



GEO Environmental Engineering



PHASE 1: DESK TOP STUDY REPORT

PRELIMINARY GEO-ENVIRONMENTAL RISK ASSESSMENT

PROPOSED REDEVELOPMENT OF LAND AT:

**Scurrigill
Egremont**

FOR

Mr Mike Sullivan

GEO Environmental Engineering

DOCUMENT CONTROL SHEET

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Team and LPA Review

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1.0 Introduction

1.1 Instruction

Geo Environmental Engineering Ltd (GEO) has completed a Phase 1: Desk Top Study Report (Preliminary Geo-Environmental Risk Assessment) for land at Scurrgill, Egremont. Geo Environmental Engineering Ltd has been commissioned by the Client, Mr Mike Sullivan, to determine any potential geohazards that may affect the redevelopment of the site.

The Phase 1: Desk Top Study Report (Preliminary Geo-Environmental Risk Assessment) is suitable for submission to the Local Authority as part of a planning application as the site is currently undergoing consideration by the Client for residential redevelopment. Further details relating to the full scope of redevelopment can be obtained from the Client.

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 generally been completed in accordance with the following documents:

- 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) – Extracts shown in Appendix IV.
- Environment Agency (EA).
- Ground Sure Report (Geosight and Enviroinsight – GSR – Appendix II and III – Incorporating Mapinsight Historical Ordnance Survey (OS) Plans)
- The Coal Authority Online Database (CA – Appendix IV).
- Egremont Mining Company Iron Ore record search by Mr Gilbert Finlinson, retired Mining Engineer (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 Existing Site Layout Plan (provided by the Consultant) in Appendix I.

This DTS has been completed utilising information relating to the physical, environmental and industrial setting of the development area, highlighting, where possible, any potential geohazards that might be encountered when considering the future redevelopment of this land, with this DTS reflecting a proposed end use, as considered by the developer (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.

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 Site Location

The site is located at Scurrgill, Egremont and comprises vacant land within a small area, south-east of Egremont town centre. Residential properties are present to the south and east, with woodland, fields and open-space to the north and a main road to the west.

The site is approximately 0.13ha in size and located at a National Grid Reference of 301682, 510027 (centre of site).

2.2 Site Levels

The central and southern site area is generally level. An upward slope is present in the northern site area. The surrounding topography falls to the west, suggesting some infilling may have taken place across part of the site (i.e. the western site area). It may be prudent to determine site levels and features by way of a Topographical Survey.

2.3 Site Surfacing and Buildings

The site surfacing is of gravel hardstand, with some grass in the northern site area. The site was historically single-storey domestic garages/lock-ups that have recently been removed. The garages are indicated in the aerial photograph extracts in Appendix I.

2.4 Surrounding Land Uses

The surrounding land uses are predominantly residential in nature.

2.5 Infrastructure and Utilities

A review of statutory utility supplier records lies outside the scope of this report. However, it may be the case that buried utilities pass through the site and it would be considered prudent to undertake a Utility Survey that will include correspondence with the utility providers to determine the presence of buried /overhead utilities prior to commencing any redevelopment 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.

2.6 Site Activities

The site was historically single-storey domestic garages/lock-ups that have recently been removed.

2.7 Development Proposal

It is understood that the Client wishes to construct residential properties. Further details relating to the full development can be obtained from the Client.

3.0 Environmental Setting

Section 3.1 refers to the Ground Sure Report (GSR – Geoinsight) contained in Appendix II and the Coal Authority Coal Mining Report (CA) within Appendix IV, with Sections 3.2 to 3.4 referring to the Ground Sure Report (GSR – Enviroinsight) contained in Appendix II. Section 3.5 refers to the historical map extracts (GSR – Mapinsight) contained in Appendix III.

3.1 Development Area Geology

A geological review of the site has been undertaken using information provided on published geological plans in conjunction with the Ground Sure Report (GSR) contained in Appendix II.

3.1.1 Made Ground

A review of published geological maps and the GSR does not indicate the presence of made ground on site. A review of historical OS plans within the GSR indicates former ground workings (iron ore mines etc.) to the NE that could result in some infilling and ground gas generation.

As the site was previously developed and due to localised topographical variations, some made ground is anticipated across parts of the site. Made ground could comprise a mixture of disturbed natural materials (i.e. clay, silt, sand and gravel) with anthropogenic debris (i.e. fragments of ash, clinker, brick, red shale, concrete etc.).

3.1.2 Drift Geological Deposits

The Drift geological deposits are recorded as Glacial Till, typically comprising sandy gravelly clay. No unacceptable or heightened risks are identified with respect to shrink-swell clays, landslides, compressible deposits, collapsible deposits or running sands (Section 6 GSR).

Intrusive ground investigation works would be recommended to confirm ground conditions for future foundation, highway and soakaway design.

3.1.3 Solid Geological Deposits

Reference to published geological plans and the GSR indicates the site is underlain by Solid geological deposits of the St Bees Sandstone, typically comprising layers Sandstone. It is understood that the St. Bees Sandstone is devoid of productive ore bodies or coal seams. However, iron bodies may potentially be present in older strata at a greater depth.

The GSR (Section 5.6) does not record Natural Cavities on site, or within close proximity to the site. The GSR (Section 6.3) within Appendix II identifies a Negligible risk of Ground Dissolution of Soluble Rocks and the follow statement is made:

“Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks”.

As a result, intrusive ground investigation works are recommended to confirm ground conditions for future foundation, highway and soakaway design.

3.1.4 Historical Investigation Records

A historical borehole log is recorded c.7m NE of the site and notes the following:

- Soil to 0.33m
- Sandy clay, sand, gravel, cobbles to 8.23m
- Red Sandstone to 121.13m

The materials at a greater depth (beyond c.121m are of little concern to the site.

3.1.5 Geological Features

No geological structural faults are inferred on geological plans and the GSR as passing beneath the site, however, numerous are recorded around the site. Whilst they are not considered to pose a structural risk, they could potentially act as conduits for ground gas migrations.

3.1.6 Mining and Quarrying Assessment

Due to the geological setting the site reference has been made to the Coal Authority by-way of their on-line database. The following has been noted:

- The site does not lie within a Coal Authority Referral Area and therefore a site-specific Coal Authority Coal Mining Report is not required
- No shallow/subcropping coal seams are noted.
- No recorded shallow coal mine workings are present.
- No suspected shallow coal mine workings are indicated.
- No mine entries are recorded.
- The site does not lie within a Coal Authority defined “High Risk Development Area”.

Therefore, the site is not currently considered to be at risk of shallow coal mining geohazards.

Information presented within the GSR suggests that the site is not a risk of other types of mining that could include brine extraction, gypsum extraction, clay or tin mining. The GSR also notes that the site is not at risk of natural cavities.

Due to the site geological and geographical setting the GSR (Section 5.4 Non-Coal Mining) indicates a risk of iron ore mining. As a result, the Client has obtained an Iron Ore Mining Report from local expert Mr Gilbert Finlinson, who was associated with the Egremont Mining Company and holds the local records for the area. Mr Finlinson has confirmed that whilst Florence Mine was to the north, no mining was undertaken beneath the development site, presumably due to the significant thickness of St Bees Sandstone identified on the historical borehole logs referred to in Section 3.1.4 of this report

Whilst no historical quarrying activities are identified on site or within close proximity to the site, according to the GSR and available historical plans, collieries with reservoirs covered large areas of the land to the immediate east and north, which included spoil heaps and refuse tips. As a result, variable infilling/made ground is anticipated that may pose a risk of ground gas.

As no potential mining features have been identified by the desk based sources no significant risk is considered present. However, GEO is not responsible for the accuracy and completeness of third party information.

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 Health Protection Agency (HPA), as less than 1% of properties are above the action level. Consequently, in accordance with BR211 radon protective measures are not 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 Drift geology is noted as a Secondary (undifferentiated) Aquifer (formerly Minor to Non-Aquifer status) and therefore not of significant environmental sensitivity.

3.2.3 Solid Geology

The Solid geology is designated as a Principal Aquifer status comprising geology of high permeability and is therefore likely to be of strategic significance. However, the anticipated overlying clay soils will likely act as a natural barrier to afford protection to the aquifer.

3.3 Development Area Hydrology

3.3.1 Groundwater

Groundwater is not anticipated at shallow depth. There is the potential for localised pockets of trapped surface infiltration within the upper made ground and Drift geological deposits (where present). A review of the information in the GSR indicates the following:

- Several groundwater abstractions are recorded within c.250m of the site. All appear to be from Florence Mine for British Nuclear Fuels. They are unlikely to be affected by the proposed development.
- No surface water abstractions are recorded within c.250m of the development area.
- Numerous potable water abstraction licences are held within c.250m of the site. All appear to be from Florence Mine for British Nuclear Fuels. They are unlikely to be affected by the proposed development.
- The site is recorded as being within a Source Protection Zone (Zone 3, Total Catchment).

3.3.2 Surface Water Features

No surface water features are recorded directly on site. The nearest watercourse is noted c.56m S. There are no Environment Agency (EA) GQA (biological or chemical) monitoring points recorded within c.250m of the development area.

3.3.3 Current Surface Water Run-off

It is considered that the current surface water will infiltrate directly into the made ground/topsoil as impermeable hard-standings/buildings are not present.

3.4 Development Area Environmental Sensitivity

3.4.1 Site Ecology

- One Site of Special Scientific Interest (SSSI) is noted within c.250m. This is noted as Florence Mine, c.208m N.
- No National Nature Reserves (NNR) are present within c.250m.

- No Special Areas of Conservation (SAC) are noted within c.250m.
- No Special Protection Areas (SPA) are present within c.250m.
- No World Heritage Sites are recorded within c.250m.
- No RAMSAR Sites are noted within c.250m.
- No Records of Ancient Woodland are recorded within c.250m.
- No Records of Environmentally Sensitive Areas are recorded within c.250m.
- No Areas of Outstanding Natural Beauty (AONB) are recorded within c.250m.
- No National Parks are recorded within c.250m.
- No Nitrate Sensitive Areas are within c.250m.
- The site does lie within a Nitrate Vulnerable Zones (NVZ). However, the proposed development is unlikely to increase risk of nitrates to nitrate vulnerable waters.
- The site lies within a recorded area of Green Belt land.

The Design Team should refer to Section 8.0 of the GSR (Enviroinsight – Appendix II) for further information on the above-mentioned records.

3.4.2 Authorisations, Incidents and Registers

- No records of IPC Authorisations are held within c.250m.
- No records of IPPC Authorisations are held within c.250m.
- No records of Water Industry Referrals (potentially harmful discharges to the public sewer) are held within c.250m.
- No records of Red List Discharge Consents (potentially harmful discharges to controlled waters) are held within c.250m.
- No records of List 1 Dangerous Substances Inventory sites are held within c.250m.
- No records of List 2 Dangerous Substances Inventory sites are held within c.250m.
- No Part A (2) and Part B Activities are recorded within c.250m.
- No records of Category 3 or 4 Radioactive Substances Authorisations are held within c.250m.
- No Licensed Discharge Consents are held within c.250m.
- No records of Planning Hazardous Substance Consents or Enforcements are within c.250m.
- No records of COMAH and NIHHS sites are held within c.250m.
- No Environment Agency Recorded Pollution Incidents (List 2) are detailed within c.250m.

The Design Team should refer to Section 2.0 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

A review of Section 1.0 in the GSR (EnviroInsight) identifies the following:

- Potentially Contaminative Uses Identified within c.250m – Four entries on site and a further thirteen entries within c.250m. They include tramway sidings, iron ore pit, refuse heaps and cuttings.
- Historical Tank Database – One entry recorded within c.250m.
- Historical Energy Features – No entries noted within c.250m.
- Historical Petrol and Fuel Site Database – None noted within c.250m.
- Historical Garage and Motor Vehicle Repair Database – No entries noted within c.250m.
- Historical Military Sites – No entries recorded within c.250m.

- Potentially Infilled Land within c.250m – Two entries on site with a further fifteen entries recorded within c.250m. They include iron ore pits, refuse heaps, reservoirs and cuttings. Areas of infilling within c.250m pose a potential risk of ground gas generation.

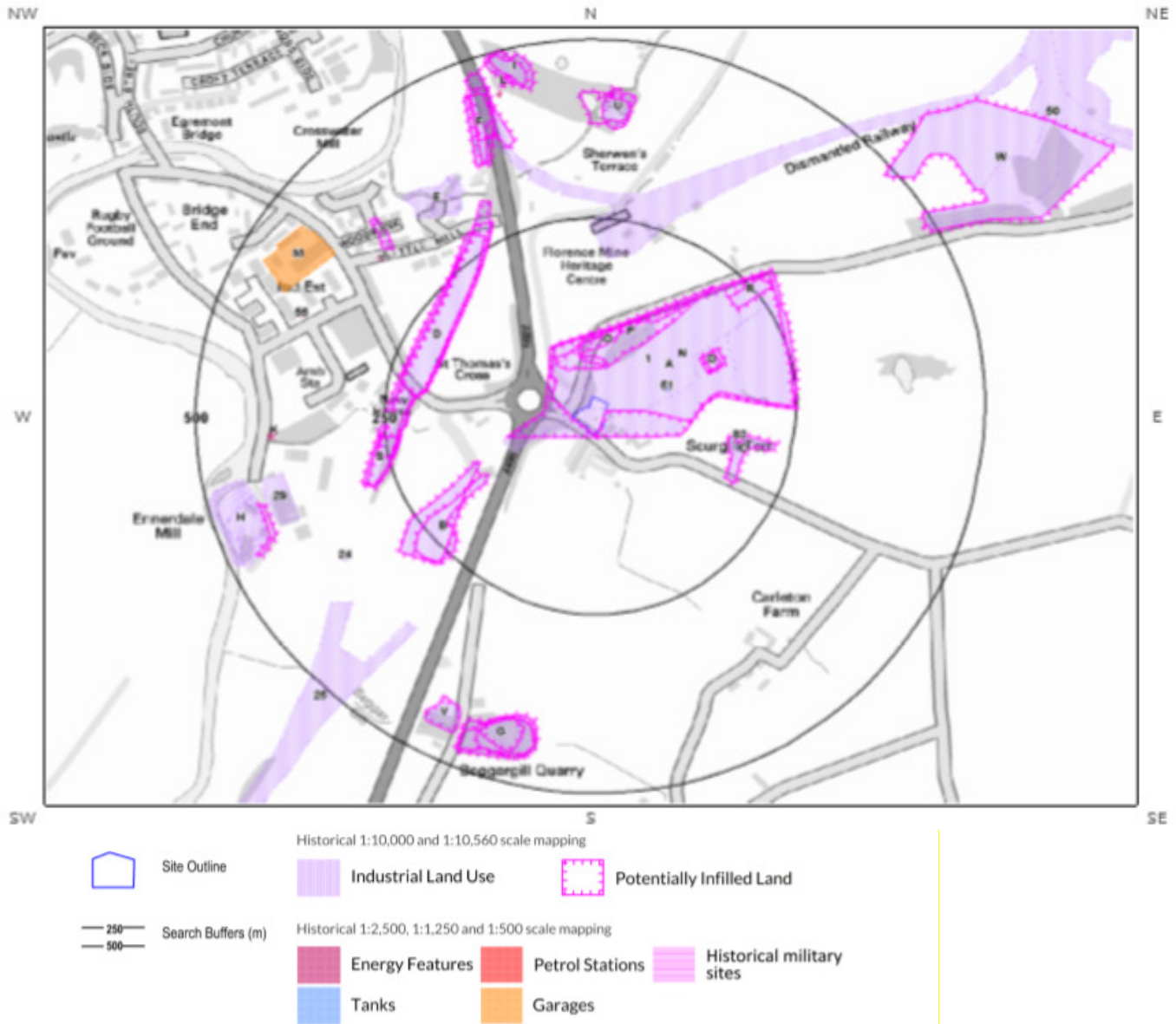


Figure 3.1 GSR Environsight Historical Land Use

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

3.4.5 Current Industrial Land Uses

Due to the residential nature of the surrounding area there are only three current industrial land uses noted within c.250m of the development site. They include a garage for road vehicle repairs, electricity substation and (former) iron ore mine. Reference can be made to Section 4.1 of the GSR for further information (Environsight – Appendix II).

3.4.6 Fuel Station Entries

Section 4.2 of the GSR (Enviroinsight – Appendix II) indicates that no current or former fuel filling stations are recorded within c.250m.

3.4.7 Landfill and Waste Regulation/Management – Landfill Sites

- No Environment Agency Registered Landfill Sites are recorded within c.250m.
- Two Environment Agency Historic Landfill Sites are recorded within c.250m.
- The BGS/DoE Landfill Site Survey does not note any Landfill Sites within c.250m.
- One GroundSure Local Authority Landfill site is recorded within c.250m.
- No Operational or Non-Operational Waste Treatment, Transfer or Disposal Sites are recorded within c.250m.
- One Environment Agency Licensed Waste Site is recorded within c.250m.

It is recommended that reference be made to Section 3.0 of the GSR Enviroinsight (Appendix II) for further information.

The GSR records former landfill and historical plans indicate former refuse heaps/areas of infilling within close proximity that pose a potential risk of ground gas generation.

3.5 Development Area Historical Plan Appraisal

Section 3.5 is based on historical plans (Ordnance Survey extracts) obtained as part of the parcel of information within the GSR and provides a summary of the site history, highlighting any industries, processes or activities that may be considered as Geohazards. Copies of old survey plans covering the site and adjacent areas have been reviewed with extracts provided within Appendix III. Reference has also been made to historical Aerial images, where available.

The earliest detailed plan around c.1863 indicates the site as agricultural fields, surrounded by fields. By c.1924 some infilling is suggested across part of the site, with Florence Mine noted to the NE. Reservoirs, spoil heaps and railway infrastructure are noted across land to the N, NE and W. Houses are present to the SE and S. The c.1961 plan indicates that Florence Mine is disused and that infilling has taken place of reservoirs and cuttings. The railway infrastructure has gone and the site is occupied by one small structure. By c.1963 the site is occupied by the lock-up garages that stood until recently when they were removed by the Client.

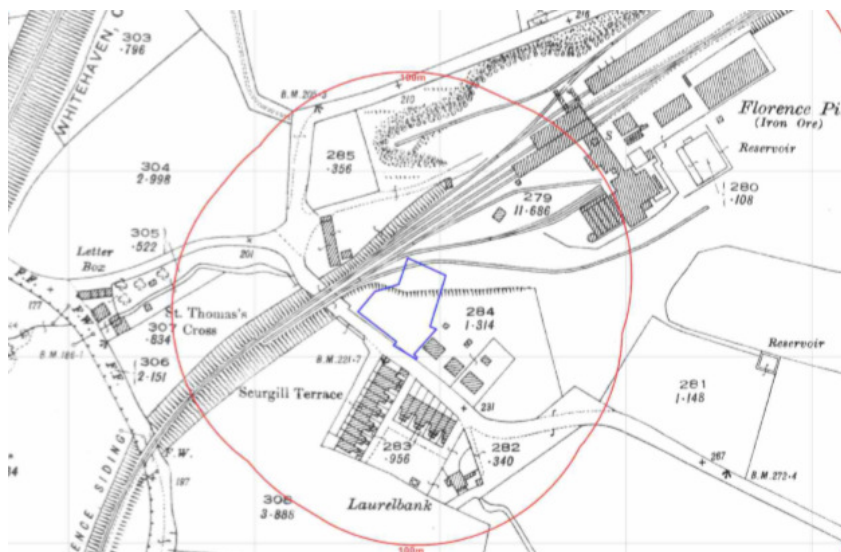


Figure 3.2 c.1924 Historical Plan Extract

4.0 Conceptual Site Model

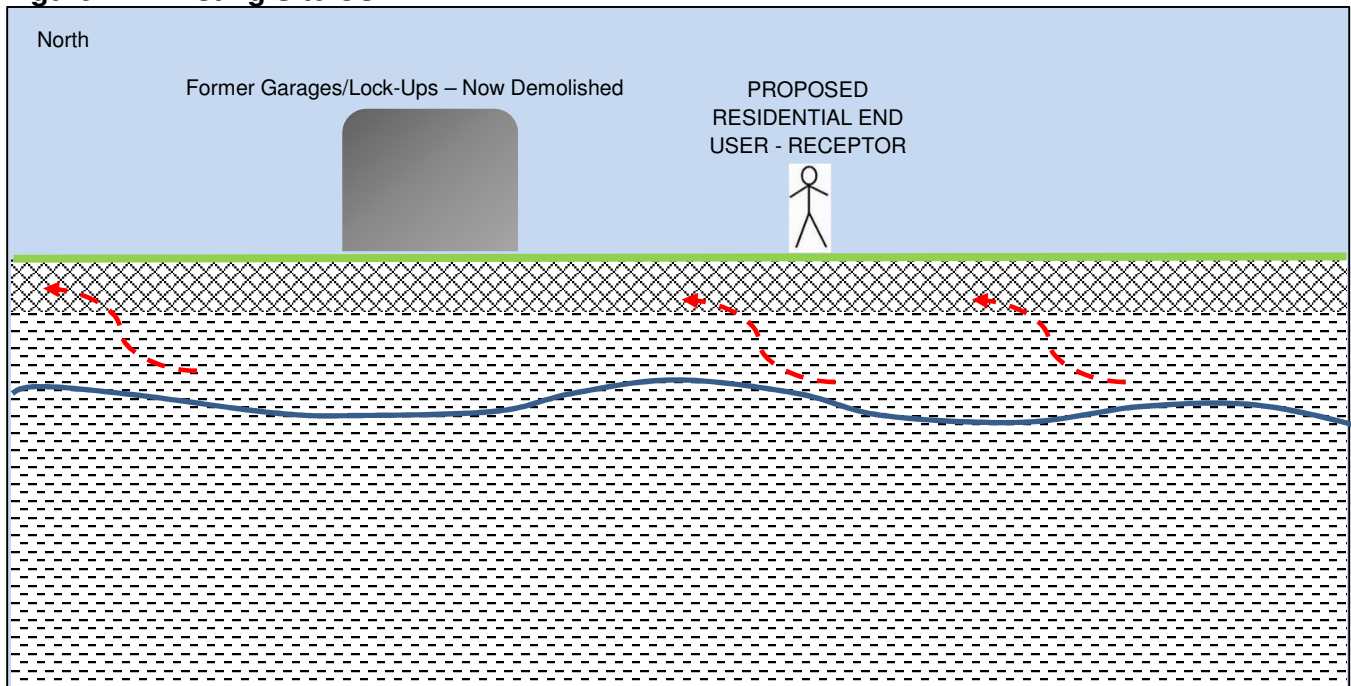
A Conceptual Site Model (CSM) has been designed using the information presented within this DTS to provide a graphical representation of the anticipated ground, groundwater and ground gas conditions below the development area (Existing Site CSM).

The CSM utilises the established *Source – Pathway – Receptor* pollutant linkage model and is designed to provide an improved understanding of the site characteristics, designing a Preliminary Screening Strategy (PSS) for the Potential Contaminants of Concern (PCOC's). 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.

During the P2 GI, the CSM can be refined depending 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 end use.

The preliminary CSM is presented in the graphically below and in the matrices on the following pages, and considers the anticipated *Source – Pathway – Receptor* pollutant linkage model derived for this site.

Figure 4.1 Existing Site CSM



Conceptual, for Information Only – Not to Scale (does not take into consideration topographical constraints)

Table 4.2

	Made Ground – generic/organic contaminants
	Drift Geology –Glacial Till
	Solid Geology –Sandstone
	Groundwater (at depth in Drift/Solid Geology?)
	Ground Gas – Various sources (off site)

Conceptual, for Information Only – Refer to Tables 4.3 for detail


Table 4.3

Sources:
<p>Soil and Water Contamination</p> <p>S1 = Generic Made Ground. Made ground on site associated with former site levelling, structures, etc...</p> <p>It is recommended that intrusive investigations be completed to confirm the shallow ground conditions, with samples of made ground recovered for a Human Health Risk Assessment and to determine the suitability for topsoil (where present) for reuse in a residential context in accordance with British Standards.</p> <p>Potential contaminants of concern (PCOC's) 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.</p> <p>Asbestos containing materials (ACM's) may have been included within the fabric of former structures on site and therefore screening of soils should be undertaken for asbestos fibres (qualitative).</p> <p>General Comments. In addition, a watching brief should be implemented during the redevelopment 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.</p>
<p>Ground Gas Generation</p> <p>S2 = Sources Identified.</p> <p>Potential Sources of Ground Gas include: Made ground/areas of infilling (former mine, reservoirs, landfill sites, refuse heaps etc.). The Glacial Till may potentially act as a natural barrier to hinder ground gas migrations.</p> <p>PCOC's include Carbon Dioxide, Methane and reduced Oxygen levels.</p>
Pathways:
P1 = Inhalation of indoor / outdoor air (wind-blown particles)
P2 = Dermal/direct contact (risk present through areas of private gardens and soft landscaping)
P3 = Ingestion (risk present through areas of private gardens and soft landscaping)
P4 = Migration through existing services
P5 = Direct contact with building materials
P6 = Surface Run-off
P7 = Leaching from Soils
Receptors:
R1 = Human Health (Proposed Residents)
R2 = Human Health (Construction Workforce)
R3 = Groundwater (Principal Aquifer)
R4 = Building Materials and Buried Utilities
R5 = Flora and Fauna (future private gardens and soft landscaping)

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




- Some variable made ground may be present across parts of the site.
- If natural clay soils are present, then they may be affected by surrounding mature vegetation.

Information from the BGS and CA suggests no risk of shallow coal mining geohazards. Information from a local expert indicates no risk of iron ore mining beneath the site. However, GEO is not responsible for the accuracy and completeness of third-party information and consideration of potential unrecorded mining features should be taken during redevelopment (i.e. watching brief).

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 made ground and Drift geological deposits) to aid detailed design (i.e. foundations, highways and drainage).

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 considering 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

A preliminary qualitative risk level of VERY LOW is currently determined appropriate for this development with respect to ground contamination. No significant contamination risks have been identified, however the site was previously developed and levels suggest made ground is present.

As the proposed end use is residential it is recommended that intrusive investigations be completed to confirm the shallow ground conditions, with samples of made ground recovered for a Human Health Risk Assessment and to determine the suitability for topsoil (where present) for reuse in a residential context in accordance with British Standards.

Potential contaminants of concern (PCOC's) 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.

Asbestos containing materials (ACM's) may have been included within the fabric of former structures on site and therefore screening of soils should be undertaken for asbestos fibres (qualitative).

A preliminary qualitative 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. No significant sources have been identified directly on site and the shallower Drift deposits are recorded as Glacial Till, which will likely act as a natural barrier to hinder potential contaminant migrations.

A preliminary qualitative risk level of LOW to MODERATE is currently considered appropriate for the site with respect to potential harmful ground gas (Carbon Dioxide and Methane) as potential sources have been identified within an influencing distance. The development area is not identified as being within an area requiring radon protective measures.

In addition to the above, a watching brief should be implemented during the redevelopment 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 very low risk to the proposed end users (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.
- A low to moderate level of risk is currently considered present of ground gas.

Geohazards have been identified and it is recommended that investigations be completed on site to determine ground/groundwater/ground gas conditions to inform of any remedial requirements prior to redevelopment taking place. It may therefore be the case that the Local Planning Authority sees fit to apply specific conditions relating to the intrusive assessment of the site, subject to planning permission being awarded.

