



GEO
Environmental Engineering



PHASE 1: DESK TOP STUDY REPORT

(PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT)

PROPOSED DEVELOPMENT OF LAND AT:

PARK STREET

FRIZINGTON

CUMBRIA

FOR

MR MARTIN

GEO Environmental Engineering

DOCUMENT CONTROL SHEET

Report Ref: 2021-4690

Report Date: 28.05.2021

Report Type: DRAFT DTS v1 for Design Team Review

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Client: Mr Martin

Consultant: MJN Associates

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1.0 Introduction

1.1 Instruction

Geo Environmental Engineering Ltd have been commissioned by the Consultant, MJN Associates on behalf of the Client, Mr Martin to undertake a desk-based assessment for a site located at Park Street, Frizington, Cumbria. The purpose of this desk-based report is to examine publicly available geo-environmental information to determine any potential “*geohazards*” that may affect the development of the site.

It is understood that the Client is considering the site for residential development. A proposed layout has not been provided, however, it is anticipated that the development will include a residential property as well as private gardens, general areas of soft landscaping and other infrastructure. Further details relating to the full scope of development should be obtained from the Client.

This Phase 1: Desk Top Study Report is suitable for submission to the Local Authority as part of a planning application.

1.2 Aims and Objectives

The aims and objectives of this Phase 1: Desk Top Study (DTS) Report are to assess the geological and environmental sensitivity of the development area and the surrounding environs, with particular attention made to any potentially contaminative industries or processes that may have taken place on site or on immediately adjacent sites, which may be considered as potentially posing a risk of ground/groundwater contamination and ground gas that could negatively affect the proposed end users, adjacent sites and controlled waters. This Phase 1: Desk Top Study Report has been completed in accordance with the following documents:

- Land Contamination Risk Management Stages 1 to 4 (LCRM – www.gov.uk).
- CLR11: Model Procedures for the Management of Land Contamination. DEFRA/EA, 2004.
- BS10175:2011: Code of Practice for the Investigation of Potentially Contaminated Sites.
- BS5930:2015: Code of Practice for Site Investigations.
- UK Specification for Ground Investigation, 2nd Edition. Site Investigation Steering Group, 2011.
- Effective Site Investigation. Site Investigation Steering Group, 2013.

During the completion of this DTS information has been obtained and reviewed from the following sources:

- British Geological Survey (BGS) Geological Mapping Data
- Environment Agency (EA).
- Ground Sure Report (Enviro+Geo insight – GSR – Appendix II)
- Ordnance Survey Historical Map Data (Mapinsight – GSR – Appendix III)
- The Coal Authority Consultants Coal Mining Report and Online Database (CA – Appendix IV).

1.3 Limitations of Use

The information, assessments, conclusions and recommendations presented within this Phase 1: Desk Top Study (DTS) Report are solely based on, and are limited to, the boundaries of the site, the immediate area around the site, and the historical use(s) as described, with the approximate extent of the site marked on the Site Location Plan in Appendix I.

This DTS has been completed utilising information relating to the physical and environmental setting of the development area, highlighting, where possible, any potential geohazards that might be encountered with respect to the proposed Residential end use (i.e. "Best Fit" CLEA classification of *Residential*).

Therefore, if a change in the proposed end use is envisaged, then a reassessment of the development area should be carried out.

Consequently, any comments, opinions, diagrams, cross sections and/or sketches contained within the DTS, and/or any configuration of the findings is purely conjectural and given for guidance only as no intrusive investigation works have been completed by Geo Environmental Engineering Ltd and it is recommended that confirmation of the anticipated ground conditions should be considered before development proceeds.

The conclusions and recommendations presented within this report are considered reasonable based on the available information. However, these cannot be guaranteed to gain regulatory approval. Therefore, the report should be passed to the appropriate regulatory authorities and/ or other key stakeholders in order to seek their approval of the findings prior to undertaking any works on site.

Reliance on the report is for the named Client only. Agreement for the use or copying of this report by any Third Party must be obtained in writing from Geo Environmental Engineering Ltd. Reliance on the report is strictly in accordance with the Geo Environmental Engineering Ltd Standard Terms and Conditions, copies of which are available on request.

2.0 Site Location and Development Proposals

2.1 Development Proposal

It is understood that the site will be developed for residential end use. A proposed site layout plan has not been provided, however, it is anticipated that the development will include residential properties with private gardens, general areas of soft landscaping and other associated infrastructure. Further details relating to the proposed development should be obtained from the Client.

2.2 Site Location

The site occupies an area of 0.04ha and is situated to the southeast of Frizington, approximately 850m southeast of the village centre. The site is irregular in shape and is currently part undeveloped.

The site is centred on National Grid Reference: 303469, 516456.

A site location plan and a selection of Street view photographs are included in Appendix I.

2.3 Existing Site Levels

The site appears to fall to the south.

2.4 Existing Site Surfacing and Buildings

No permanent or significant structures are noted on site. The majority of the site is noted as grass landscaping with some trees.

2.5 Surrounding Land Uses

Surrounding land uses are a mixture of residential and commercial / industrial. Agricultural fields are to the west beyond Frizington Road.

2.6 Existing Infrastructure and Utilities

A review of statutory utility supplier records lies outside the scope of this report.

Although no evidence of utilities has been identified on aerial images, it is possible that buried utilities pass through the site. It is recommended that utility providers are consulted to determine the presence of utilities prior to commencing any development works.

This will determine if any significant or mains utilities are present on site that may require easement strips, alterations to proposed layouts or potentially costly diversions/terminations. Determining the presence of on-site utilities will also protect the workforce by reducing the risk of utility strikes during the construction phase.

3.0 Geo-Environmental Setting

This section is based principally upon a search of information available on public registers and obtained through the Ground Sure Report (GSR) to determine any environmental or geological constraints to the proposed development.

- Section 3.1 to 3.4 refer to the Ground Sure Report (Enviro+Geo insight) contained in Appendix II.
- Section 3.5 refers to the Historical Map Extracts contained in Appendix III.

3.1 Development Area Geology

A geological review of the site has been undertaken using information provided in the Ground Sure Report (GSR) and on published geological maps as indicated below:

- BGS Sheet 28 Whitehaven, Solid and Drift Edition, 1:50,000 scale map.
- BGS Sheet NY01NW 1:10,000 scale map.

3.1.1 Made Ground

A review of published geological maps and the GSR does not indicate any made ground on the site or within close proximity of the site.

However, as the site was once occupied with terraced housing, it is possible that made ground may extend on to and across the site, particularly if basements were present that have been infilled.

Made ground is anticipated in the surrounding area associated with Iron Pits and Shafts (later recorded as Mowbray Iron Ore Mine, Pit No. 3), which were historically to the east (although not shown as encroaching on site).

3.1.2 Drift Geological Deposits

A review of published geological plans indicates that the site is underlain by Glacial Till deposits which typically comprise sandy, gravelly, firm and stiff clay with layers of sand and gravel, with abundant cobbles and boulders.

The GSR (Section 17.0) within Appendix II identifies the following geohazards and indicates a preliminary level of risk:

- | | |
|-------------------------|------------------|
| ■ Shrink-swell clays | very low risk. |
| ■ Landslides | very low risk. |
| ■ Compressible deposits | negligible risk. |
| ■ Collapsible deposits | very low risk. |
| ■ Running sands | very low risk. |

Glacial Till deposits may be geotechnically variable and can be affected by shrinking and swelling in the vicinity of mature vegetation such as hedgerows and trees.

It is recommended that reference be made to Section 17.0 of the Geosight GSR (Appendix II). Consequently, Phase 2: Ground Investigation works would be prudent to aid the design of foundations, any retaining structures and highways, should they be deemed necessary by the Design Team.

3.1.3 Bedrock Deposits

Reference to the published geological map and the GSR indicates that the site is underlain by the Stainmore Formation which comprises alternations of Mudstone, Siltstone and Sandstone.

The GSR indicates that there is a negligible risk from the dissolution of rock or natural cavities beneath the site. These units are thought to be devoid of significant and productive coal seams.

3.1.4 Historical Investigation Records

Various historical borehole logs are indicated within a representative distance of the site, with the nearest detailed log indicating reddish brown boulder clay with cobbles and boulders to at least 6m depth. Deeper boreholes (within 250m) suggest rockhead could be at c.12m depth (NY01NW163) comprising sandstone, limestone and shale. Productive ore bodies (Haematite/Iron Ore) are locally present and worked in this area.

3.1.5 Geological Features

An inspection of the geological map indicates that there are no geological faults within the site boundary or within close proximity to the site that are considered to pose a structural risk.

3.1.6 Mining and Quarrying Assessment

The site is indicated to be underlain by the Stainmore Formation which is devoid of productive coal seams. As such, the site is not considered to be at risk of shallow coal mine workings due to the geological setting.

However, bands of “Ore” are known to be present with the geological plan recording iron ore mine workings beneath the site and historical plans indicating former iron ore mines to the east. The Coal Authority Consultants Coal Mining Report records iron ore mine workings 180m beneath the site with an extraction thickness of c.1.20m. This iron ore body was mined from Mowbray Iron Ore Mine, which was recorded to the east and south-east. These mine workings are recorded by the BGS and the CA and are considered to be too deep to pose a risk of surface instability. Section 18.6 of the GSR notes the following with respect to iron ore workings:

“Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered”.

Information presented within the GSR suggests that there is no risk to the development from brine extraction, tin mining, clay mining and gypsum extraction. The GSR also notes that the site is not at risk of natural cavities.

3.1.7 Radon Gas Assessment

The GSR indicates that the development site is not located within a Radon Affected Area as defined by the British Geological Survey (BGS) and Public Health England (PHE) as less than 1% estimated properties are affected. Consequently, in accordance with the BGS and PHE no radon protection measures are necessary.

3.2 Development Area Hydrogeology (Groundwater)

3.2.1 Made Ground/Soils

Any made ground/topsoil materials on site are likely to be classified as high permeability (i.e. worst-case scenario assumed until proven otherwise).

3.2.2 Drift Geology

The GSR indicates that the drift deposits are recorded by the BGS as a Secondary Aquifer (undifferentiated layers). However, as it is anticipated that the drift deposits will comprise Glacial Till, it is likely that they will have a low permeability and a negligible significance for water supply or river base flow.

3.2.3 Solid Geology

The bedrock is classified as a Secondary 'A' Aquifer. This includes 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.

3.3 Development Area Hydrology

3.3.1 Groundwater

Given the topography and anticipated ground conditions, shallow groundwater is not anticipated.

A review of the Hydrology information in the GSR indicates the following:

- No groundwater abstractions are recorded within 500m of the site.
- No surface water abstractions are recorded within 500m of the site.
- No potable water abstraction licences are held within 500m of the site.
- The site is not recorded as being within or within 500m of a Source Protection Zone.

3.3.2 Surface Water Features

The nearest water course is a beck, 81m east of the site which flows from north to south. There are no surface water features indicated within the site boundaries. There are no Environment Agency (EA) GQA/WFD classified rivers, canals, ponds or lakes recorded within 250m of the development area.

3.3.3 Current Surface Water Run-off

Given the anticipated ground conditions, it is likely that any surface water will infiltrate directly into the ground. In addition, some overland flow (with the topography) is likely during heavy rainfall events.

3.3.4 Ground Infiltration Potential

The site is indicated to be underlain by Glacial Till deposits which typically comprise sandy gravelly clay with occasional bands of sand and gravel. As such, there is limited potential for infiltration where clays are present. However, where thick bands of sand or gravel are present there is a potential for increased infiltration. This should be considered during the ground investigation.

3.4 Development Area Environmental Sensitivity

3.4.1 Site Ecology

- No Sites of Special Scientific Interest (SSSI) are noted within 250m.
- No National Nature Reserves (NNR) are present within 250m.
- No Special Areas of Conservation (SAC) are noted within 250m.
- No Special Protection Areas (SPA) are present within 250m.
- No World Heritage Sites are recorded within 250m.
- No RAMSAR Sites are noted within 250m.
- No Records of Ancient Woodland are recorded within 250m.
- No Records of Environmentally Sensitive Areas are recorded within 250m.
- No Areas of Outstanding Natural Beauty (AONB) are recorded within 250m.
- No National Parks are recorded within 250m.
- No Nitrate Vulnerable Zones (NVZ) are within 250m.
- No Nitrate Sensitive Areas are within 250m.

The Design Team should refer to Section 10.0 of the GSR (Appendix II) for further information on the above-mentioned records.

3.4.2 Authorisations, Incidents and Registers

Section 4.0 of the GSR (Appendix II) does not identify any significant risks with authorisations, incidents and registers for items such as COMAH, IPC, List 1 Dangerous Substances etc.

There is one Environment Agency Recorded Pollution Incident (List 2) noted within 250m of the site. This is recorded 36m north of the site boundary and relates to contaminated water from vehicle and plant washing. The incident is not considered to pose a significant risk to the proposed development.

One licensed discharge to controlled waters is recorded c.97m east to Lingla Beck. This is recorded as revoked and not of significant concern.

The Design Team should refer to Section 4.0 of the GSR (Enviroinsight – Appendix II).

3.4.3 Determination of Contaminated Land (Part IIA)

A review of the GSR Enviroinsight has indicated that the site is not currently recorded as being determined as Contaminated Land under Part IIA EPA 1990. In addition, no sites are determined as Contaminated Land under Part IIA EPA 1990 within c.500m of the development area.

3.4.4 Historical Industrial Land Uses

Sections 1.0 and 2.0 of the GSR identifies the following:

- Historical Lands Uses (HLU) - Numerous noted within c.50m of site (although none directly on site). Items of note located off site include unspecified heaps, disused iron ore mine pits, unspecified ground workings, old shafts, railway sidings and a Gas Works.
- The GSR also indicates areas of potentially infilled land within 250m of the site, all associated with the HLU's noted above.
- Historical Tank Database – None noted within c.250m.
- Historical Energy Features – None noted within 250m.
- Historical Petrol and Fuel Site Database – None noted within 250m.

- Historical Garage and Motor Vehicle Repair Database – None noted by the GSR within 250m, although one is thought to be present to the south (Braemar Garage). This is down gradient of the site and unlikely to pose a significant risk.
- Historical Military Land – None noted within c.250m.

It is recommended that reference be made to Section 1.0 of the GSR for further information (Enviroinsight – Appendix II).

3.4.6 Recent Industrial Land Uses

The GSR records several recent industrial land uses within 250m, all relating to the Rural Workshops (Commercial/Industrial units) and other commercial/industrial units in close proximity to the site. None are considered to pose a significant risk to the proposed development.

3.4.6 Fuel Station Entries

No fuel filling stations are currently active within 250m of the site.

3.4.7 Landfill and Waste Regulation/Management – Landfill Sites

Section 3.0 of the GSR (Appendix II) identifies no historical or current landfill sites within close proximity to the development area. It does note a vehicle depolluting and dismantling facility c.70m south. Subject to appropriate measures being in place at the facility, it is unlikely to pose a significant future risk.

3.5 Development Area Historical Plan Appraisal

This section is based on historical Ordnance Survey map data that was obtained as part of the GSR and provides a summary of the site history and highlights any industries, processes or activities that may be considered as Geohazards. Copies of historical maps are provided in Appendix III. Copies of historical Ordnance Survey maps covering the site and adjacent areas have been reviewed with extracts provided within Appendix III.

From the earliest available plan (c.1864) terraced houses are present in the western site area, with additional terraced properties to the north, south and west. Frizington comprises one street at this time, trending from north to south (as existing). Properties are known as Parkgate and High Dyke. D. Well is noted to the south.

By c.1899 Mowbray Iron Ore mine is recorded to the west with railway infrastructure, pits, shafts, buildings and spoil heaps. The number of residential properties in Frizington has increased with the industrial activity.

By c.1985 all the mining industry is gone (railways, spoil heaps, shafts, buildings etc.) and the site is devoid of structures (previous terraced housing demolished). The small industrial estate currently present on the site boundaries is underdevelopment.

The c.1994 plan indicates a similar setting to today.

4.0 Conceptual Site Model

A Conceptual Site Model (CSM) has been designed using the information presented within this DTS to provide a model of the anticipated ground, groundwater and ground gas conditions below the development area (Existing Site CSM).

The CSM utilises the established *Source – Pathway – Receptor* pollutant linkage model and is designed to provide an improved understanding of the site characteristics. This ensures adequate and appropriate Phase 2: Ground Investigation (P2 GI) Works are designed and undertaken for wide spread and targeted investigations, should they be deemed necessary.

Depending on the results of the ground investigation, the CSM can be refined based upon the outcomes of the intrusive works to ensure that appropriate remediation (if required) is completed to ensure the development area is “fit for purpose” in relation to the proposed residential end use.

The preliminary CSM is presented in the matrix on the following page and considers the anticipated *Source – Pathway – Receptor* pollutant linkage model derived for this site.

Source – Pathway – Receptor Conceptual (Pollutant Linkage) Site Model

Sources:
S1 = Possible Made Ground. Historical information indicates that the site was previously developed and that demolition of former site structures took place (terraced houses). The surrounding area also has a history of industry (mining). Therefore, it is recommended that excavations be completed on site to confirm the shallow ground conditions with made ground samples recovered for laboratory analysis. In addition, the developer should implement a watching brief during the development works to ensure that if made ground and or visual/olfactory evidence of contamination is identified then works should be stopped, the Local Authority notified, and advice should be sought from an appropriately qualified and experienced Geo-Environmental Engineer.
S2 = Ground Gas - Potential Sources Identified. Iron ore workings are recorded beneath the site, with other conduits being nearby mine shafts (east). There is a potential for ground gas generation from the mine workings and, therefore a plausible risk of ground gas migration beneath the site. Areas of made ground was also likely on site associated with historical developments, as well as within the general site area associated with historical industry (predominantly iron ore mining). Possible gasses of concern include carbon dioxide and methane. A programme of ground gas monitoring should therefore be completed. The site is not currently considered by the BGS and PHE as being at risk or radon gas.
Pathways:
P1 = Inhalation of air (wind-blown particles, vapours, gasses)
P2 = Dermal/direct contact (limited risk through areas of private gardens and soft landscaping)
P3 = Ingestion (limited risk through areas of private gardens and soft landscaping)
P4 = Migration through services (potable water supply)
P5 = Direct contact with building materials (aggressive ground conditions for buried concrete)
P6 = Surface Run-off
P7 = Leaching from Soils (to underlying Principal Aquifer)
Receptors:
R1 = Human Health (End users - Residents)
R2 = Human Health (Construction Workforce)
R3 = Groundwater (Secondary 'A' Aquifer)
R4 = Building Materials and Buried Utilities
R5 = Flora and Fauna (future private gardens and soft landscaping)

In addition to the above, a prudent developer should implement a watching brief during the redevelopment works to ensure that if made ground and or visual/olfactory evidence of contamination is identified then works should be stopped, the Local Authority notified, and advice should be sought from an appropriately qualified and experienced Geo-Environmental Engineer.

5.0 Preliminary Qualitative Risk Assessment

5.1 Qualitative Geotechnical Risk Assessment – Risk Meter

The following preliminary Geotechnical Risk Meter determines the potential level of risk associated with the geotechnical properties of the site, considering any potential geohazards identified by the information presented within the DTS.

Geotechnical:	↓					
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH

A risk level of LOW is determined appropriate for this development area for the following reasons:

- Historical records indicate that the site has been previously developed (terraced housing) and therefore some made ground is anticipated.
- Historical and geological records indicate that the site has been mined for iron ore using underground mining techniques. However, the CA records the mining at a depth of c.180m, which is considered to be too deep to pose a structural risk at surface.
- Geological records indicate that the site is underlain by glacial till (sandy gravelly clay with sand, gravel, cobbles and boulders).
- Shallow groundwater is not anticipated although some trapped “perched” water may be present within the glacial drift deposits.
- Where clay soils are present, their soil shrink ability could be affected by mature vegetation such as trees.
- Information available from the CA, BGS and GSR suggests that the development site is not considered to be at potential risk of coal mining related geohazards (i.e. ground disturbance/movement/mine entries etc.).

Consequently, it would be prudent for a Phase 2: Ground Investigation to be completed to confirm the underlying ground conditions (i.e. the presence of any made ground and the drift deposits).

5.2 Qualitative Contamination Risk Assessment – Risk Meter

The following Ground Contamination, Groundwater Contamination and Ground Gas Risk Meter determines the potential level of risk associated with the redevelopment of the site when taking into account the anticipated *Sources – Pathways – Receptors* within the pollutant linkage model and CSM.

Ground Contamination:	↓					
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Groundwater Contamination:	↓					
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Ground Gas:	↓					
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Radon Gas:	↓					
	<1%	1%-3%	3%-5%	5%-10%	10%-30%	>30%*
Estimated Percentage of Dwellings Exceeding the Radon Action Level						

A risk level of LOW is currently determined appropriate for this development with respect to ground contamination. In summary, the site has been developed and there have been historical industries/processes within close proximity to the site that could pose a risk of contamination.

It is recommended that intrusive investigations be completed to confirm the shallow ground conditions, with samples recovered to allow for chemical laboratory analysis to facilitate a Human Health Risk Assessment.

At this stage, it is recommended that the soils are screened for a generic suite of contaminants that should include: Arsenic, Cadmium, Chromium (III and VI), Copper, Lead, Mercury, Nickel, Selenium, Zinc, Cyanide (free), pH, Water Soluble Sulphate, Total Organic Carbon, Asbestos and Speciated PAH.

If, during the ground investigation, areas of made ground or evidence of contamination are identified, it may be necessary to increase the range of contaminant screening depending on the nature and type of possible contaminants encountered.

A risk level of NEGLIGIBLE is currently considered appropriate for the site with respect to potential risks to controlled waters (groundwater, nearby surface water features) and adjacent sites, as limited potential sources have been identified and the presence of glacial clays will largely mitigate the risk of migration.

A risk level of VERY LOW is currently considered appropriate for the site with respect to potential harmful ground gas (Carbon Dioxide and Methane). Iron ore workings are recorded beneath the site with other potential sources including on site and nearby made ground. There is a potential for ground gas generation from the mine workings and, therefore a plausible risk of ground gas migration beneath the site.

At this stage, the BGS and PHE does not record the site as being at risk of radon gas and does not require radon protection measures.

In addition to the above, a watching brief should be implemented during the development works to ensure that if additional areas of made ground (that includes anthropogenic debris, i.e. ash, clinker etc.) and/or visual/olfactory (malodorous) evidence of potential contamination (i.e. fuel/oil) are identified then works should be stopped, the Local Authority notified and advice should be sought from an appropriately qualified and experienced Geo-Environmental Engineer.

6.0 Conclusions

When considering the results of this DTS report, the following can be seen:

- The development site is currently considered to represent a low geotechnical risk.
- The site is currently considered to pose a low risk to the proposed end users from ground contamination.
- The site is currently considered to pose a negligible risk to adjacent sites (the surrounding environment) and controlled waters with respect to potential ground/groundwater contamination.
- The site is currently considered to pose a very low risk to the proposed end users from ground gas.

