Waters	There are four surface water features located within 250 m of the site. The closest is some 160 m south of the site.	✓
Ecological Systems		
On/Off Site		
SSSIs, national nature reserves, SACs etc	None	×

Table A: Potential Receptors to be considered in the Preliminary Conceptual Model

Link	Source	Hazard	Transport Mechanism	Pathway	Medium of Exposure	Receptor	Risk Summary*
1	Contaminated soils	Direct contact /ingestion of soil or dust	Direct contact with contaminated soil	Dermal contact/ingestion of soil at surface	Soil	Humans (on-site/off-site), domestic pets	Low
2	Contaminated soils	Particulate inhalation	Wind blown particulates	Inhalation of particulates	Air	Humans (on-site/off-site), domestic pets	Low
3	Contaminated Soils	Impaired produce growth	Uptake of contaminants by homegrown produce resulting in loss	Uptake during growth	Vegetable produce	Property (domestic produce)	Low
4	Contaminated Soils	Ingestion of Contaminants	Uptake of contaminants by homegrown produce	Consumption of homegrown produce	Vegetable produce	Humans	Low
5	Contaminated Soils	Inhalation of Ground Gas	Migration of ground gas through permeable layers	Inhalation of Gases	Air	Humans (on-site/ off-site, domestic pets)	Moderate
6	Contaminated Soils	Vapour Inhalation	Volatalisation of organic compounds through unsaturated zone of soil leading to inhalation	Inhalation of Vapours	Air	Humans (on-site/ off-site, domestic pets)	Low
7	Contaminated Soils	Damage to structure/services	Direct contact of contaminants with building structures/services	Direct contact	Soil/Water	Flora, Services, Concrete	Low
8	Contaminated Soils	Degradation of surface water quality	Dissolution or suspension of contaminants into perched waters	Dissolution or Suspension	Water	Perched Waters, Thelwall Brook, Drains	Low
9	Contaminated Soils	Pollution of underlying groundwater	Dissolution or suspension of contaminants into groundwaters	Dissolution or Suspension	Water	Groundwaters	Low

Table B: *Preliminary Conceptual Model*

***Relative Risk Screening and Prioritisation for further Investigation & or Assessment**

High	Higher probability of occurrence and identification of primary sources of contamination with respect to most sensitive receptors.
Medium	Pollutant linkage generally dependent on the presence of other primary pollutant linkages and/or where pollutant linkage generally associated with less sensitive receptors.
Low	Lower probability of occurrence such as based on requirement for significant migration pathway or where pollutant linkage requires the presence of source contaminants at concentration likely to be much higher than other identified pollutant linkages.