If during intrusive investigations contaminated ground/groundwater or elevated ground gas is identified, then it may be the case that some form of remediation is required. Until quantitative intrusive ground investigation information is available, it is not possible to accurately confirm what may or may not be required.

The Phase 2: Ground Investigation works would also be prudent to aid the design of foundations, retaining structures and highways (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. The information presented within this report is provided by GroundSure (emapsite) and GEO cannot be held responsible for the accuracy of third party information.

End of Report

Appendix I

- Site Location Plan
- Aerial Photograph Extract
- Site Images

GEO2018-3547: Site Location Plan



GEO2018-3547: Aerial Photograph Extract



Aerial Photograph Capture date: 05-Oct-2008
Grid Reference: 301682,510027
Site Size: 0.13ha

GEO2018-3547: Site Images – January 2019



Appendix II

- Ground Sure Report (GSR – Geinsight and Enviroinsight)



EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Report Reference: EMS-526698_708239

Your Reference: EMS_526698_708239

Report Date 12 Feb 2019

Report Delivery Method: Email - pdf

Geo Insight

Address: Land at, Scurrigill, Egremont,

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you would like further assistance regarding this report then please contact the emapsite customer services team on 0118 9736883 quoting the above report reference number.

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Geo Insight

Address: Land at, Scurrigill, Egremont,
Date: 12 Feb 2019
Reference: EMS-526698_708239
Client: EmapSite

NW N NE



SW S SE

Aerial Photograph Capture date: 05-Oct-2008
Grid Reference: 301682,510027
Site Size: 0.13ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	No

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

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

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

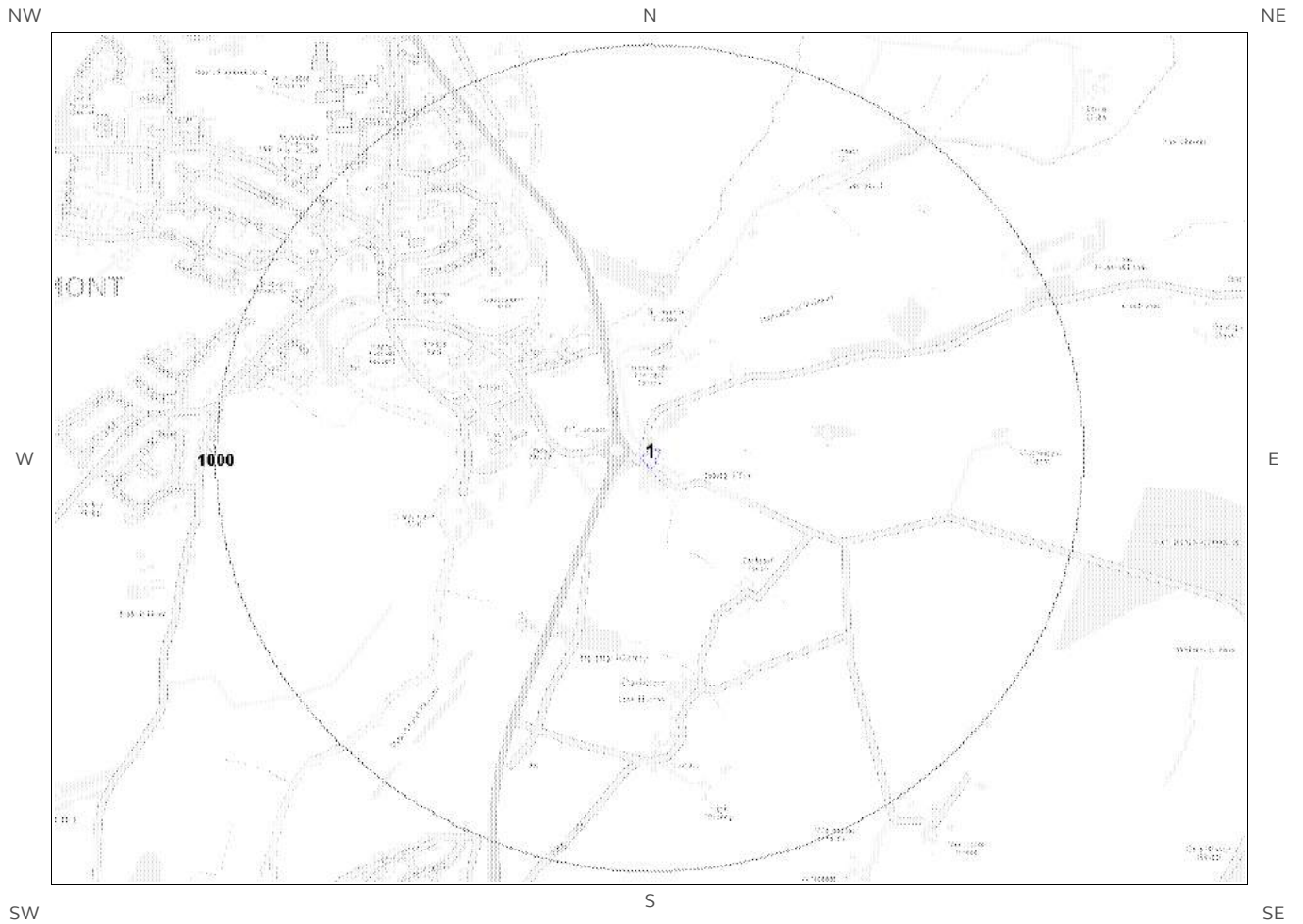
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	2	2	13	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	2	10
4.3 Current Ground Workings	0	0	1	3	3

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	2	0	0	2	10
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	2	0	1	2	4
5.5 Non-Coal Mining Cavities	0	1	0	1	2
5.5 Natural Cavities	0	0	0	0	0

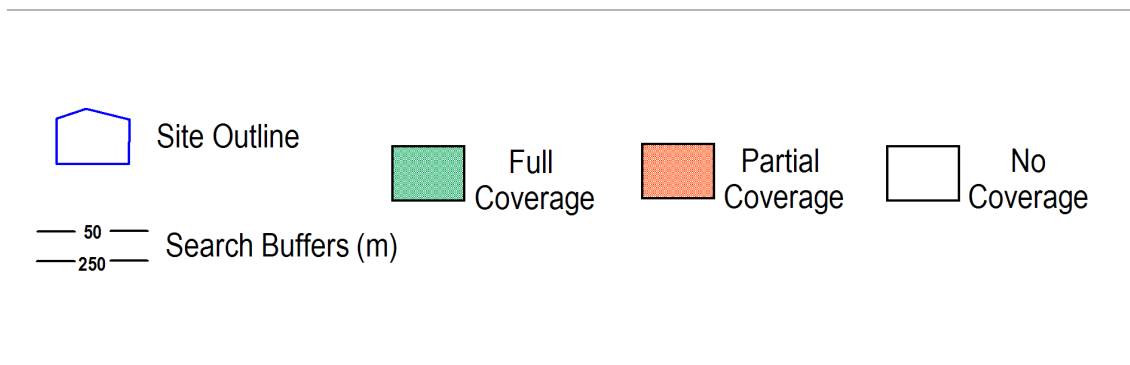
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence					
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records					
7 BGS Recorded Boreholes	On-site	0-50m	51-250		
	0	3	44		
Section 8: Estimated Background Soil Chemistry					
8 Records of Background Soil Chemistry	On-site	0-50m	51-250		
	3	0	0		
Section 9: Railways and Tunnels					
9.1 Tunnels	On-site	0-50m	51-250	250-500	
	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	3	0	3	Not Searched	
9.3 Historical Railways	0	0	1	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	No coverage	No coverage	No coverage
N2	1656.0	No deposits are mapped	No coverage	No coverage	No coverage

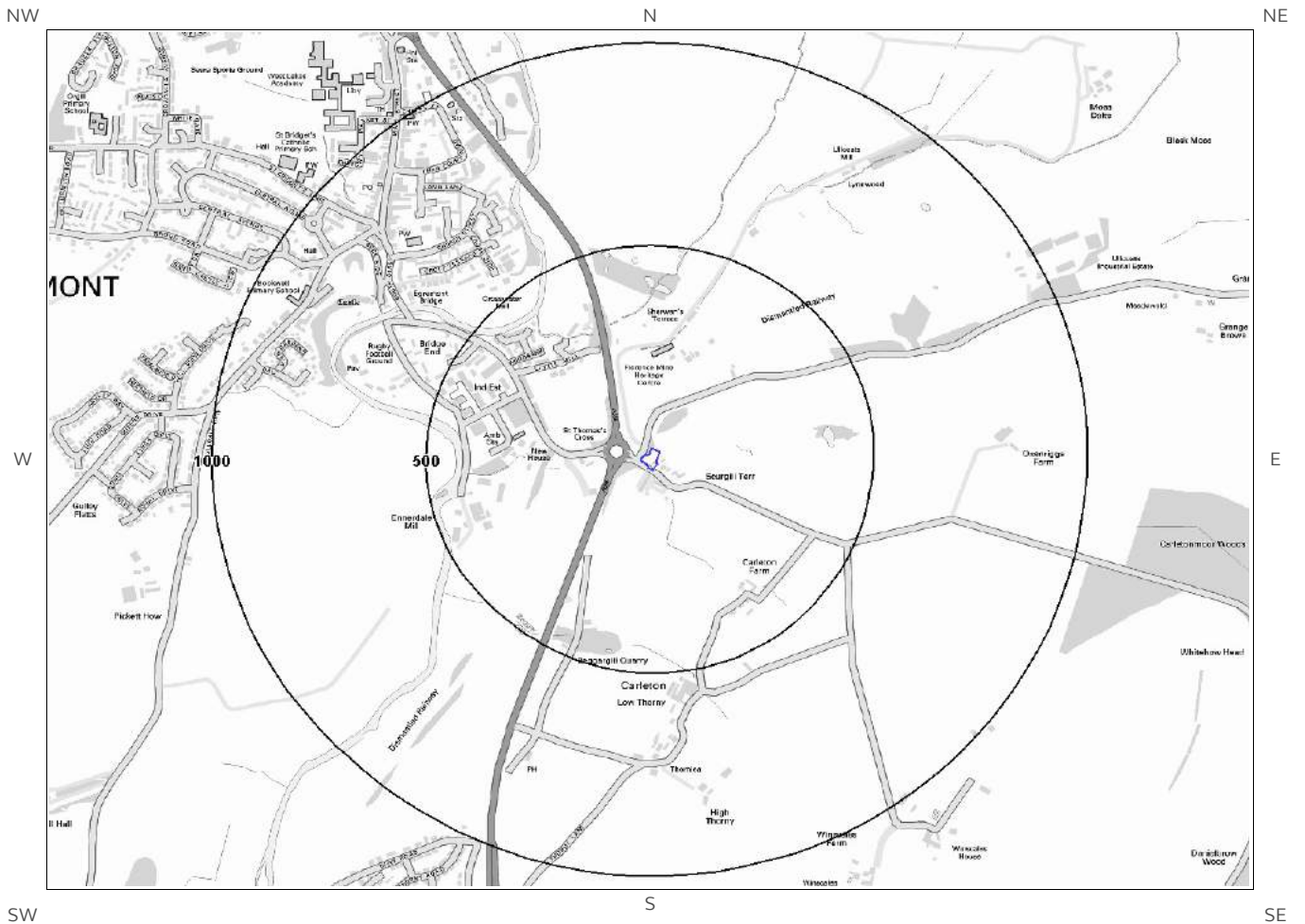
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage




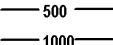




1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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	Site Outline		Made Ground (undivided)		Disturbed Ground (undivided)
	Search Buffers (m)		Worked Ground (undivided)		Landscaped Ground (undivided)
			Infilled Ground		Reclaimed Ground

1. Geology 1:10,000 scale

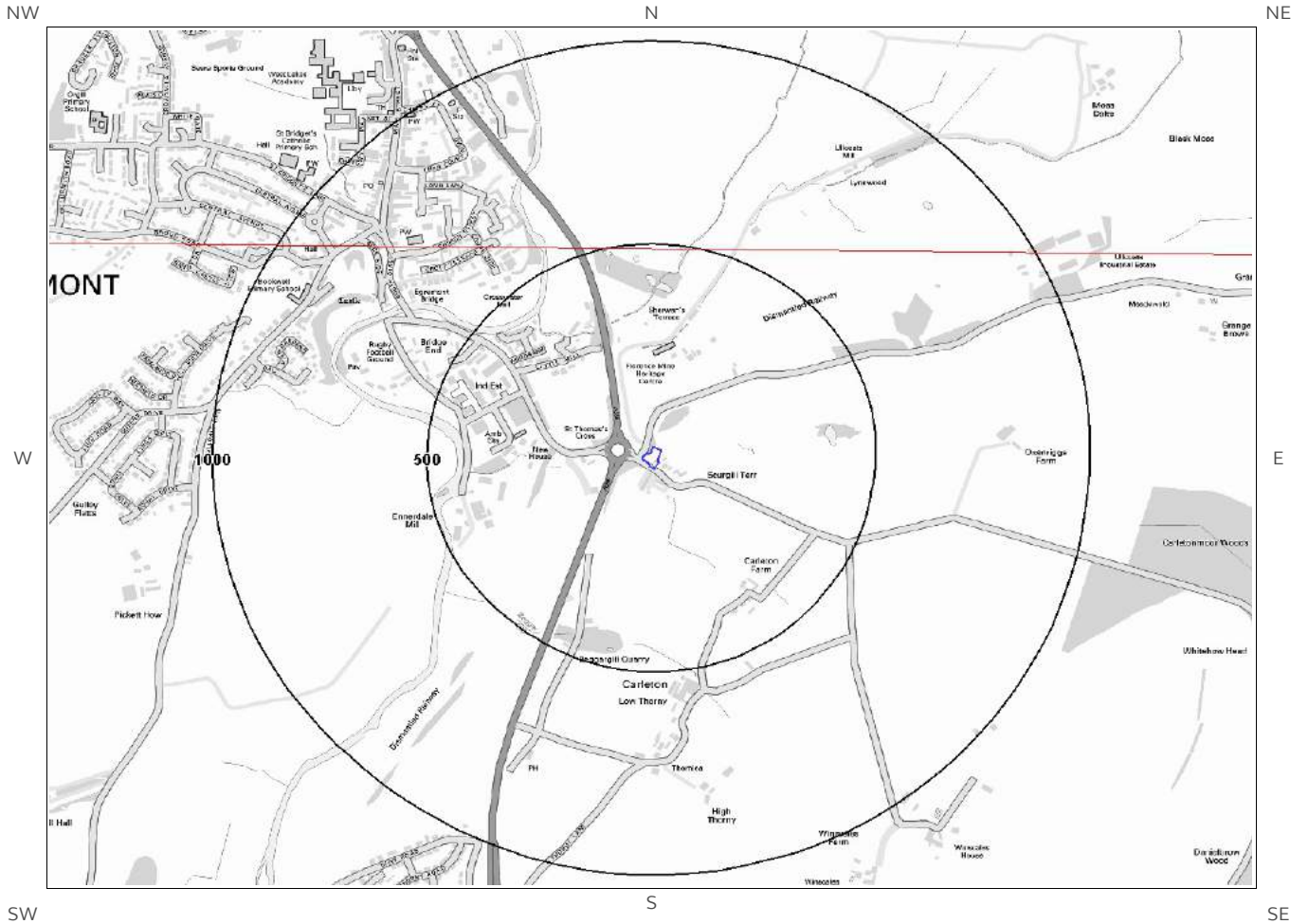
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? No




Database searched and no data found.

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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-  Site Outline
-  500
-  1000
- Search Buffers (m)

1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

1.2.2 Landslip

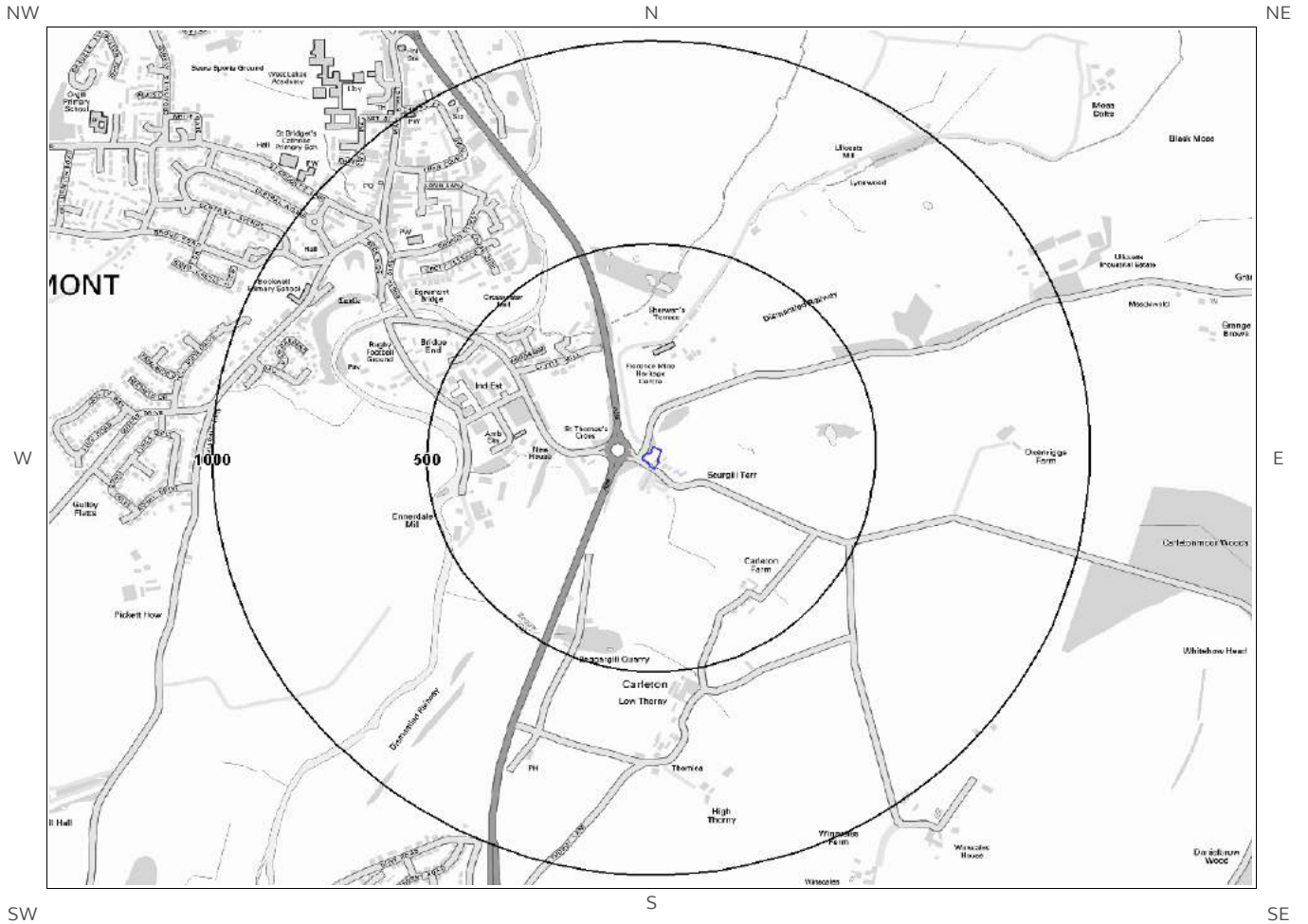
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale




This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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-  Site Outline
 -  500
 -  1000
- Search Buffers (m)

1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

Database searched and no data found at this scale.

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? No

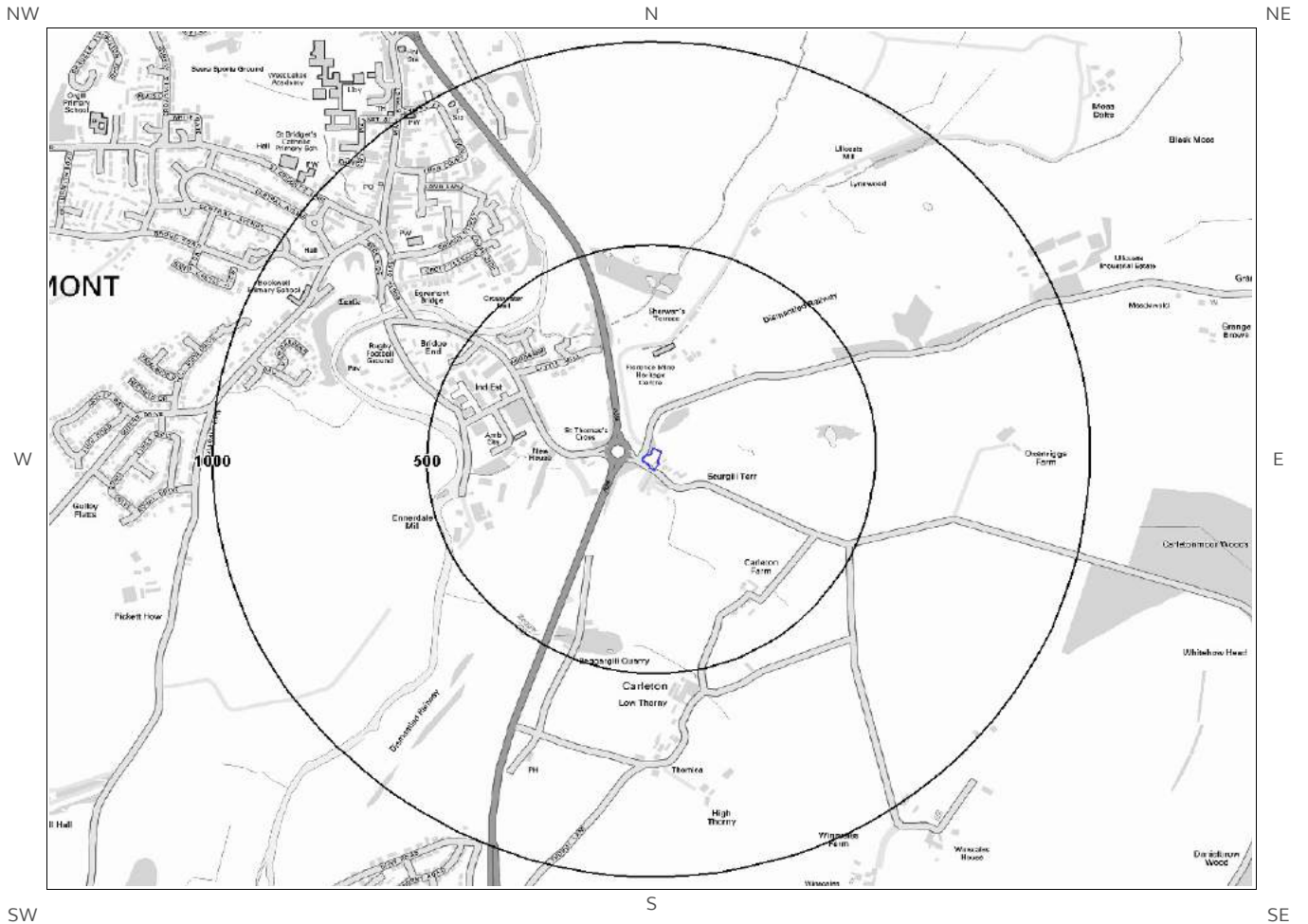
Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

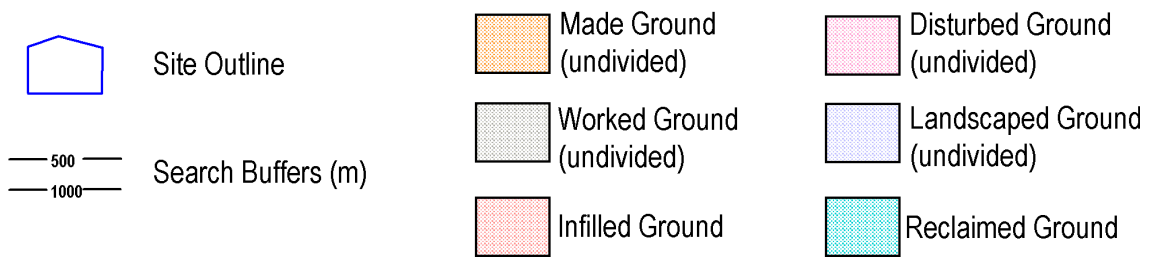
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 037

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? No

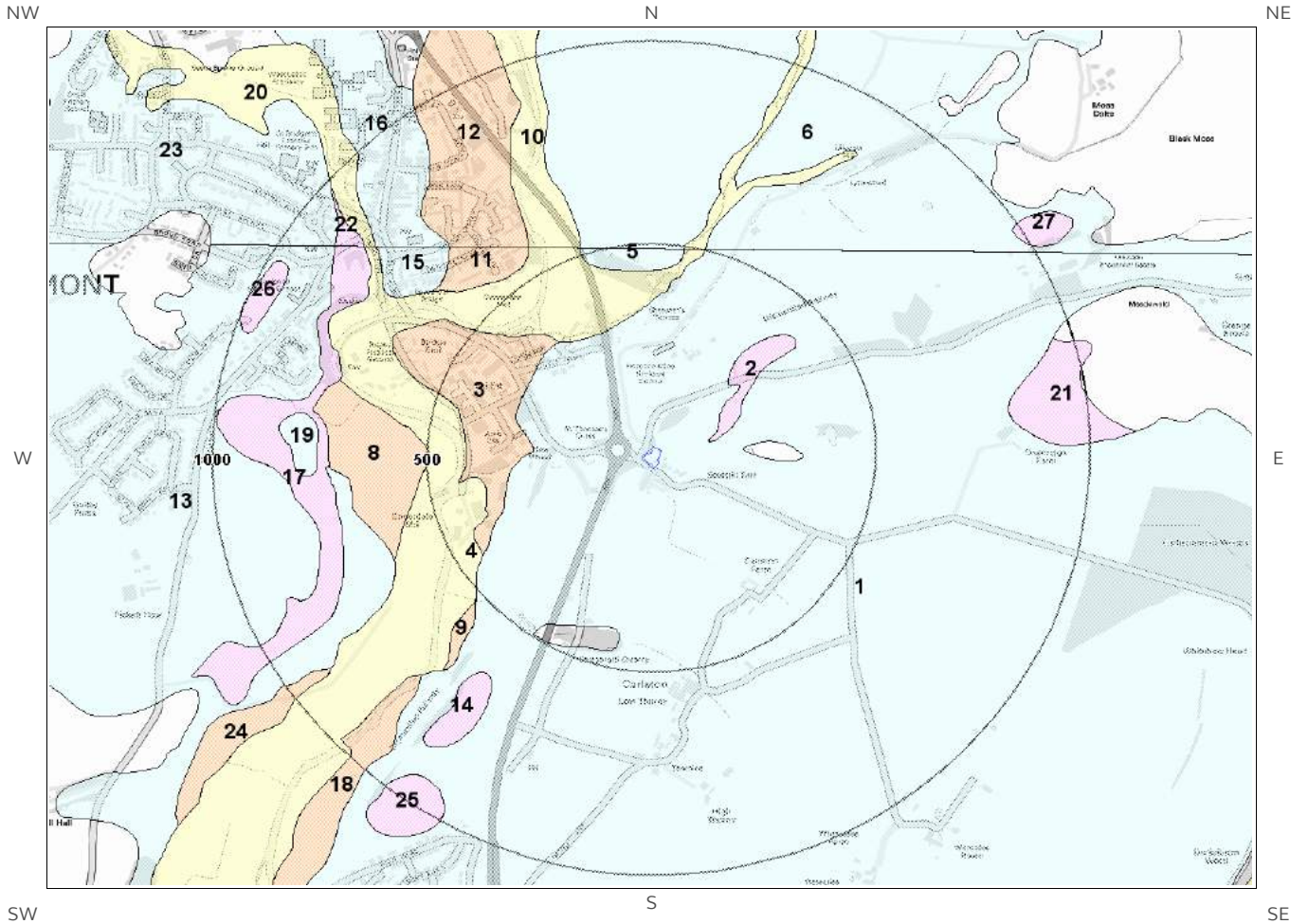
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

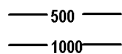
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	113.0	E	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	251.0	W	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
4	305.0	NW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	434.0	N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	489.0	N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	493.0	N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
8	495.0	W	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low
0.0	On Site	Mixed	High	Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary?