Should planning permission be granted it is recommended that any permission includes conditions relating to a Phase 2: Ground Investigation to allow the full characterisation of the site to ensure that if made ground and/or contamination is identified then it is dealt with in an appropriate manner to ensure the future suitability of the site for the proposed residential end use. Samples of topsoil should also be screened to ensure its appropriateness for re-use in a residential context. This assessment should include a ground gas risk assessment for carbon dioxide and methane.

The Phase 2: Ground Investigation works would also be prudent to aid the design of foundations, highways, drainage and any retaining structures (where necessary).

GEO also recommends that a “watching brief” and “observational technique” be applied to this site to ensure that if ground conditions appear to vary from those identified within this investigation report then advice should be sought from a suitably qualified and experienced Engineering Geologist, Geotechnical or Geo-Environmental Engineer.

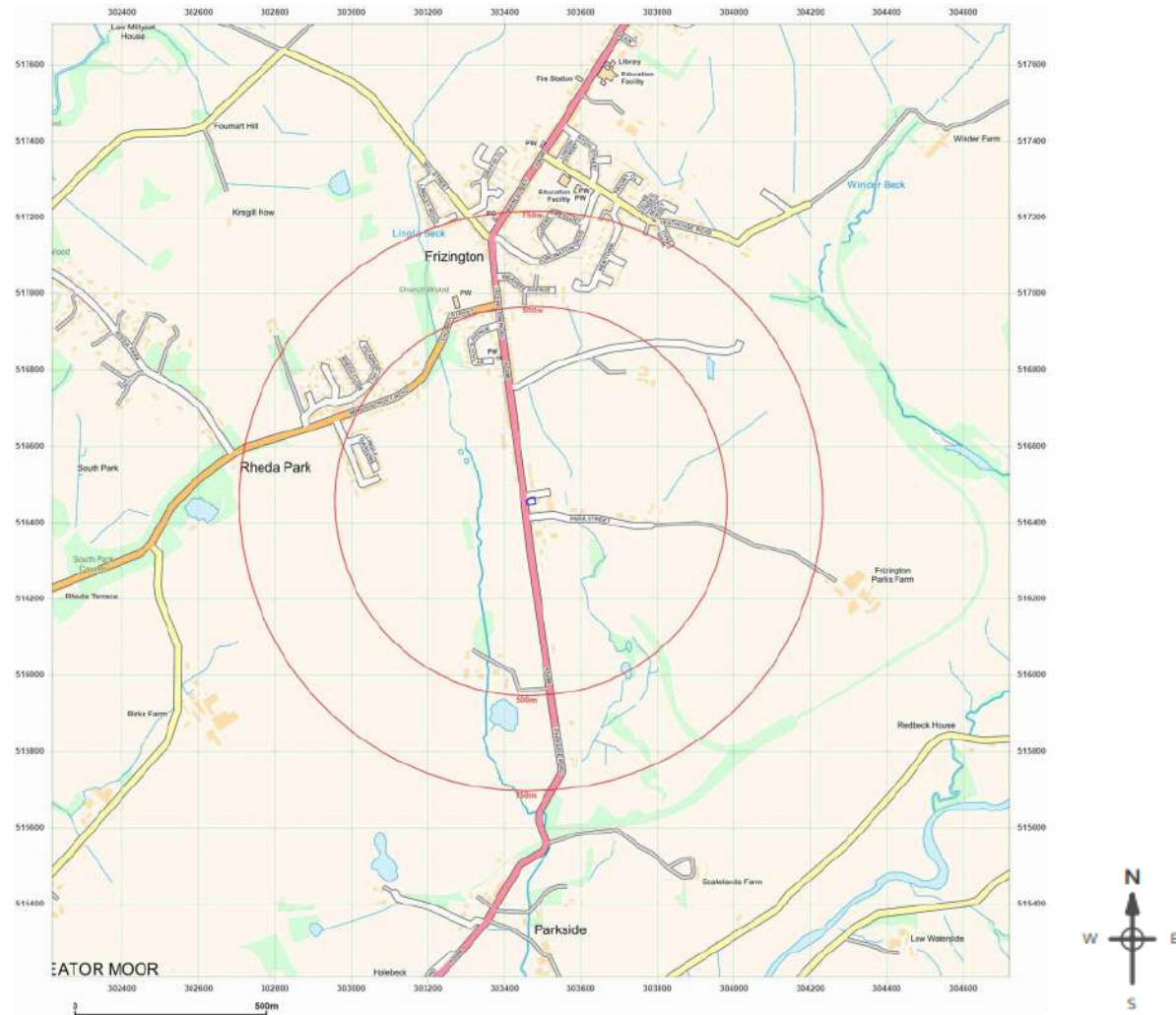
The conclusions and recommendations presented within this report are considered reasonable based on the available information. However, these cannot be guaranteed to gain regulatory approval. Therefore, the report should be passed to the appropriate regulatory authorities and/ or other key stakeholders in order to seek their approval of the findings prior to undertaking any works on site. GEO is not responsible for the accuracy or completeness of third party information contained herein.

End of Report

Appendix I

- Site Location Plan
- Aerial Photograph Extract
- Existing Site Layout Plan
- Google Earth Streetview Imagery

GEO2021-4690: Park Street, Frizington - Site Location Plan (Not to Scale)



GEO2021-4690: Park Street, Frizington - Aerial Photograph Extract



Capture Date: 10/10/2018

Site Area: 0.04ha

Website: www.geoenvironmentalengineering.com

Email: info@geoenvironmentalengineering.com

Telephone: 08456 768 895 / 07883 440 186

GEO2021-4690: Park Street, Frizington – Existing Site Layout Plan



Site Area: 0.04ha

GEO2021-4690: Park Street, Frizington – Google Earth Street View Imagery



Photo 1.



Photo 2.



Photo 3.

Appendix II

- Ground Sure Report (Enviro + Geo insight)

303469 516456

Order Details

Date: 28/05/2021
Your ref: EMS_697845_912697
Our Ref: EMS-697845_912697
Client: emapsite

Site Details

Location: 303469 516456
Area: 0.04 ha
Authority: [Copeland Borough Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.12

groundsure.com/insightuserguide

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	0	0	48	86	-
18	1.2	Historical tanks	0	0	0	8	-
19	1.3	Historical energy features	0	0	0	4	-
20	1.4	Historical petrol stations	0	0	0	0	-
20	1.5	Historical garages	0	0	0	1	-
20	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
21	2.1	Historical industrial land uses	0	0	70	114	-
28	2.2	Historical tanks	0	0	0	9	-
29	2.3	Historical energy features	0	0	0	4	-
29	2.4	Historical petrol stations	0	0	0	0	-
29	2.5	Historical garages	0	0	0	1	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
31	3.1	Active or recent landfill	0	0	0	0	-
31	3.2	Historical landfill (BGS records)	0	0	0	0	-
32	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
32	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
32	3.5	Historical waste sites	0	0	0	0	-
32	3.6	Licensed waste sites	0	0	2	0	-
33	3.7	Waste exemptions	0	0	6	17	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
36	4.1	Recent industrial land uses	0	0	5	-	-
37	4.2	Current or recent petrol stations	0	0	0	1	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
38	4.7	Regulated explosive sites	0	0	0	0	-
38	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
39	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	1	0	-
40	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
40	4.15	Pollutant release to public sewer	0	0	0	0	-
40	4.16	List 1 Dangerous Substances	0	0	0	0	-
40	4.17	List 2 Dangerous Substances	0	0	0	0	-
40	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	1	0	3	-
41	4.19	Pollution inventory substances	0	0	0	0	-
41	4.20	Pollution inventory waste transfers	0	0	0	0	-
42	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
43	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
45	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
47	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
48	5.4	<u>Groundwater vulnerability- soluble rock risk</u>	Identified (within 0m)				
48	5.5	Groundwater vulnerability- local information	None (within 0m)				
49	5.6	<u>Groundwater abstractions</u>	0	0	0	0	2
50	5.7	Surface water abstractions	0	0	0	0	0
50	5.8	Potable abstractions	0	0	0	0	0
51	5.9	Source Protection Zones	0	0	0	0	-
51	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
52	6.1	<u>Water Network (OS MasterMap)</u>	0	0	14	-	-



54	6.2	<u>Surface water features</u>	0	0	11	-	-
54	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
54	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
55	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
56	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
56	7.2	Historical Flood Events	0	0	0	-	-
56	7.3	Flood Defences	0	0	0	-	-
56	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
57	7.5	Flood Storage Areas	0	0	0	-	-
58	7.6	Flood Zone 2	None (within 50m)				
58	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
59	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
60	9.1	<u>Groundwater flooding</u>	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
61	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	2
62	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
62	10.3	<u>Special Areas of Conservation (SAC)</u>	0	0	0	0	1
62	10.4	Special Protection Areas (SPA)	0	0	0	0	0
63	10.5	National Nature Reserves (NNR)	0	0	0	0	0
63	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
63	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	3
64	10.8	Biosphere Reserves	0	0	0	0	0
64	10.9	Forest Parks	0	0	0	0	0
64	10.10	Marine Conservation Zones	0	0	0	0	0
64	10.11	Green Belt	0	0	0	0	0
64	10.12	Proposed Ramsar sites	0	0	0	0	0



65	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
65	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
65	10.15	Nitrate Sensitive Areas	0	0	0	0	0
65	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
66	<u>10.17</u>	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
67	<u>10.18</u>	<u>SSSI Units</u>	0	0	0	0	2
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
69	11.1	World Heritage Sites	0	0	0	-	-
69	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
69	11.3	National Parks	0	0	0	-	-
69	11.4	Listed Buildings	0	0	0	-	-
70	11.5	Conservation Areas	0	0	0	-	-
70	11.6	Scheduled Ancient Monuments	0	0	0	-	-
70	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
71	<u>12.1</u>	<u>Agricultural Land Classification</u>	Grade 3 (within 250m)				
72	12.2	Open Access Land	0	0	0	-	-
72	12.3	Tree Felling Licences	0	0	0	-	-
72	12.4	Environmental Stewardship Schemes	0	0	0	-	-
72	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
73	13.1	Priority Habitat Inventory	0	0	0	-	-
73	13.2	Habitat Networks	0	0	0	-	-
73	13.3	Open Mosaic Habitat	0	0	0	-	-
73	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
74	<u>14.1</u>	<u>10k Availability</u>	Identified (within 500m)				
75	14.2	Artificial and made ground (10k)	0	0	0	0	-
76	14.3	Superficial geology (10k)	0	0	0	0	-

76	14.4	Landslip (10k)	0	0	0	0	-
77	14.5	Bedrock geology (10k)	0	0	0	0	-
77	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
78	15.1	<u>50k Availability</u>	Identified (within 500m)				
79	15.2	Artificial and made ground (50k)	0	0	0	0	-
79	15.3	Artificial ground permeability (50k)	0	0	-	-	-
80	15.4	<u>Superficial geology (50k)</u>	1	0	1	1	-
81	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
81	15.6	<u>Landslip (50k)</u>	0	0	0	1	-
81	15.7	Landslip permeability (50k)	None (within 50m)				
82	15.8	<u>Bedrock geology (50k)</u>	1	0	5	5	-
83	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
83	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	2	3	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
85	16.1	<u>BGS Boreholes</u>	0	2	13	-	-
Page	Section	Natural ground subsidence					
87	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
88	17.2	<u>Running sands</u>	Very low (within 50m)				
89	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
90	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
91	17.5	<u>Landslides</u>	Very low (within 50m)				
92	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
94	18.1	Natural cavities	0	0	0	0	-
95	18.2	<u>BritPits</u>	0	0	2	2	-
96	18.3	<u>Surface ground workings</u>	0	0	50	-	-
98	18.4	<u>Underground workings</u>	0	0	8	12	37
100	18.5	<u>Historical Mineral Planning Areas</u>	0	0	0	1	-



<u>100</u>	<u>18.6</u>	<u>Non-coal mining</u>	1	0	1	3	10
<u>102</u>	<u>18.7</u>	<u>Mining cavities</u>	0	0	0	1	2
103	18.8	JPB mining areas	None (within 0m)				
<u>103</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
103	18.10	Brine areas	None (within 0m)				
103	18.11	Gypsum areas	None (within 0m)				
104	18.12	Tin mining	None (within 0m)				
104	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>105</u>	<u>19.1</u>	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>106</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	1	3	-	-	-
106	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
106	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
107	21.1	Underground railways (London)	0	0	0	-	-
107	21.2	Underground railways (Non-London)	0	0	0	-	-
108	21.3	Railway tunnels	0	0	0	-	-
<u>108</u>	<u>21.4</u>	<u>Historical railway and tunnel features</u>	0	0	6	-	-
108	21.5	Royal Mail tunnels	0	0	0	-	-
<u>109</u>	<u>21.6</u>	<u>Historical railways</u>	0	0	1	-	-
109	21.7	Railways	0	0	0	-	-
109	21.8	Crossrail 1	0	0	0	0	-
109	21.9	Crossrail 2	0	0	0	0	-
110	21.10	HS2	0	0	0	0	-



Recent aerial photograph



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Capture Date: 10/10/2018

Site Area: 0.04ha



Recent site history - 2016 aerial photograph



Capture Date: 16/08/2016

Site Area: 0.04ha



Recent site history - 2008 aerial photograph



Capture Date: 05/10/2008

Site Area: 0.04ha



Recent site history - 2000 aerial photograph



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Capture Date: 16/06/2000

Site Area: 0.04ha



OS MasterMap site plan



Site Area: 0.04ha



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

134

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

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

ID	Location	Land use	Dates present	Group ID
A	76m E	Unspecified Heap	1898	592972



ID	Location	Land use	Dates present	Group ID
A	79m E	Disused Iron Ore Mine	1926	601392
A	79m E	Unspecified Ground Workings	1923 - 1926	621215
A	81m E	Unspecified Ground Workings	1951	600964
A	85m E	Unspecified Heap	1926	598951
A	90m E	Unspecified Heap	1969	616958
B	91m NE	Railway Sidings	1926 - 1938	616044
B	91m NE	Cuttings	1926	593179
A	94m E	Disused Iron Ore Mine Pit	1951	613112
B	95m NE	Cuttings	1951	615164
B	107m NE	Cuttings	1938	589772
A	113m E	Iron Ore Mine Pit	1898	558682
A	114m E	Disused Iron Ore Mine Pit	1923	608639
A	139m E	Unspecified Heap	1926	625816
A	141m E	Unspecified Heap	1898	604396
A	141m E	Unspecified Heap	1951	599124
A	146m E	Unspecified Heap	1926	631254
A	158m E	Unspecified Heap	1863	596372
A	160m E	Disused Iron Ore Mine Pit	1926	608343
A	164m E	Iron Shaft	1863	554514
C	174m N	Cuttings	1969	593604
C	177m N	Cuttings	1926 - 1938	614552
D	177m SE	Unspecified Pit	1923 - 1926	607013
D	177m SE	Unspecified Pit	1926 - 1951	595249
D	181m SE	Unspecified Old Shaft	1926 - 1951	600797
D	181m SE	Unspecified Heap	1969	561718
D	182m SE	Unspecified Heap	1926	632535
D	185m SE	Unspecified Old Shaft	1926	594415
D	185m SE	Old Shaft	1923	633439



ID	Location	Land use	Dates present	Group ID
C	185m N	Unspecified Pit	1898	582490
D	187m SE	Unspecified Heap	1969	602868
D	187m SE	Unspecified Heap	1951	618451
D	190m SE	Unspecified Disused Pit	1898	548668
D	191m SE	Unspecified Heap	1923	599585
D	193m SE	Unspecified Heap	1926	595674
D	199m SE	Iron Pit	1863	586526
A	202m E	Unspecified Heaps	1926	615564
A	207m E	Unspecified Ground Workings	1969	609842
A	207m E	Unspecified Heaps	1951	625217
A	207m E	Unspecified Ground Workings	1923	628121
A	208m E	Unspecified Ground Workings	1926	613417
A	212m E	Unspecified Heap	1863	561702
1	216m S	Iron Ore Mines	1898	579171
A	217m E	Old Iron Shaft	1863	576914
A	227m E	Unspecified Old Shafts	1898	597081
E	230m SE	Disused Iron Ore Mine Pit	1923	626136
E	231m SE	Iron Ore Mine Pit	1898	558681
A	242m E	Unspecified Ground Workings	1923	621561
E	257m SE	Unspecified Old Shaft	1951	593701
A	262m E	Unspecified Old Shafts	1926	593908
A	262m E	Unspecified Old Shafts	1926	597451
A	264m E	Unspecified Old Shafts	1926 - 1951	620100
A	266m E	Old Shafts	1923	625479
F	267m E	Gas Works	1926	613795
E	270m SE	Disused Iron Ore Mine Pit	1951	595815
F	271m E	Gas Works	1923	601857
A	271m E	Unspecified Old Shafts	1926	612811



ID	Location	Land use	Dates present	Group ID
A	271m E	Unspecified Old Shafts	1926	634016
F	272m E	Gas Works	1926	620081
A	276m E	Old Shafts	1923	612737
F	277m E	Unspecified Works	1969	552684
E	285m SE	Unspecified Old Shaft	1926	620366
E	286m SE	Unspecified Old Shaft	1926	603254
E	287m SE	Old Shaft	1923	630496
E	298m SE	Disused Iron Ore Mine	1926	627313
E	300m SE	Disused Iron Ore Mine Pit	1926	626956
E	302m SE	Unspecified Heaps	1951	610963
F	303m E	Gasometers	1926	639604
E	307m SE	Unspecified Heaps	1926	605423
E	307m SE	Unspecified Ground Workings	1923	593054
E	308m SE	Unspecified Ground Workings	1926	629628
F	309m E	Unspecified Tank	1951	627525
F	309m E	Gasometers	1923	625673
F	311m E	Gasometer	1926	553289
F	314m E	Unspecified Tank	1969	621019
E	323m SE	Unspecified Heap	1898	591550
G	324m SE	Sewage Works	1951	595453
G	326m SE	Sewage Works	1926	590625
F	327m E	Unspecified Tank	1951	639066
F	329m E	Gasometer	1926	553290
F	334m E	Unspecified Tank	1969	624367
E	336m SE	Unspecified Works	1969	552685
H	336m S	Unspecified Heap	1969	561719
E	340m SE	Unspecified Heap	1969	621896
H	342m S	Iron Ore Pit	1926	601487



ID	Location	Land use	Dates present	Group ID
H	343m S	Refuse Heap	1951	588768
H	343m S	Iron Ore Pit	1938	613538
H	344m S	Railway Sidings	1951	602859
H	347m S	Railway Sidings	1926 - 1938	639202
E	358m SE	Sewage Works	1926	595990
E	358m SE	Sewage Works	1923	605422
E	362m SE	Filter Bed	1951	570897
E	375m SE	Unspecified Ground Workings	1898	607110
E	383m SE	Iron Shaft	1863	554516
3	384m NW	Cuttings	1926 - 1938	620167
E	410m SE	Unspecified Heap	1863	561717
E	415m SE	Iron Shaft	1863	554518
I	416m S	Unspecified Old Shaft	1951	586828
I	416m S	Old Shafts	1923	590218
I	417m S	Unspecified Heap	1926	607551
I	420m S	Unspecified Ground Workings	1951	595875
I	420m S	Unspecified Ground Workings	1969	598874
I	421m S	Unspecified Old Shaft	1926	586829
I	421m S	Unspecified Old Shafts	1926	596854
E	422m SE	Unspecified Ground Workings	1898 - 1923	615001
E	422m SE	Unspecified Ground Workings	1923	634914
E	422m SE	Unspecified Pit	1926	624409
E	424m SE	Unspecified Pit	1926	635495
E	424m SE	Unspecified Ground Workings	1969	595520
J	426m S	Iron Ore Mine	1898	586363
I	426m S	Unspecified Heap	1923 - 1926	624834
I	426m S	Unspecified Heap	1923	613775
I	427m S	Unspecified Heap	1898	630217



ID	Location	Land use	Dates present	Group ID
K	439m N	Unspecified Heap	1923 - 1926	618687
K	440m N	Unspecified Heap	1926 - 1951	618329
K	440m N	Unspecified Heap	1898	629376
5	444m S	Unspecified Pit	1938	630461
K	447m N	Unspecified Heap	1969	613349
L	447m S	Unspecified Old Shafts	1951	614893
L	451m S	Unspecified Old Shafts	1926	635192
L	452m S	Unspecified Old Shafts	1926	592041
L	452m S	Unspecified Old Shafts	1926	638480
L	452m S	Old Shafts	1923	599460
L	452m S	Old Shafts	1923	612572
6	473m N	Police Station	1969	580952
K	474m N	Unspecified Old Shafts	1898	573314
E	476m SE	Unspecified Pit	1898	623009
E	478m SE	Unspecified Pit	1926	603939
7	490m SE	Railway Sidings	1898	622898
J	490m S	Unspecified Heap	1898 - 1926	634127
M	491m S	Unspecified Pit	1938	598166
M	491m S	Unspecified Pit	1898	621264
8	495m NE	Iron Ore Old Shafts	1951	639368
J	499m S	Unspecified Heap	1898 - 1926	598339

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 13**

ID	Location	Land use	Dates present	Group ID
E	289m SE	Unspecified Tank	1899 - 1925	77800
F	311m E	Gasometer	1925	75424
F	312m E	Tanks	1985	75011
F	314m E	Unspecified Tank	1960	73070
F	332m E	Gasometer	1925	75423
F	335m E	Unspecified Tank	1960	73071
E	360m SE	Unspecified Tank	1899	72949
4	418m NE	Tank or Trough	1864	75599

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

4

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

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

ID	Location	Land use	Dates present	Group ID
F	275m E	Urban District Council Gas Works	1925	42520
F	311m E	Gasometer	1925	42579
F	318m E	Gas Governor	1985	42546
F	332m E	Gasometer	1925	42578

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

1

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

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

ID	Location	Land use	Dates present	Group ID
2	335m N	Garage	1960	13605

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

184

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 21**

ID	Location	Land Use	Date	Group ID
A	76m E	Unspecified Heap	1898	592972
A	79m E	Disused Iron Ore Mine	1926	601392
A	79m E	Unspecified Ground Workings	1926	621215



ID	Location	Land Use	Date	Group ID
A	79m E	Disused Iron Ore Mine	1926	601392
A	79m E	Unspecified Ground Workings	1926	621215
A	81m E	Unspecified Ground Workings	1951	600964
A	84m E	Unspecified Ground Workings	1923	621215
A	84m E	Unspecified Ground Workings	1923	621215
A	85m E	Unspecified Heap	1926	598951
A	90m E	Unspecified Heap	1969	616958
A	91m NE	Railway Sidings	1926	616044
1	91m NE	Cuttings	1926	593179
A	94m E	Disused Iron Ore Mine Pit	1951	613112
B	95m NE	Cuttings	1951	615164
B	103m NE	Railway Sidings	1938	616044
B	105m NE	Cuttings	1926	593179
B	107m NE	Cuttings	1938	589772
A	113m E	Iron Ore Mine Pit	1898	558682
A	114m E	Disused Iron Ore Mine Pit	1923	608639
A	114m E	Disused Iron Ore Mine Pit	1923	608639
A	139m E	Unspecified Heap	1926	625816
A	139m E	Unspecified Heap	1926	625816
A	141m E	Unspecified Heap	1898	604396
A	141m E	Unspecified Heap	1951	599124
A	146m E	Unspecified Heap	1926	631254
A	158m E	Unspecified Heap	1863	596372
A	160m E	Disused Iron Ore Mine Pit	1926	608343
A	164m E	Iron Shaft	1863	554514
B	174m N	Cuttings	1969	593604
B	177m N	Cuttings	1938	614552
C	177m SE	Unspecified Pit	1926	607013