APPENDIX E

Site Photographs



P1: Gated access along the northern site boundary



P2: A view south across the site



P3: A view across the northern section of the site



P4: Singed ground in the centre of the site



P5: A view south-east across the site



P6: A view of the site from Greenside Road

GEO-ENVIRONMENTAL CONSULTING

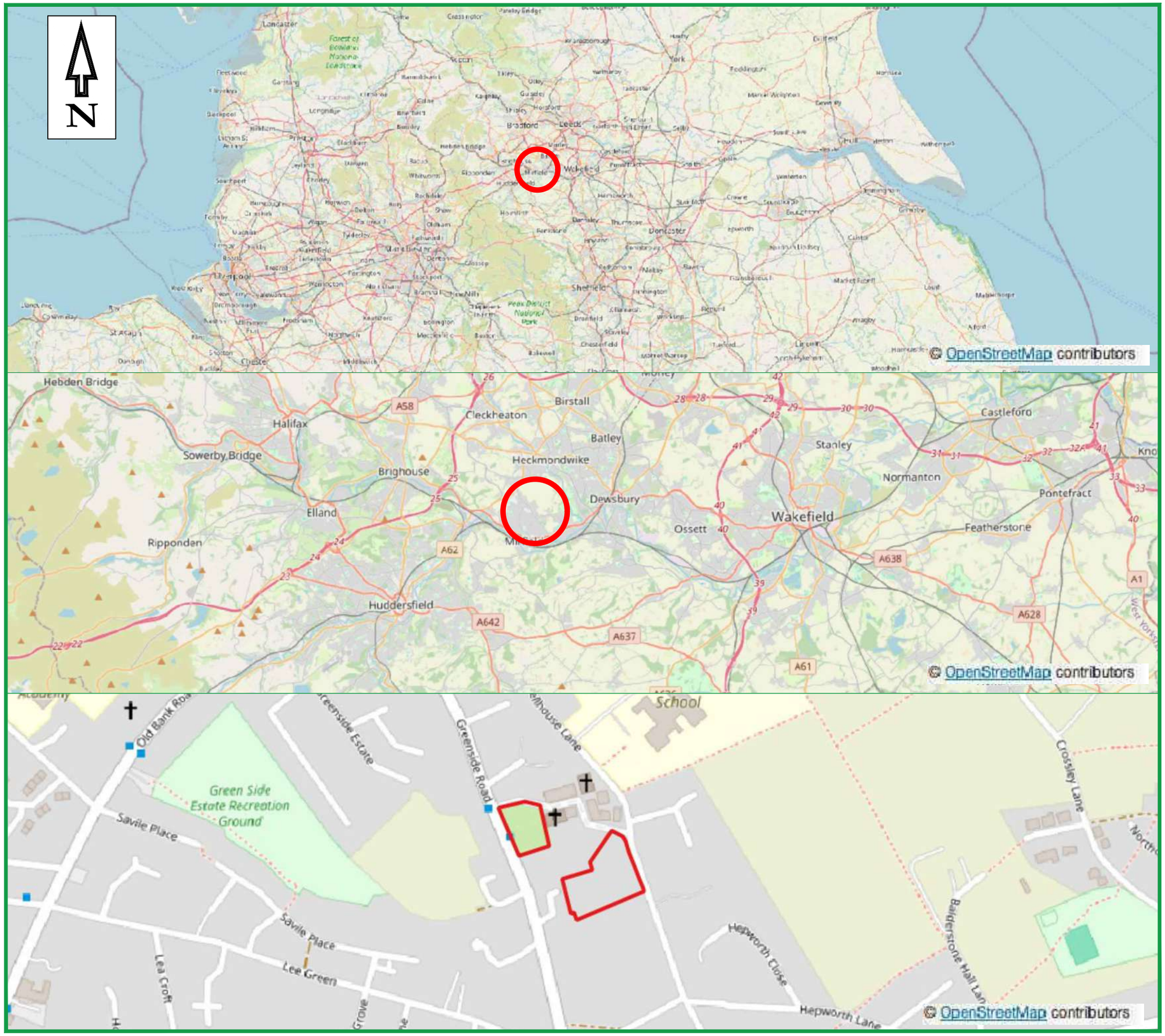
Comments:

Photographs 1 to 6

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project	**Site:** Site 1 – Land off Greenside Road, Mirfield	**Project No:** 26035	**Created By:** M Leigh-Monk	**Date:** March 2026
	Title: Appendix E - Site Photographs	**Client:** McDonald Wilkinson Tonge		

APPENDIX F

Drawings



LEGEND

SITE LOCATION

REV	DESCRIPTION	DATE	BY

GEO-ENVIRONMENTAL CONSULTING
No 2 Landwick Court, Metcalf Drive, Altham Business Park, Lancashire
Tel: 01254 377622 Mob: 07906753583
Email: mbuckley@bekenviro.co.uk
Web: www.bekenviro.co.uk

CLIENT.

MCDONALD WILKINSON TONGE

JOB TITLE.

LAND OFF GREENSIDE ROAD AND
LAND OFF WELLHOUSE LANE,
MIRFIELD

DRAWING TITLE.

SITE LOCATION PLAN

SCALE @ A3.	DRAWN BY.	APPROVED BY.	DATE.
NTS	D.E.	M.B.	09/03/26

DRAWING No. 26035-1

REV. -



LEGEND

SITE FOOTPRINT

REV	DESCRIPTION	DATE	BY

GEO-ENVIRONMENTAL CONSULTING
No 2 Landwick Court, Metcalf Drive, Altham Business Park, Lancashire, BB5 5GY
Tel: 01254 377622 Mob: 07906753583
Email: mbuckley@bekenviro.co.uk
Web: www.bekenviro.co.uk

CLIENT.

MCDONALD WILKINSON TONGE

JOB TITLE.

LAND OFF GREENSIDE ROAD AND
LAND OFF WELLHOUSE LANE,
MIRFIELD

DRAWING TITLE.

SITE LAYOUT PLAN

SCALE @ A3.	DRAWN BY.	APPROVED BY.	DATE.
NTS	D.E.	M.B.	09/03/26

DRAWING No.	REV.
26035-2	-



[img10] - proposed site layout concept - context appraisal