No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

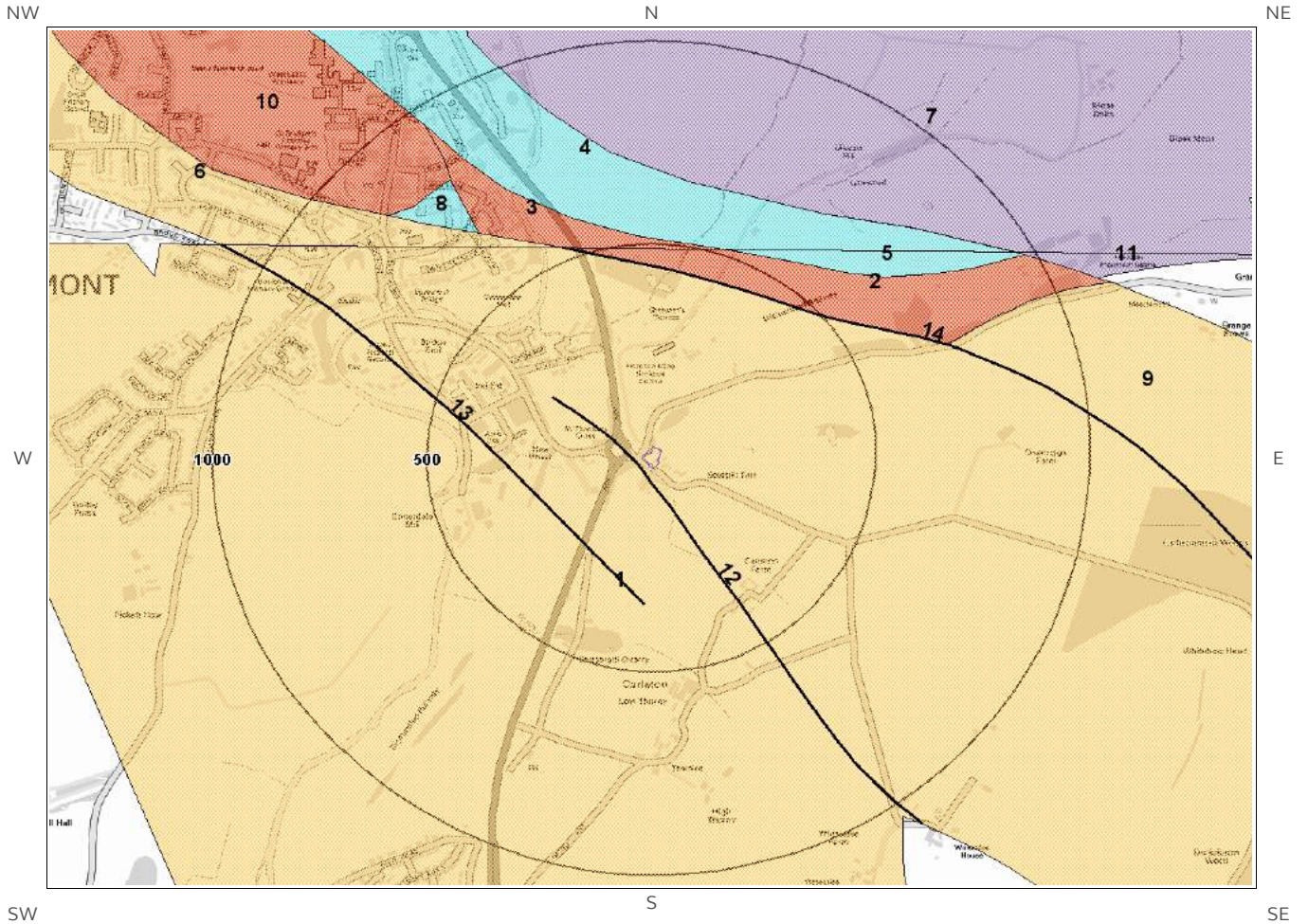
2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

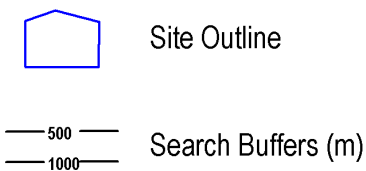
No

Database searched and no data found.

2.3 Bedrock and linear features map (1:50,000 scale)



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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 037

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-
2	432.0	N	BK-BREC	BROCKRAM - BRECCIA	-
3	489.0	N	BK-BREC	BROCKRAM - BRECCIA	-

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Moderate
0.0	On Site	Mixed	High	Moderate

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
12	16.0	SW	FAULT	Fault, inferred, displacement unknown
13	240.0	SW	FAULT	Fault, inferred, displacement unknown
14	432.0	N	FAULT	Fault, inferred, displacement unknown

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

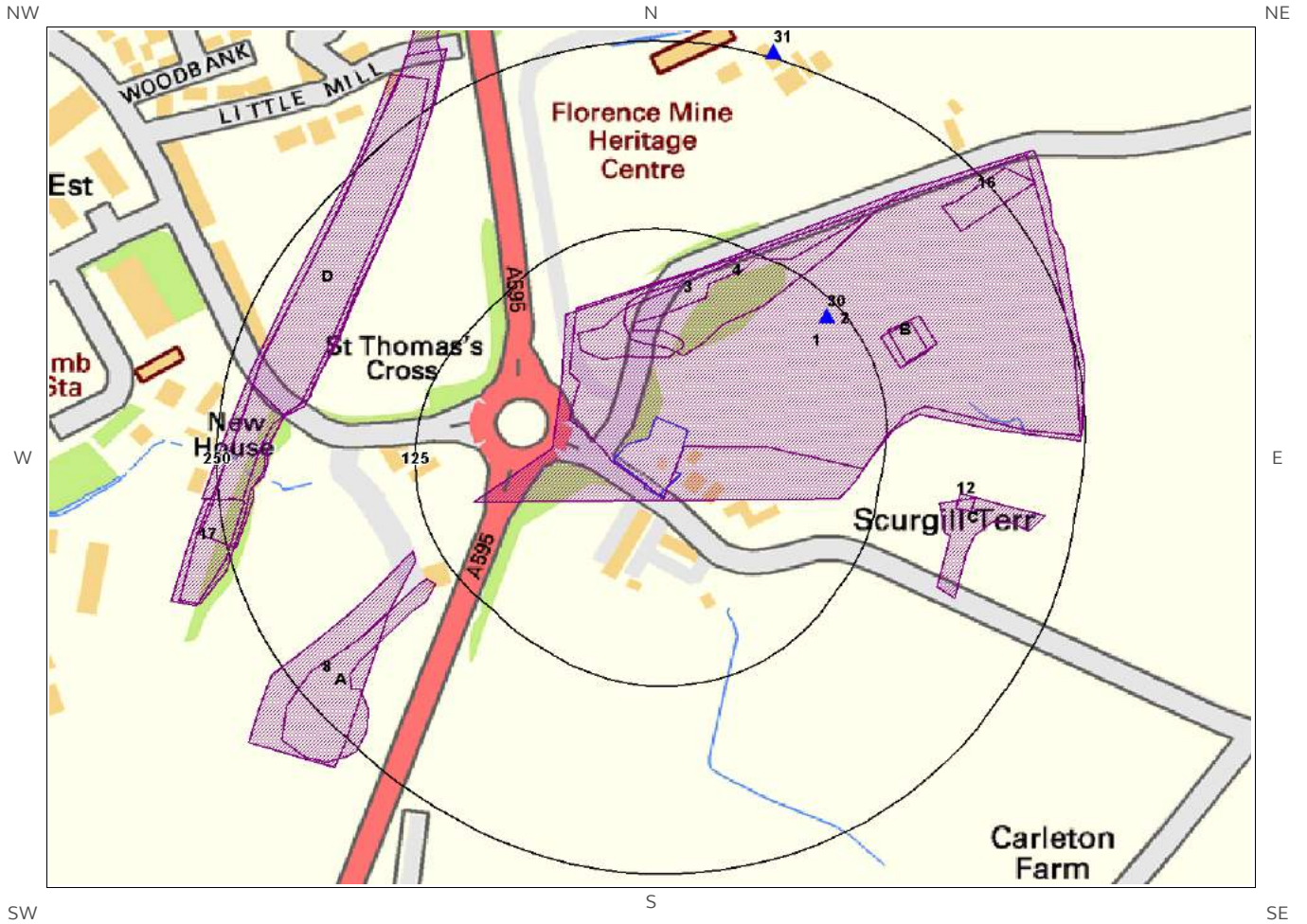
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection



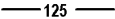
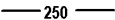
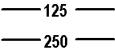
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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-  Site Outline
-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings
-  Search Buffers (m)

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	301759 510111	Iron Ore Pit	1948
2	0.0	On Site	301790 510114	Iron Ore Pit	1926
3	39.0	N	301707 510141	Refuse Heap	1948
4	44.0	NE	301751 510149	Refuse Heap	1926
5B	136.0	NE	301839 510101	Reservoir	1948
6A	139.0	SW	301479 509884	Unspecified Heap	1981
7A	139.0	SW	301479 509884	Unspecified Heap	1971
8	140.0	SW	301478 509892	Refuse Heap	1951
9B	142.0	NE	301844 510105	Reservoir	1926
10C	165.0	E	301873 509966	Refuse Heap	1981
11C	165.0	E	301873 509966	Refuse Heap	1971
12	175.0	E	301878 509996	Reservoir	1926
13D	191.0	NW	301473 510132	Cuttings	1898
14D	192.0	NW	301488 510190	Cuttings	1926
15D	195.0	W	301468 510139	Cuttings	1948
16	217.0	NE	301892 510198	Cuttings	1926
17	234.0	W	301400 509963	Cuttings	1951

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	449.0	N	301562 510492	Unspecified Old Shaft	1948
Not shown	453.0	N	301570 510496	Unspecified Old Shaft	1926
Not shown	688.0	NE	302604 510514	Iron Ore Mine	1948
Not shown	694.0	NE	302306 510509	Iron Ore Mine	1926
Not shown	793.0	NW	301273 510970	Unspecified Mine	1898
Not shown	823.0	NE	302435 510439	Unspecified Mine	1898
Not shown	854.0	NW	301298 510917	Unspecified Mine	1926
Not shown	886.0	SE	302543 509481	Iron Ore Mine	1951
Not shown	886.0	SE	302543 509481	Unspecified Mine	1971
Not shown	891.0	SE	302539 509433	Unspecified Disused Mine	1994
Not shown	897.0	SE	302532 509476	Unspecified Mine	1926
Not shown	978.0	SE	302461 509393	Unspecified Disused Shaft	1981

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

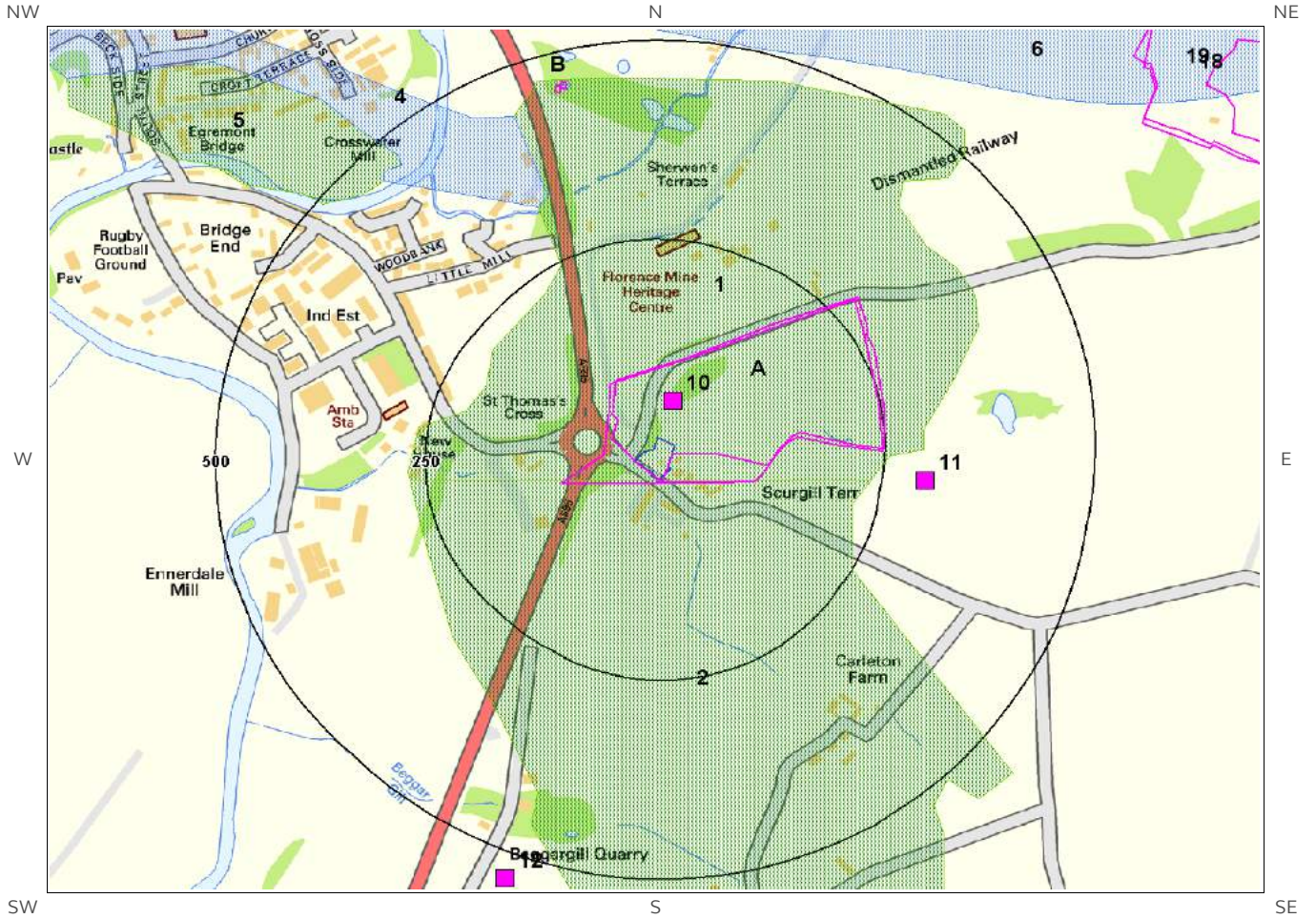
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
30	116.0	NE	301790 510120	Hematite (Iron Ore)	Florence Pit No 1	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)	Ceased

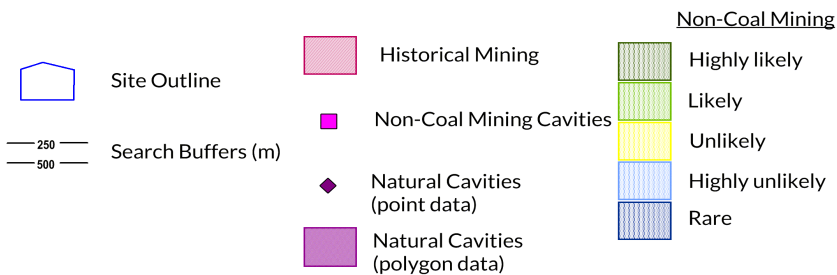
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
31	254.0	N	301756 510296	Hematite (Iron Ore)	Florence Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	331.0	NE	301834 510348	Hematite (Iron Ore)	Florence Mine	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)	Ceased
Not shown	443.0	S	301552 509577	Sandstone	Beggargill Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	589.0	NE	302120 510460	Hematite (Iron Ore)	Ullcoats Mine No 3	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)	Ceased
Not shown	618.0	NE	302250 510330	Hematite (Iron Ore)	Ullcoats Mine No 2	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)	Ceased
Not shown	739.0	NE	302320 510450	Hematite (Iron Ore)	Ullcoats Mine No 1	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)	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
14A	0.0	On Site	301790 510114	Iron Ore Pit	1926
15A	0.0	On Site	301759 510111	Iron Ore Pit	1948
16B	449.0	N	301562 510492	Unspecified Old Shaft	1948
17B	453.0	N	301570 510496	Unspecified Old Shaft	1926
18	688.0	NE	302604 510514	Iron Ore Mine	1948
19	694.0	NE	302306 510509	Iron Ore Mine	1926
Not shown	793.0	NW	301273 510970	Unspecified Mine	1898
Not shown	823.0	NE	302435 510439	Unspecified Mine	1898
Not shown	854.0	NW	301298 510917	Unspecified Mine	1926
Not shown	886.0	SE	302543 509481	Iron Ore Mine	1951
Not shown	886.0	SE	302543 509481	Unspecified Mine	1971
Not shown	891.0	SE	302539 509433	Unspecified Disused Mine	1994
Not shown	897.0	SE	302532 509476	Unspecified Mine	1926
Not shown	978.0	SE	302461 509393	Unspecified Disused Shaft	1981

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Iron Ore (Non Vein)	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
2	0.0	On Site	Not available	Iron Ore (Non Vein)	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
3	220.0	E	Not available	Iron Ore (Non Vein)	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
4	324.0	NW	Not available	Iron Ore (Non Vein)	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
5	459.0	NW	Not available	Iron Ore (Non Vein)	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
6	504.0	N	Not available	Vein Mineral	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
Not shown	665.0	NW	Not available	Vein Mineral	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
Not shown	862.0	SE	Not available	Iron Ore (Non Vein)	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
Not shown	892.0	NW	Not available	Iron Ore (Non Vein)	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

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
10	50.0	N	301700 510100	FLORENCE MINE, Cumbria	-	-	Hematite
11	300.0	E	302000 510000	ULLBANK MINE, Cumbria	-	-	Hematite
12	533.0	S	301500 509500	FLORENCE, Cumbria	-	-	Hematite
Not shown	947.0	N	301700 511000	ST HELENA, Cumbria	-	-	Bornite, Chalcocite, Copper, Malachite, Native Copper, Tetrahedrite

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

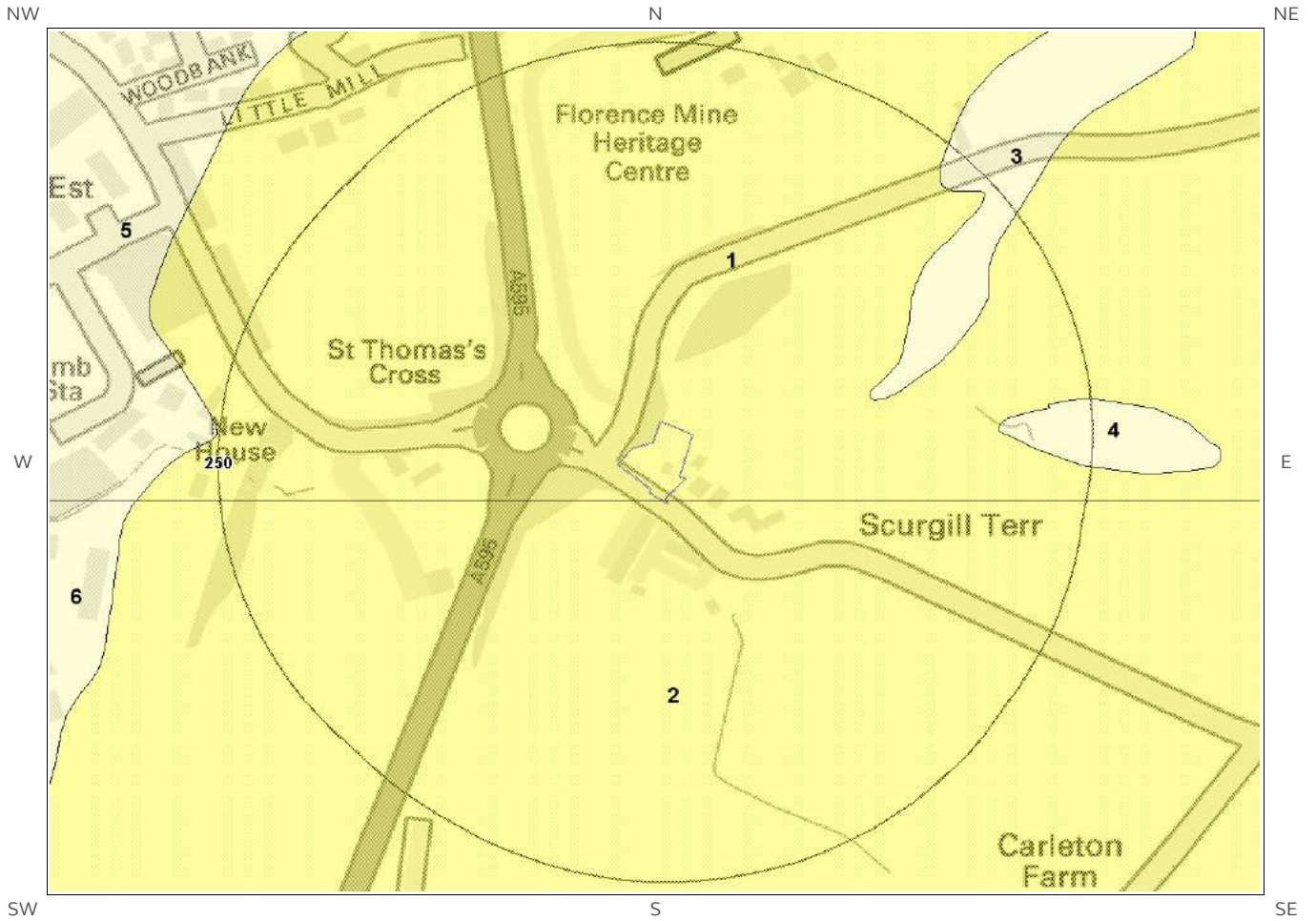
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