ID	Location	Land Use	Date	Group ID
C	177m SE	Unspecified Pit	1926	607013
C	177m SE	Unspecified Pit	1951	595249
B	178m N	Cuttings	1926	614552
C	181m SE	Unspecified Old Shaft	1951	600797
C	181m SE	Unspecified Heap	1969	561718
C	181m SE	Unspecified Old Shaft	1926	600797
C	181m SE	Unspecified Old Shaft	1926	600797
C	181m SE	Unspecified Pit	1923	607013
C	181m SE	Unspecified Pit	1923	607013
C	182m SE	Unspecified Heap	1926	632535
C	182m SE	Unspecified Heap	1926	632535
C	182m SE	Unspecified Pit	1926	595249
C	185m SE	Unspecified Old Shaft	1926	594415
C	185m SE	Old Shaft	1923	633439
C	185m SE	Old Shaft	1923	633439
B	185m N	Unspecified Pit	1898	582490
C	187m SE	Unspecified Heap	1951	618451
C	187m SE	Unspecified Heap	1969	602868
C	190m SE	Unspecified Disused Pit	1898	548668
C	191m SE	Unspecified Heap	1923	599585
C	191m SE	Unspecified Heap	1923	599585
C	193m SE	Unspecified Heap	1926	595674
C	199m SE	Iron Pit	1863	586526
A	202m E	Unspecified Heaps	1926	615564
A	202m E	Unspecified Heaps	1926	615564
A	207m E	Unspecified Heaps	1951	625217
A	207m E	Unspecified Ground Workings	1969	609842
A	207m E	Unspecified Ground Workings	1923	628121



ID	Location	Land Use	Date	Group ID
A	207m E	Unspecified Ground Workings	1923	628121
A	208m E	Unspecified Ground Workings	1926	613417
A	212m E	Unspecified Heap	1863	561702
2	216m S	Iron Ore Mines	1898	579171
A	217m E	Old Iron Shaft	1863	576914
A	227m E	Unspecified Old Shafts	1898	597081
D	230m SE	Disused Iron Ore Mine Pit	1923	626136
D	230m SE	Disused Iron Ore Mine Pit	1923	626136
D	231m SE	Iron Ore Mine Pit	1898	558681
A	242m E	Unspecified Ground Workings	1923	621561
A	242m E	Unspecified Ground Workings	1923	621561
D	257m SE	Unspecified Old Shaft	1951	593701
A	262m E	Unspecified Old Shafts	1926	597451
A	262m E	Unspecified Old Shafts	1926	593908
A	264m E	Unspecified Old Shafts	1951	620100
A	266m E	Old Shafts	1923	625479
A	266m E	Old Shafts	1923	625479
A	267m E	Unspecified Old Shafts	1926	620100
E	267m E	Gas Works	1926	613795
D	270m SE	Disused Iron Ore Mine Pit	1951	595815
E	271m E	Gas Works	1923	601857
E	271m E	Gas Works	1923	601857
A	271m E	Unspecified Old Shafts	1926	634016
A	271m E	Unspecified Old Shafts	1926	612811
E	272m E	Gas Works	1926	620081
A	276m E	Old Shafts	1923	612737
A	276m E	Old Shafts	1923	612737
E	277m E	Unspecified Works	1969	552684



ID	Location	Land Use	Date	Group ID
D	285m SE	Unspecified Old Shaft	1926	620366
D	285m SE	Unspecified Old Shaft	1926	620366
D	286m SE	Unspecified Old Shaft	1926	603254
D	287m SE	Old Shaft	1923	630496
D	287m SE	Old Shaft	1923	630496
D	298m SE	Disused Iron Ore Mine	1926	627313
D	298m SE	Disused Iron Ore Mine	1926	627313
D	300m SE	Disused Iron Ore Mine Pit	1926	626956
D	302m SE	Unspecified Heaps	1951	610963
E	303m E	Gasometers	1926	639604
D	307m SE	Unspecified Heaps	1926	605423
D	307m SE	Unspecified Heaps	1926	605423
D	307m SE	Unspecified Ground Workings	1923	593054
D	307m SE	Unspecified Ground Workings	1923	593054
D	308m SE	Unspecified Ground Workings	1926	629628
E	309m E	Unspecified Tank	1951	627525
E	309m E	Gasometers	1923	625673
E	309m E	Gasometers	1923	625673
E	311m E	Gasometer	1926	553289
E	314m E	Unspecified Tank	1969	621019
D	323m SE	Unspecified Heap	1898	591550
F	324m SE	Sewage Works	1951	595453
F	326m SE	Sewage Works	1926	590625
F	326m SE	Sewage Works	1926	590625
E	327m E	Unspecified Tank	1951	639066
E	329m E	Gasometer	1926	553290
E	334m E	Unspecified Tank	1969	624367
D	336m SE	Unspecified Works	1969	552685



ID	Location	Land Use	Date	Group ID
G	336m S	Unspecified Heap	1969	561719
D	340m SE	Unspecified Heap	1969	621896
G	342m S	Iron Ore Pit	1926	601487
G	343m S	Refuse Heap	1951	588768
G	343m S	Iron Ore Pit	1938	613538
G	343m S	Iron Ore Pit	1938	613538
G	344m S	Railway Sidings	1951	602859
G	347m S	Railway Sidings	1926	639202
G	348m S	Railway Sidings	1938	639202
D	358m SE	Sewage Works	1926	595990
D	358m SE	Sewage Works	1923	605422
D	358m SE	Sewage Works	1923	605422
D	362m SE	Filter Bed	1951	570897
D	375m SE	Unspecified Ground Workings	1898	607110
D	383m SE	Iron Shaft	1863	554516
H	384m NW	Cuttings	1938	620167
H	385m NW	Cuttings	1926	620167
D	410m SE	Unspecified Heap	1863	561717
D	415m SE	Iron Shaft	1863	554518
I	416m S	Unspecified Old Shaft	1951	586828
I	416m S	Old Shafts	1923	590218
I	416m S	Old Shafts	1923	590218
I	417m S	Unspecified Heap	1926	607551
I	420m S	Unspecified Ground Workings	1951	595875
I	420m S	Unspecified Ground Workings	1969	598874
I	421m S	Unspecified Old Shaft	1926	586829
I	421m S	Unspecified Old Shafts	1926	596854
I	421m S	Unspecified Old Shafts	1926	596854



ID	Location	Land Use	Date	Group ID
D	422m SE	Unspecified Ground Workings	1923	615001
D	422m SE	Unspecified Ground Workings	1923	634914
D	422m SE	Unspecified Pit	1926	624409
D	422m SE	Unspecified Pit	1926	624409
D	424m SE	Unspecified Pit	1926	635495
D	424m SE	Unspecified Ground Workings	1969	595520
D	425m SE	Unspecified Ground Workings	1898	615001
J	426m S	Iron Ore Mine	1898	586363
I	426m S	Unspecified Heap	1926	624834
I	426m S	Unspecified Heap	1926	624834
I	426m S	Unspecified Heap	1923	613775
I	426m S	Unspecified Heap	1923	624834
I	427m S	Unspecified Heap	1898	630217
I	430m S	Unspecified Heap	1926	607551
I	430m S	Unspecified Heap	1898	630217
K	439m N	Unspecified Heap	1926	618687
K	439m N	Unspecified Heap	1926	618687
K	440m N	Unspecified Heap	1926	618329
K	440m N	Unspecified Heap	1898	629376
K	442m N	Unspecified Heap	1923	618687
K	442m N	Unspecified Heap	1923	618687
5	444m S	Unspecified Pit	1938	630461
K	447m N	Unspecified Heap	1951	618329
K	447m N	Unspecified Heap	1969	613349
L	447m S	Unspecified Old Shafts	1951	614893
L	451m S	Unspecified Old Shafts	1926	635192
L	452m S	Unspecified Old Shafts	1926	638480
L	452m S	Unspecified Old Shafts	1926	592041



ID	Location	Land Use	Date	Group ID
L	452m S	Old Shafts	1923	612572
L	452m S	Old Shafts	1923	599460
6	473m N	Police Station	1969	580952
K	474m N	Unspecified Old Shafts	1898	573314
D	476m SE	Unspecified Pit	1898	623009
D	478m SE	Unspecified Pit	1926	603939
7	490m SE	Railway Sidings	1898	622898
J	490m S	Unspecified Heap	1898	634127
M	491m S	Unspecified Pit	1938	598166
M	491m S	Unspecified Pit	1898	621264
J	494m S	Unspecified Heap	1926	634127
8	495m NE	Iron Ore Old Shafts	1951	639368
J	499m S	Unspecified Heap	1926	598339

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

9

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 21**

ID	Location	Land Use	Date	Group ID
D	289m SE	Unspecified Tank	1899	77800
D	289m SE	Unspecified Tank	1925	77800
E	311m E	Gasometer	1925	75424
E	312m E	Tanks	1985	75011
E	314m E	Unspecified Tank	1960	73070
E	332m E	Gasometer	1925	75423
E	335m E	Unspecified Tank	1960	73071



ID	Location	Land Use	Date	Group ID
D	360m SE	Unspecified Tank	1899	72949
4	418m NE	Tank or Trough	1864	75599

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

4

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 21**

ID	Location	Land Use	Date	Group ID
E	275m E	Urban District Council Gas Works	1925	42520
E	311m E	Gasometer	1925	42579
E	318m E	Gas Governor	1985	42546
E	332m E	Gasometer	1925	42578

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

1

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 21**

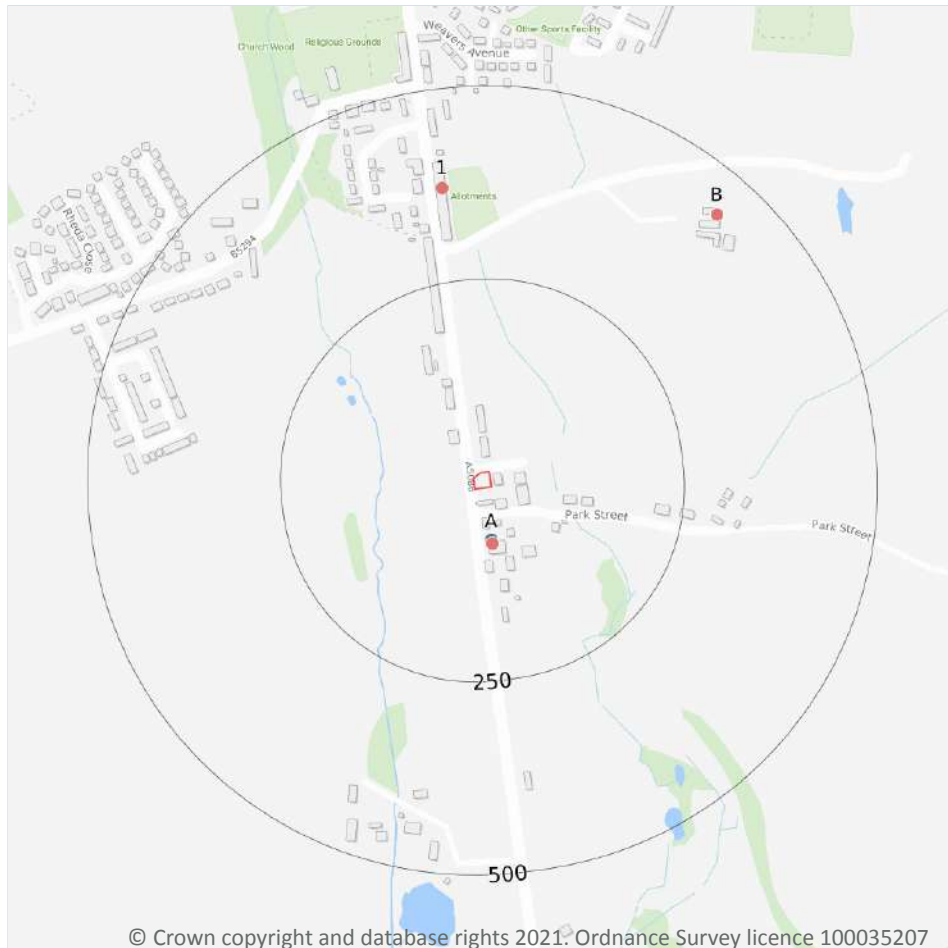


ID	Location	Land Use	Date	Group ID
3	335m N	Garage	1960	13605

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- 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
0

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

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

3.5 Historical waste sites

Records within 500m
0

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

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

3.6 Licensed waste sites

Records within 500m
2

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

Features are displayed on the Waste and landfill map on **page 31**

ID	Location	Details		
A	70m S	Site Name: Vehicle Depolluting & Dismantling (authorised Treatment Facility) Site Address: Park Gate Garage, Frizington Road, Frizington, Cumbria, CA26 3QY Correspondence Address: Avondale, Frizington Road, Frizington, Cumbria, CA26 3QY	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KEN004 EPR reference: - Operator: Malcolm Wayne Kenmare & Karen Kenmare Waste Management licence No: 57542 Annual Tonnage: 0	Issue Date: 07/09/2004 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

ID	Location	Details		
A	70m S	Site Name: Park Gate Garage Site Address: Park Gate Garage, Frizington Road, Frizington, Cumbria, CA26 3QY Correspondence Address: -	Type of Site: ELV Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KEN006 EPR reference: EA/EPR/YP3093ZY/S003 Operator: Kenmare Tyre Services Limited Waste Management licence No: 57542 Annual Tonnage: 0	Issue Date: 07/09/2004 Effective Date: 17/06/2005 Modified:: - Surrendered Date: Mar 1 2017 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered

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

3.7 Waste exemptions

Records within 500m

23

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 31**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX232270	Storing waste exemption	Not on a farm	Storage of waste in a secure place
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX232270	Treating waste exemption	Not on a farm	Recovery of scrap metal
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX232270	Using waste exemption	Not on a farm	Use of depolluted end-of-life vehicles for vehicle parts
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX088445	Storing waste exemption	Not on a farm	Storage of waste in a secure place
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX088445	Treating waste exemption	Not on a farm	Recovery of scrap metal
A	74m S	PARKGATE GARAGE, FRIZINGTON ROAD, FRIZINGTON, CA26 3QY	WEX088445	Using waste exemption	Not on a farm	Use of depolluted end-of-life vehicles for vehicle parts



ID	Location	Site	Reference	Category	Sub-Category	Description
1	372m N	Frizington HWRC Yeathouse Road Whitehave CA26 3QU	EPR/CF0403H U/A001	Treating waste exemption	Non- Agricultura l Waste Only	Crushing waste fluorescent tubes
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Disposing of waste exemption	On a farm	Burning waste in the open
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Aerobic composting and associated prior treatment
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Preparatory treatments (baling, sorting, shredding etc)
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Use of waste in construction
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Spreading of plant matter to confer benefit
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Pig and poultry ash
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Burning of waste as a fuel in a small appliance
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Storing waste exemption	On a farm	Storage of waste in secure containers
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Treatment of sheep dip for disposal
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Screening and blending of waste

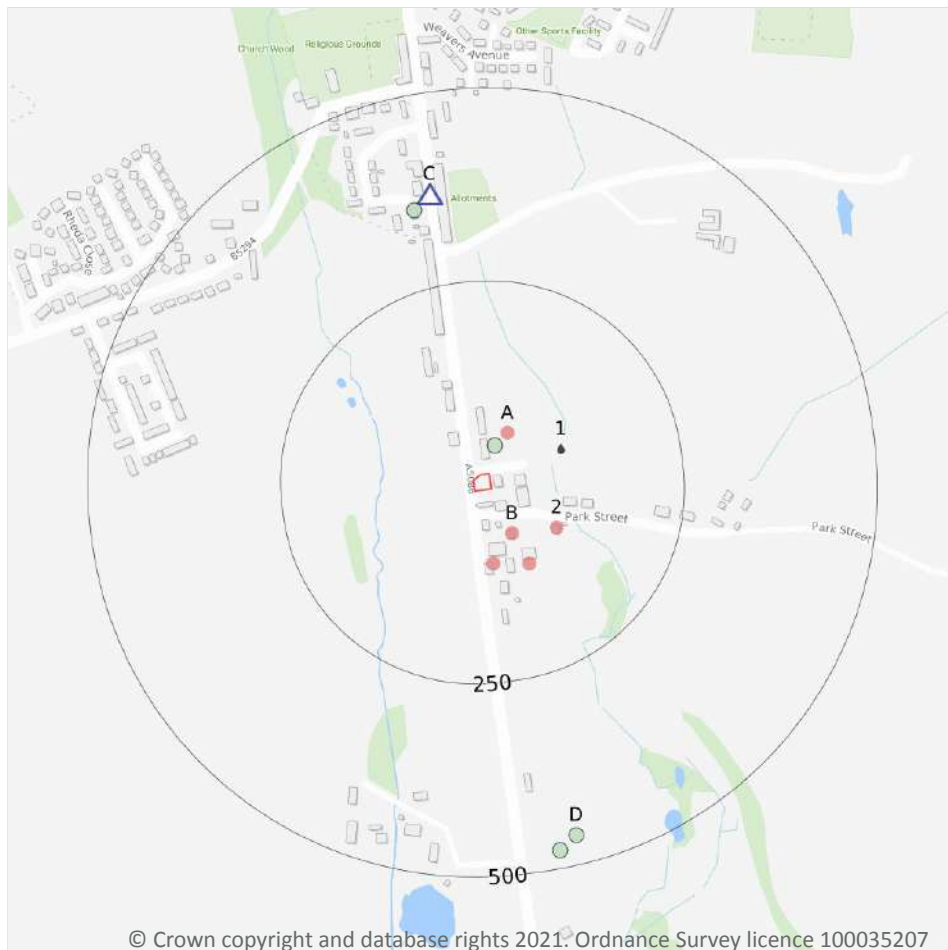


ID	Location	Site	Reference	Category	Sub-Category	Description
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Treating waste exemption	On a farm	Recovery of scrap metal
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Use of mulch
B	444m NE	MOWBRAY FARM, FRIZINGTON ROAD, FRIZINGTON, CA26 3QU	WEX097240	Using waste exemption	On a farm	Incorporation of ash into soil

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

5

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Company	Address	Activity	Category
A	58m NE	Rural Workshops	Cumbria, CA26	Unspecified Works Or Factories	Industrial Features
B	64m SE	Kenmare Tyre Services Ltd	Avondale, Frizington Road, Frizington, Cumbria, CA26 3QY	Vehicle Parts and Accessories	Motoring



ID	Location	Company	Address	Activity	Category
B	96m S	Calvin Gate & Railings	Rear Of 127 Frizington Road, Frizington, Cumbria, Cumbria, CA26 3QY	Fences, Gates and Railings	Industrial Products
2	98m SE	J Jackson & Son	Stone Lea, Park Street, Frizington, Cumbria, CA26 3RB	Dairy Farming	Farming
B	108m SE	Scrap Yard	Cumbria, CA26	Scrap Metal Merchants	Recycling Services

This data is sourced from Ordnance Survey.

4.2 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 36**

ID	Location	Company	Address	LPG	Status
C	369m N	UNBRANDED	64, Frizington Road, Frizington, Whitehaven, Cumbria, CA26 3QU	No	Closed

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

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

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



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Address	Details	
1	97m E	FRIZINGTON IND ESTATE SWO, FRIZINGTON ROAD, FRIZINGTON	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 017490252 Permit Version: 1 Receiving Water: LINGLA BECK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1900 Revocation Date: 01/11/1994

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m**0**

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

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

4.15 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.17 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m**4**

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

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Details	
A	36m N	Incident Date: 01/08/2002 Incident Identification: 96617 Pollutant: Contaminated Water Pollutant Description: Vehicle and Plant Washings	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
C	352m N	Incident Date: 14/11/2001 Incident Identification: 42732 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	461m S	Incident Date: 14/01/2002 Incident Identification: 52368 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	476m S	Incident Date: 05/07/2002 Incident Identification: 90320 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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



4.21 Pollution inventory radioactive waste

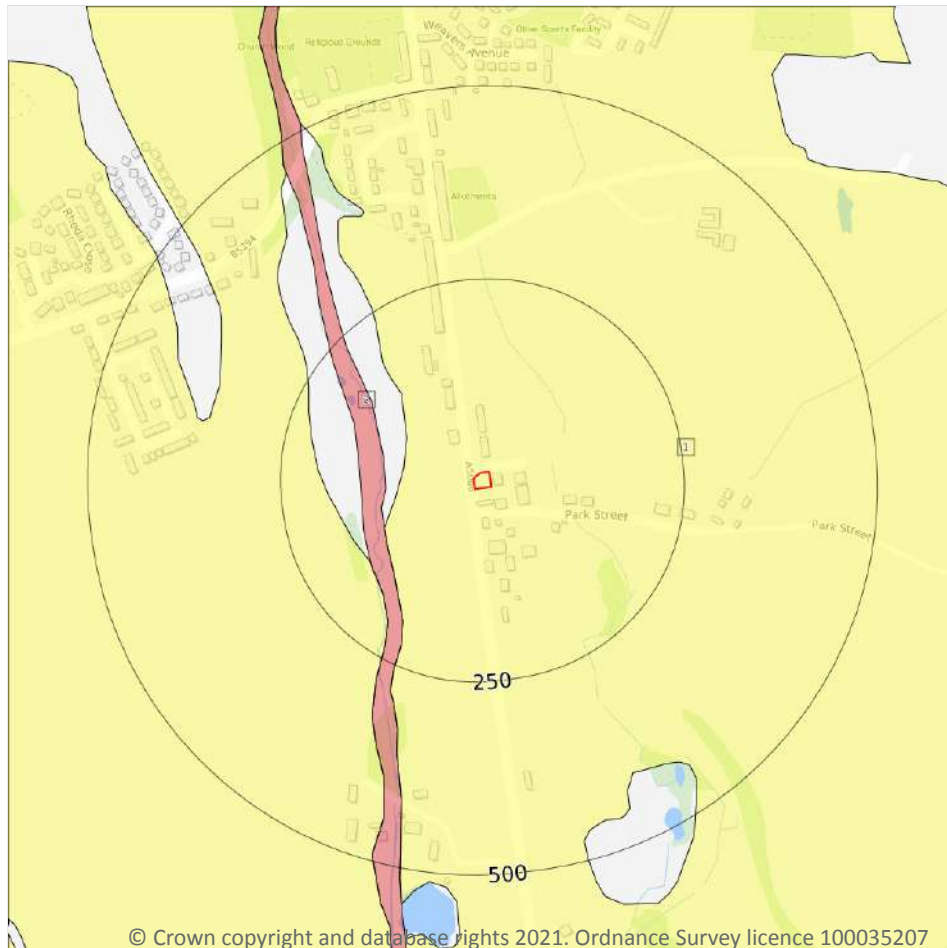
Records within 500m
0

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

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



5 Hydrogeology - Superficial aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

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

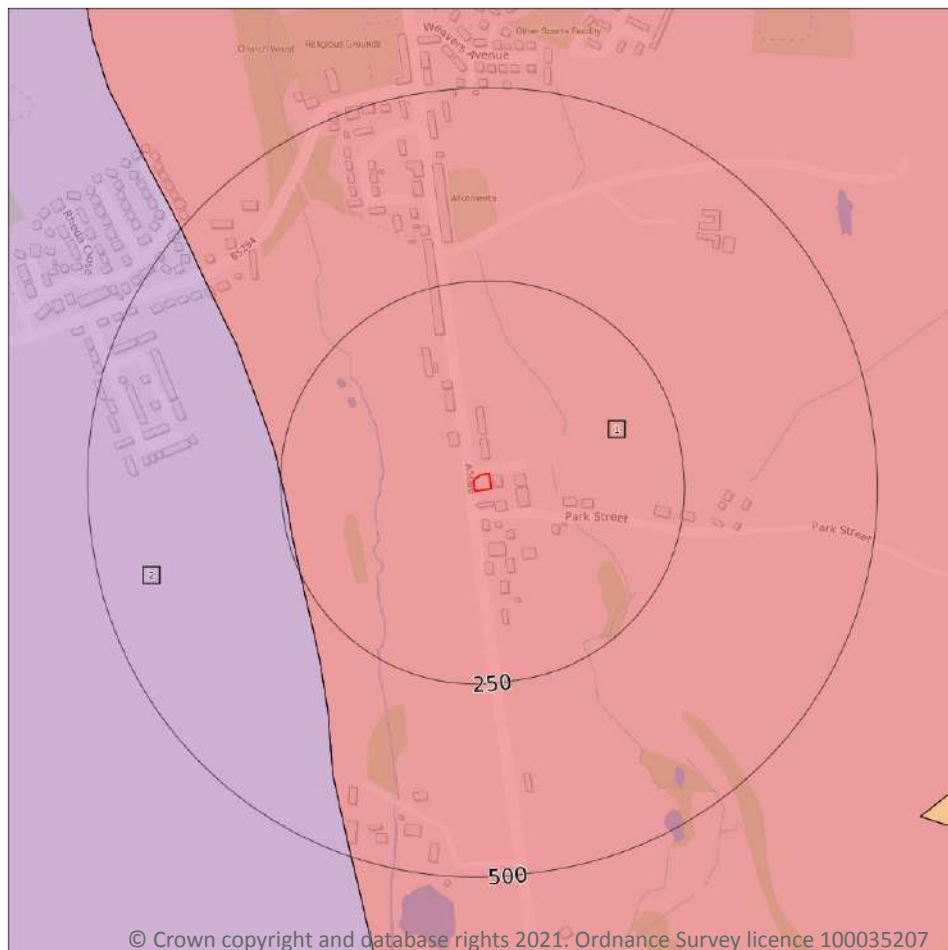
ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	114m W	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.



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 45**

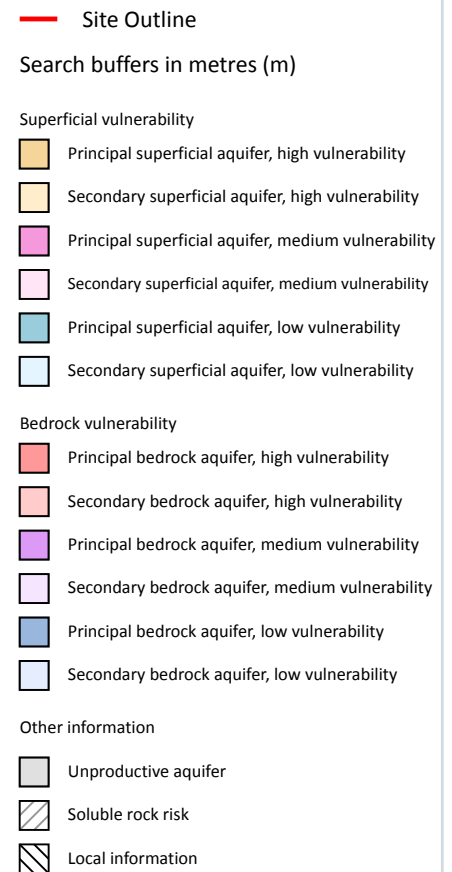
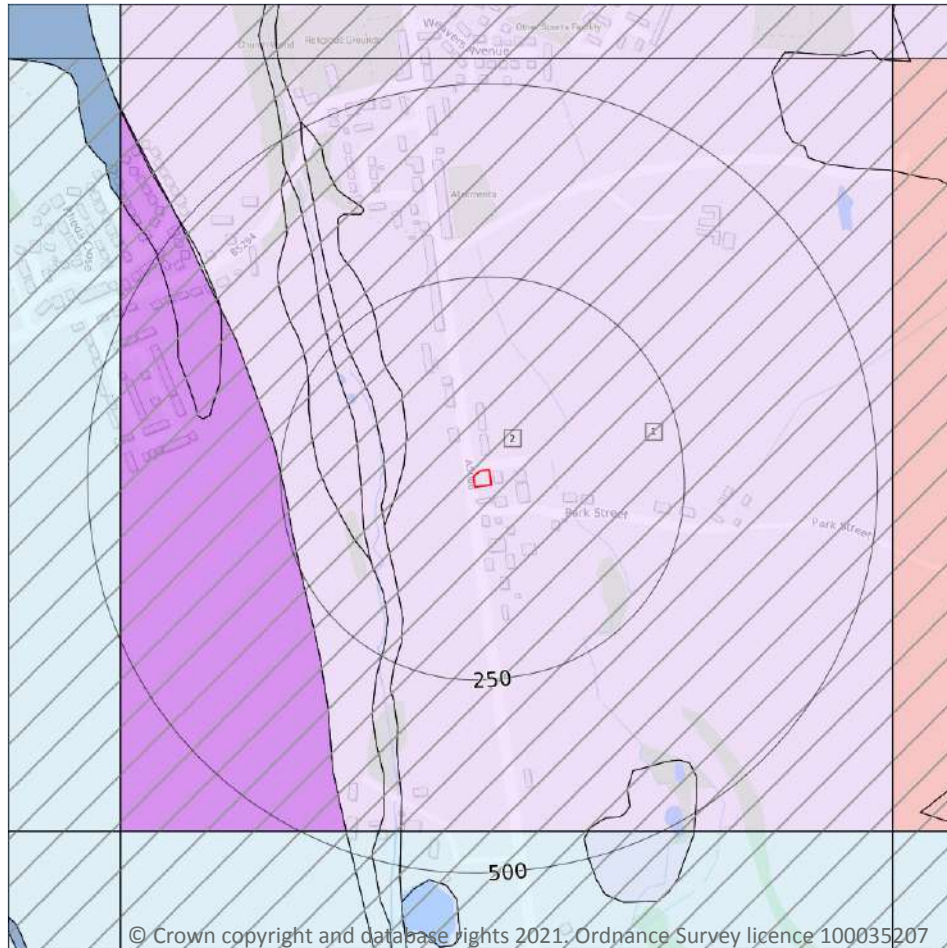
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	243m W	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers



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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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 47**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	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	1
------------------------	----------

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
2	Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow.	20.0%

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

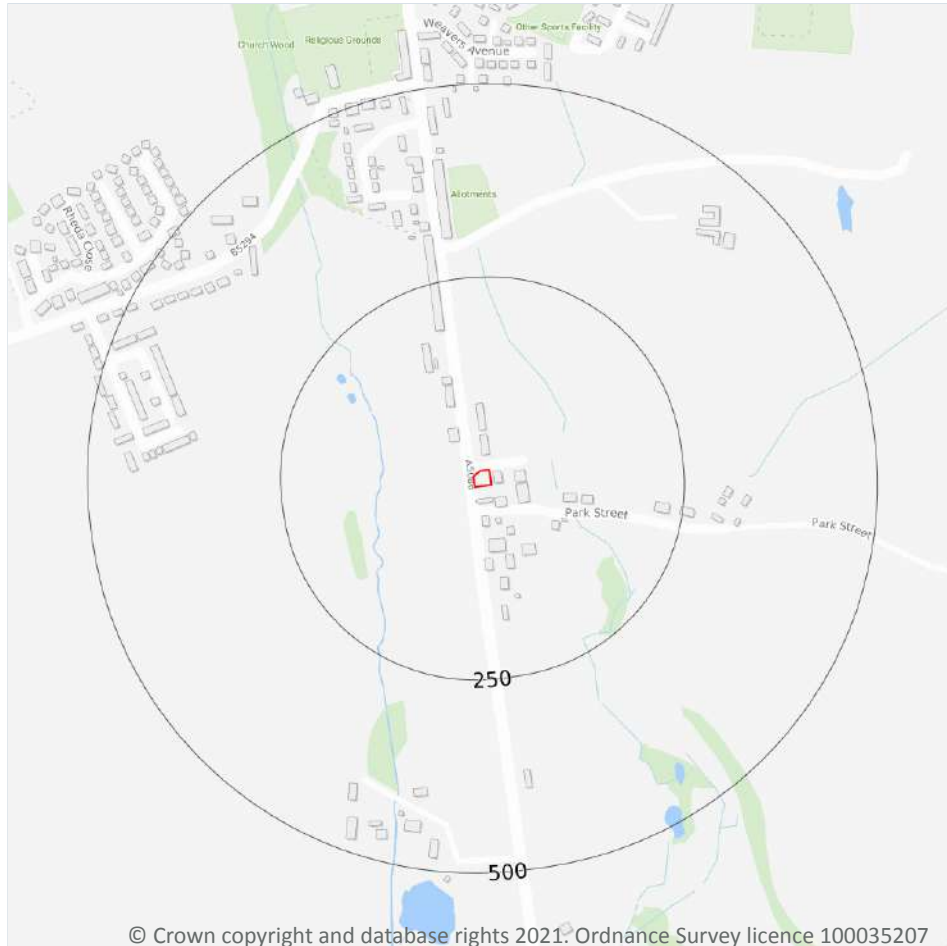
5.5 Groundwater vulnerability- local information

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
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

2

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 49**

ID	Location	Details	
-	834m SW	Status: Historical Licence No: 2774004002 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: "WELL AT BIRKS FARM, CLEATOR MOOR, CUMBRIA" Data Type: Point Name: J CHARLTON & SONS Easting: 302700 Northing: 516100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1965 Version End Date: -
-	834m SW	Status: Historical Licence No: 2774004002 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: WELL AT BIRKS FARM, CLEATOR MOOR, CUMBRIA Data Type: Point Name: J CHARLTON & SONS Easting: 302700 Northing: 516100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 16/12/1965 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

0

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.

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

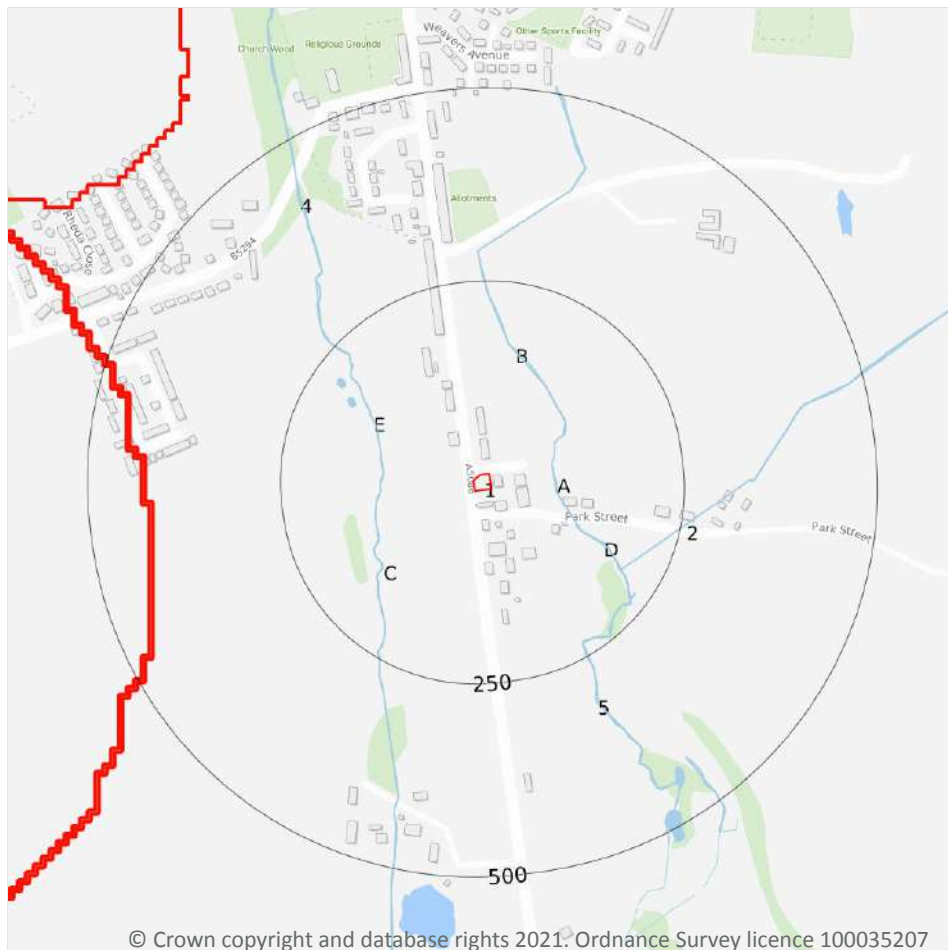
0

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

14

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 52**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	81m E	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	81m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	85m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	101m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	108m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	117m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	117m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lingla Beck
E	154m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Lingla Beck
E	157m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lingla Beck
2	197m SE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
D	197m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	213m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Lingla Beck
5	226m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	229m SE	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

11

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 52**

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 52**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Ehen (upper including Liza)	GB112074070010	Ehen-Calder	South West Lakes

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 52**



ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1328m SE	River	Ehen (upper including Liza)	GB112074070010	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

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

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

Features are displayed on the Hydrology map on **page 52**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Derwent and West Cumbria Lower Palaeozoic and Carboniferous Aquifers	GB41202G103700	Poor	Poor	Good	2015

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

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

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

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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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



7.5 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

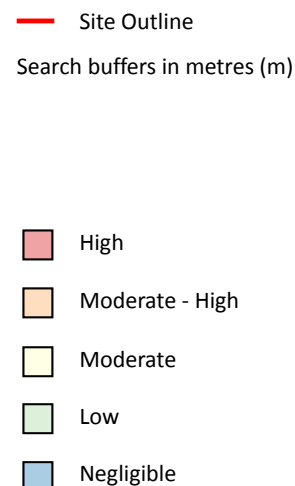
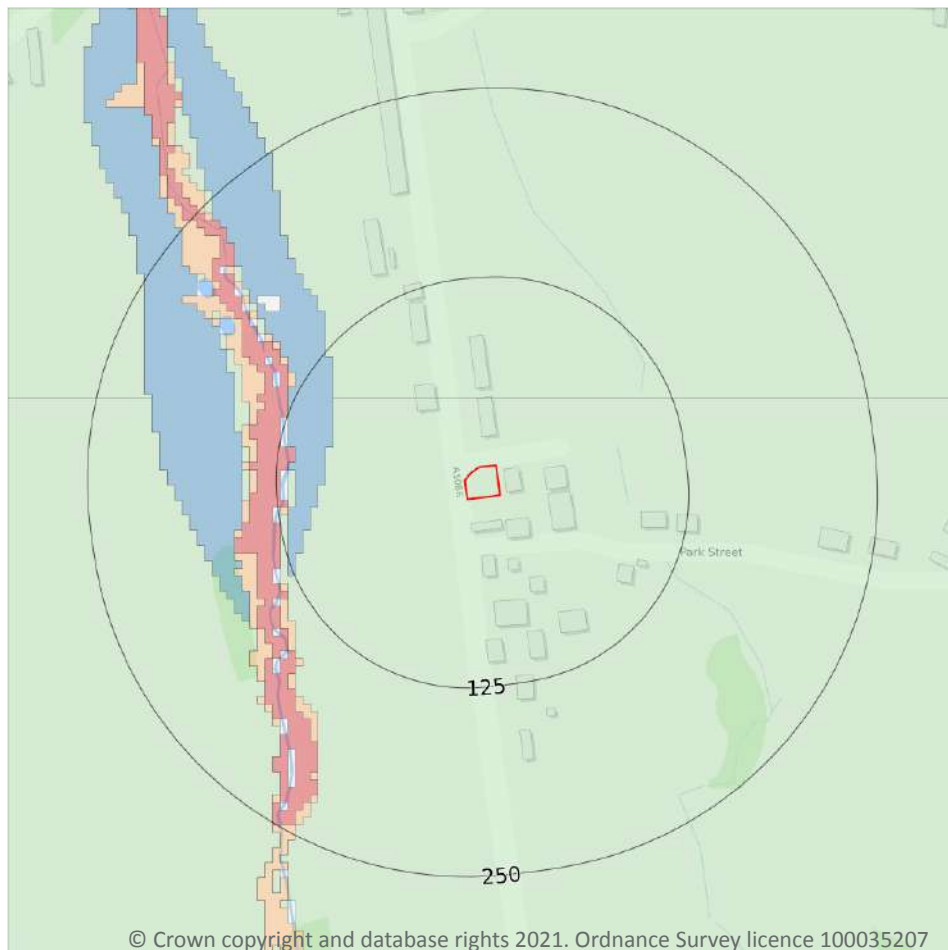
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

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

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

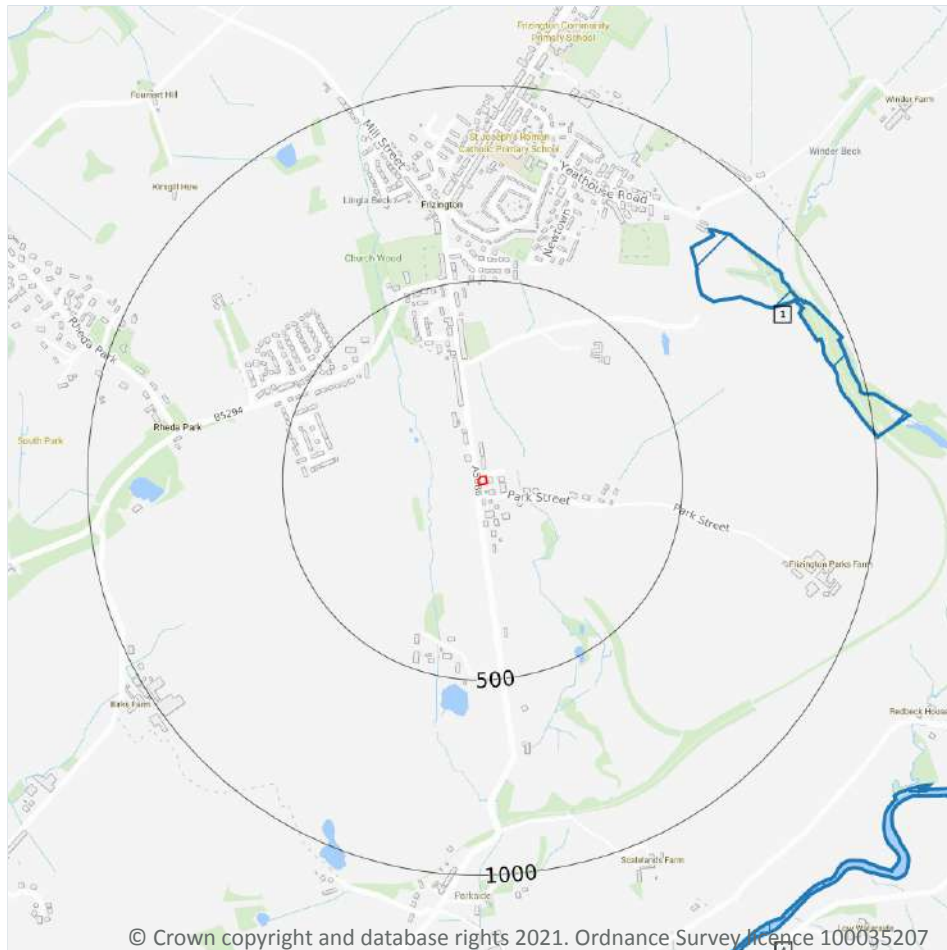
Low

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 60**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- X Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

2

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

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

ID	Location	Name	Data source
1	722m NE	Yeathouse Quarry	Natural England



ID	Location	Name	Data source
A	1314m SE	River Ehen (Ennerdale Water to Keekle Confluence)	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

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

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

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

10.3 Special Areas of Conservation (SAC)

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

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.

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

ID	Location	Name	Features of interest	Habitat description	Data source
A	1314m SE	River Ehen	Brook lamprey; Atlantic salmon; Freshwater pearl mussel.	Inland water bodies (Standing water, Running water); Coniferous woodland; Broad-leaved deciduous woodland	Natural England

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

10.4 Special Protection Areas (SPA)

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

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m**0**

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

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

10.7 Designated Ancient Woodland

Records within 2000m**3**

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 61**

ID	Location	Name	Woodland Type
-	1490m NW	Unknown	Ancient Replanted Woodland
-	1532m E	Salter Wood	Ancient & Semi-Natural Woodland
-	1601m NW	Unknown	Ancient & Semi-Natural 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

0

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

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m**0**

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

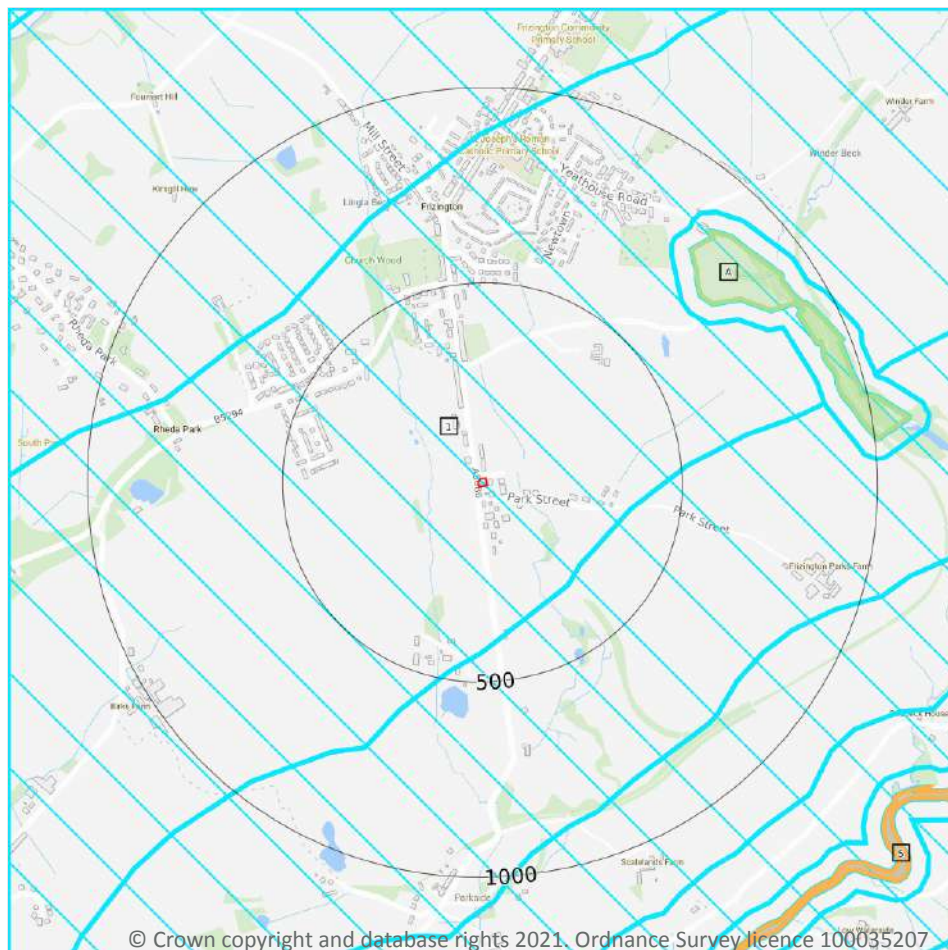
Records within 2000m**0**

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

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



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 66**

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location). Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

2

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

Features are displayed on the SSSI Impact Zones and Units map on **page 66**

ID: A
 Location: 722m NE
 SSSI name: Yeathouse Quarry
 Unit name: 1
 Broad habitat: Earth Heritage
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
ED - Dinantian	Favourable	15/05/2012



ID: 5
Location: 1314m SE
SSSI name: River Ehen (Ennerdale Water to Keekle Confluence)
Unit name: Old Units 3-6
Broad habitat: Rivers And Streams
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Atlantic salmon, <i>Salmo salar</i>	Unfavourable - No change	13/08/2012
Population of Schedule 5 mollusc - <i>Margaritifera margaritifera</i> , Freshwater Pearl Mussel	Unfavourable - Declining	13/08/2012
Rivers and Streams	Unfavourable - No change	13/08/2012
S1029 Freshwater pearl mussel, <i>Margaritifera margaritifera</i>	Unfavourable - Declining	13/08/2012
S1106 Atlantic salmon, <i>Salmo salar</i>	Unfavourable - No change	13/08/2012

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



11 Visual and cultural designations

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

0

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.