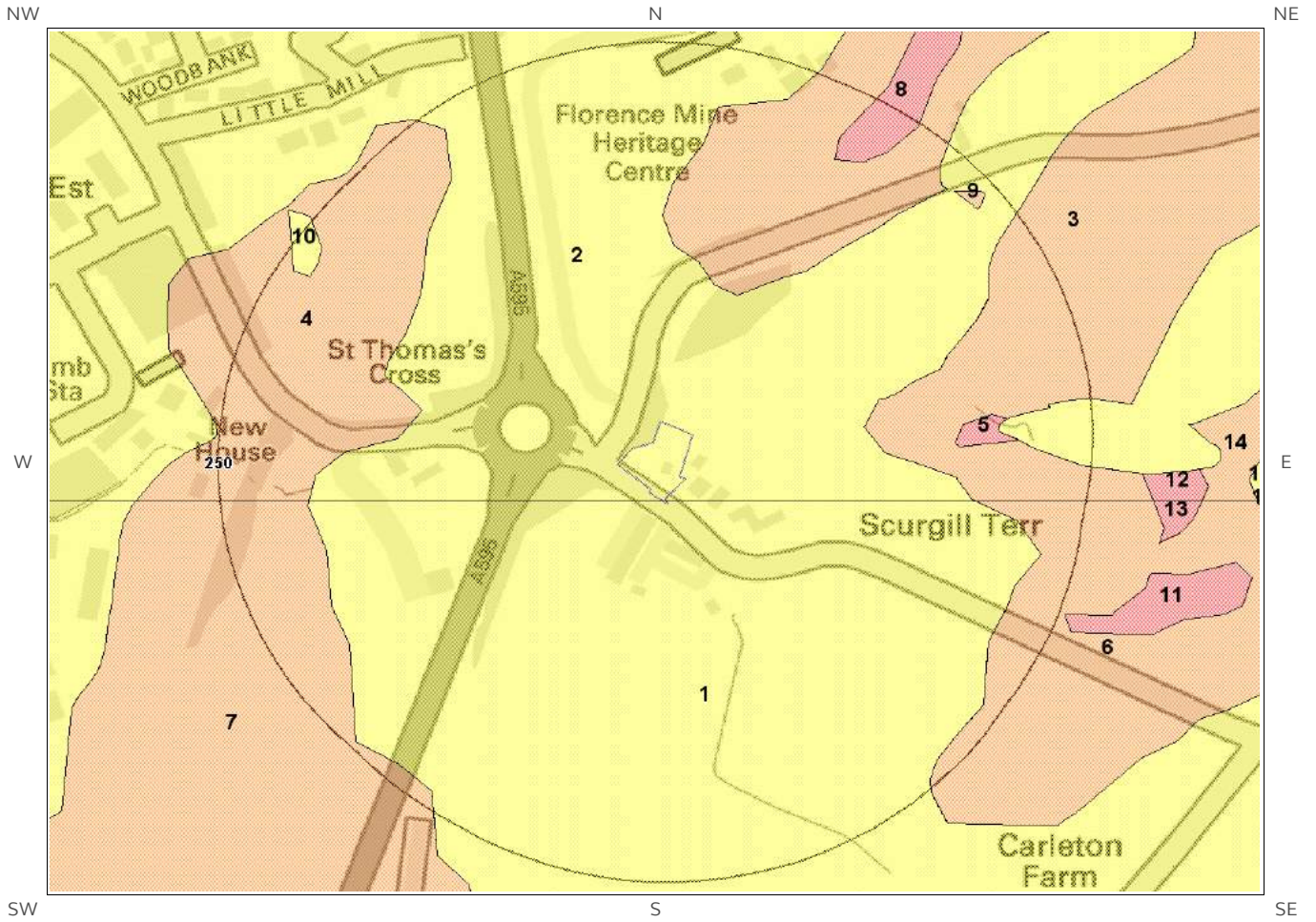


Shrink Swell Clay Legend

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6.2 Landslides map

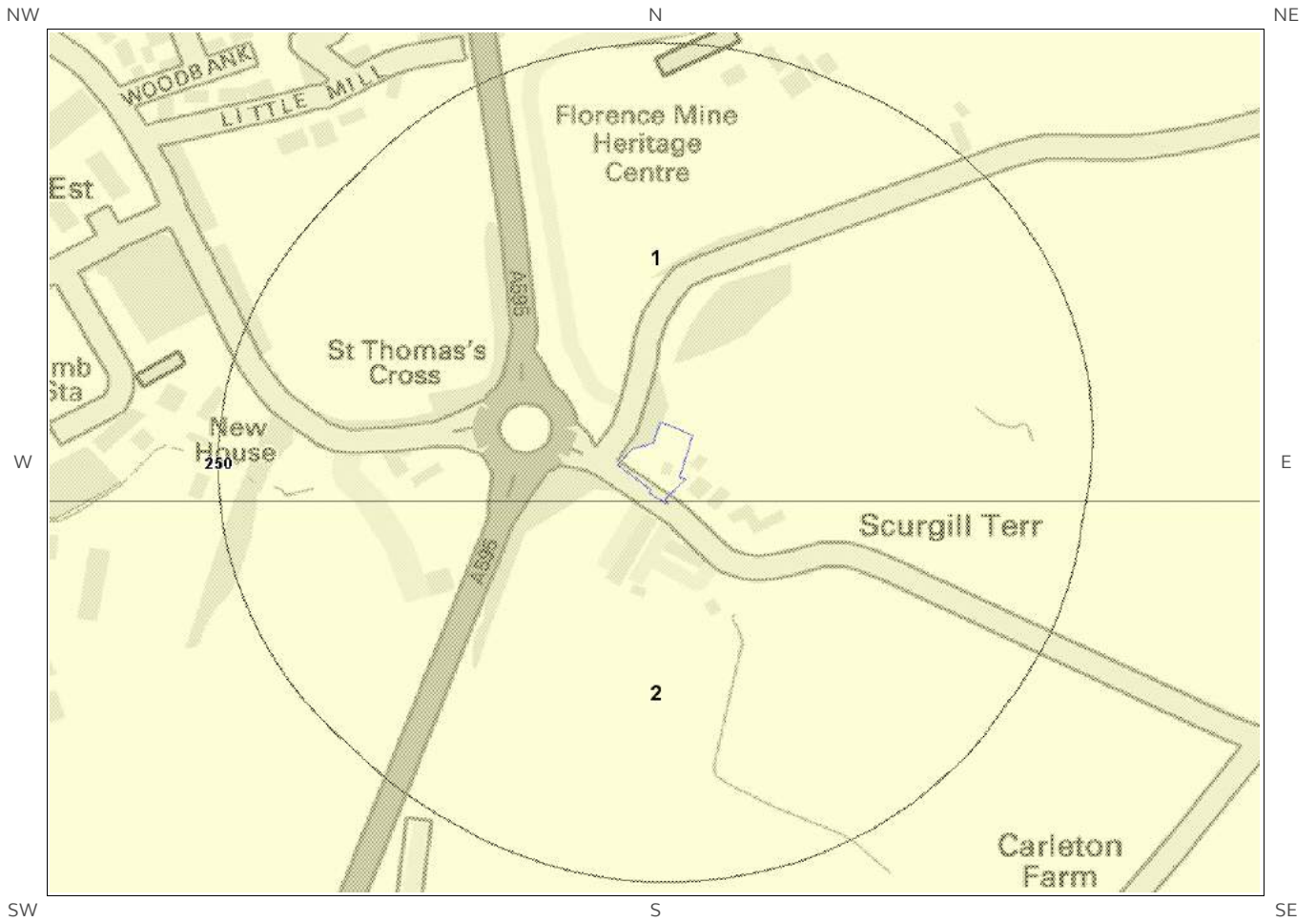


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks map

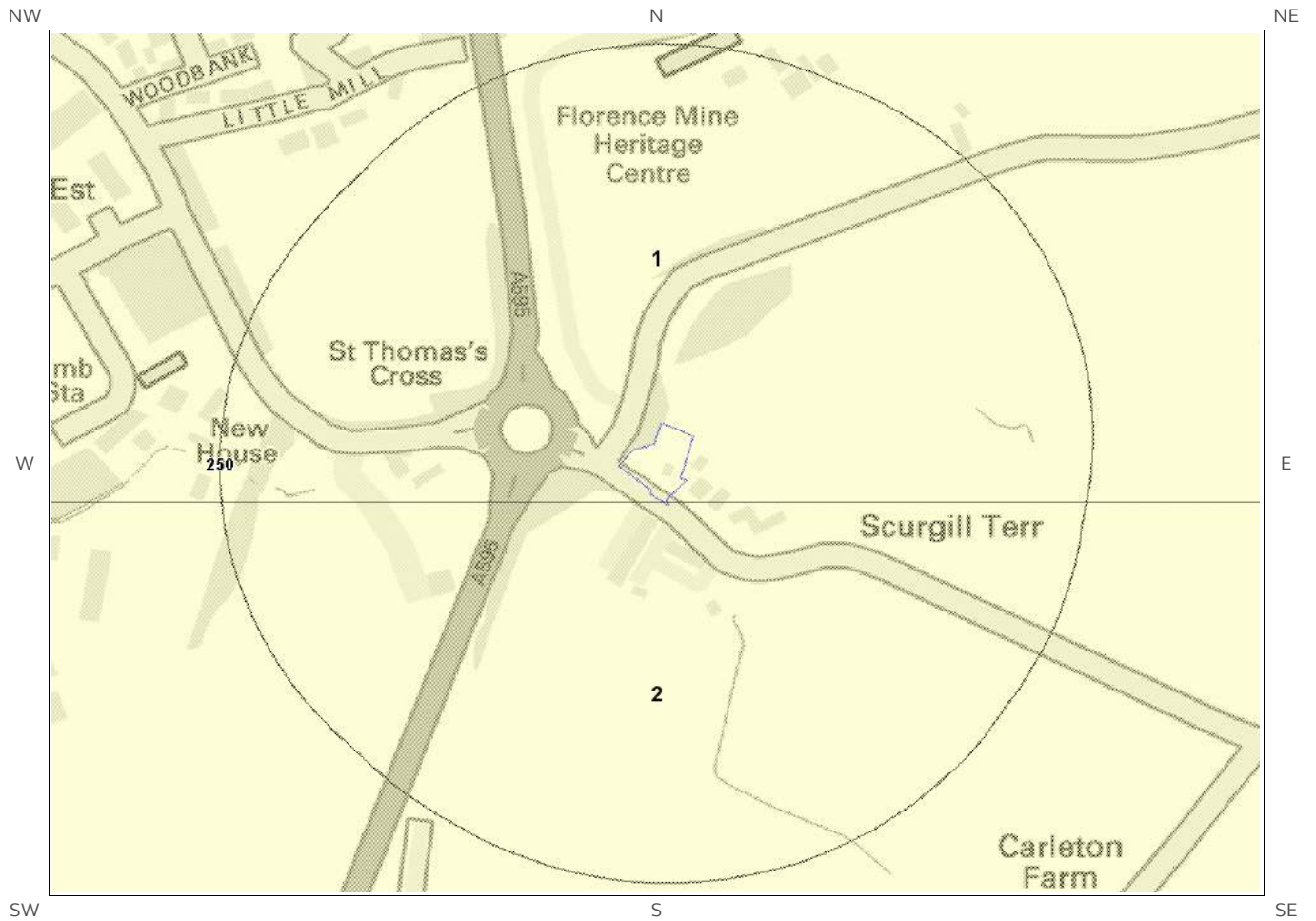


Ground Dissolution Soluble Rocks Legend

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6.4 Compressible Deposits map

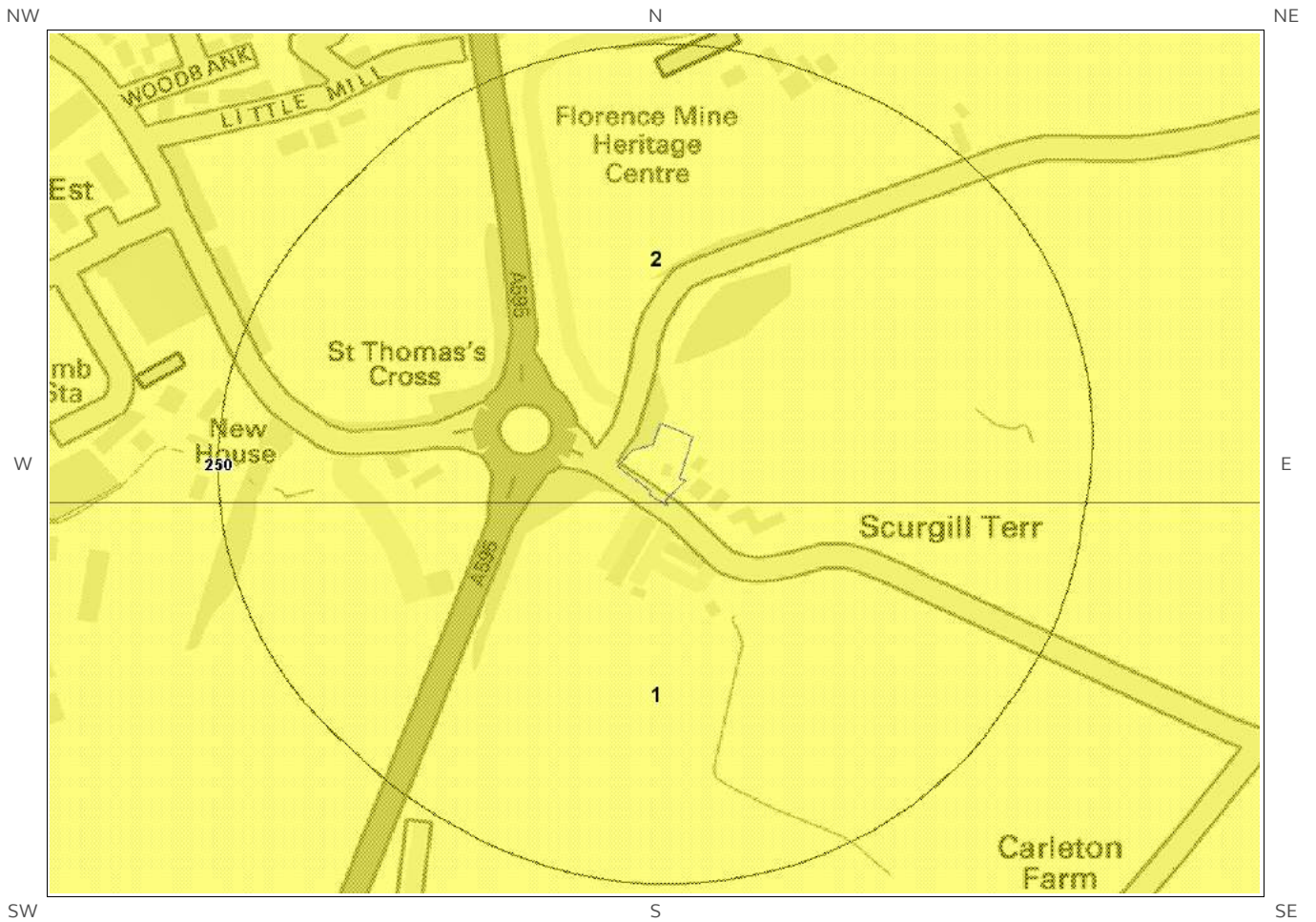


Compressible Deposits Legend

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6.5 Collapsible Deposits map

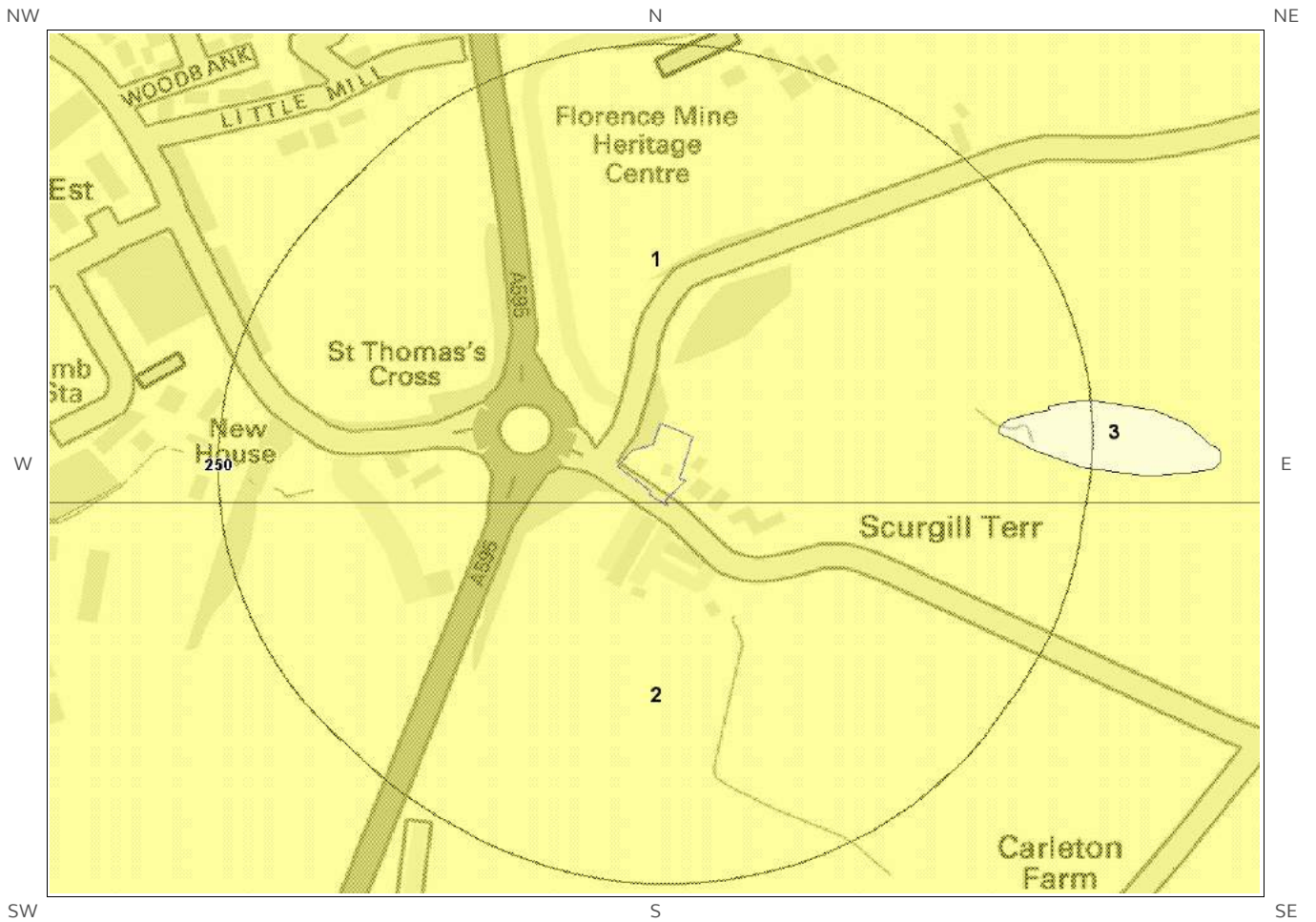


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Very Low

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
2	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

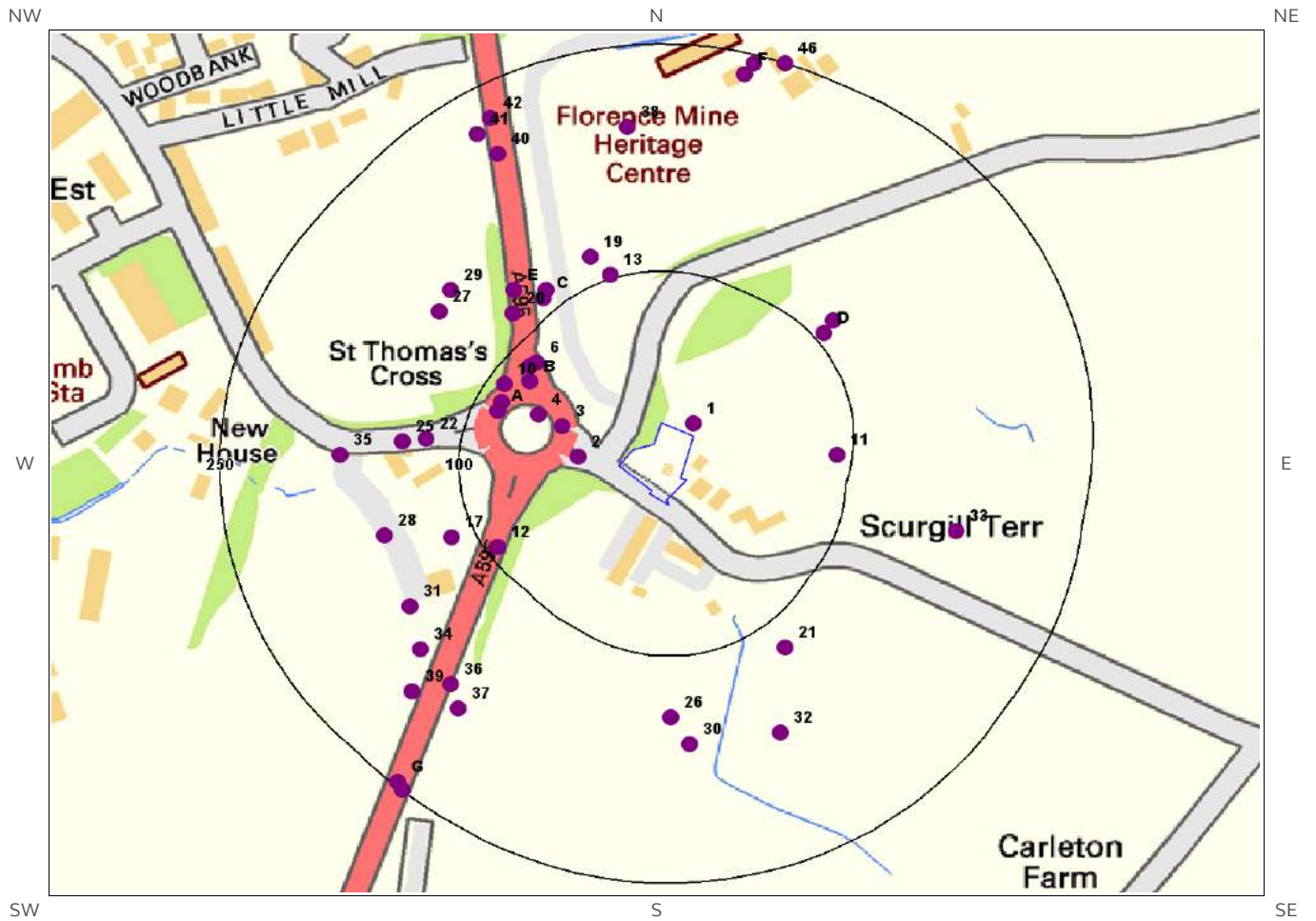
The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

The following Running Sands information provided by the British Geological Survey:

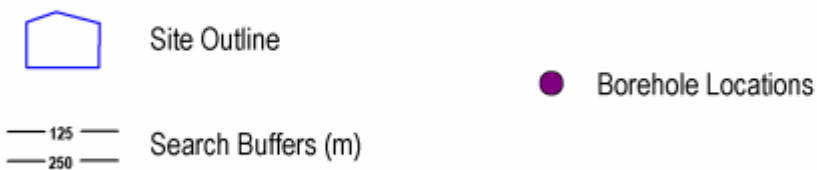
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

47

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	7.0	NE	301702 510052	NY01SW4	273.4	FLORENCE PIT 21
2	26.0	W	301630 510030	NY01SW14067/TP68	1.0	A595 EGREMONT BYPASS TP68
3	44.0	NW	301620 510050	NY01SW14067/P68A	1.0	A595 EGREMONT BYPASS TP68A
4	61.0	NW	301605 510058	NY01SW597	-1.0	A595 (T) EGREMONT BYPASS 68H
5B	78.0	NW	301600 510080	NY01SW638	-1.0	FLORENCE M8
6	83.0	NW	301604 510092	NY01SW596	-1.0	A595 (T) EGREMONT BYPASS 67
7A	84.0	NW	301580 510060	NY01SW14067/TP69	1.0	A595 EGREMONT BYPASS TP69
8A	85.0	NW	301582 510066	NY01SW598	-1.0	A595 (T) EGREMONT BYPASS 69H
9B	85.0	NW	301600 510090	NY01SW14067/TP67	3.0	A595 EGREMONT BYPASS TP67
10	90.0	NW	301584 510078	NY01SW180	268.81	BH NO.8 FLORENCE
11	90.0	E	301792 510031	NY01SW5	255.27	FLORENCE PIT 20
12	93.0	SW	301580 509970	NY00NW14067/TP71	4.0	A595 EGREMONT BYPASS TP71
13	102.0	N	301650 510150	NY01SW637	-1.0	FLORENCE M7
14D	106.0	NE	301784 510112	NY01SW6	303.58	FLORENCE PIT 22
15C	111.0	NW	301608 510135	NY01SW594	-1.0	A595 (T) EGREMONT BYPASS 65
16C	113.0	NW	301610 510140	NY01SW14067/TP65	3.0	A595 EGREMONT BYPASS TP65
17	115.0	SW	301551 509977	NY00NW431	4.0	A595(T) EGREMONT BYPASS TP71
18D	116.0	NE	301790 510120	NY01SW651	-1.0	FLORENCE NO. 1
19	118.0	N	301638 510162	NY01SW179	272.44	BH NO.7 FLORENCE
20	118.0	NW	301589 510125	NY01SW595	-1.0	A595 (T) EGREMONT BYPASS 66
21	120.0	SE	301760 509904	NY00NW283	286.21	NO.18 FLORENCE PIT
22	122.0	W	301535 510042	NY01SW599	-1.0	A595 (T) EGREMONT BYPASS 70C

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23E	127.0	NW	301590 510140	NY01SW14067/66	12.6	A595 EGREMONT BYPASS 66
24E	127.0	NW	301590 510140	NY01SW14067/66A	12.6	A595 EGREMONT BYPASS 66A
25	136.0	W	301520 510040	NY01SW14067/TP70	1.0	A595 EGREMONT BYPASS TP70
26	141.0	S	301688 509858	NY00NW303	290.78	NO.2 CARLETON
27	152.0	NW	301543 510126	NY01SW395	275.85	EGREMONT M28
28	154.0	W	301509 509978	NY00NW406/A	3.0	ST THOMAS'S CROSS EGREMONT 3
29	155.0	NW	301550 510140	NY01SW691	-1.0	MILLOM XM28
30	159.0	S	301700 509840	NY00NW642	-1.0	CARLETON, NO 2
31	160.0	SW	301525 509931	NY00NW406/B	2.0	ST THOMAS'S CROSS EGREMONT TP1
32	166.0	SE	301757 509848	NY00NW302	299.01	NO.1 CARLETON FLORENCE MINE
33	173.0	E	301867 509981	NY00NW381	287.12	NO.16 BSC 616 CARLETON
34	174.0	SW	301531 509903	NY00NW406/C	7.1	ST THOMAS'S CROSS EGREMONT 2
35	175.0	W	301481 510031	NY01SW533	-1.0	ST THOMAS'S CROSSEGREMONT TP4
36	177.0	SW	301550 509880	NY00NW14067/72	7.2	A595 EGREMONT BYPASS 72
37	186.0	SW	301555 509864	NY00NW432	7.0	A595(T) EGREMONT BYPASS BH72
38	196.0	N	301661 510248	NY01SW236	251.16	BH NO.34 FLORENCE (MILLOM)
39	198.0	SW	301526 509875	NY00NW295	302.41	NO.23 FLORENCE MINES
40	204.0	NW	301580 510230	NY01SW14067/P65A	3.0	A595 EGREMONT BYPASS TP65A
41	222.0	NW	301567 510243	NY01SW499	-1.0	BSC 302
42	228.0	NW	301575 510254	NY01SW593	-1.0	A595 (T) EGREMONT BYPASS 65A
43F	236.0	N	301734 510283	NY01SW455	193.0	BSC 630 BH30 CARLETON
44F	244.0	N	301740 510290	NY01SW641	-1.0	FLORENCE M30
45G	248.0	SW	301517 509815	NY00NW433	2.8	A595(T) EGREMONT BYPASS (TP73)
46	249.0	N	301760 510290	NY01SW768	-1.0	FLORENCE NO. 2
47G	250.0	SW	301520 509810	NY00NW14067/TP73	2.0	A595 EGREMONT BYPASS TP73

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/896352
#2: scans.bgs.ac.uk/sobi_scans/boreholes/897323
#3: scans.bgs.ac.uk/sobi_scans/boreholes/897294
#4: scans.bgs.ac.uk/sobi_scans/boreholes/896974
#5B: scans.bgs.ac.uk/sobi_scans/boreholes/897015
#6: scans.bgs.ac.uk/sobi_scans/boreholes/896973
#7A: scans.bgs.ac.uk/sobi_scans/boreholes/897324
#8A: scans.bgs.ac.uk/sobi_scans/boreholes/896975
#9B: scans.bgs.ac.uk/sobi_scans/boreholes/897322
#10: scans.bgs.ac.uk/sobi_scans/boreholes/896529
#11: scans.bgs.ac.uk/sobi_scans/boreholes/896353
#12: scans.bgs.ac.uk/sobi_scans/boreholes/875388
#13: scans.bgs.ac.uk/sobi_scans/boreholes/897014
#14D: scans.bgs.ac.uk/sobi_scans/boreholes/896354
#15C: scans.bgs.ac.uk/sobi_scans/boreholes/896971
#16C: scans.bgs.ac.uk/sobi_scans/boreholes/897321
#17: scans.bgs.ac.uk/sobi_scans/boreholes/875049
#18D: scans.bgs.ac.uk/sobi_scans/boreholes/897028
#19: scans.bgs.ac.uk/sobi_scans/boreholes/896528
#20: scans.bgs.ac.uk/sobi_scans/boreholes/896972
#21: scans.bgs.ac.uk/sobi_scans/boreholes/874893
#22: scans.bgs.ac.uk/sobi_scans/boreholes/896976
#23E: scans.bgs.ac.uk/sobi_scans/boreholes/897274
#24E: scans.bgs.ac.uk/sobi_scans/boreholes/897282
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#43F: scans.bgs.ac.uk/sobi_scans/boreholes/896809
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#45G: scans.bgs.ac.uk/sobi_scans/boreholes/875051
#46: scans.bgs.ac.uk/sobi_scans/boreholes/897145
#47G: scans.bgs.ac.uk/sobi_scans/boreholes/875389