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

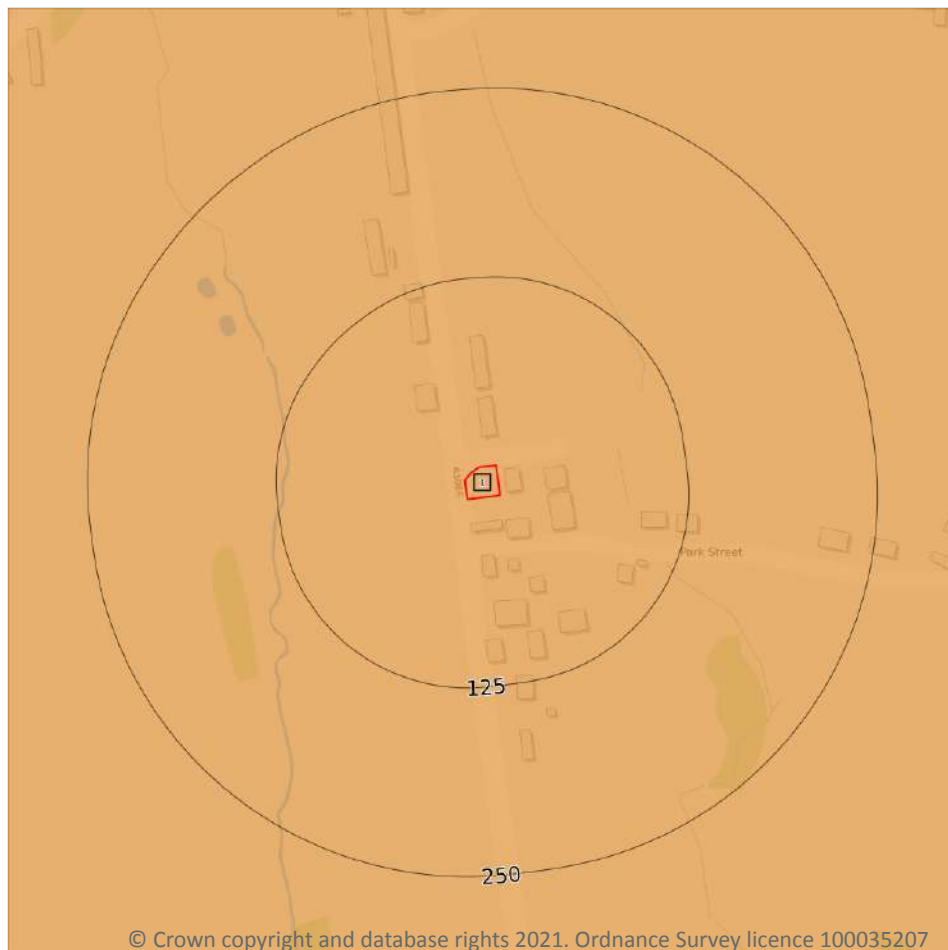
0

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

1

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 71**

ID	Location	Classification	Description
1	On site	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

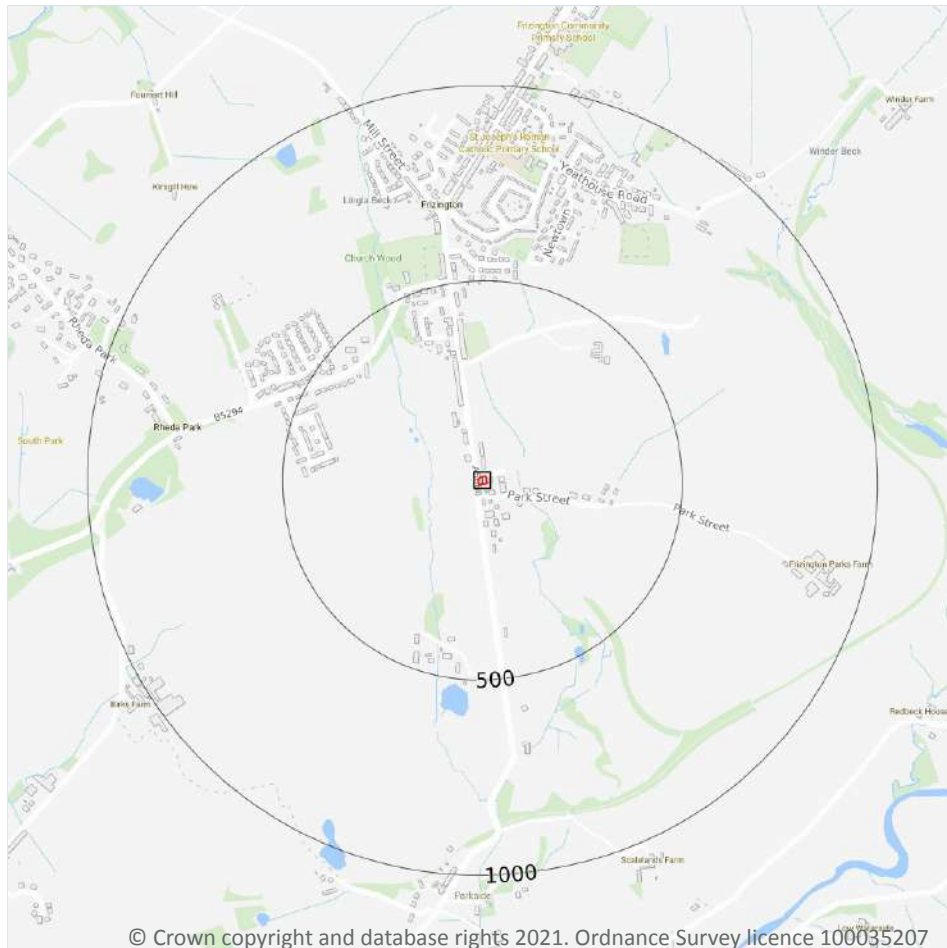
Records within 250m**0**

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 74**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

0

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.

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

14.5 Bedrock geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

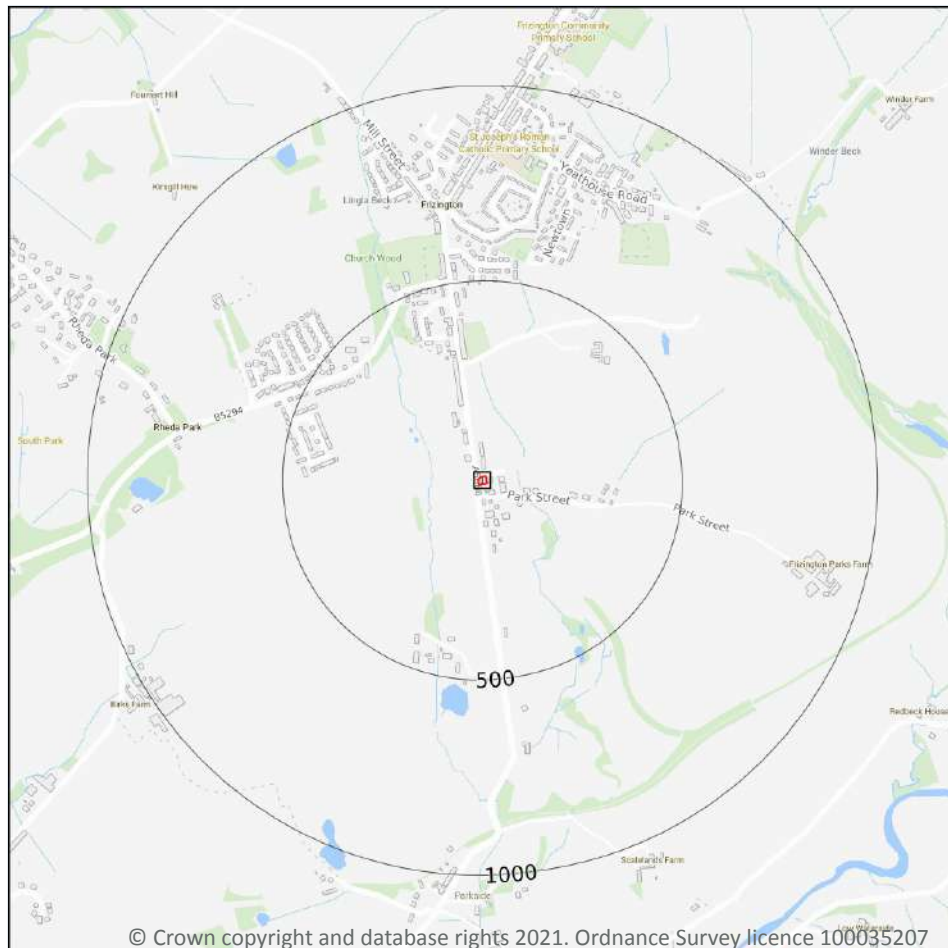
0

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.

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 78**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW028_whitehaven_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

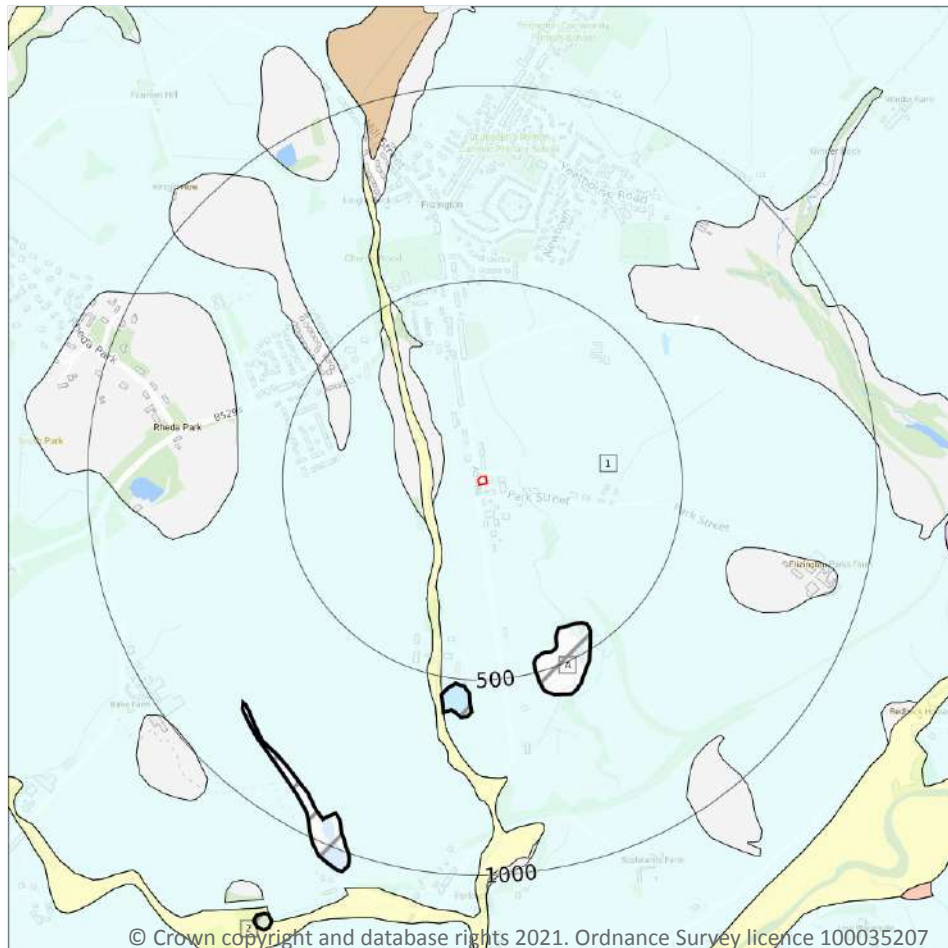
0

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



— Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

3

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.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 80**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	114m W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
A	413m SE	SUPNM-UNKNOWN	SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]	UNKNOWN/UNCLASSIFIED ENTRY



This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

1

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).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

1

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.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 80**

ID	Location	LEX Code	Description	Rock description
A	413m SE	FOUN-UNKNOWN	FOUNDERED STRATA	UNKNOWN/UNCLASSIFIED ENTRY

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

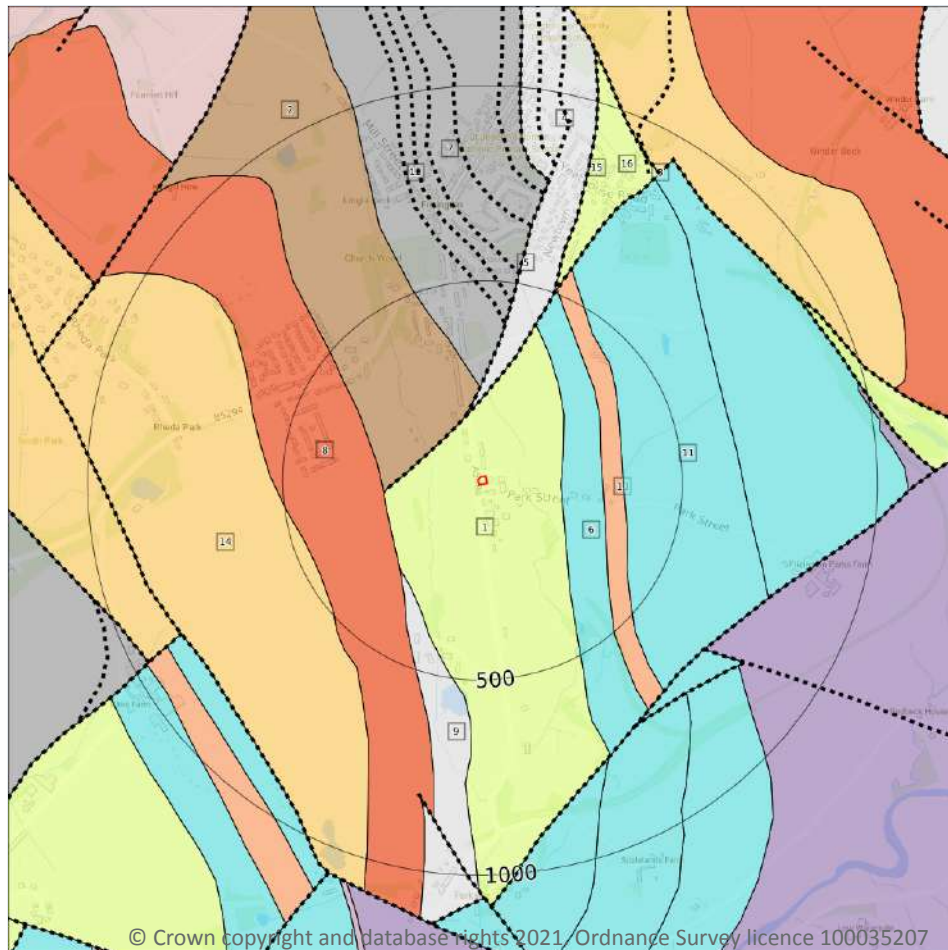
0

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

11

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 82**

ID	Location	LEX Code	Description	Rock age
1	On site	SMGP-MDSS	STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	NAMURIAN
2	135m NW	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
4	160m N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
6	190m E	ESKT-LMST	ESKETT LIMESTONE FORMATION - LIMESTONE	WISEAN
7	228m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	243m W	BK-BREC	BROCKRAM - BRECCIA	-
9	296m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	296m E	OBS-SDST	OREBANK SANDSTONE - SANDSTONE	WISEAN
11	349m E	ESKT-LMST	ESKETT LIMESTONE FORMATION - LIMESTONE	WISEAN
14	464m SW	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-
16	500m N	SMGP-MDSS	STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	NAMURIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

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

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 82**

ID	Location	Category	Description
3	135m NW	FAULT	Fault, inferred, displacement unknown
5	160m N	FAULT	Fault, inferred, displacement unknown

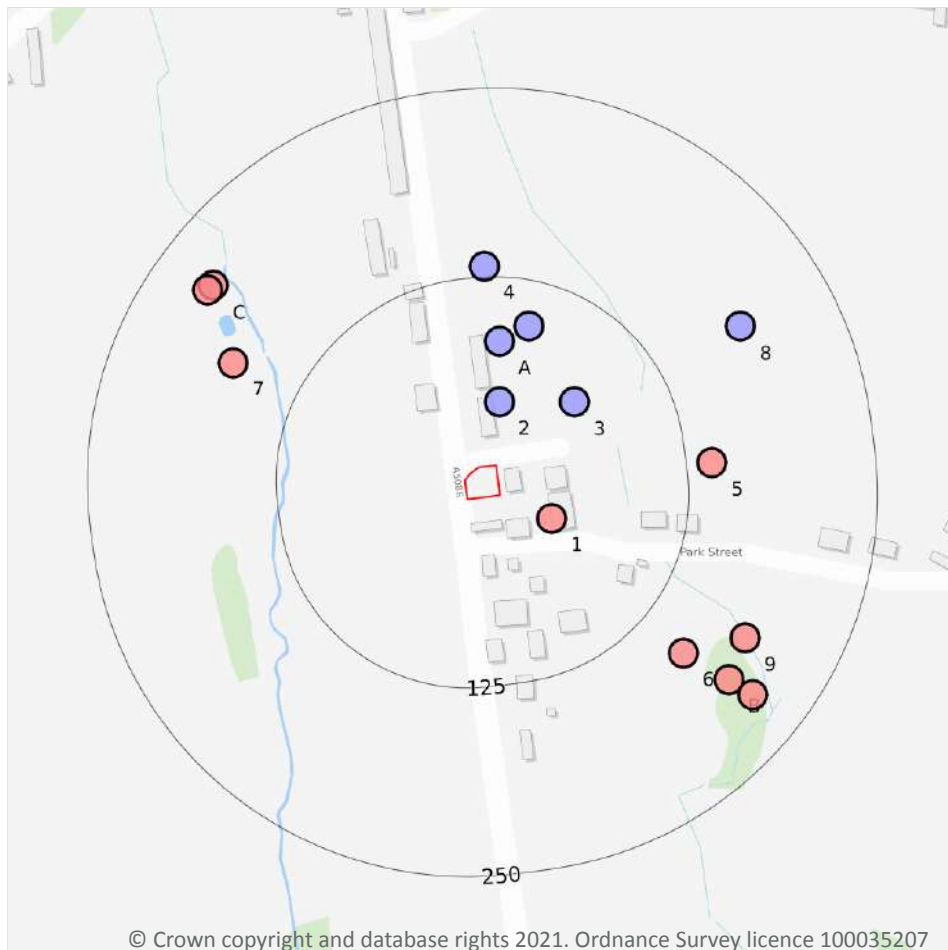


ID	Location	Category	Description
12	393m N	ROCK	Coal seam, inferred
13	448m N	ROCK	Coal seam, inferred
15	500m N	FAULT	Fault, inferred, displacement unknown

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

15

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 85**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	38m SE	303515 516433	MOWBRAY IRON ORE MINES BH22 (CROSS SECTION)	138.35	N	837861
2	42m N	303480 516510	RURAL WORKSHOPS FRIZINGTON CUMBRIA 3	6.0	N	16102821

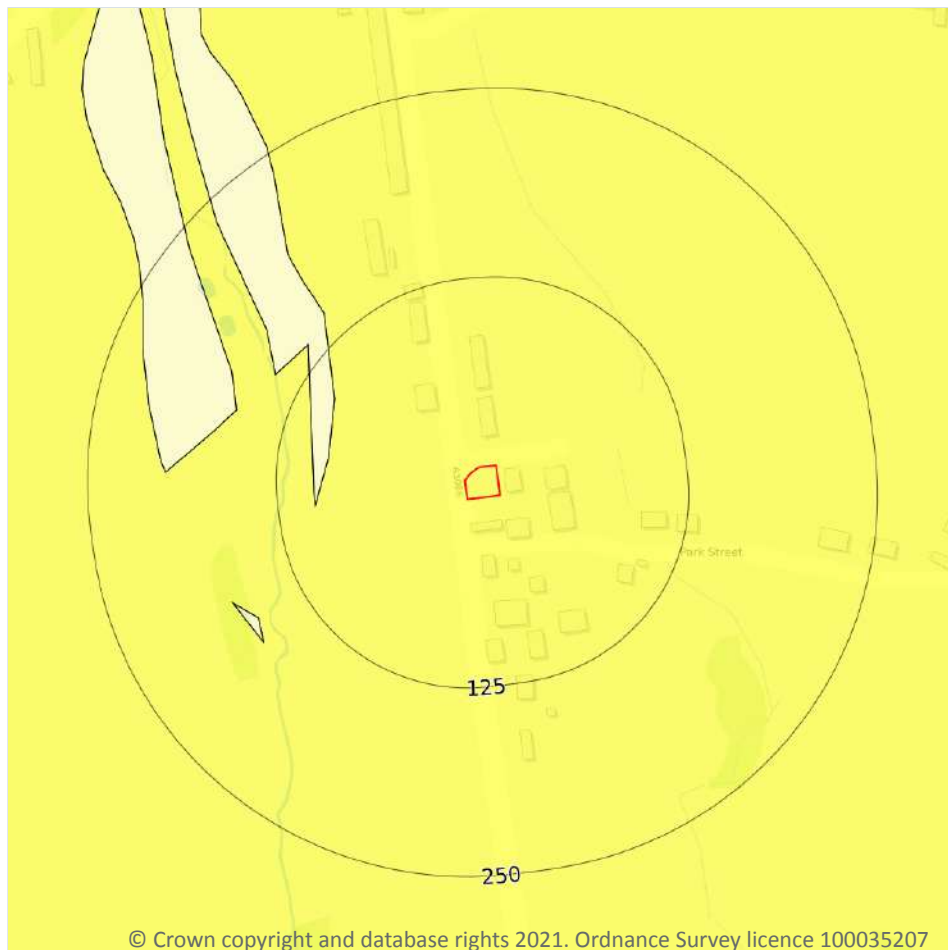


ID	Location	Grid reference	Name	Length	Confidential	Web link
3	67m NE	303530 516510	RURAL WORKSHOPS FRIZINGTON CUMBRIA 5	5.0	N	16102828
A	82m N	303480 516550	RURAL WORKSHOPS FRIZINGTON CUMBRIA 2	4.5	N	16102818
A	95m N	303500 516560	RURAL WORKSHOPS FRIZINGTON CUMBRIA 4	5.0	N	16102827
4	132m N	303470 516600	RURAL WORKSHOPS FRIZINGTON CUMBRIA 1	6.0	N	16102811
5	142m E	303621 516470	MOWBRAY MINE NO. 3 PIT	181.97	N	837754
6	160m SE	303602 516344	NEW PARKSIDE 6	230.35	N	837755
7	172m NW	303304 516536	HOLLOW DYKE BH	328.88	N	837862
8	186m NE	303640 516560	MOWBRAY MINE (FILE) (M)	-2.0	N	838019
9	188m SE	303643 516354	NEW PARKSIDE NO.7 PIT	106.07	N	837761
B	195m SE	303632 516326	NEW PARKSIDE 11	104.39	N	837760
C	210m NW	303291 516587	MOWBRAY NO.1	324.92	N	837864
C	212m NW	303287 516584	MOWBRAY NO.2	219.0	N	837863
B	214m SE	303648 516316	NEW PARKSIDE 10	105.58	N	837759

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

1

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).