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

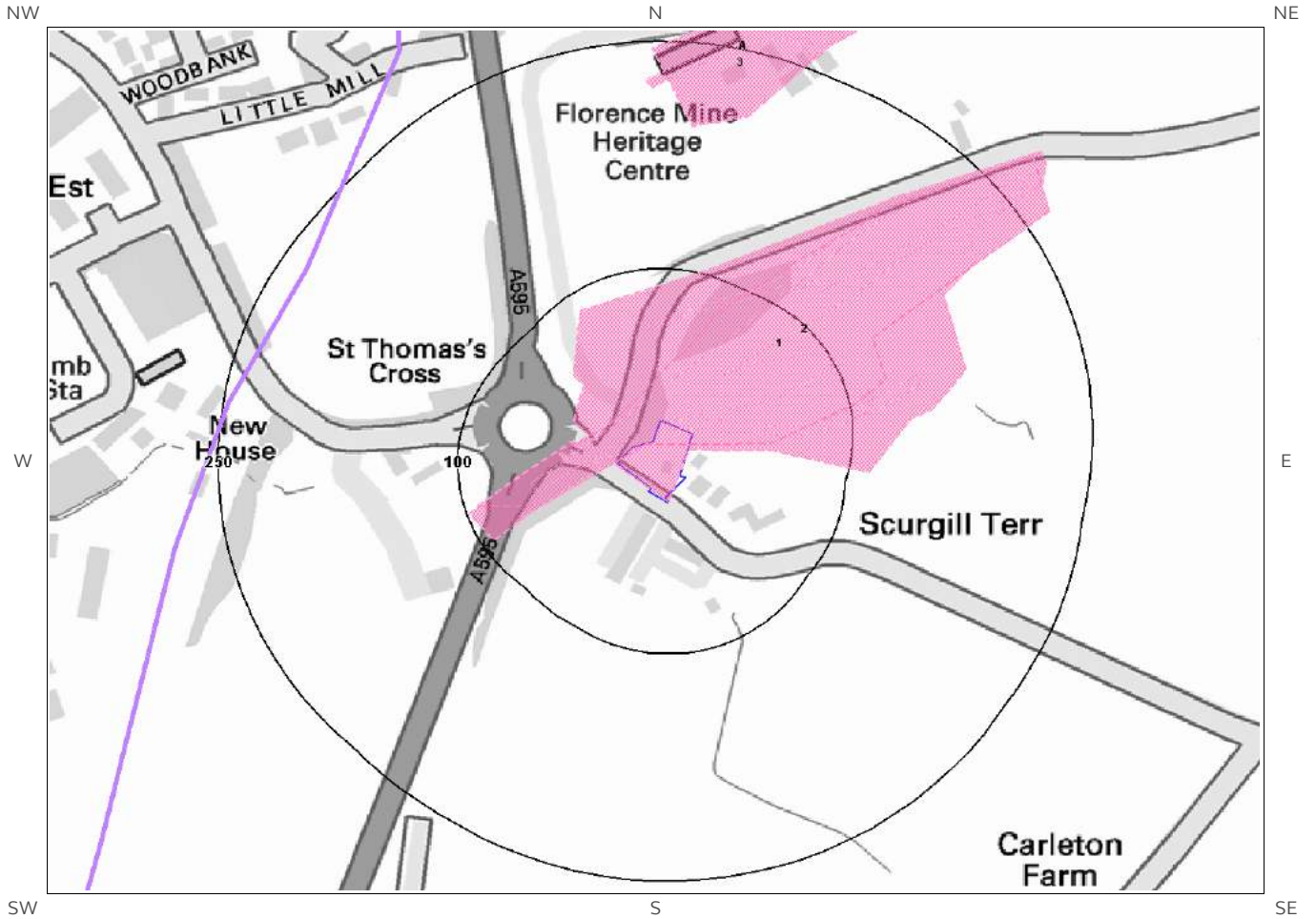
3

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	<100 mg/kg













*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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	Site Outline		Underground or Partially Underground Railway / Subway System		Railway Track (OpenStreetMap)
	250 Search Buffers (m)		Railway Tunnel (OS Mapping)		High Speed 2
	500 Search Buffers (m)		Abandoned or Dismantled Railway (OpenStreetMap)		High Speed 2 Revised Proposed Route
			Railway Track (OS Mapping)		Crossrail 1
					Railway and/or Tunnel Feature from Historical Mapping

9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? Yes

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	0	On Site	301765 510102	Tramway Sidings	1926
2	0	On Site	301747 510111	Railway Sidings	1948
4	0	On Site	301756 510110	Railway Sidings	1924
3	195	N	302245 510517	Railway Sidings	1948
5A	220	N	301836 510350	Mineral Railway Sidings	1961
6A	220	N	301836 510350	Mineral Railway Sidings	1968

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
233	NW	Abandoned

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

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BGS Geological Hazards Reports and general geological enquiries



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The Coal Authority

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Standard Terms and Conditions

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<https://www.groundsure.com/terms-and-conditions-feb11-2019>



EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Groundsure Reference: EMS-526698_708240

Your Reference: EMS_526698_708240

Report Date 12 Feb 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: Land at, Scurrigill, Egremont,

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

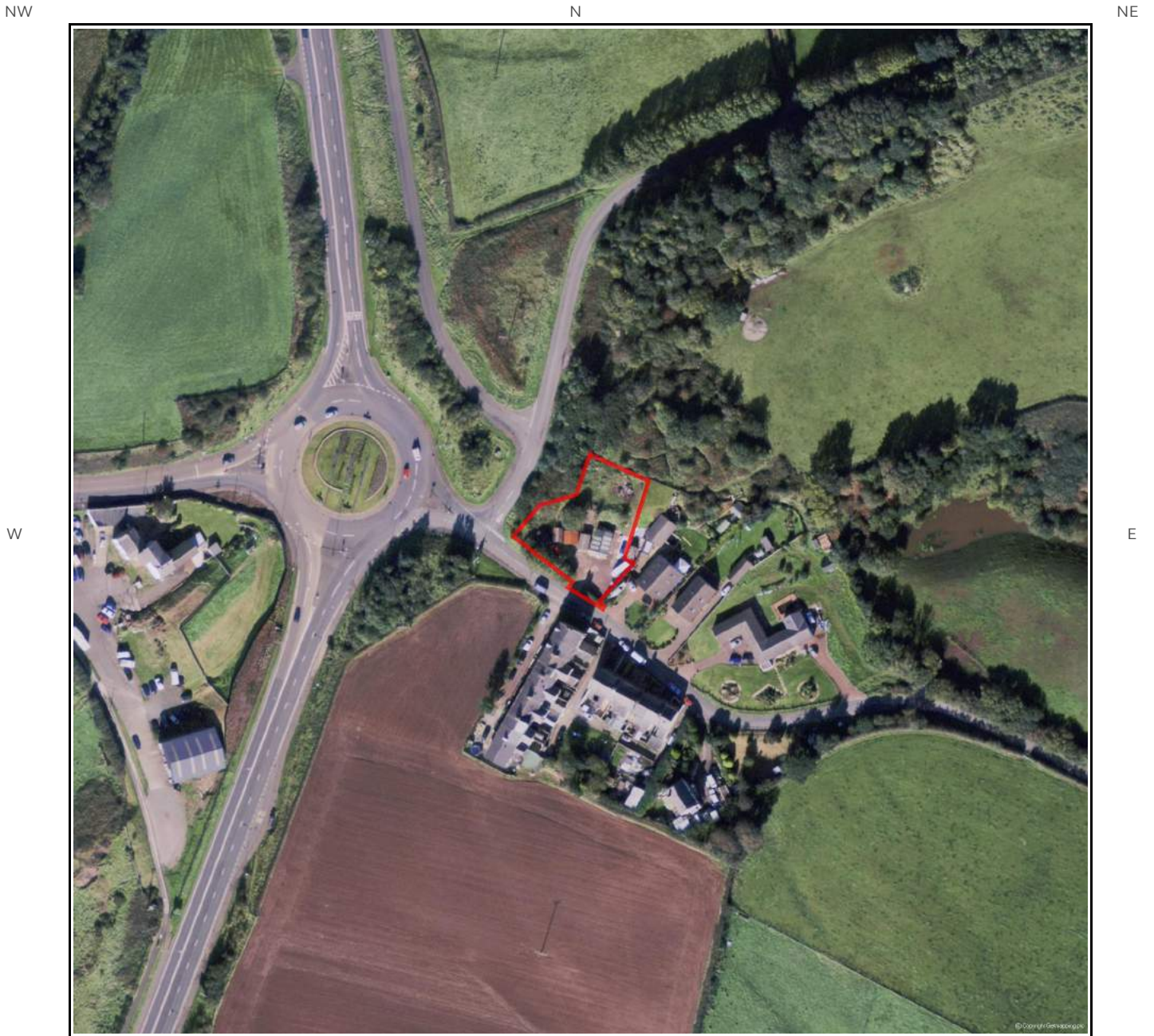
If you would like further assistance regarding this report then please contact the emapsite customer services team on 0118 9736883 quoting the above report reference number.

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Enviroinsight

Address: Land at, Scurrigill, Egremont,
Date: 12 Feb 2019
Reference: EMS-526698_708240
Client: EmapSite



Aerial Photograph Capture date: 05-Oct-2008
Grid Reference: 301682,510027
Site Size: 0.13ha

Report Reference: EMS-526698_708240
Client Reference: EMS_526698_708240

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	4	2	11	33
1.2 Additional Information – Historical Tank Database	0	0	1	0
1.3 Additional Information – Historical Energy Features Database	0	0	0	15
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	5
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	2	2	13	20
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	2
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	5
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	3
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	2	0	4	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	1	0	1	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	2	1	6	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	3	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	0-500m
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	On-site	0-50m	51-250	251-500	501-1000	1000-2000
0-500m						
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	8	0	0	20
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	2	0	0	7
6.6 Source Protection Zones (within 500m of the study site)	2	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	1	#250GWV #	#500GWV #	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	Yes	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	14	62	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	None identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	None identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Limited potential					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Low					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	1	0	0	7
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	1	0	1

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 Maximum risk of natural ground subsidence	Very Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Coal mining areas within 75m of the study site	None identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	Identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

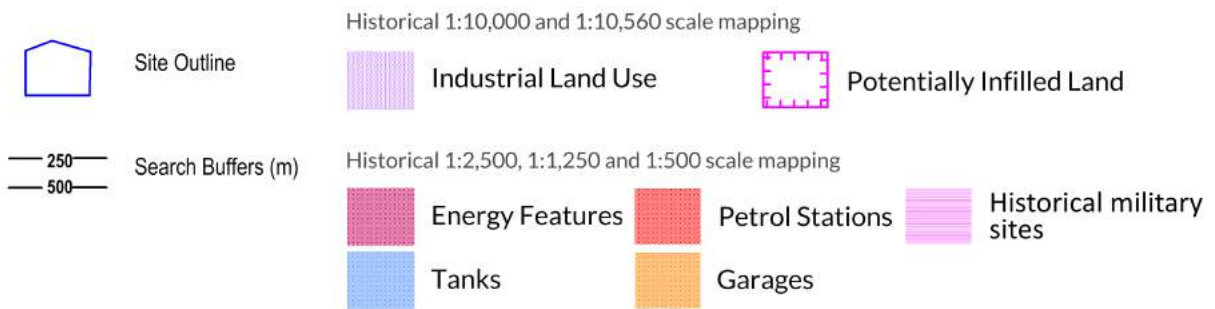
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 50

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Tramway Sidings	1926
2A	0	On Site	Iron Ore Pit	1948
3N	0	On Site	Iron Ore Pit	1926
4A	0	On Site	Railway Sidings	1948
5O	39	N	Refuse Heap	1948
6P	44	NE	Refuse Heap	1926
7B	139	SW	Unspecified Heap	1971
8B	139	SW	Unspecified Heap	1981
9B	140	SW	Refuse Heap	1951
10C	165	E	Refuse Heap	1971
11C	165	E	Refuse Heap	1981
12D	191	NW	Cuttings	1898
13D	192	NW	Cuttings	1926
14D	195	W	Cuttings	1948
15	195	N	Railway Sidings	1948
16R	217	NE	Cuttings	1926
17S	234	W	Cuttings	1951
18E	311	NW	Corn Mill	1861
19E	317	NW	Unspecified Mill	1926
20E	317	NW	Unspecified Mill	1898
21T	333	NW	Unspecified Ground Workings	1926
22E	336	NW	Unspecified Mill	1948
23F	355	NW	Cuttings	1948
24	355	SW	Unspecified Tank	1861
25	356	SW	Railway Sidings	1951
26F	356	N	Cuttings	1926
27U	376	N	Refuse Heap	1948
28F	386	N	Cuttings	1898
29	388	W	Unspecified Depot	1994
30G	403	S	Unspecified Disused Quarry	1926
31G	403	S	Unspecified Quarry	1898
32G	408	S	Unspecified Disused Quarry	1951

33G	409	S	Unspecified Quarry	1861
34G	409	S	Unspecified Disused Quarry	1994
35G	409	S	Unspecified Disused Quarry	1981
36G	409	S	Unspecified Disused Quarry	1971
37V	416	SW	Unspecified Quarry	1861
38H	431	W	Woollen Mill	1926
39H	432	W	Paper Mill	1861
40H	433	W	Unspecified Factory	1981
41H	433	W	Unspecified Factory	1971
42H	433	W	Unspecified Mill	1994
43H	437	W	Woollen Mill	1951
44H	438	W	Unspecified Mill	1898
45I	440	N	Refuse Heap	1926
46I	446	N	Refuse Heap	1948
47L	449	N	Unspecified Old Shaft	1948
48I	453	N	Unspecified Old Shaft	1926
49W	488	NE	Unspecified Pit	1926
50	488	NE	Tramway Sidings	1926

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 1

ID	Distance (m)	Direction	Use	Date
51	79	E	Unspecified Tank	1924

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 15

ID	Distance (m)	Direction	Use	Date
52J	332	NW	Electricity Substation	1993
53J	332	NW	Electricity Substation	1994
54J	334	NW	Electricity Substation	1995

55	383	W	Electricity Substation	1995
56K	393	W	Electricity Substation	1993
57K	393	W	Electricity Substation	1994
58K	394	W	Electricity Substation	1995
59K	397	W	Electricity Substation	1990
60K	397	W	Electricity Substation	1990
61K	397	W	Electricity Substation	1993
62K	397	W	Electricity Substation	1993
63L	437	N	Electricity Substation	1995
64L	438	N	Electricity Substation	1982
65L	438	N	Electricity Substation	1993
66L	438	N	Electricity Substation	1994

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 5

ID	Distance (m)	Direction	Use	Date
67M	390	NW	Garage	1995
68M	390	NW	Garage	1968
69M	390	NW	Garage	1994
70M	390	NW	Garage	1993
71M	390	NW	Garage	1982

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site:

37

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
72N	0	On Site	Iron Ore Pit	1926
73N	0	On Site	Iron Ore Pit	1948
74O	39	N	Refuse Heap	1948
75P	44	NE	Refuse Heap	1926
76Q	136	NE	Reservoir	1948
77B	139	SW	Unspecified Heap	1981
78B	139	SW	Unspecified Heap	1971
79B	140	SW	Refuse Heap	1951
80Q	142	NE	Reservoir	1926
81C	165	E	Refuse Heap	1971
82C	165	E	Refuse Heap	1981
83	175	E	Reservoir	1926
84D	191	NW	Cuttings	1898
85D	192	NW	Cuttings	1926
86D	195	W	Cuttings	1948
87R	217	NE	Cuttings	1926
88S	234	W	Cuttings	1951
89T	333	NW	Unspecified Ground Workings	1926
90F	355	NW	Cuttings	1948
91F	356	N	Cuttings	1926
92U	376	N	Refuse Heap	1948
93U	382	N	Pond	1926
94F	386	N	Cuttings	1898
95G	403	S	Unspecified Quarry	1898
96G	403	S	Unspecified Disused Quarry	1926
97G	408	S	Unspecified Disused Quarry	1951
98G	409	S	Unspecified Quarry	1861
99G	409	S	Unspecified Disused Quarry	1981
100G	409	S	Unspecified Disused Quarry	1994
101G	409	S	Unspecified Disused Quarry	1971
102V	416	SW	Unspecified Quarry	1861

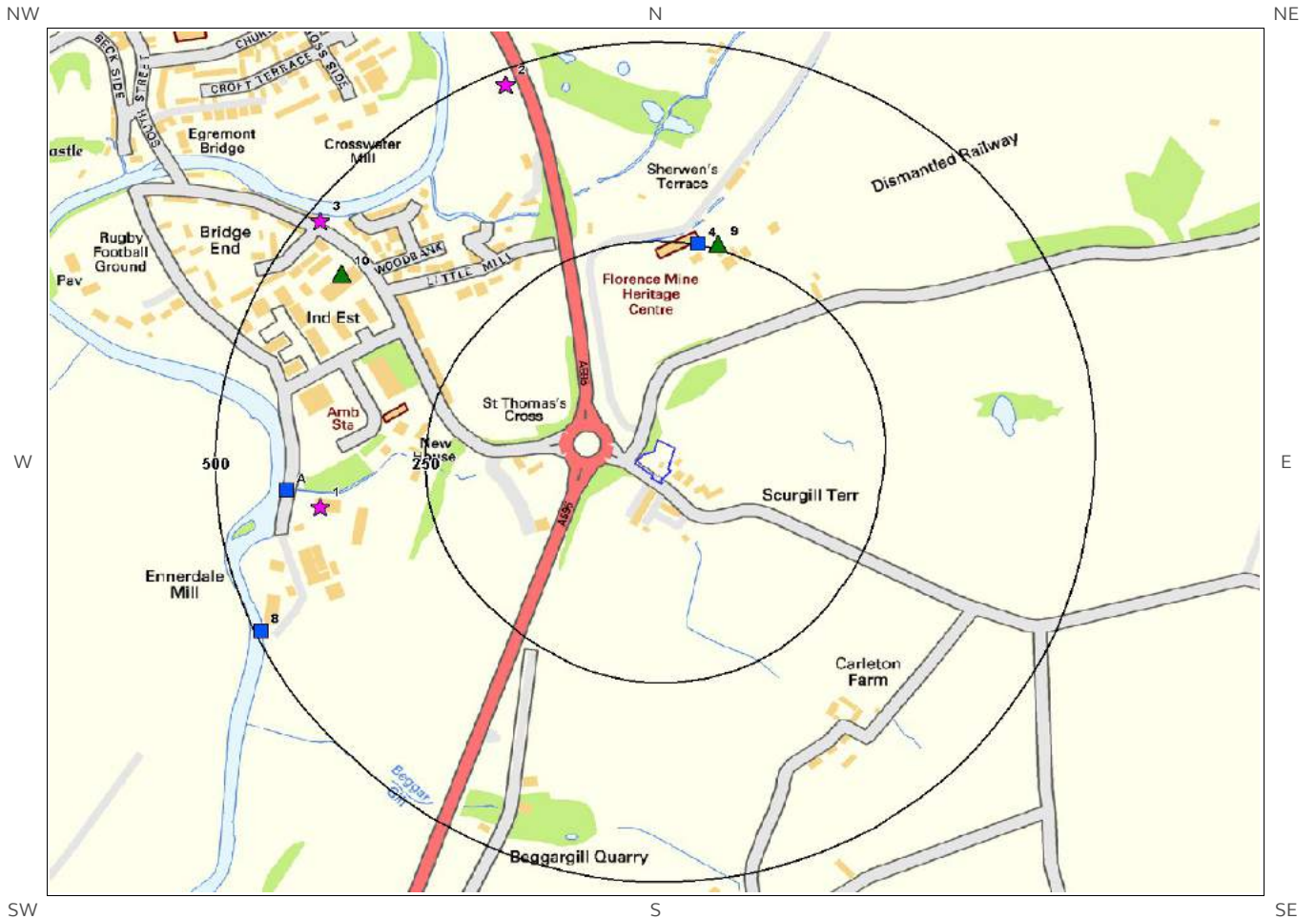


103	426	W	Pond	1861
104I	440	N	Refuse Heap	1926
105I	446	N	Refuse Heap	1948
106L	449	N	Unspecified Old Shaft	1948
107L	453	N	Unspecified Old Shaft	1926
108W	488	NE	Unspecified Pit	1926





2. Environmental Permits, Incidents and Registers Map



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- | | | | | | |
|--|-------------------------------|--|---|--|--|
| | Site Outline | | Recorded Pollution Incident | | RAS 3 & 4 Authorisations |
| | Dangerous Substances (List 1) | | Dangerous Substances (List 2) | | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | Water Industry Referrals | | Part A(2) and Part B Authorised Processes | | COMAH / NIHHS Sites |
| | Licenced Discharge Consents | | Sites Determined as Contaminated Land | | Hazardous Substance Consents and Enforcements |
| | Red List Discharge Consents | | | | |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

2

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
9	254	N	301754 510297	Address: Egremont Mining Co. Ltd, Florence Mine, Egremont, CA22 2NR Process: Mine Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	422	NW	301306 510260	Address: Bridge End Garage, Egremont, Cumbria, CA22 2RQ Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

5

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
4	251	N	301730 510300	Address: WINDER MINE, FLORENCE MINE, EGREMONT, CUMBRIA Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017490228 Permit Version: 1 Receiving Water: RIVER EHEN Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Apr-1991 Revocation Date: -
5A	417	W	301240 509990	Address: BRIDGE END, EGREMONT, CUMBRIA Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 01COP0016 Permit Version: 2 Receiving Water: RIVER EHEN Status: CONSENT CURRENTLY UNDER APPEAL Issue date: 23/09/2005 Effective Date: 23-Sep-2005 Revocation Date: -
6A	417	W	301240 509990	Address: BRIDGE END, EGREMONT, CUMBRIA Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: 01COP0016 Permit Version: 1 Receiving Water: RIVER EHEN Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/01/1995 Effective Date: 01-Jan-1995 Revocation Date: 22/09/2005

ID	Distance (m)	Direction	NGR	Details	
7A	417	W	301240 509990	Address: BRIDGE END, EGREMONT, CUMBRIA Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01COP0016 Permit Version: 2	Receiving Water: RIVER EHEN Status: CONSENT CURRENTLY UNDER APPEAL Issue date: 23/09/2005 Effective Date: 23-Sep-2005 Revocation Date: -
8	493	SW	301210 509814	Address: REMAC LIMITED, ENNERDALE MILL, BRIDE END INDUSTRIAL ESTATE, EGREMONT, CUMBRIA, CA22 2PN Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD005965 Permit Version: 1	Receiving Water: RIVER EHEN Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 25/03/2009 Effective Date: 25-Mar-2009 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

3

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	379	W	301280	Incident Date: 24-Apr-2002	Water Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details
			509970	Incident Identification: 74285 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	483	N	301500 510500	Incident Date: 20-May-2004 Incident Identification: 258433 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
3	484	NW	301280 510329	Incident Date: 06-Aug-2001 Incident Identification: 22356 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

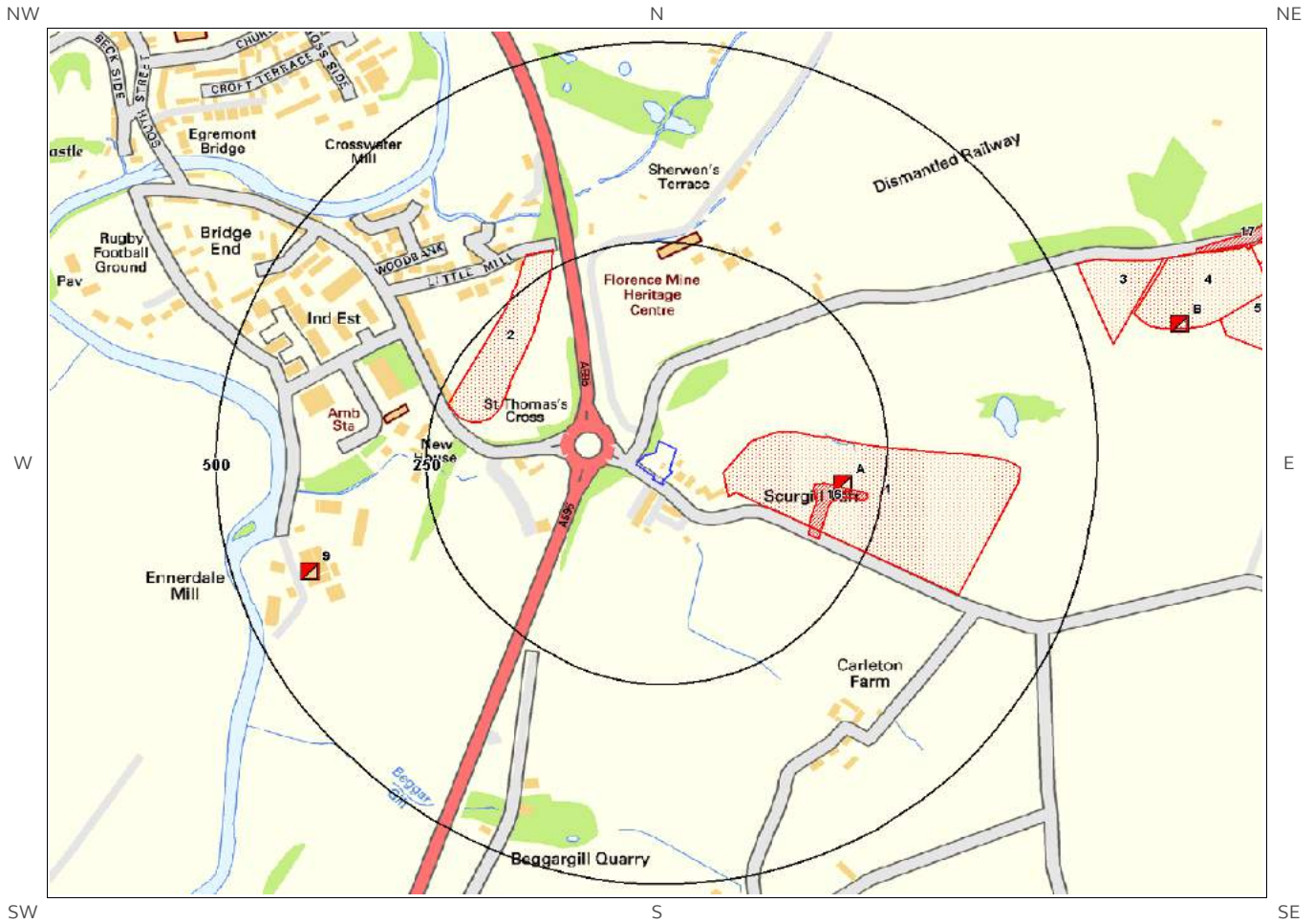
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0










Database searched and no data found.