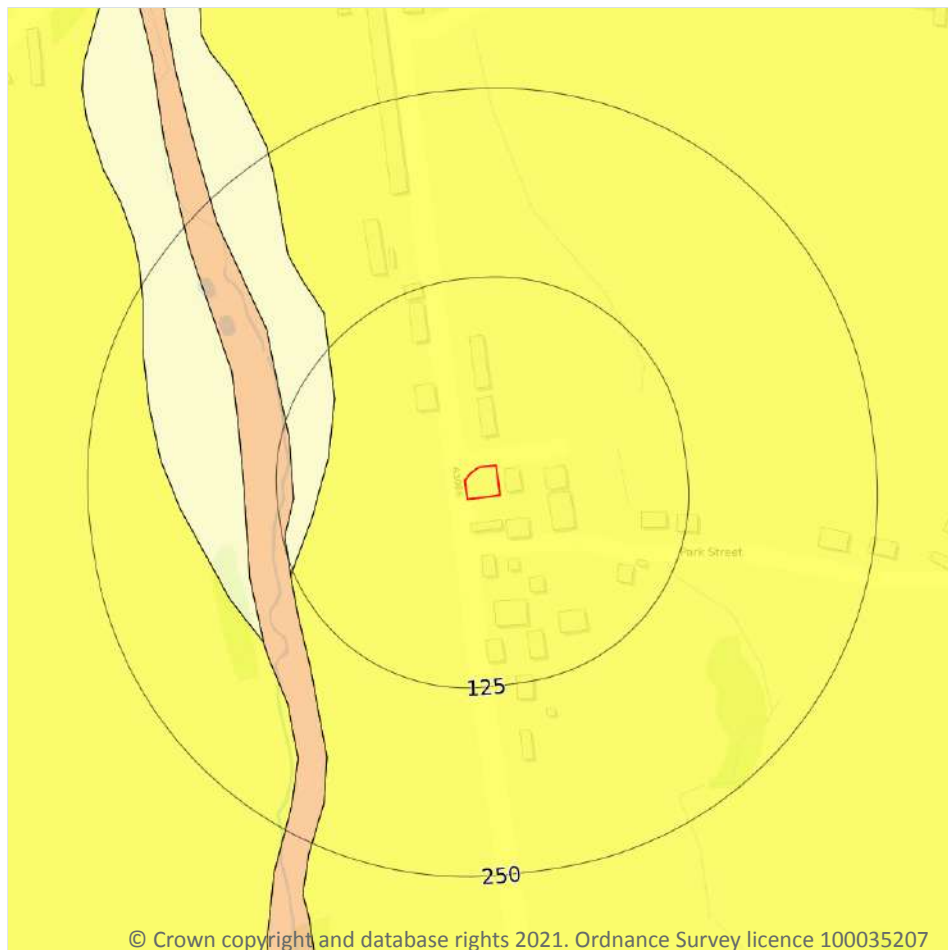
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 87**

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

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

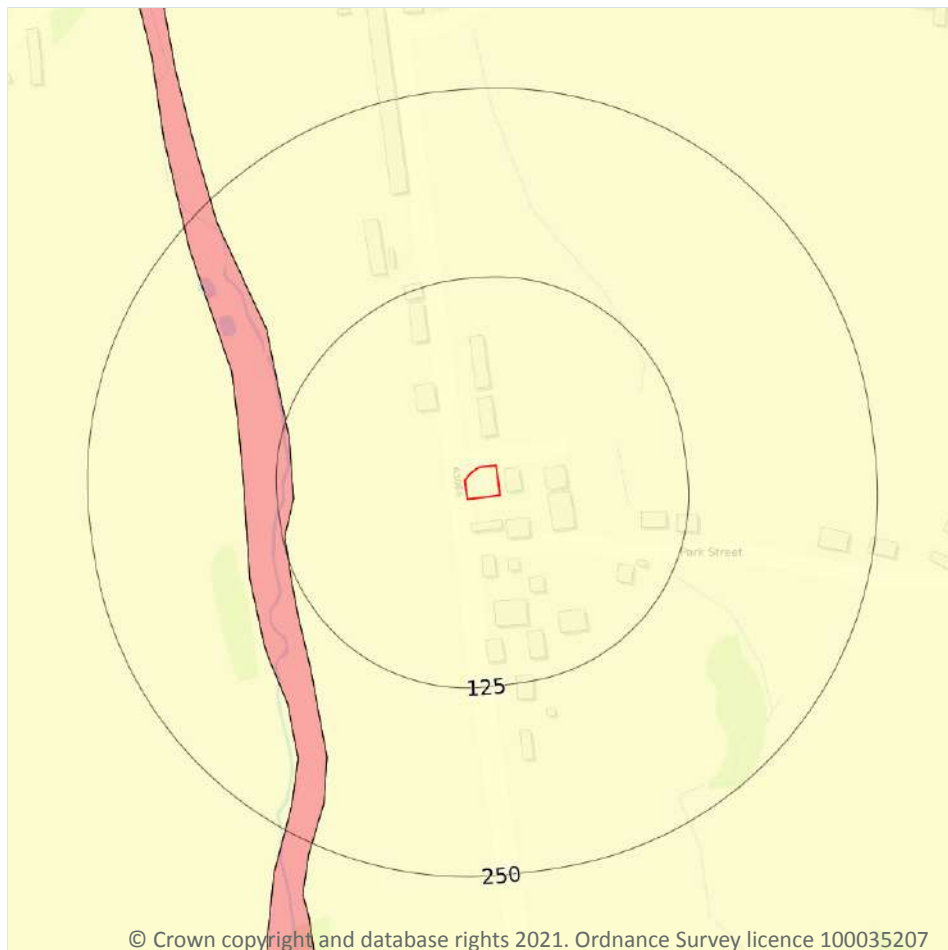
Features are displayed on the Natural ground subsidence - Running sands map on **page 88**

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

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.

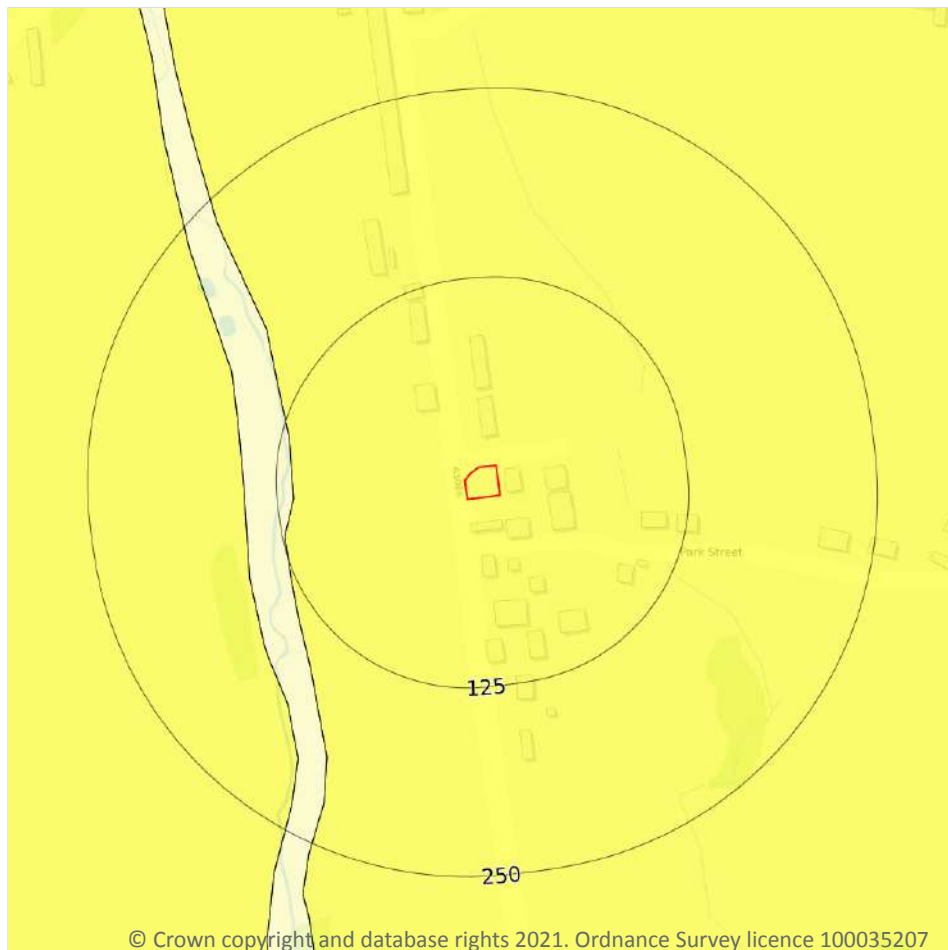
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 89**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

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

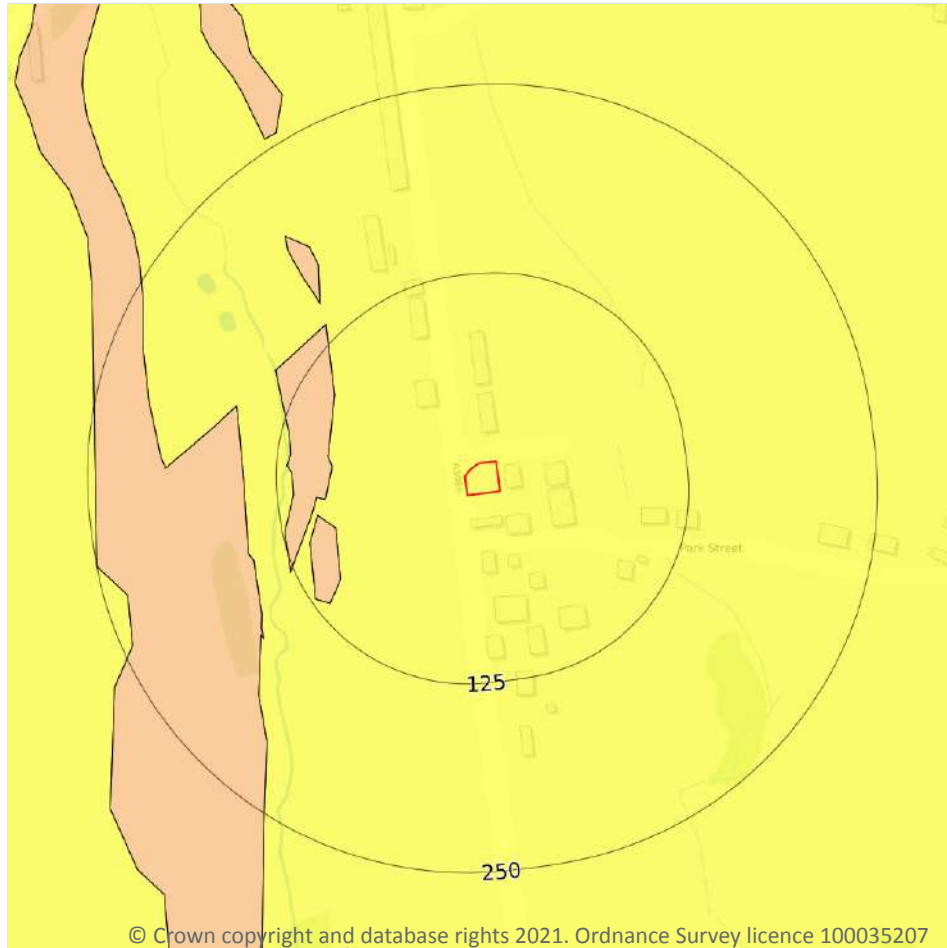
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 90**

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.

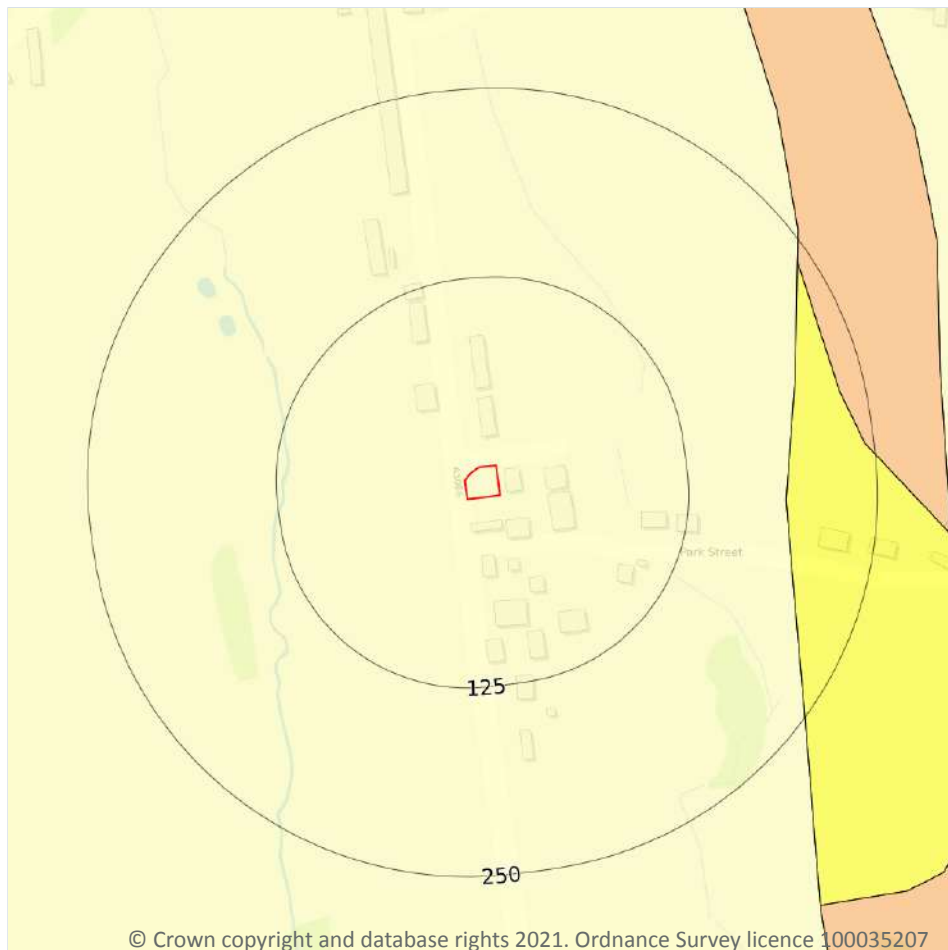
Features are displayed on the Natural ground subsidence - Landslides map on **page 91**

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



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

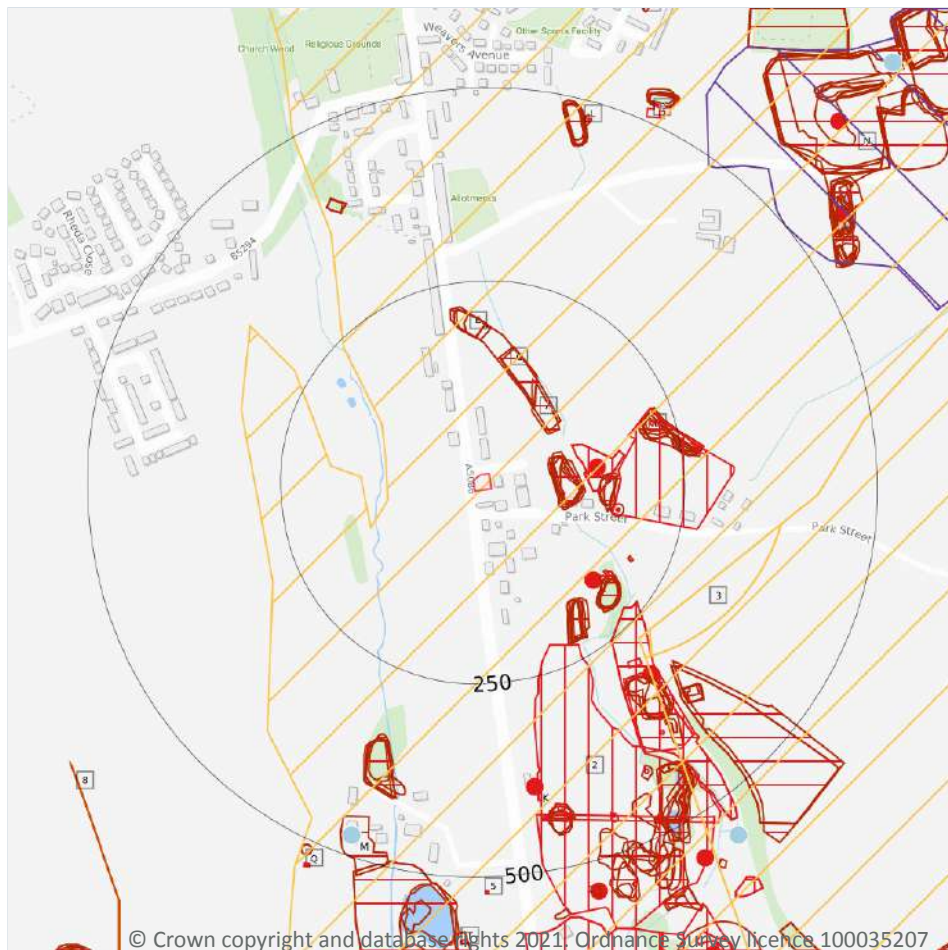
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 92**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

4

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Details	Description
B	138m E	Name: Mowbray Iron Ore Mine Address: FRIZINGTON, Cumbria Commodity: Hematite (Iron Ore) Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	176m SE	Name: Mowbray Iron Ore Mine Address: FRIZINGTON, Cumbria Commodity: Hematite (Iron Ore) Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
G	316m SE	Name: Frizington Parks Iron Ore Mine Address: FRIZINGTON, Cumbria Commodity: Hematite (Iron Ore) Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
K	389m S	Name: New Parkside Iron Ore Mine Address: FRIZINGTON, Cumbria Commodity: Hematite (Iron Ore) Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.