3. Landfill and Other Waste Sites Map



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- | | | | | | |
|---|------------------------|---|---------------------------|---|---|
|  | Site Outline |  | EA/NRW Active Landfill |  | Historic and Planned Waste Sites |
|  | 250 Search Buffers (m) |  | EA/NRW Historic Landfill |  | EA/NRW Licensed Waste Site |
|  | 500 Search Buffers (m) |  | BGS / DoE Survey Landfill |  | Local Authority/Historical Mapping Landfill Records |

3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

6

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	60	E		<p>Site Address: Florence No.1 Mine, Scurgill Terrace, Carleton, Egremont, Cumbria Waste Licence: Yes Site Reference: 116, 89, E160.64 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: NT1/L/ALC004</p> <p>Licence Issue: 26-Apr-1982 Licence Surrendered: Licence Holder Address: Clay Flatts, Workington, Cumbria Operator: Alco Waste Management Limited Licence Holder: Alco Transport Servicest Limited First Recorded: 31-Dec-1977 Last Recorded: 06-Apr-2000</p>
2	177	NW		<p>Site Address: Disused Railway Cuttings, Egremont Bypass, St Thomas's Cross, Egremont, Cumbria Waste Licence: Yes Site Reference: 164 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 10-Dec-1991 Licence Surrendered: 11-Mar-1993 Licence Holder Address: Hooton, South Wirral, Cheshire Operator: - Licence Holder: Alfred McAlpine Construction Limited First Recorded: 01-Oct-1991 Last Recorded: 31-Oct-1991</p>
3	528	E		<p>Site Address: M Fleming and T Coulthard, Field No 3323 and 4031, Grange Road, Egremont, Cumbria Waste Licence: Yes Site Reference: 152 Waste Type: Special Environmental Permitting Regulations (Waste) Reference: NT1/L/FLE003</p> <p>Licence Issue: 22-Mar-1981 Licence Surrendered: Licence Holder Address: Keaslow, Netherton, Egremont, Cumbria Operator: - Licence Holder: M Fleming and T Coulthard First Recorded: - Last Recorded: -</p>
4	569	E		<p>Site Address: Field Nos 4031 3323 and 4527, Grange Road, Egremont, Cumbria Waste Licence: Yes</p> <p>Licence Issue: 22-Mar-1991 Licence Surrendered: Licence Holder Address: -</p>

ID	Distance (m)	Direction	NGR	Details
				Site Reference: 152, TW23 Waste Type: Inert, Special Environmental Permitting Regulations (Waste) Reference: - Operator: Inter County Skip Hire Limited Licence Holder: M Fleming and T Coulthard T/A Inter Country Waste First Recorded: 01-Jan-1981 Last Recorded: 06-Sep-1996
5	666	E		Site Address: Field No 4527 and parts of 3323 4216 4031 5214, Grange Road, Egremont, Cumbria Waste Licence: Yes Site Reference: 271, E160.263 Waste Type: Inert, Special Environmental Permitting Regulations (Waste) Reference: NT1/L/INT002 Licence Issue: 01-Aug-1994 Licence Surrendered: Licence Holder Address: Keaslow, Nethertown, Egremont Operator: Inter County Skip Hire Limited Licence Holder: Inter County Skip Hire Limited First Recorded: 01-Aug-1994 Last Recorded: -
Not shown	897	E		Site Address: Field Nos 4031 3323 and 4527, Ullcoats, Egremont, Cumbria Waste Licence: Yes Site Reference: 88 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 19-May-1982 Licence Surrendered: 30-Apr-1994 Licence Holder Address: PO Box 8, Moresby Road, Whitehaven, Cumbria Operator: - Licence Holder: T Milburn Limited First Recorded: 01-Jan-1981 Last Recorded: 31-Dec-1983

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

2

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
16	169	E	301873 509965	Refuse Tip	1961 mapping	Polygon
17	665	E	302387 510315	Refuse Tip	1961 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

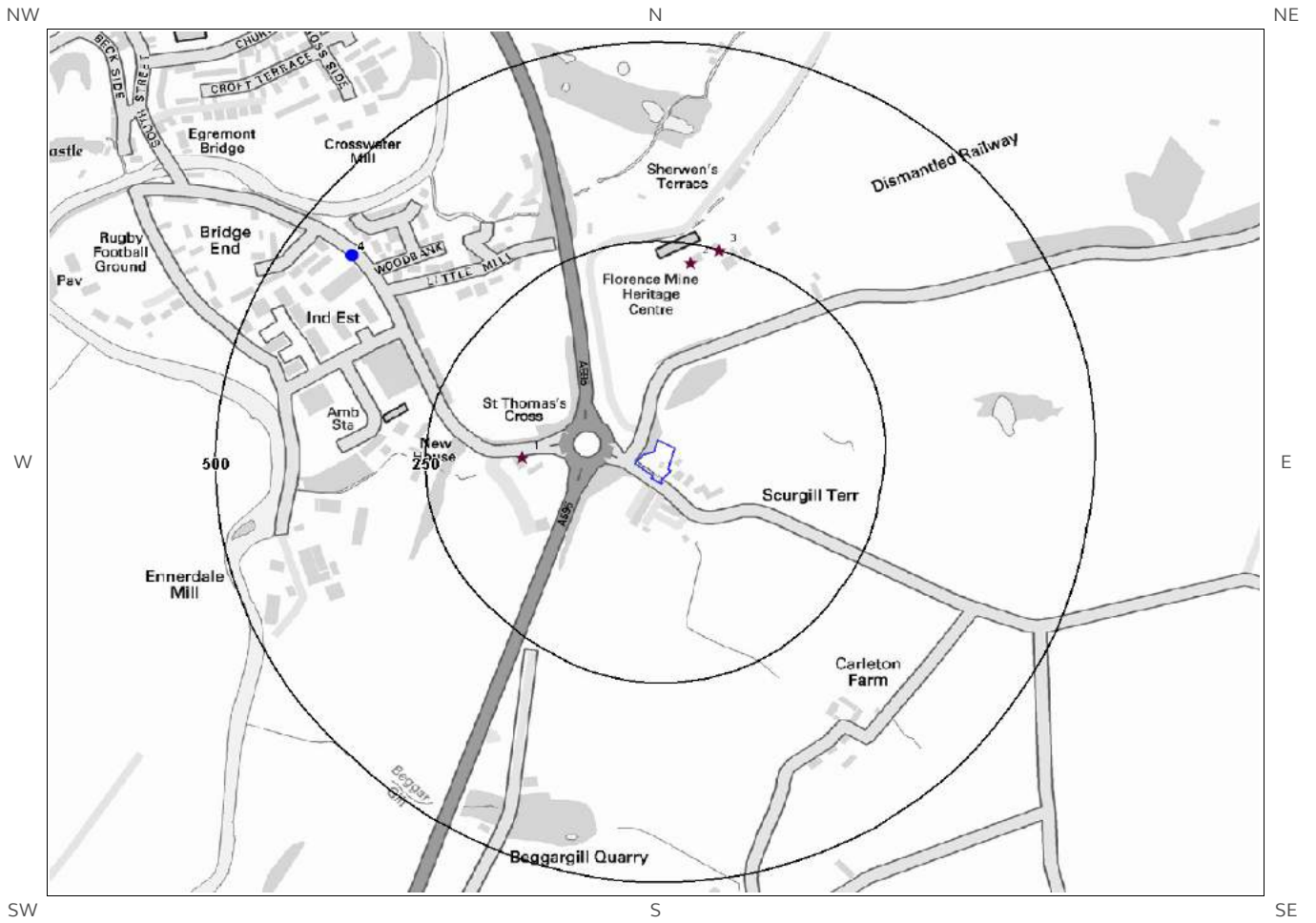
9

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
7A	202	E	301900 510000	<p>Site Address: Scurgill Transfer Station, Scurgill Terrace, Egremont, Cumbria, CA22 2NS</p> <p>Type: Household, Commercial & Industrial Waste T Stn</p> <p>Size: >= 25000 tonnes < 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ALC008</p> <p>EPR reference: EA/EPR/KP3293ZF/A001</p> <p>Operator: Alco Waste Management Ltd</p> <p>Waste Management licence No: 57149</p> <p>Annual Tonnage: 755.0</p> <p>Issue Date: 22/03/1991</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: 17/01/2000</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: Alco Waste Management</p> <p>Correspondence Address: -</p>
8A	202	E	301900 510000	<p>Site Address: Florence No 1 Mine, Scurgill Terrace, Egremont, Cumbria, CA22 2NS</p> <p>Type: Landfill taking Non-Biodegradable Wastes</p> <p>Size: >= 25000 tonnes < 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ALC004</p> <p>EPR reference: EA/EPR/GP3293ZG/A001</p> <p>Operator: Alco Waste Management Ltd</p> <p>Waste Management licence No: 57116</p> <p>Annual Tonnage: 500.0</p> <p>Issue Date: 19/09/1986</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: Alco Waste Management</p> <p>Correspondence Address: -</p>
9	411	W	301267 509891	<p>Site Address: J. M. Skips Brownriggs Yard, Ennerdale Mill, Egremont, Cumbria, CA22 2PN</p> <p>Type: 75kte HCl Waste Transfer Station</p> <p>Size: < 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: JAC099</p> <p>EPR reference: EA/EPR/AB3806LV/A001</p> <p>Operator: Jacksons Marine Limited</p> <p>Waste Management licence No: 402645</p> <p>Annual Tonnage: 74999.0</p> <p>Issue Date: 03/09/2015</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: J. M. Skips Brownriggs Yard</p> <p>Correspondence Address: -</p>
10B	617	E	302300 510200	<p>Site Address: Field No 3323 & 4031, Grange Road, Egremont, Cumbria</p> <p>Type: Other Landfill Site taking Special Waste</p> <p>Size: Unknown</p> <p>Environmental Permitting Regulations (Waste) Licence Number: FLE003</p> <p>EPR reference: -</p> <p>Operator: M Fleming & T Coulthard</p> <p>Issue Date: 22/03/1981</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Part revoke</p> <p>Site Name: M Fleming & T Coulthard</p> <p>Correspondence Address: Keaslow,</p>

ID	Distance (m)	Direction	NGR	Details	
				Waste Management licence No: 57152 Annual Tonnage: 0.0	Netherton, Egremont, Cumbria, CA22 2UJ
11B	617	E	302300 510200	Site Address: Field No 3323 & 4031, Grange Road, Egremont, Cumbria Type: Other Landfill Site taking Special Waste Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FLE003 EPR reference: EA/EPR/KP3693ZR/A001 Operator: M Fleming & T Coulthard Waste Management licence No: 57152 Annual Tonnage: 300000.0	Issue Date: 22/03/1981 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: M Fleming & T Coulthard Correspondence Address: -
Not shown	743	E	302400 510300	Site Address: Field No 4527, Grange Road, Egremont, Cumbria Type: Other Landfill Site taking Special Waste Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: INT002 EPR reference: - Operator: Inter County Skip Hire Ltd Waste Management licence No: 57271 Annual Tonnage: 0.0	Issue Date: 01/08/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Inter County Skip Hire Ltd Correspondence Address: Keaslow, Nethertown, Egremont, Cumbria, CA22 2UJ
Not shown	743	E	302400 510300	Site Address: Field No 4527, Grange Road, Egremont, Cumbria Type: Other Landfill Site taking Special Waste Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: INT002 EPR reference: EA/EPR/NP3293ZN/A001 Operator: Inter County Skip Hire Ltd Waste Management licence No: 57271 Annual Tonnage: 300000.0	Issue Date: 01/08/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Inter County Skip Hire Ltd Correspondence Address: -
Not shown	837	E	302500 510300	Site Address: Grange Road Transfer Station, Part Field No 4031 & 4527, Grange Road, Egremont, Cumbria Type: Special Waste Transfer Station Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: FLE004 EPR reference: - Operator: M Fleming & T Coulthard Waste Management licence No: 57220 Annual Tonnage: 0.0	Issue Date: 27/05/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: M Fleming & T Coulthard Correspondence Address: Keaslow, Nethertown, Egremont, Cumbria, CA22 2UJ
Not shown	837	E	302500 510300	Site Address: Grange Road Transfer Station, Part Field No 4031 & 4527, Grange Road, Egremont, Cumbria Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FLE004 EPR reference: EA/EPR/FP3893ZA/A001 Operator: M Fleming & T Coulthard Waste Management licence No: 57220 Annual Tonnage: 50000.0	Issue Date: 27/05/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: M Fleming & T Coulthard Correspondence Address: -

4. Current Land Use Map



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-  Site Outline
-  Current Industrial Sites
-  Electricity Transmission Cables
-  Petrol & Fuel Sites
-  Gas Transmission Pipelines
-  Search Buffers (m)

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 3

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	135	W	St Thomas Cross Garage Ltd	301521 510032	Egremont, Cumbria, CA22 2RW	Vehicle Repair, Testing and Servicing	Repair and Servicing
2	227	N	Electricity Sub Station	301721 510277	Cumbria, CA22	Electrical Features	Infrastructure and Facilities
3	250	N	Egremont Mining Company Ltd	301755 510292	Florence Mine, Egremont, Cumbria, CA22 2NR	Ore Mining	Extractive Industries

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
4	427	NW	301318 510285	BP	Bridge End, Egremont, Cumbria, CA22 2RQ	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.



4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

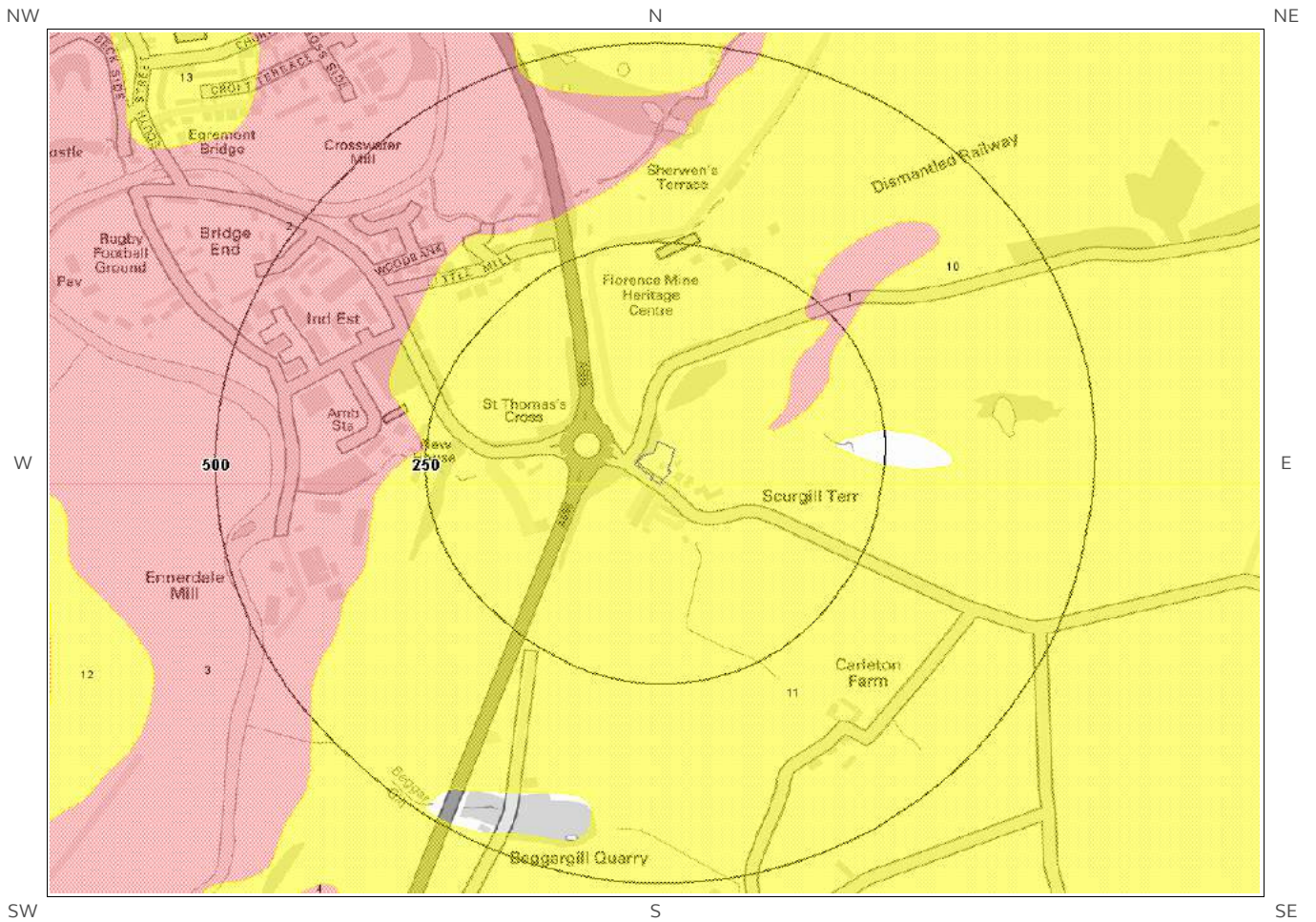
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SBS-SDST	ST BEES SANDSTONE MEMBER	SANDSTONE

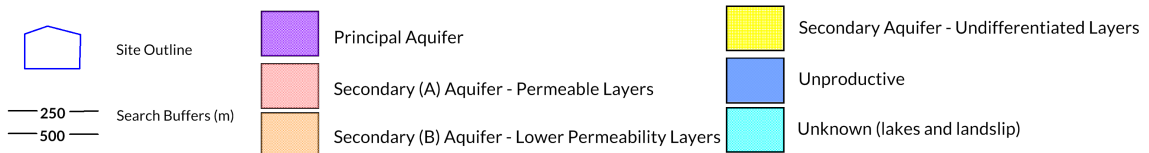
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology

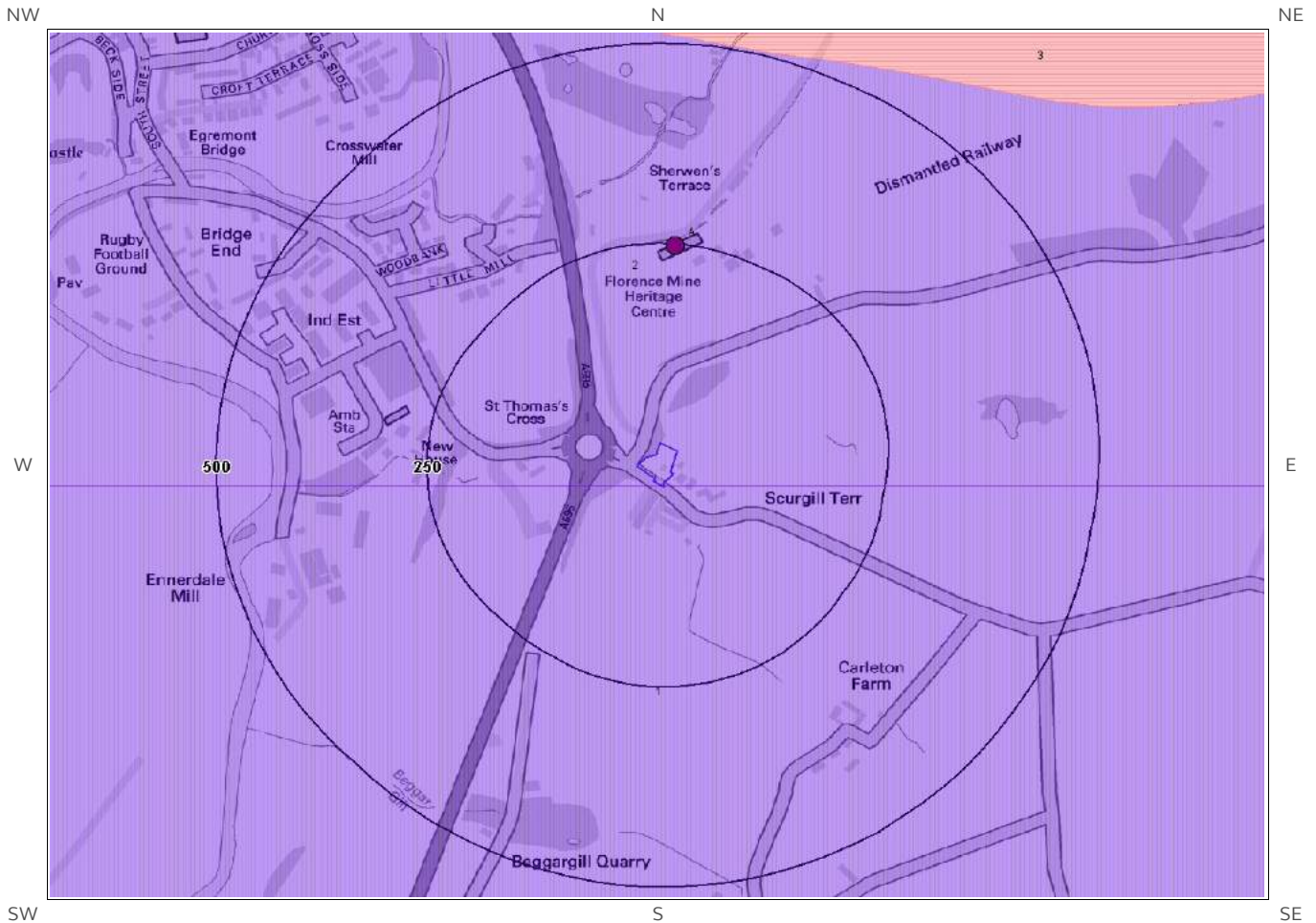


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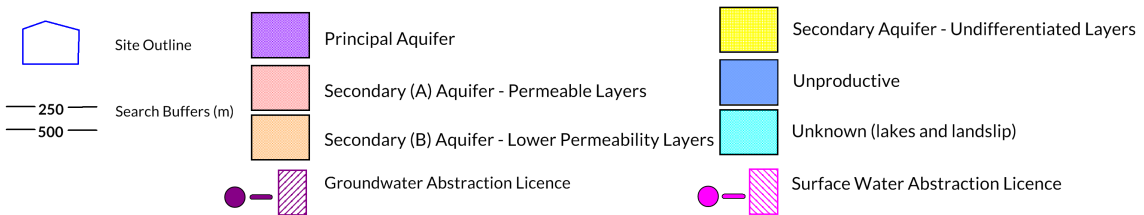




6b. Aquifer Within Bedrock Geology and Abstraction Licences

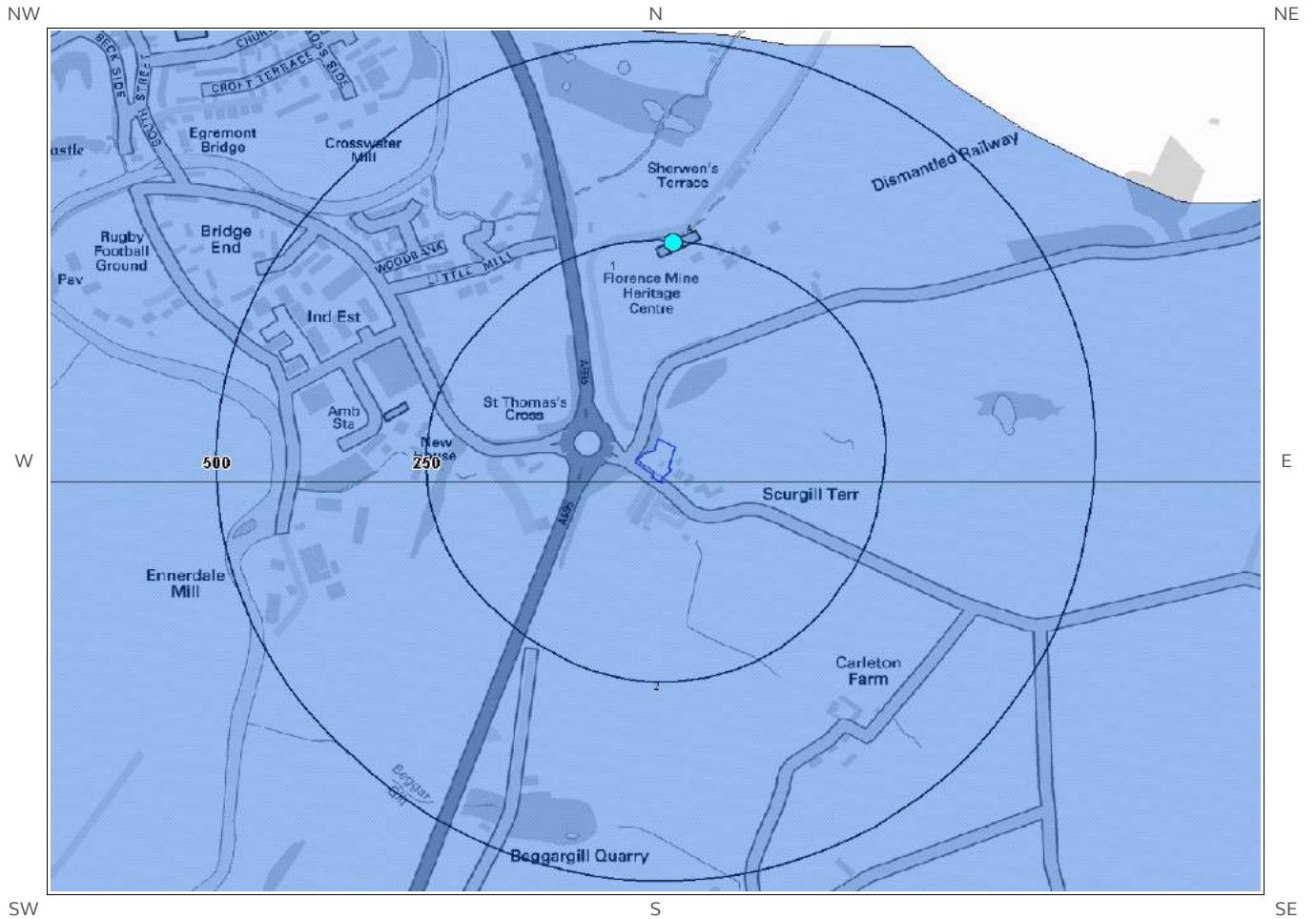


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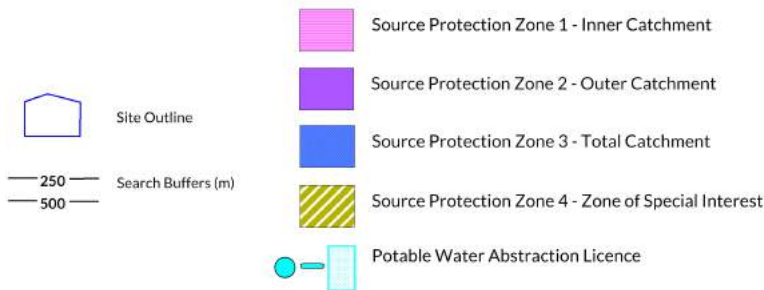




6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences

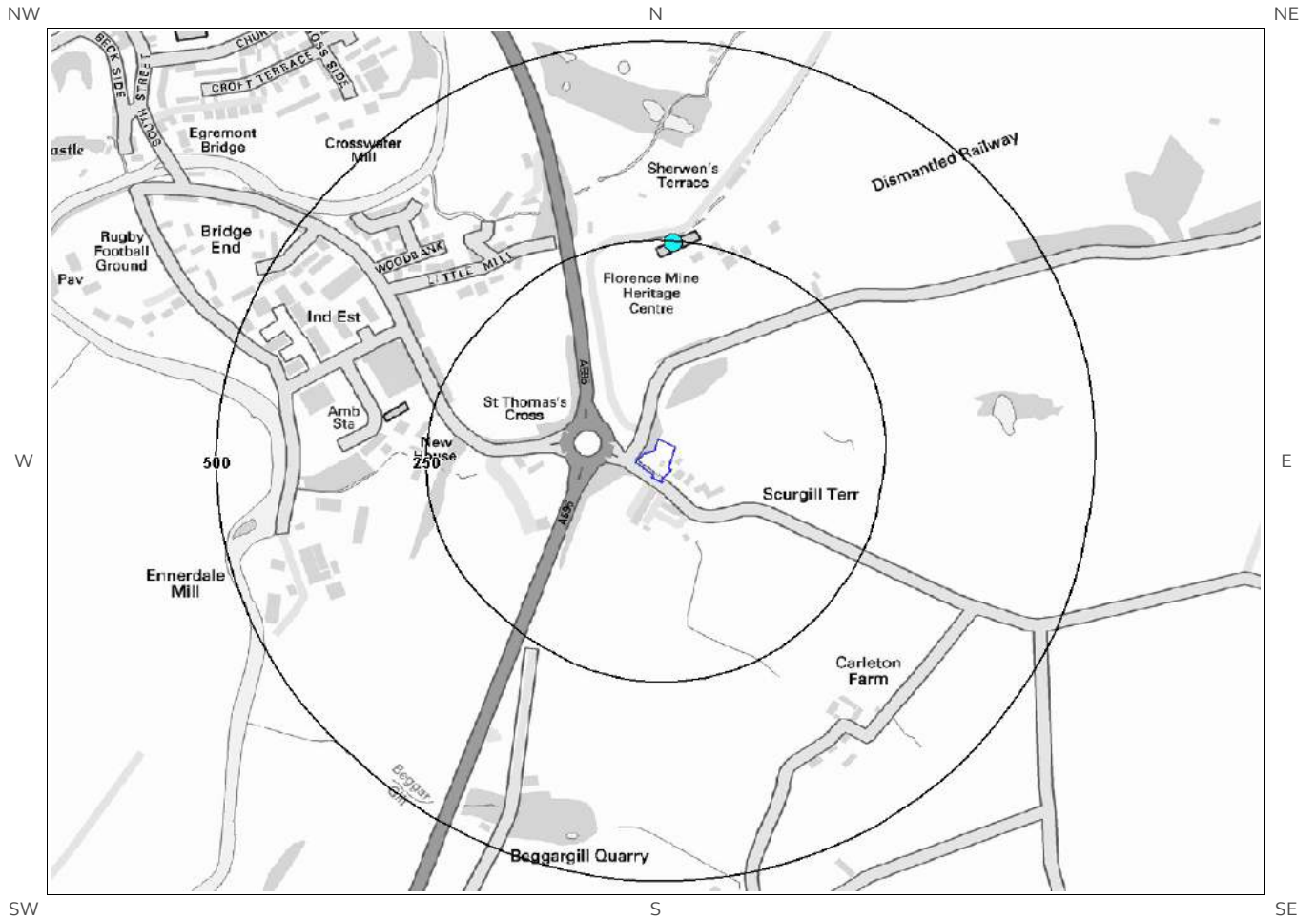


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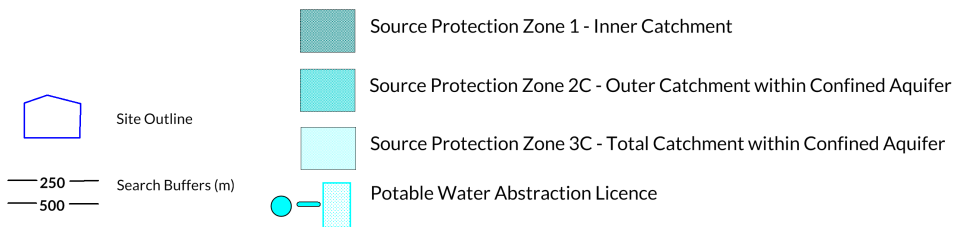