18.3 Surface ground workings

Records within 250m

50

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Land Use	Year of mapping	Mapping scale
B	76m E	Unspecified Heap	1898	1:10560
B	79m E	Unspecified Ground Workings	1926	1:10560
B	79m E	Unspecified Ground Workings	1926	1:10560
B	81m E	Unspecified Ground Workings	1951	1:10560
B	84m E	Unspecified Ground Workings	1923	1:10560
B	84m E	Unspecified Ground Workings	1923	1:10560
B	85m E	Unspecified Heap	1926	1:10560
B	90m E	Unspecified Heap	1969	1:10560
A	91m NE	Cuttings	1926	1:10560
C	95m NE	Cuttings	1951	1:10560
C	105m NE	Cuttings	1926	1:10560
C	107m NE	Cuttings	1938	1:10560
B	113m E	Iron Ore Mine Pit	1898	1:10560
B	139m E	Unspecified Heap	1926	1:10560
B	139m E	Unspecified Heap	1926	1:10560
B	141m E	Unspecified Heap	1898	1:10560
B	141m E	Unspecified Heap	1951	1:10560
B	146m E	Unspecified Heap	1926	1:10560
B	158m E	Unspecified Heap	1863	1:10560
E	174m N	Cuttings	1969	1:10560
E	177m N	Cuttings	1938	1:10560
F	177m SE	Unspecified Pit	1926	1:10560
F	177m SE	Unspecified Pit	1926	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
F	177m SE	Unspecified Pit	1951	1:10560
E	178m N	Cuttings	1926	1:10560
F	181m SE	Unspecified Heap	1969	1:10560
F	181m SE	Unspecified Pit	1923	1:10560
F	181m SE	Unspecified Pit	1923	1:10560
F	182m SE	Unspecified Heap	1926	1:10560
F	182m SE	Unspecified Heap	1926	1:10560
F	182m SE	Unspecified Pit	1926	1:10560
E	185m N	Unspecified Pit	1898	1:10560
F	187m SE	Unspecified Heap	1951	1:10560
F	187m SE	Unspecified Heap	1969	1:10560
F	190m SE	Unspecified Disused Pit	1898	1:10560
F	191m SE	Unspecified Heap	1923	1:10560
F	191m SE	Unspecified Heap	1923	1:10560
F	193m SE	Unspecified Heap	1926	1:10560
F	199m SE	Iron Pit	1863	1:10560
D	202m E	Unspecified Heaps	1926	1:10560
D	202m E	Unspecified Heaps	1926	1:10560
D	207m E	Unspecified Heaps	1951	1:10560
D	207m E	Unspecified Ground Workings	1969	1:10560
D	207m E	Unspecified Ground Workings	1923	1:10560
D	207m E	Unspecified Ground Workings	1923	1:10560
D	208m E	Unspecified Ground Workings	1926	1:10560
D	212m E	Unspecified Heap	1863	1:10560
G	231m SE	Iron Ore Mine Pit	1898	1:10560
D	242m E	Unspecified Ground Workings	1923	1:10560
D	242m E	Unspecified Ground Workings	1923	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



18.4 Underground workings

Records within 1000m

57

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Land Use	Year of mapping	Mapping scale
B	113m E	Iron Ore Mine Pit	1898	1:10560
D	160m E	Disused Iron Ore Mine Pit	1926	1:10560
B	164m E	Iron Shaft	1863	1:10560
F	181m SE	Unspecified Old Shaft	1951	1:10560
F	185m SE	Unspecified Old Shaft	1926	1:10560
2	216m S	Iron Ore Mines	1898	1:10560
D	217m E	Old Iron Shaft	1863	1:10560
G	231m SE	Iron Ore Mine Pit	1898	1:10560
D	264m E	Unspecified Old Shafts	1951	1:10560
D	267m E	Unspecified Old Shafts	1926	1:10560
G	286m SE	Unspecified Old Shaft	1926	1:10560
G	300m SE	Disused Iron Ore Mine Pit	1926	1:10560
G	383m SE	Iron Shaft	1863	1:10560
G	415m SE	Iron Shaft	1863	1:10560
K	416m S	Unspecified Old Shaft	1951	1:10560
K	421m S	Unspecified Old Shaft	1926	1:10560
G	426m S	Iron Ore Mine	1898	1:10560
G	447m S	Unspecified Old Shafts	1951	1:10560
G	451m S	Unspecified Old Shafts	1926	1:10560
L	474m N	Unspecified Old ShaftS	1898	1:10560
P	505m NE	Iron Ore Old Shafts	1926	1:10560
5	518m S	Iron Shaft	1863	1:10560
Q	528m SW	Unspecified Old Shaft	1951	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
Q	529m SW	Unspecified Old Shaft	1938	1:10560
Q	529m SW	Unspecified Old Shaft	1898	1:10560
S	564m S	Disused Iron Ore Mine	1926	1:10560
S	564m S	Iron Ore Mines	1898	1:10560
T	581m S	Iron Shafts	1863	1:10560
G	602m SE	Iron Pits	1863	1:10560
U	603m SE	Iron Ore Mine	1898	1:10560
7	632m N	Unspecified Old Shaft	1898	1:10560
U	635m SE	Iron Pits	1863	1:10560
U	656m SE	Unspecified Old Shaft	1926	1:10560
U	657m SE	Unspecified Old Shaft	1951	1:10560
-	668m S	Iron Shaft	1863	1:10560
-	677m S	Iron Ore Mine	1898	1:10560
-	692m S	Iron Shaft	1863	1:10560
-	726m S	Unspecified Old Shaft	1951	1:10560
-	727m S	Unspecified Old Shaft	1926	1:10560
-	751m SE	Iron Pits	1863	1:10560
-	786m S	Unspecified Old Shaft	1926	1:10560
-	796m S	Unspecified Old Shaft	1951	1:10560
-	808m SW	Unspecified Old Shaft	1938	1:10560
-	811m S	Unspecified Old Shafts	1898	1:10560
-	848m SE	Iron Shaft	1863	1:10560
-	853m SW	Iron Shaft	1863	1:10560
-	868m S	Iron Ore Mine	1898	1:10560
-	884m S	Unspecified Old Shaft	1898	1:10560
-	885m NE	Iron Ore Mine Pit	1926	1:10560
-	885m NE	Iron Ore Mine Pit	1898	1:10560
-	909m NE	Unspecified Old Shaft	1898	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	911m NE	Iron Ore Old Shaft	1926	1:10560
-	913m NE	Iron Ore Old Shaft	1951	1:10560
-	925m S	Iron Shaft	1863	1:10560
-	936m NE	Old Iron Shaft	1863	1:10560
-	955m SW	Coal Pit	1863	1:10560
-	977m SW	Disused Iron Mine	1898	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
N	490m NE	Yeathouse	Limestone	Surface mineral working	Valid	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

15

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Name	Commodity	Class	Likelihood
A	On site	Not available	Iron Ore (Non Vein)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered



ID	Location	Name	Commodity	Class	Likelihood
1	112m W	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
G	272m SE	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
3	274m SE	Not available	Vein Mineral\Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
4	296m SE	Not available	Vein Mineral	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
8	632m SW	Not available	Ironstone (bedded)	D	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
-	772m W	Not available	Ironstone (bedded)	D	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
16	850m NE	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	855m N	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	867m NE	Not available	Vein Mineral\Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	869m SW	Not available	Ironstone (bedded)	D	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered



ID	Location	Name	Commodity	Class	Likelihood
-	940m NE	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	959m SW	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	979m NE	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	990m SW	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

3

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Mine Address	Mineral	Data source	Publisher
M	473m S	High Crossgill Mine, Cumbria	Hematite	CATALOGUE OF MINING INFORMATION (OTHER THAN COAL, FIRECLAY & SLATE) FOR THE L.D	BGS
G	551m SE	Parkside New, Cumbria	Hematite	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED /DRAFT
N	746m NE	Yeathouse Mine, Cumbria	Hematite	CATALOGUE OF MINING INFORMATION (OTHER THAN COAL, FIRECLAY & SLATE) FOR THE L.D	BGS

This data is sourced from Stantec UK Ltd.



18.8 JPB mining areas

Records on site	0
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Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1
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Areas which could be affected by past, current or future coal mining.

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

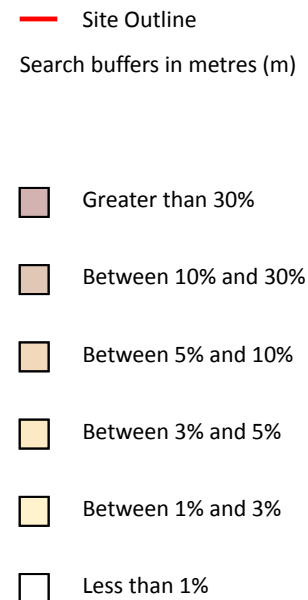
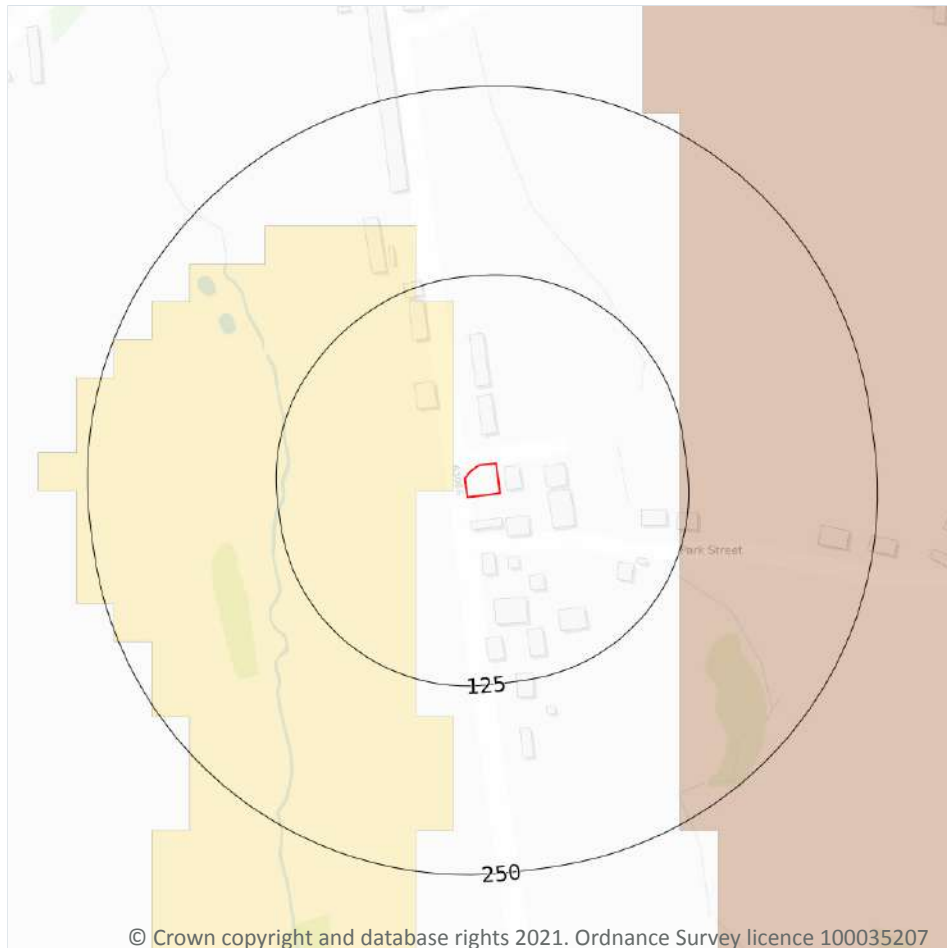
18.13 Clay mining

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

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

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

19 Radon



19.1 Radon

Records on site

1

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

Features are displayed on the Radon map on **page 105**

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

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



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

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 km². 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 km²; 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 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
19m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
32m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
39m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

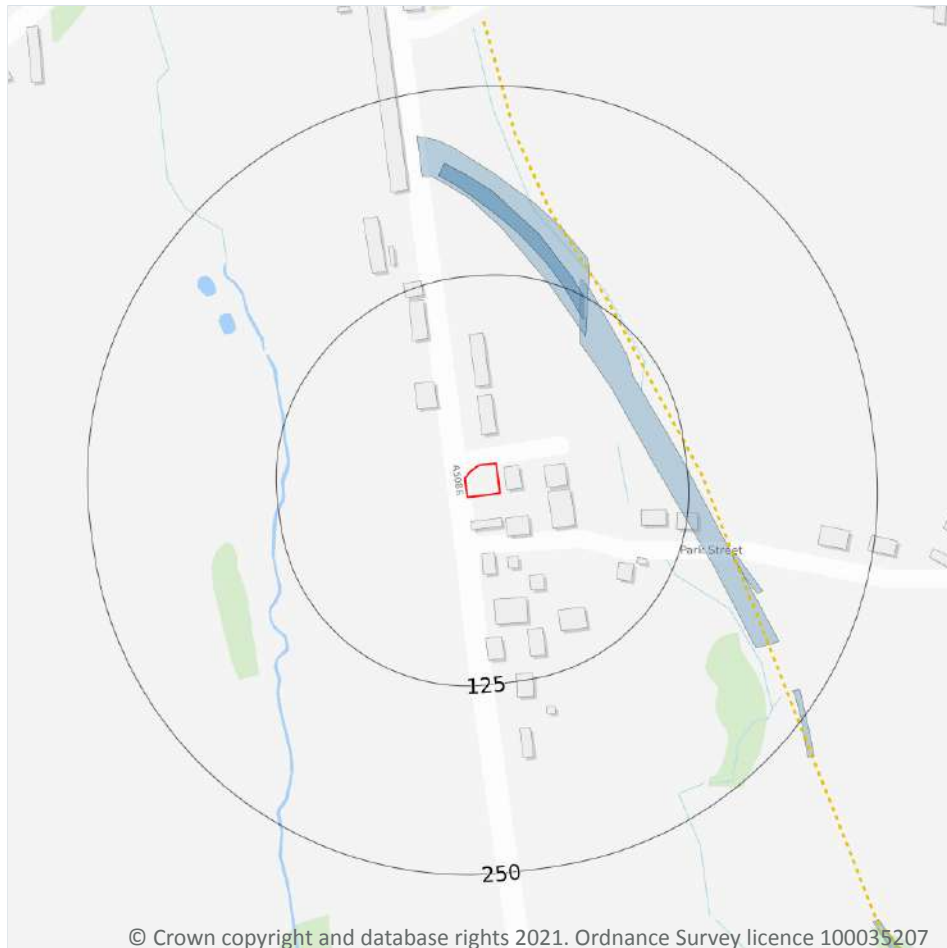
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The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

6

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.

Features are displayed on the Railway infrastructure and projects map on **page 107**

Location	Land Use	Year of mapping	Mapping scale
91m NE	Railway Sidings	1926	10560
103m NE	Railway Sidings	1938	10560
112m NE	Railway Sidings	1899	2500
112m NE	Railway Sidings	1925	2500
159m E	Railway Sidings	1925	2500
234m SE	Railway Sidings	1925	2500

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.



21.6 Historical railways

Records within 250m**1**

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

Features are displayed on the Railway infrastructure and projects map on **page 107**

Location	Description
116m NE	Abandoned

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m**0**

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

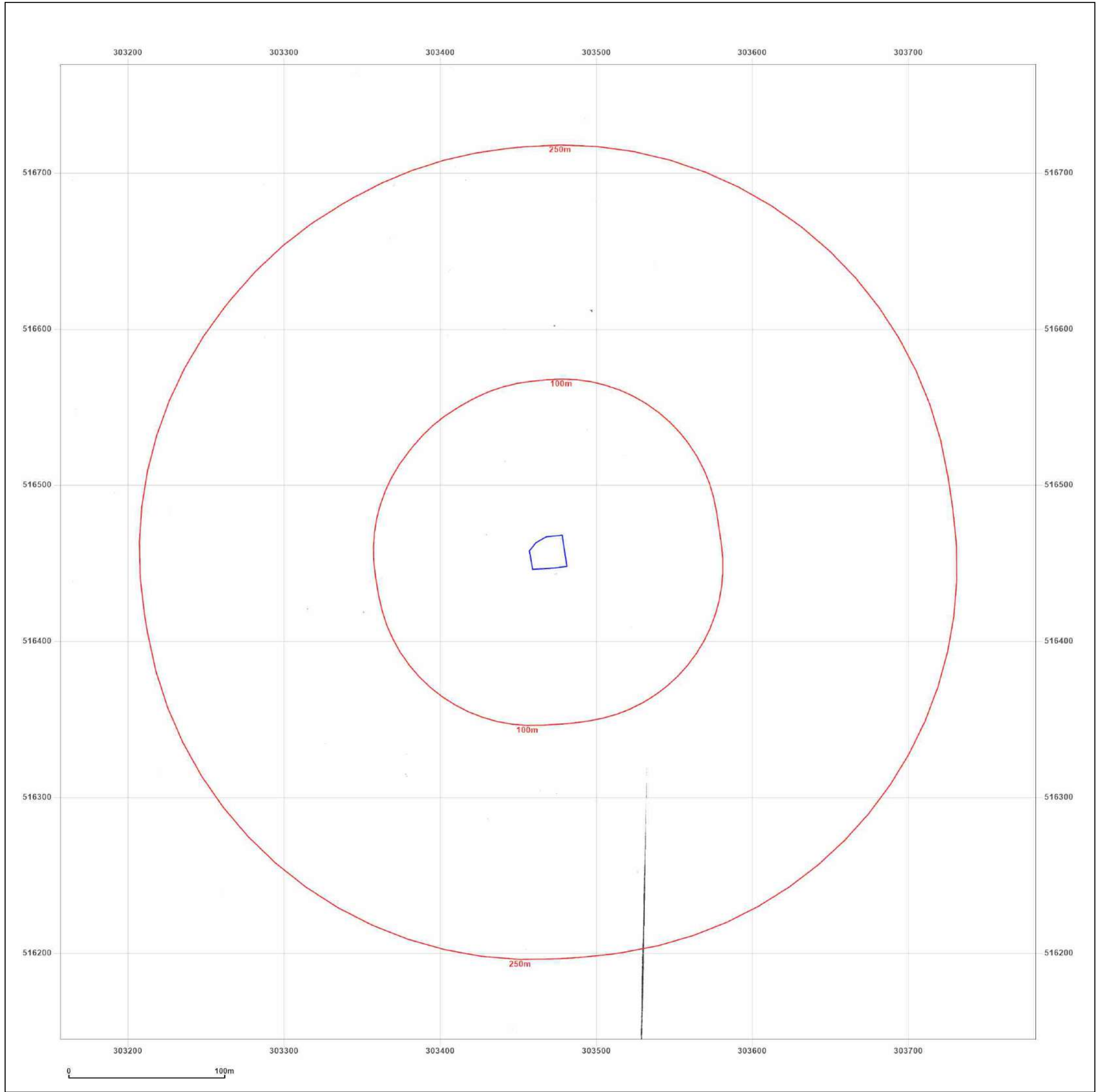
Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



Appendix III

- Historical Ordnance Survey Map Extracts



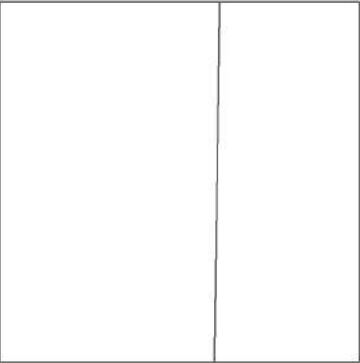
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Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: County Series
Map date: 1863
Scale: 1:2,500
Printed at: 1:2,500



Surveyed 1863
Revised 1863
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
www.groundsure.com

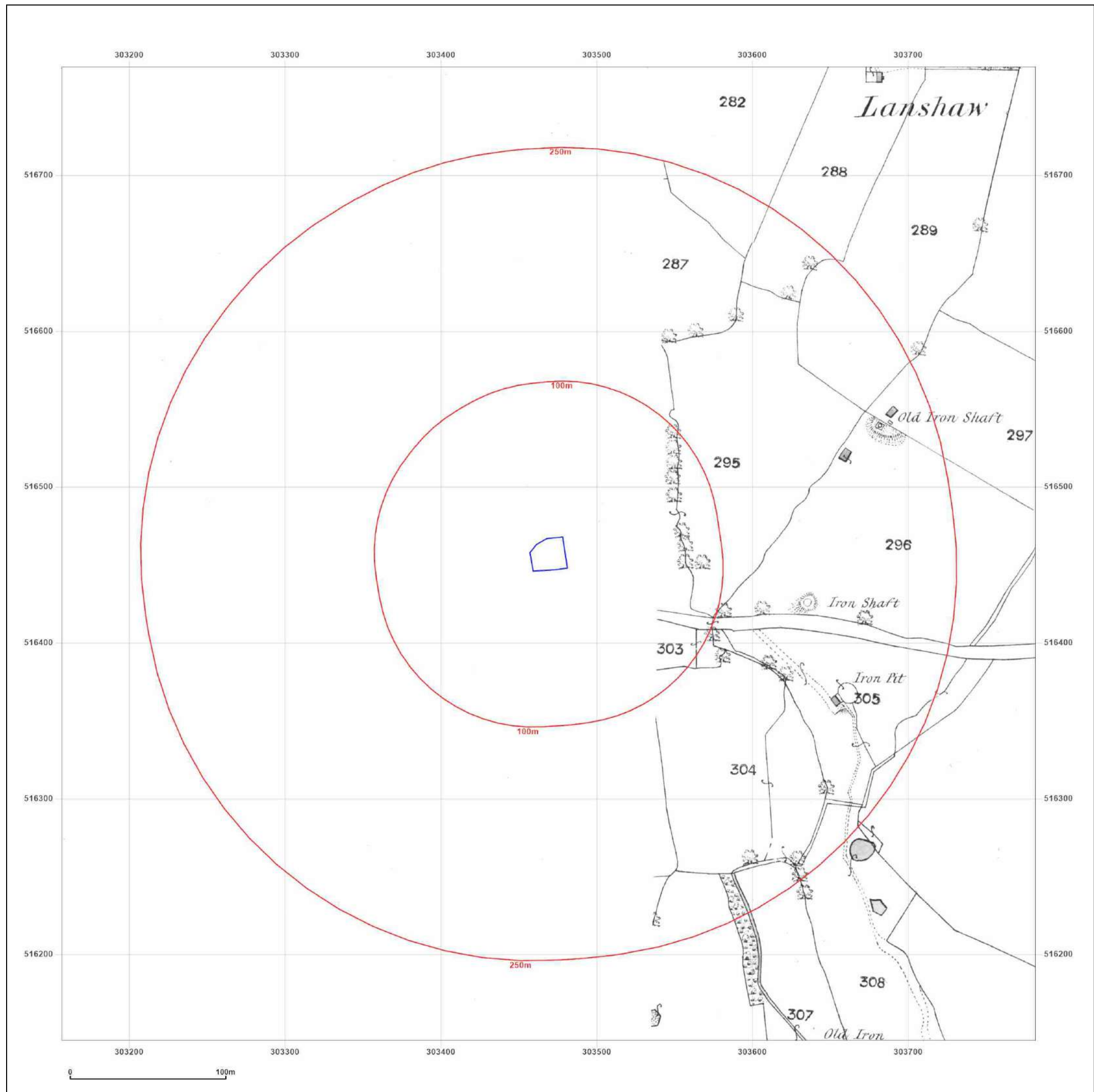


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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: County Series

Map date: 1864

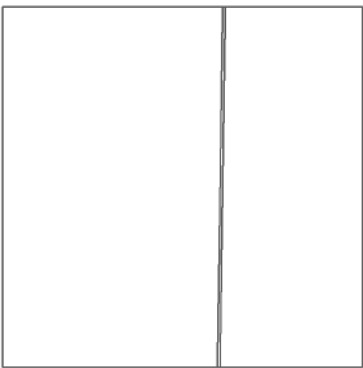
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Edition N/A
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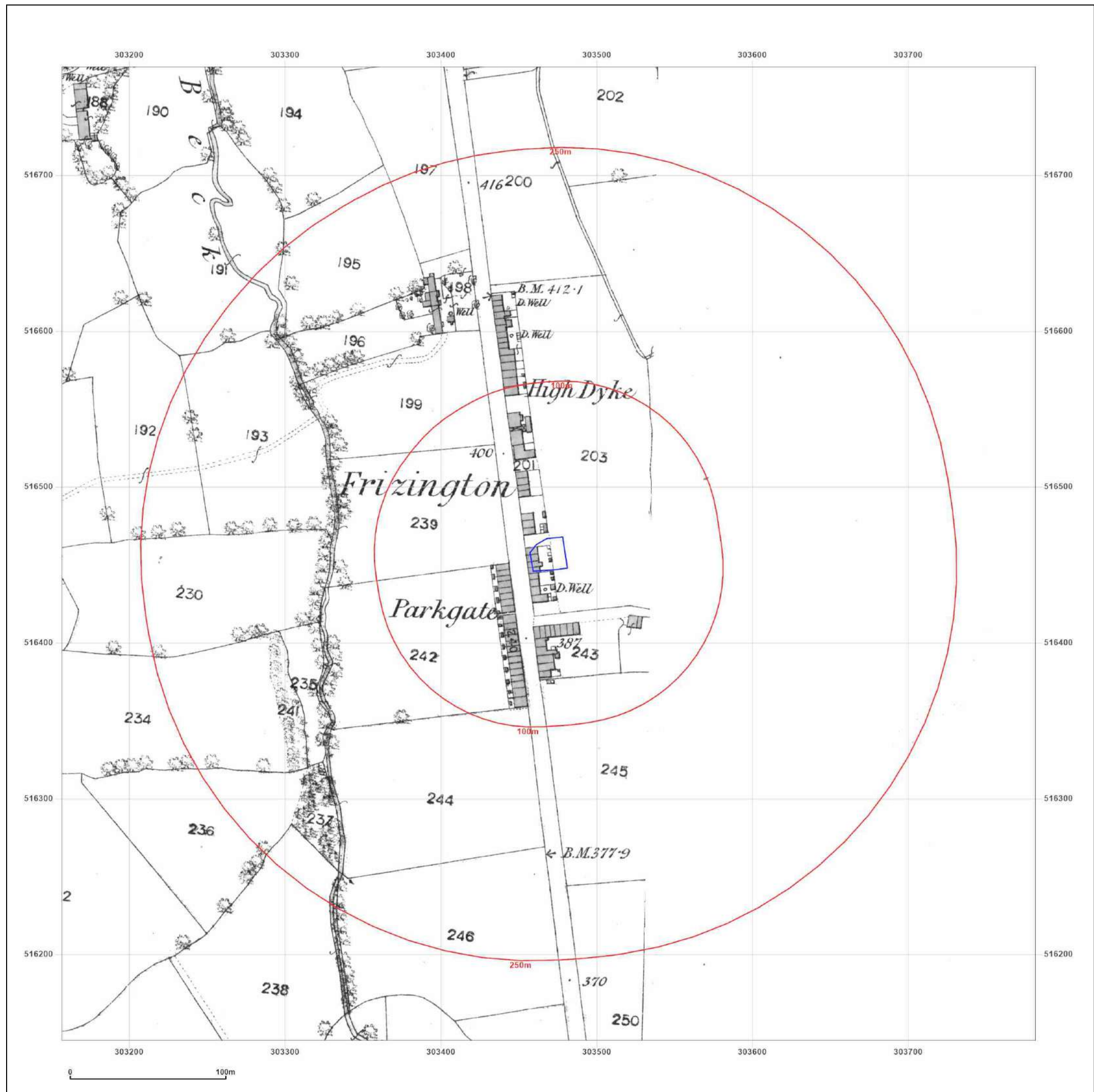