6d. Hydrogeology – Source Protection Zones within confined aquifer

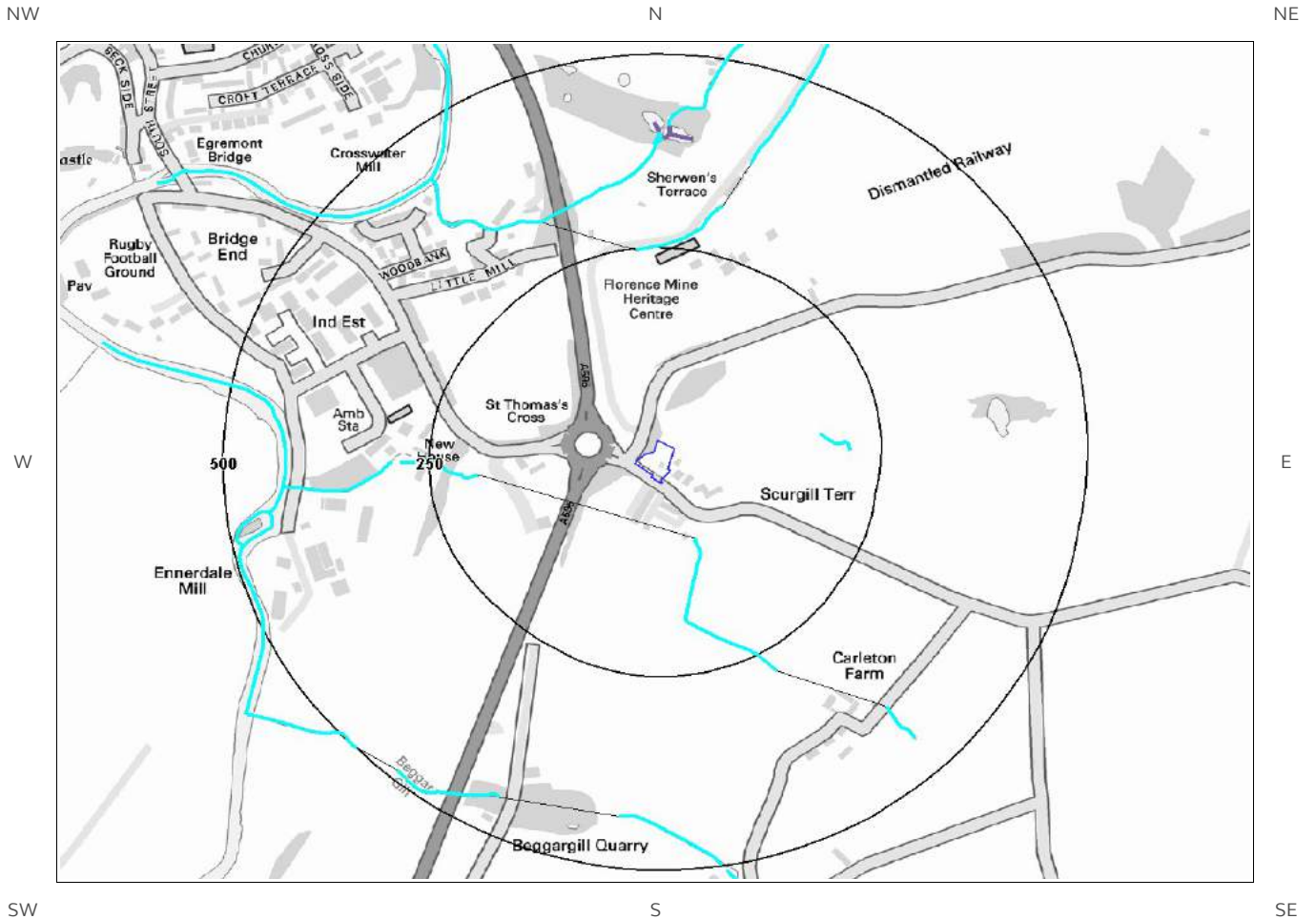


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


















6e. Hydrology – Watercourse Network and River Quality



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- | | | | | | |
|---|---------------------------------------|--|--------------------------------------|--|-------------------------------------|
|  | Site Outline |  | Tidal River |  | Canal |
|  | Search Buffers (m) |  | Underground or Elevated Tidal River |  | Underground or Elevated Canal |
|  | 250 |  | Underground or Elevated Inland River |  | Lock or Flight of Locks |
|  | 500 |  | Foreshore |  | Lake, Reservoir, or Marsh |
|  | General Quality Assessment: Chemistry |  | Drain or Transfer |  | General Quality Assessment: Biology |

6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
10	0	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
11	0	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
1	113	E	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	251	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
3	303	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

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	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
2	0	On Site	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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
6A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: Transfer between sources Direct Source: Ground Water - North West Region Point: "FLORENCE MINE AT EGREMONT,CUMBRIA" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
7A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "FLORENCE MINE AT EGREMONT,CUMBRIA" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
8A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: FLORENCE MINE AT EGREMONT,CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
9A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: Process water Direct Source: Ground Water - North West Region Point: FLORENCE MINE AT EGREMONT,CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
10A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: Transfer between Sources (Pre Water Act 2003) Direct Source: Ground Water - North West Region Point: FLORENCE MINE AT EGREMONT,CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
11A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: Process water Direct Source: Ground Water - North West Region Point: "FLORENCE MINE AT EGREMONT,CUMBRIA" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
12A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: FLORENCE MINE AT EGREMONT,CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
13A	247	N	301700 510300	Status: Historical Licence No: 2774005010 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "FLORENCE MINE AT EGREMONT,CUMBRIA" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1454	W	300222 509780	Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: GULLEY FLATTS - EGREMONT BOREHOLE C Data Type: Point Name: UNITED UTILITIES WATER LTD	Annual Volume (m ³): 3.65e+006 Max Daily Volume (m ³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 21/07/2015 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Transfer between sources Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Transfer between sources Direct Source: Ground Water - North West Region Point: "BECKERMET MINE AT BECKERMET, CUMBRIA B\$461" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Process water Direct Source: Ground Water - North West Region Point: "BECKERMET MINE AT BECKERMET, CUMBRIA B\$461" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Transfer between Sources (Pre Water Act 2003) Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BECKERMET MINE AT BECKERMET, CUMBRIA B\$461" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BECKERMET MINE AT BECKERMET, CUMBRIA B\$461" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Active Licence No: 2774005010 Details: Process Water Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 3.504e+006 Max Daily Volume (m ³): 14400 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2007 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
Not shown	1618	SE	302500 508600	Status: Active Licence No: 2774005010 Details: Evaporative Cooling Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 3.504e+006 Max Daily Volume (m ³): 14400 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2007 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Process water Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY	Annual Volume (m ³): 4830125 Max Daily Volume (m ³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2006 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Process water Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B\$461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B\$461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B\$461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: Transfer between sources Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B\$461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1987 Version End Date:
Not shown	1730	W	299975 509615	Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BLACK LING - EGREMONT BOREHOLE D Data Type: Point Name: UNITED UTILITIES WATER LTD	Annual Volume (m ³): 3.65e+006 Max Daily Volume (m ³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 21/07/2015 Version End Date:
Not shown	1949	SW	300473 508472	Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: MERRY HILL - EGREMONT BOREHOLE A Data Type: Point Name: UNITED UTILITIES WATER LTD	Annual Volume (m ³): 3.65e+006 Max Daily Volume (m ³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 21/07/2015 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

Identified

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
3A	247	N	301700 510300	<p>Status: Historical Licence No: 2774005010 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "FLORENCE MINE AT EGREMONT,CUMBRIA" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
4A	247	N	301700 510300	<p>Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: FLORENCE MINE AT EGREMONT,CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY</p> <p>Annual Volume (m³): 4830125 Max Daily Volume (m³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1454	W	300222 509780	<p>Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: GULLEY FLATTS - EGREMONT BOREHOLE C Data Type: Point Name: UNITED UTILITIES WATER LTD</p> <p>Annual Volume (m³): 3.65e+006 Max Daily Volume (m³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	1618	SE	302500 508600	<p>Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	1618	SE	302500 508600	<p>Status: Historical Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA Data Type: Point Name: NUCLEAR DECOMMISSIONING AUTHORITY</p> <p>Annual Volume (m³): 4830125 Max Daily Volume (m³): 15911 Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not	1618	SE	302500	<p>Status: Historical</p> <p>Annual Volume (m³): -</p>

ID	Distance (m)	Direction	NGR	Details
shown			508600	Licence No: 2774005010 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BECKERMET MINE AT BECKERMET, CUMBRIA B\$461 Data Type: Point Name: BRITISH NUCLEAR FUELS PLC Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1618	SE	302500 508600	Status: Historical Licence No: 2774005010 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BECKERMET MINE AT BECKERMET, CUMBRIA B\$461" Data Type: Point Name: BRITISH NUCLEAR FUELS PLC Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 28/11/1987 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1730	W	299975 509615	Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: BLACK LING - EGREMONT BOREHOLE D Data Type: Point Name: UNITED UTILITIES WATER LTD Annual Volume (m ³): 3.65e+006 Max Daily Volume (m ³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: Version End Date:
Not shown	1949	SW	300473 508472	Status: Active Licence No: NW/074/0005/003 Details: Potable Water Supply - Direct Direct Source: Ground Water - North West Region Point: MERRY HILL - EGREMONT BOREHOLE A Data Type: Point Name: UNITED UTILITIES WATER LTD Annual Volume (m ³): 3.65e+006 Max Daily Volume (m ³): 11000 Original Application No: - Original Start Date: 21/07/2015 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: Version End Date:

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

Identified

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	0	On Site	3	Total catchment
2	0	On Site	3	Total catchment

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
39	S	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
90	E	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
192	W	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
434	W	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
440	S	Major Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
469	N	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site Identified

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	988	N	301400 511000	River Name: Ehen Reach: Egremont To Fwl(bnfl Pipe Br) End/Start of Stretch: Start of Stretch NGR	B	B	B	B	A
Not shown	988	N	301400 511000	River Name: Ehen Reach: Keekle To Egremont End/Start of Stretch: End of Stretch NGR	A	A	A	A	A

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	988	N	301400 511000	River Name: Ehen Reach: Egremont To Fwl(bnfl Pipe Br) End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A
Not shown	988	N	301400 511000	River Name: Ehen Reach: Keekle To Egremont End/Start of Stretch: End of Stretch NGR	A	A	A	A	A

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.



The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	56 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
24	56 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
2	83 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	83 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	178 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
26	178 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	191 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	191 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	241 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	241 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	248 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	248 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 1.9
29	248 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	248 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.9
8	280 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
31	280 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	298 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
32	298 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	310 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.7
33	310 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.7
11	314 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	314 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	317 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3
13	317 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not shown	317 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3
Not shown	317 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.0
14	318 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
Not shown	318 NW	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.1
15	375 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	375 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	383 N	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6
17	383 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	383 N	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6
Not shown	383 N	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	391 N	Black Beck	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6
Not shown	391 N	Black Beck	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6
19	392	Not Specified	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	N			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.7
Not shown	392 N	Not Specified	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.7
20	396 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	396 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	397 N	Black Beck	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
Not shown	397 N	Black Beck	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
22	400 N	Not Specified	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.1
Not shown	400 N	Not Specified	Lake, loch or reservoir.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.1
23	407 N	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
Not shown	407 N	Black Beck	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
24	409 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	409 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	423 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 15.0
Not shown	423 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.0
26	428 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.9
Not shown	428 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.9
27	432 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	432 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	433 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	433 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	436 NW	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.2
30	436 NW	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	436 NW	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.2
Not shown	436 NW	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
31	446 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.7

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not shown	446 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.7
32	448 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	448 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
33	449 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	449 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
34	450 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	450 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
35	486 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	486 W	River Ehen	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
36	488 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	488 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	488 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	488	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Underground

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
38	498 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	498 SW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

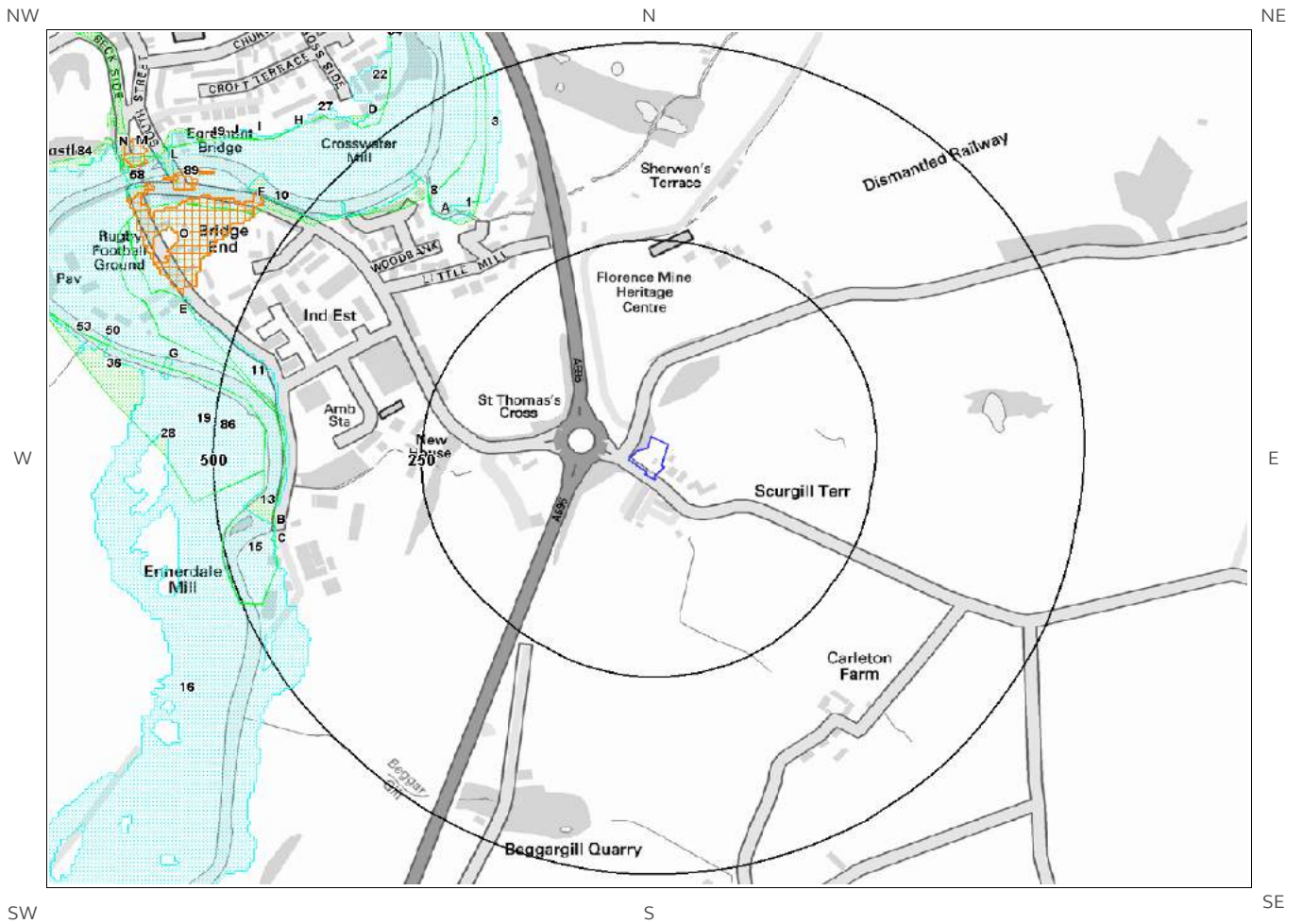
6.11 Surface Water Features

Surface water features within 250m of the study site Identified

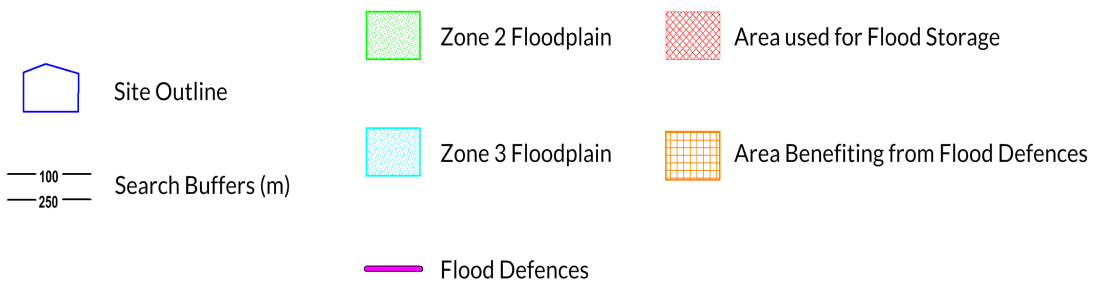
The following surface water records are not represented on mapping:

Distance (m)	Direction
83	SE
178	E
191	W
237	W

7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)

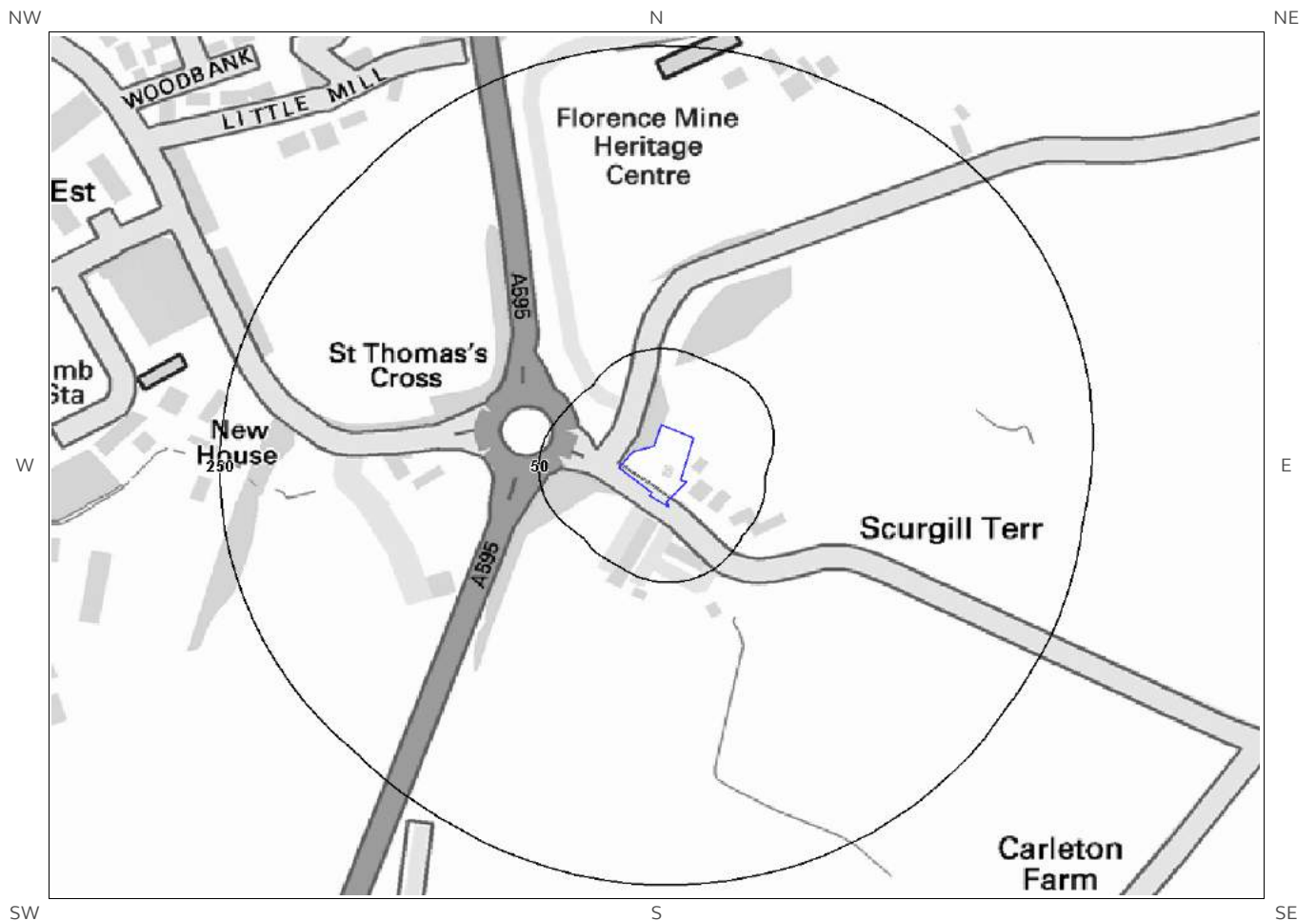


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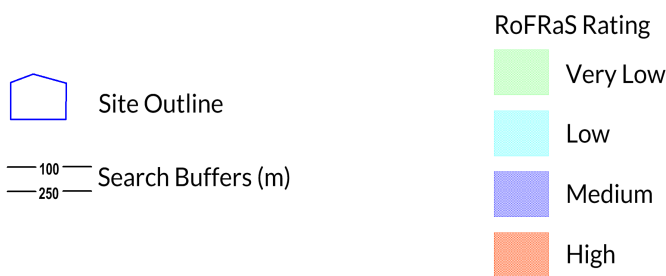




7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m None identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m None identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Flood Defences within 250m of the study site None identified
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site

None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

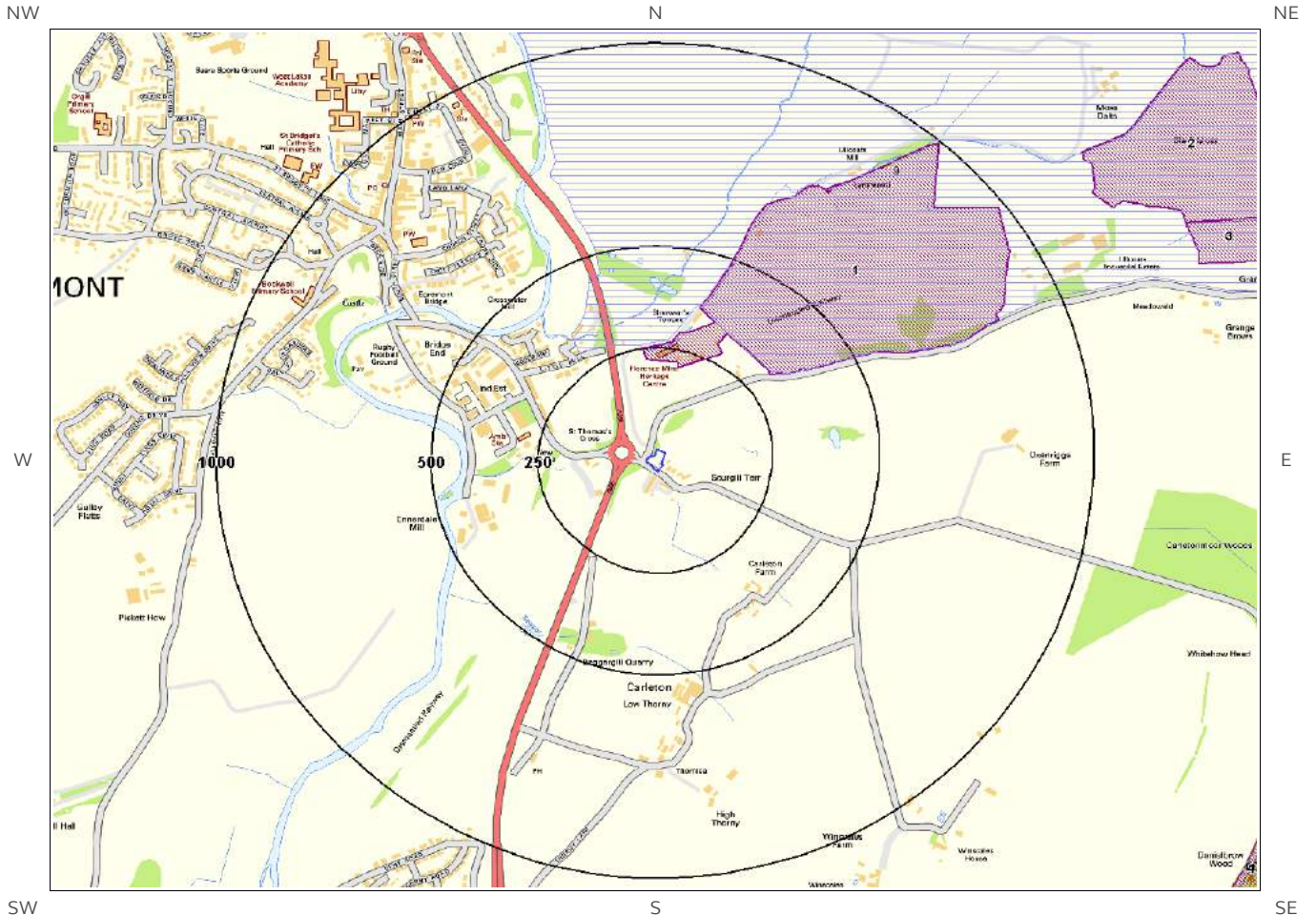
British Geological Survey confidence rating in this result

Low

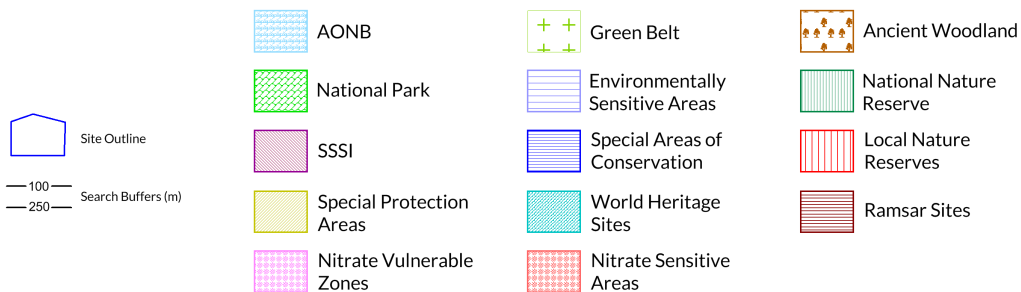
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