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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: County Series

Map date: 1864

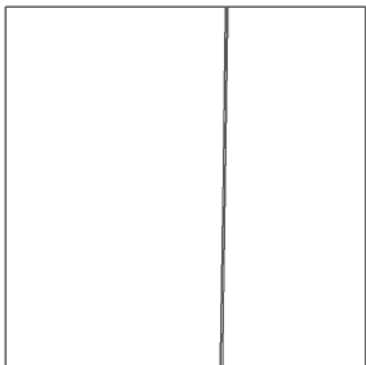
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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: County Series

Map date: 1899

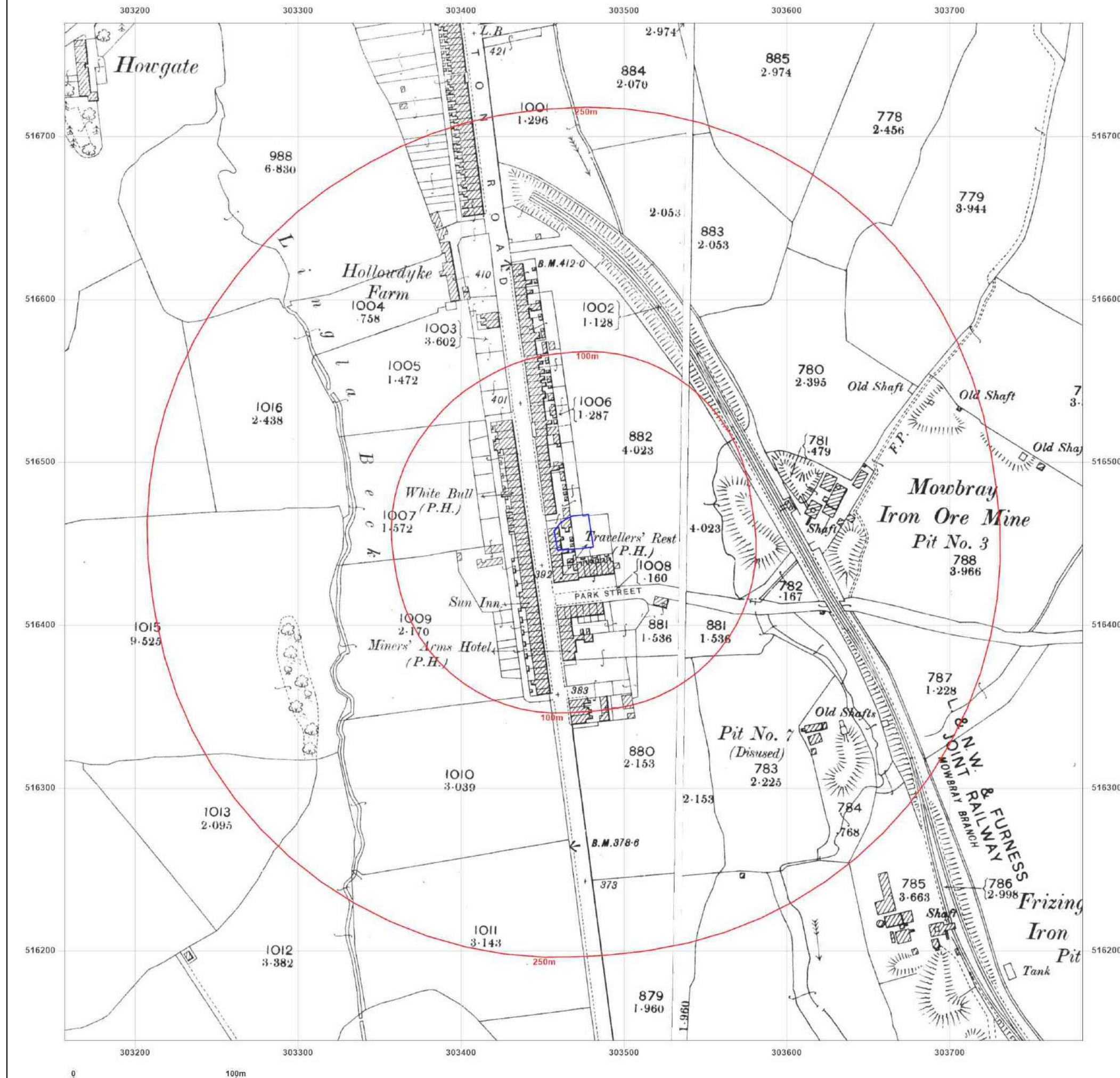
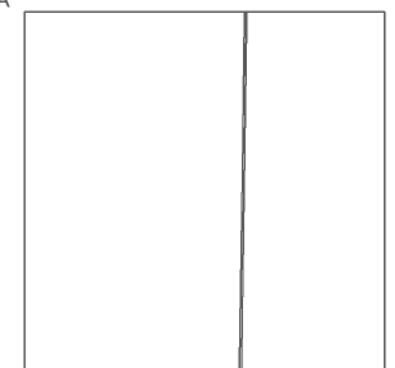
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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: County Series

Map date: 1925

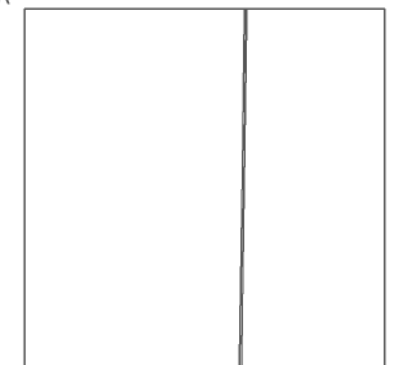
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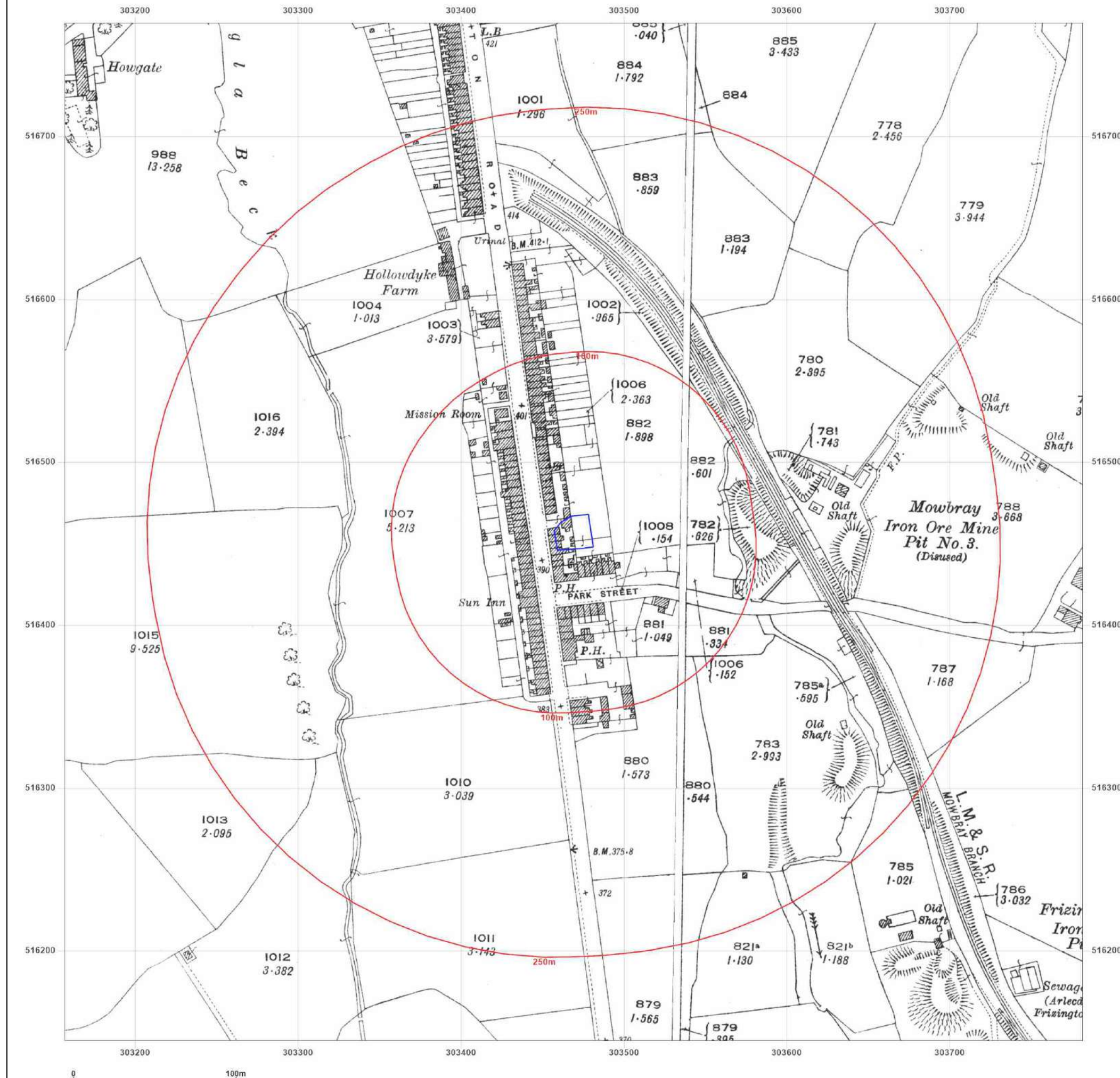


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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: National Grid

Map date: 1960

Scale: 1:2,500

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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: National Grid

Map date: 1962

Scale: 1:2,500

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Revised N/A
Edition N/A
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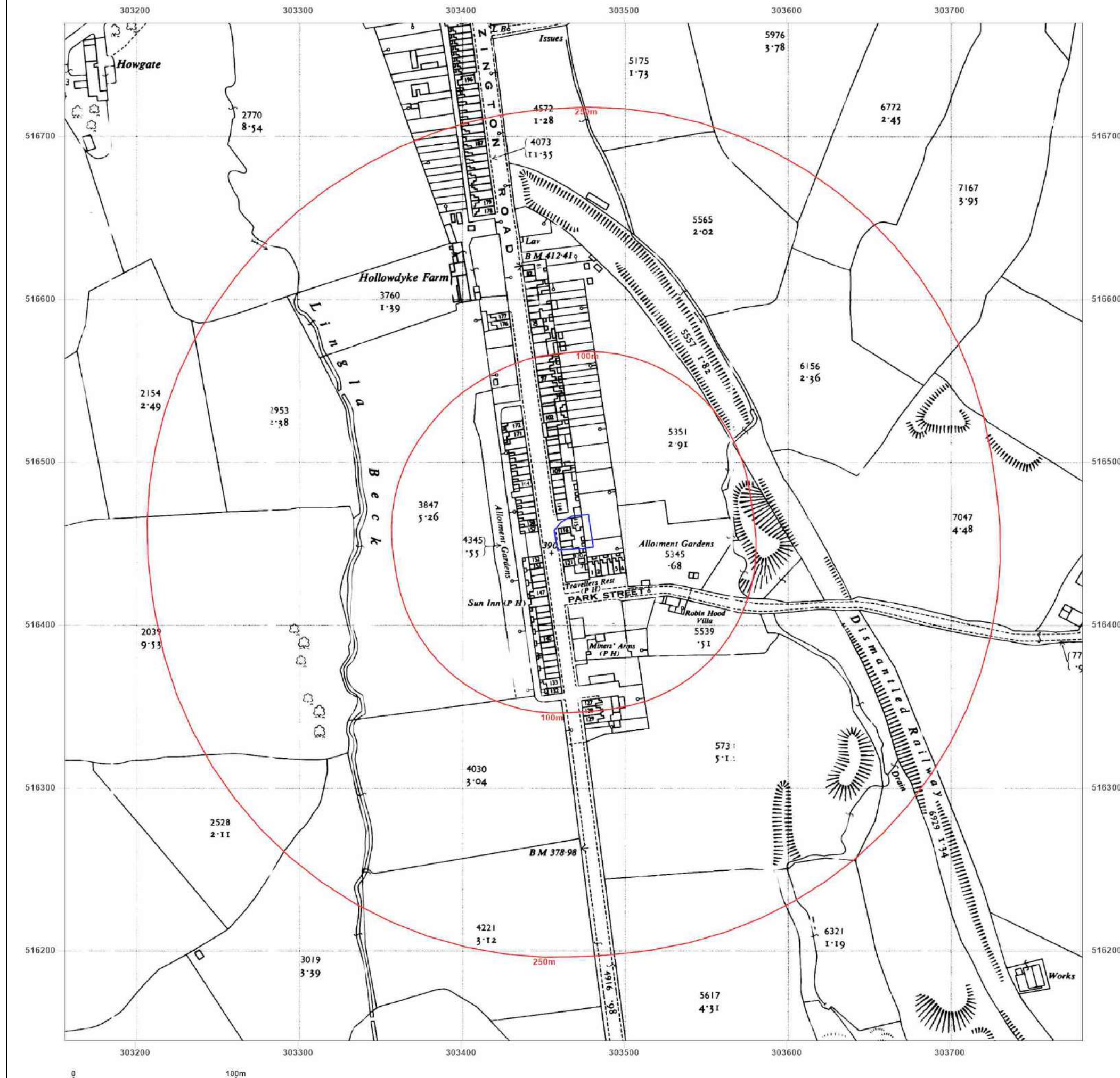


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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

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Surveyed 1994
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Site Details:

Client Ref: EMS_697845_912696
Report Ref: EMS-697845_912696
Grid Ref: 303469, 516457

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003



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Appendix IV

- The Coal Authority Consultants Coal Mining Report



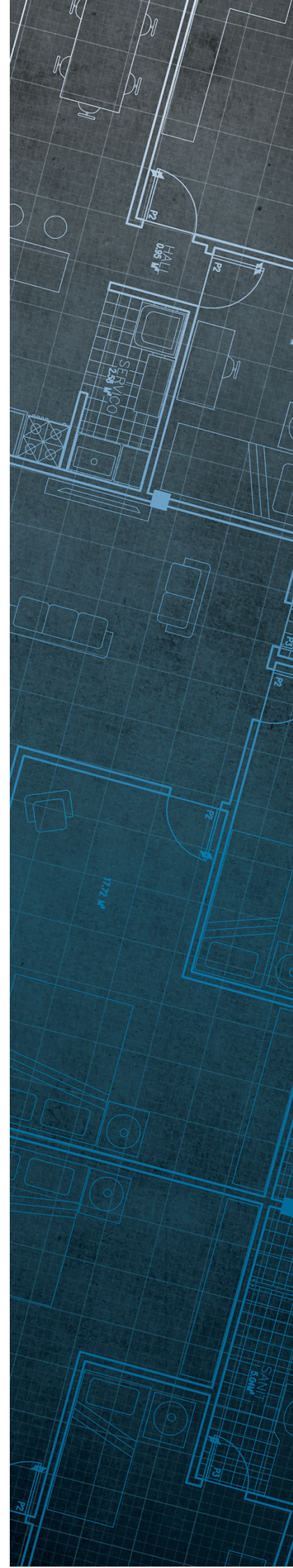
The Coal
Authority

Consultants Coal Mining Report

Land At Frizington Road
Frizington
Cumbria
CA26 3SP

Date of enquiry:	28 May 2021
Date enquiry received:	28 May 2021
Issue date:	28 May 2021

Our reference:	51002536800001
Your reference:	GEO2021-4690



Consultants

Coal Mining Report

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

Client name

Curtis Evans

Enquiry address

Land At Frizington Road
Frizington
Cumbria
CA26 3SP

How to contact us

0345 762 6848 (UK)
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200 Lichfield Lane
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Nottinghamshire
NG18 4RG

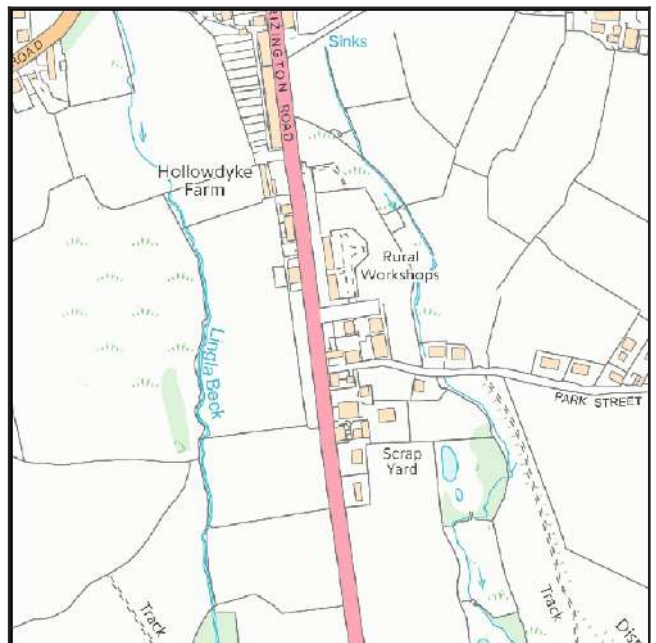
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
mowbray	IRONSTONE	Ironstone	A021	180	Beneath Property			120	1906

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

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

17353	OM3325	OM7463
-------	--------	--------

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

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

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

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

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

Withdrawal of support notices

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

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

Payments to owners of former copyhold land

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

Section 4 – Further information

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

Development advice

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

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

Section 5 – Data definitions

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

Past underground coal mining

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

Probable unrecorded shallow workings

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

Spine roadways at shallow depth

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

Mine entries

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

Abandoned mine plan catalogue numbers

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

Outcrops

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

Geological faults, fissures and breaklines

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

Opencast mines

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

Coal Authority managed tips

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

Site investigations

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

Remediated sites

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

Coal mining subsidence

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

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

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

Mine gas

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

Mine water treatment schemes

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

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

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

Future underground mining

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

Coal mining licensing

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

Court orders

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

Section 46 notices

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

Withdrawal of support notices

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

Payment to owners of former copyhold land

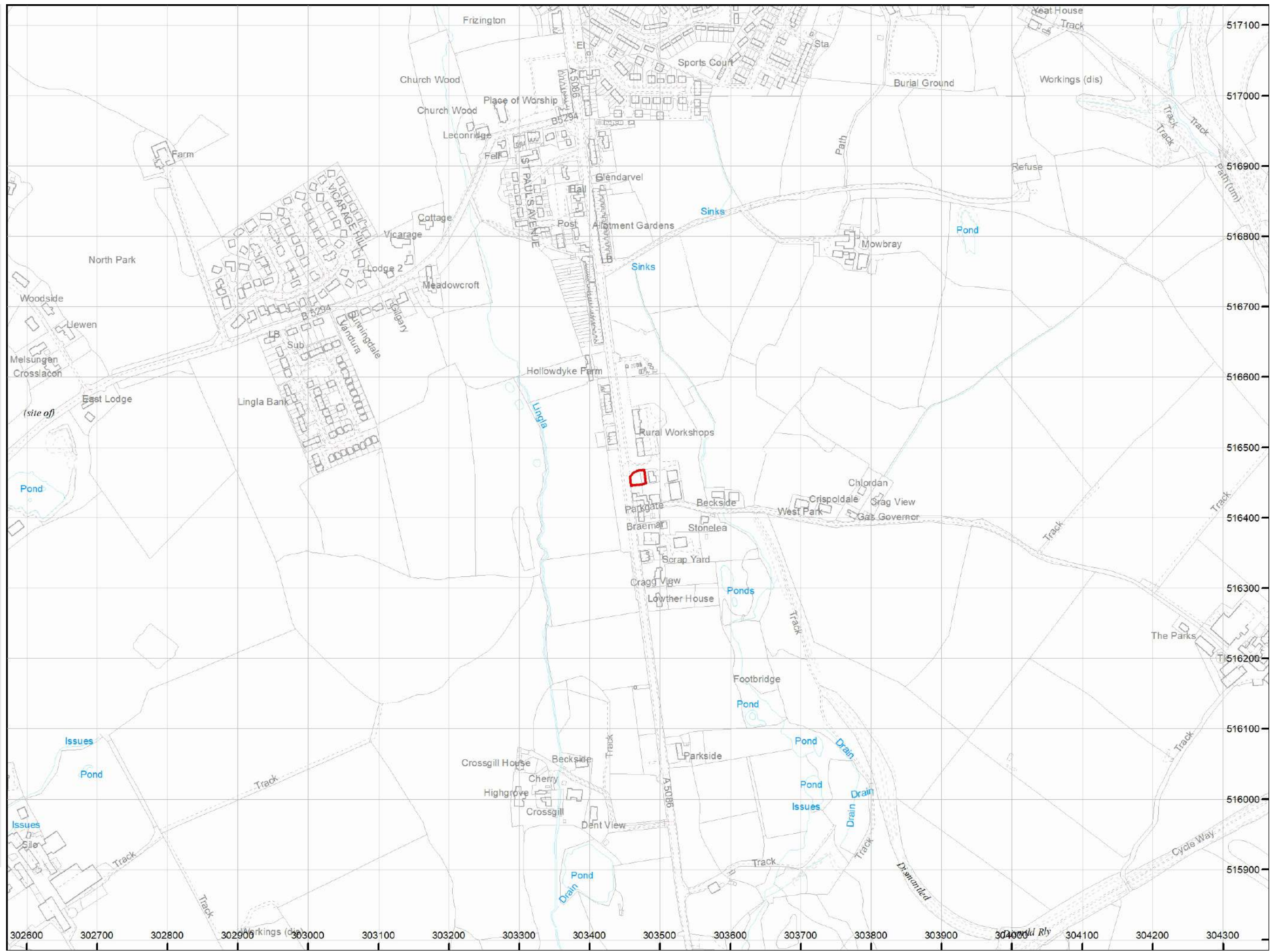
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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

Key

Approximate position of the enquiry boundary shown 

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





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