8

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
1	208	N	Florence Mine	Natural England
2	1183	NE	Black Moss	Natural England
3	1330	E	Black Moss	Natural England
4	1638	SE	Haile Great Wood	Natural England
Not shown	1733	E	Haile Great Wood	Natural England
Not shown	1873	E	Haile Great Wood	Natural England
Not shown	1926	E	Haile Great Wood	Natural England
Not shown	1984	E	Haile Great Wood	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

2

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
11	1641	SE	GREAT WOOD/+	Ancient and Semi-Natural Woodland
Not shown	1733	E	GREAT WOOD/+	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

2

The following Environmentally Sensitive Area records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	ESA Name	Data Source
9	261	N	Lake District	Natural England
10	1463	E	Lake District	Natural England

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our [website](#). The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

Identified

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Iron Ore (Non Vein)	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
0.0	On Site	Not available	Iron Ore (Non Vein)	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

These are areas known or suspected to contain past underground mining for minerals and/or other materials where workings are likely to be extensive. In the case of mineral veins these are areas within 200m of mapped mineral veins within which it is likely that mining activities may have occurred. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
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Fax: 0115 936 3276.
Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk



Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506

Web: www.environment-agency.gov.uk

Email: enquiries@environment-agency.gov.uk



Public Health England

Public information access office
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133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority

200 Lichfield Lane
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DX 716176 Mansfield 5
www.coal.gov.uk



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority

Authority: Copeland Borough Council
Phone: 0845 054 8600

Web: <http://www.copeland.gov.uk>

Address: The Copeland Centre, Catherine Street, Whitehaven,

Gemapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444





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LOCATION INTELLIGENCE

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Appendix III

- Historical Ordnance Survey Map Extracts (GSR – Mapinsight)

Site Details:

Land at, Scurrigill, Egremont

Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: County Series

Map date: 1863

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1863
 Revised 1863
 Edition N/A
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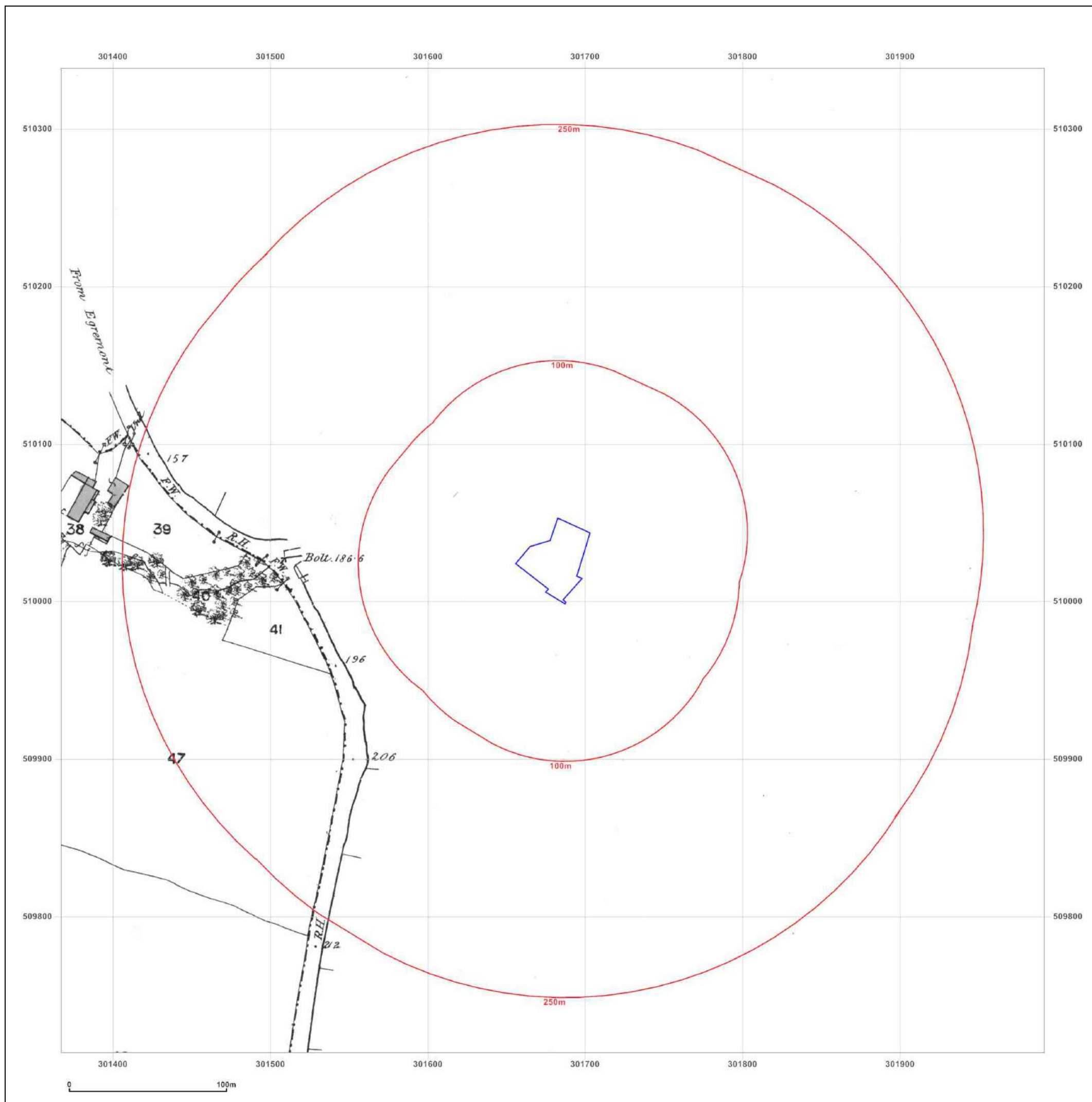


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Production date: 12 February 2019

Map legend available at:
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Site Details:

Land at, Scurrigill, Egremont

Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: County Series

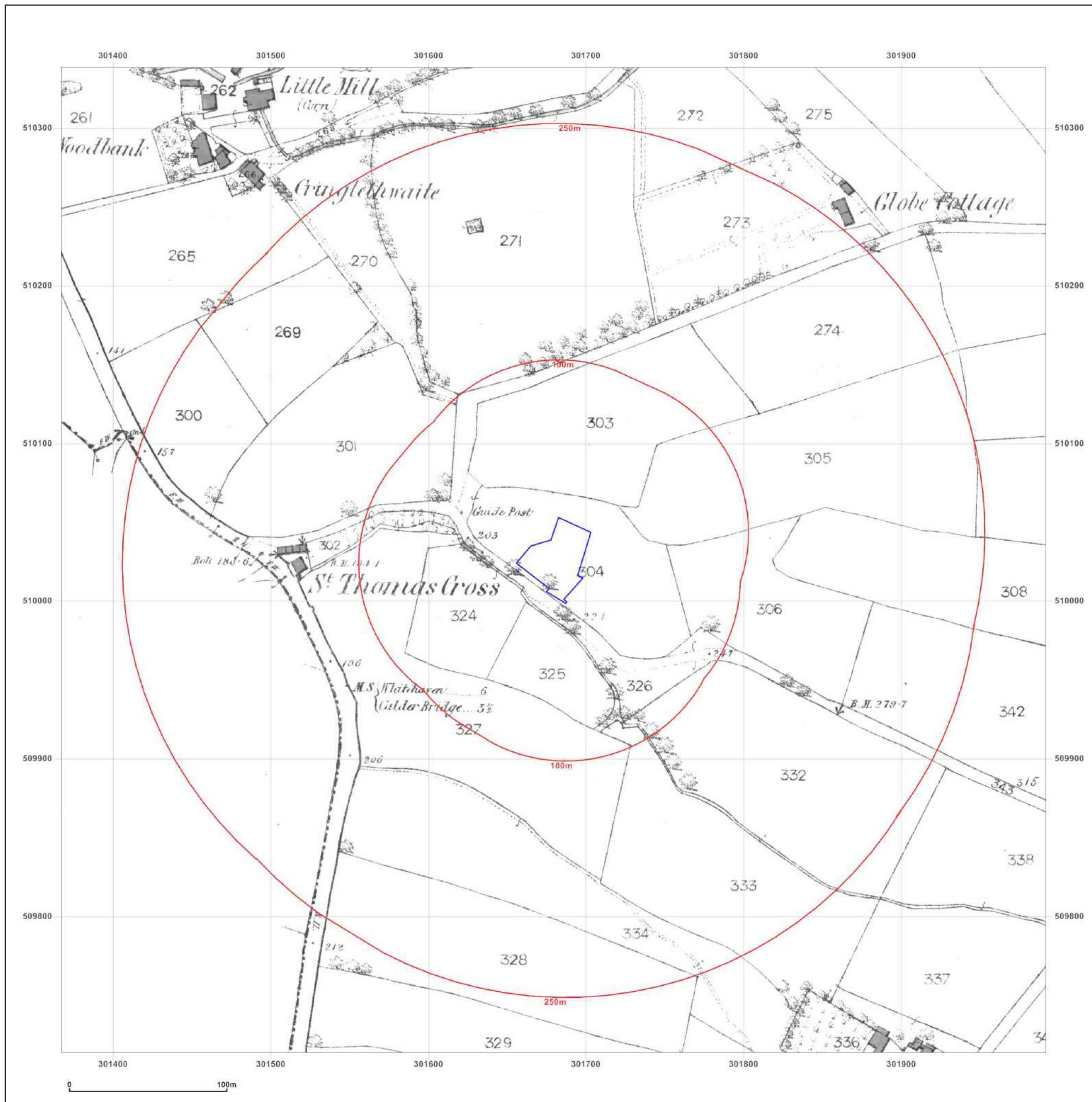
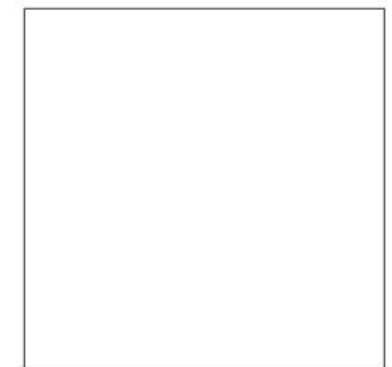
Map date: 1863

Scale: 1:2,500

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Site Details:

Land at, Scurrigill, Egremont

Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: County Series

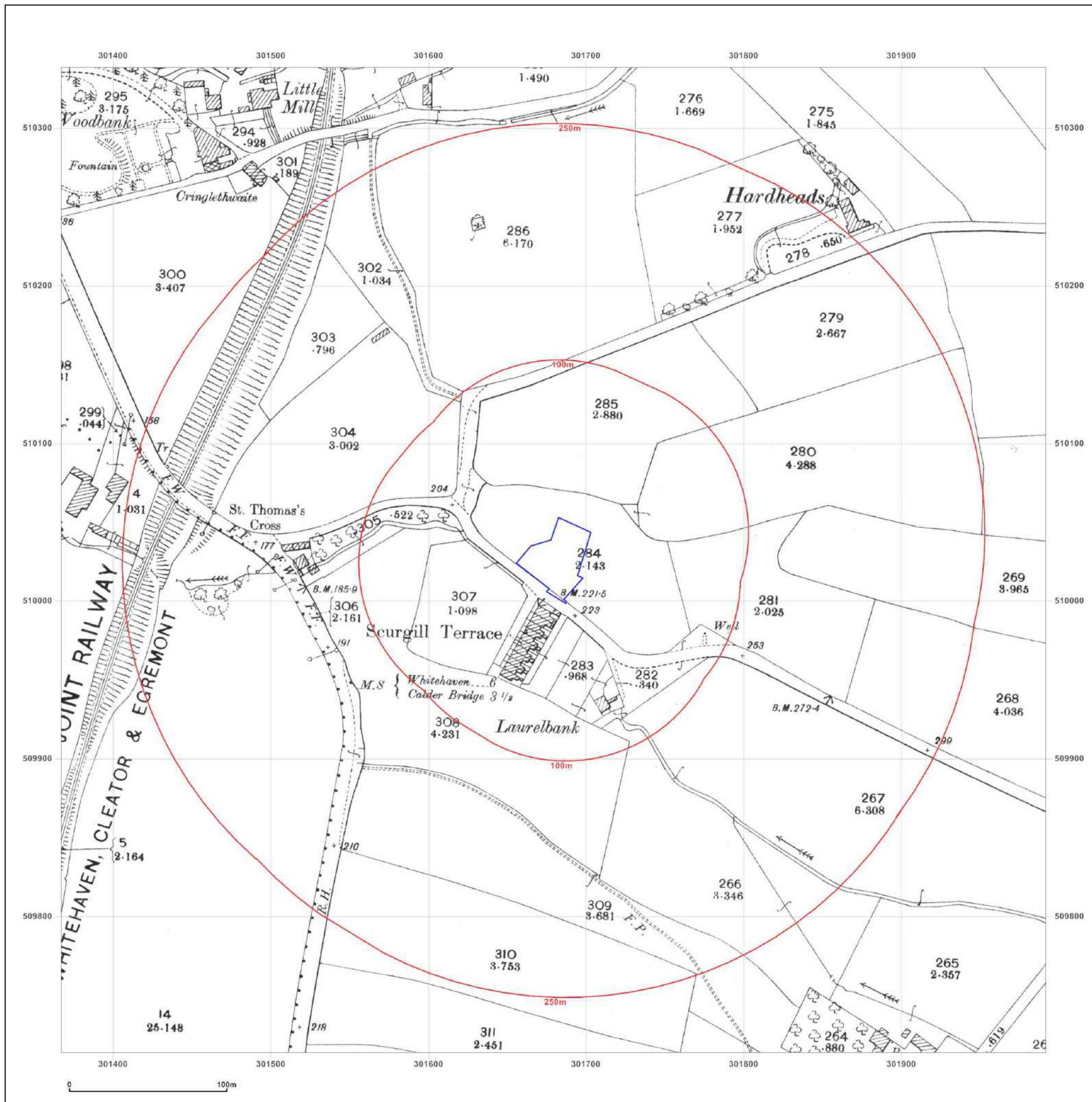
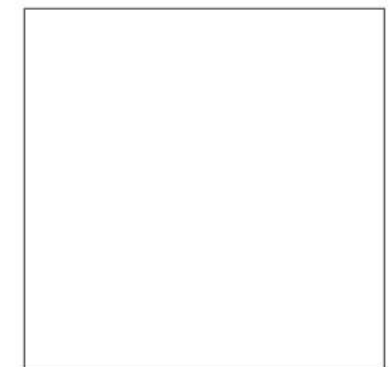
Map date: 1899

Scale: 1:2,500

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Site Details:

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Client Ref: EMS_526698_708238
 Report Ref: EMS-526698_708238
 Grid Ref: 301679, 510026

Map Name: County Series

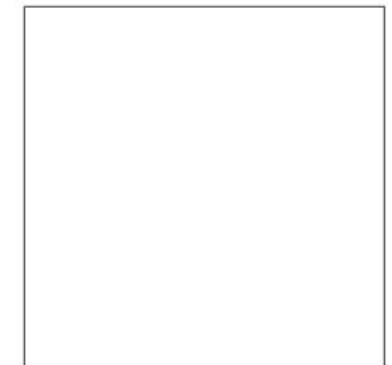
Map date: 1924

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

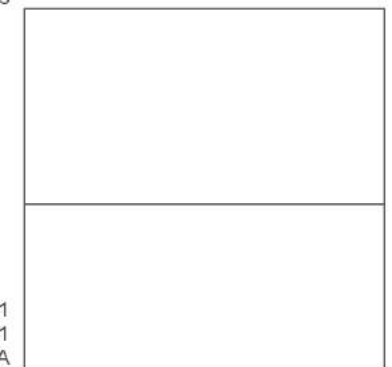
Map date: 1961-1963

Scale: 1:2,500

Printed at: 1:2,500



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 Revised 1961
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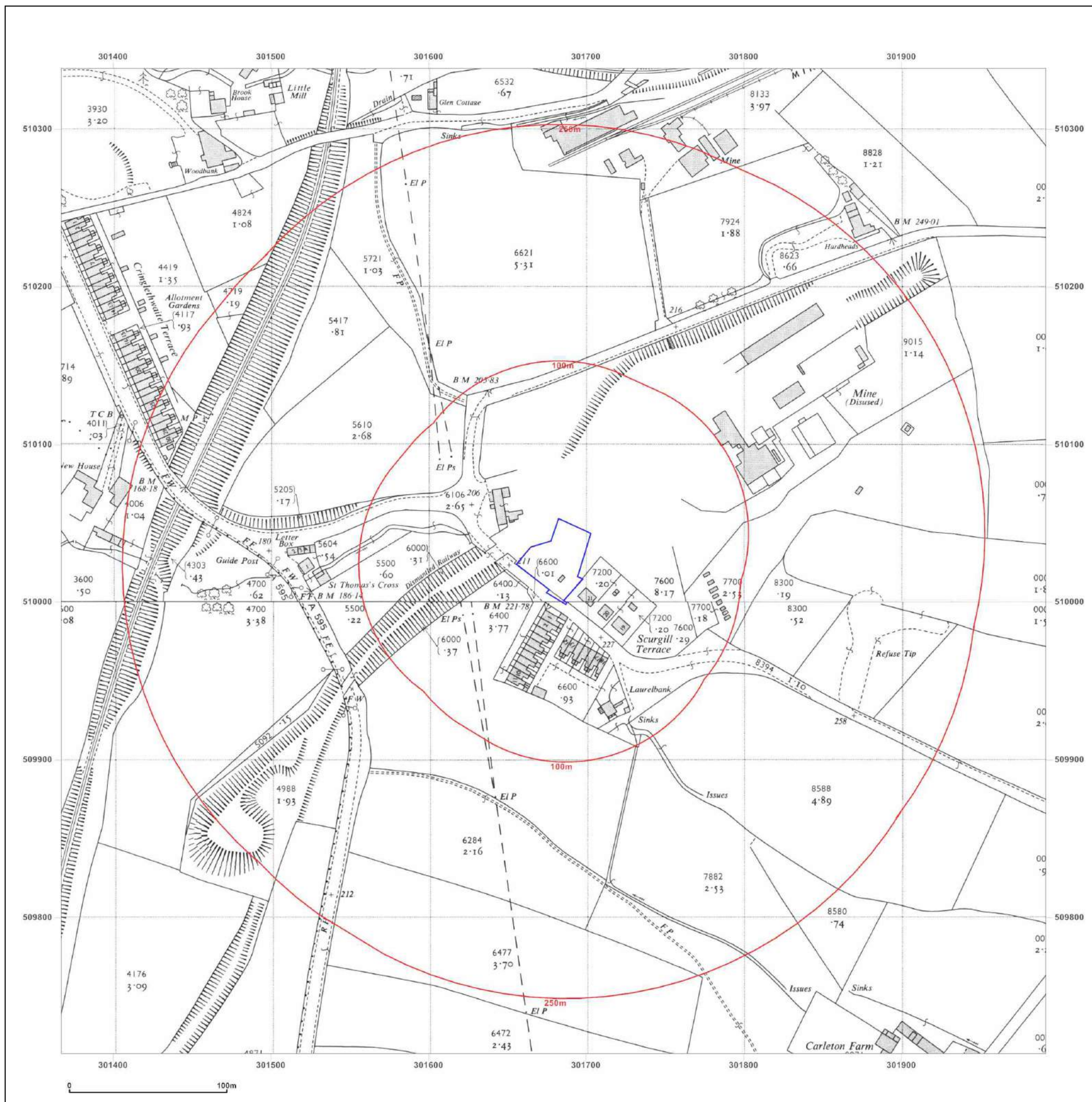


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Site Details:

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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

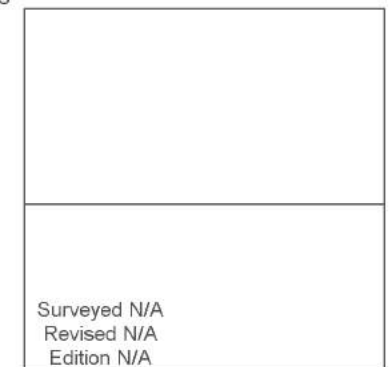
Map date: 1963-1968

Scale: 1:2,500

Printed at: 1:2,500



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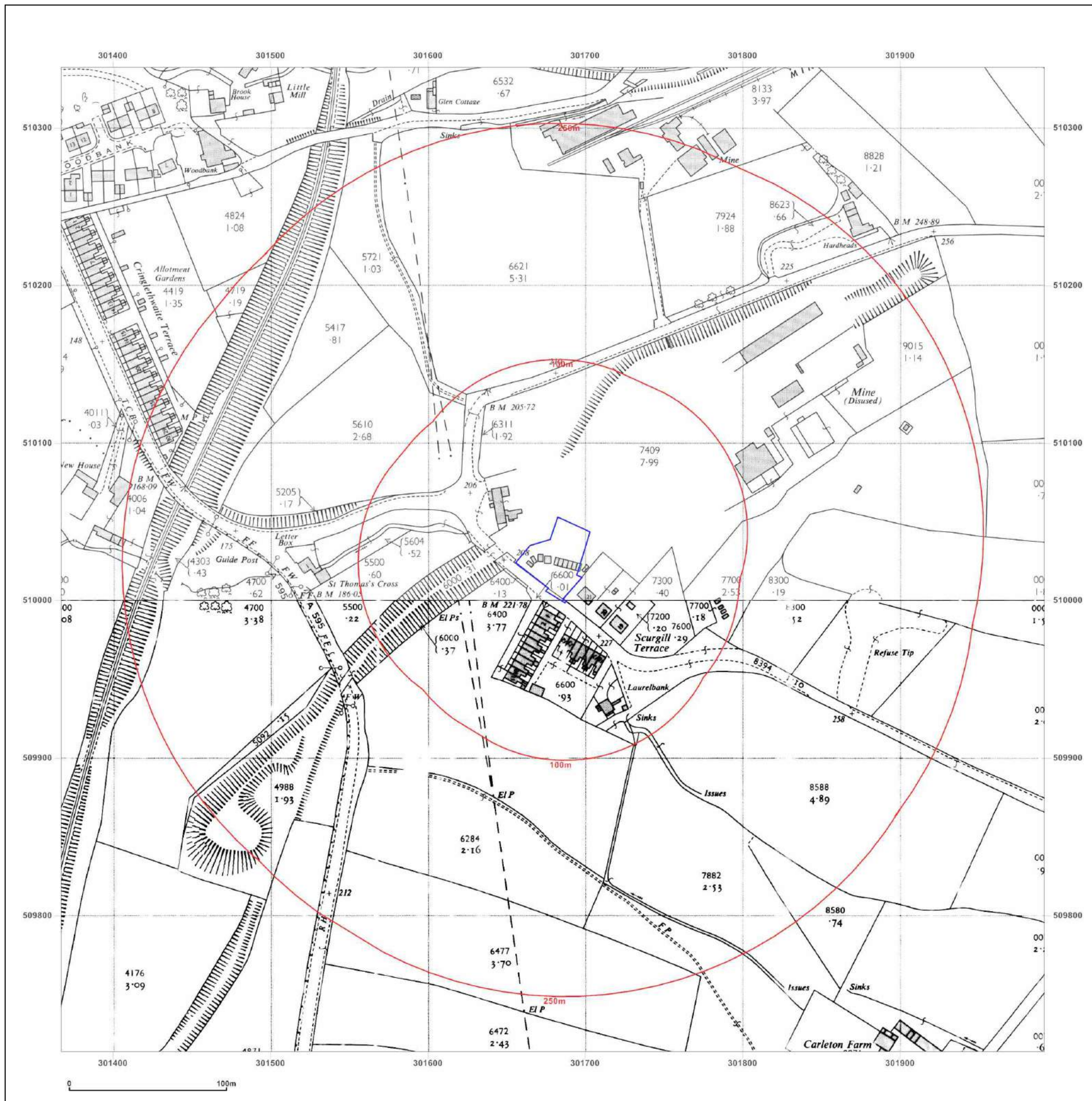


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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

Map date: 1969

Scale: 1:2,500

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Site Details:

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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

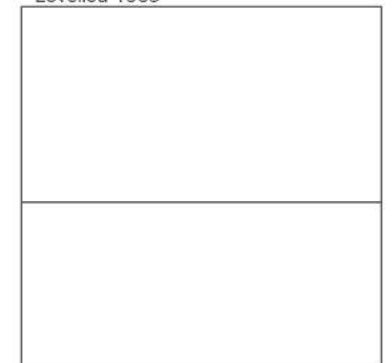
Map date: 1982

Scale: 1:2,500

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Site Details:

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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

Map date: 1990-1993

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

Map date: 1993-1994

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

Map date: 1993-1995

Scale: 1:2,500

Printed at: 1:2,500



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Client Ref: EMS_526698_708238
Report Ref: EMS-526698_708238
Grid Ref: 301679, 510026

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



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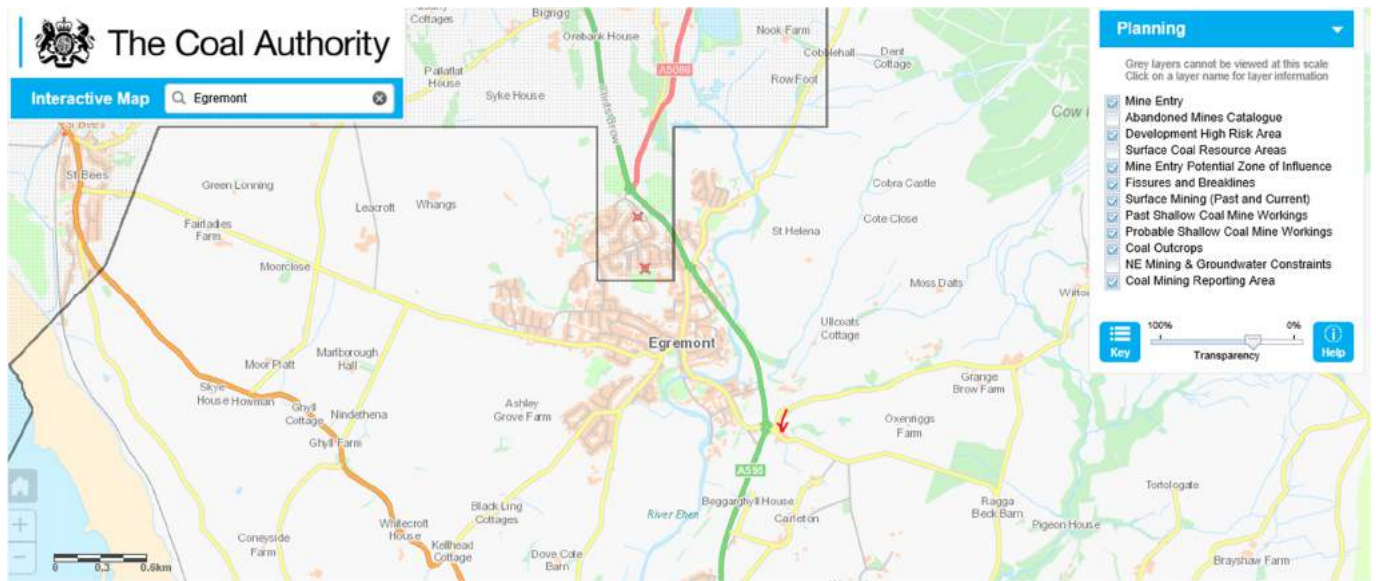
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www.groundsure.com/sites/default/files/groundsure_legend.pdf



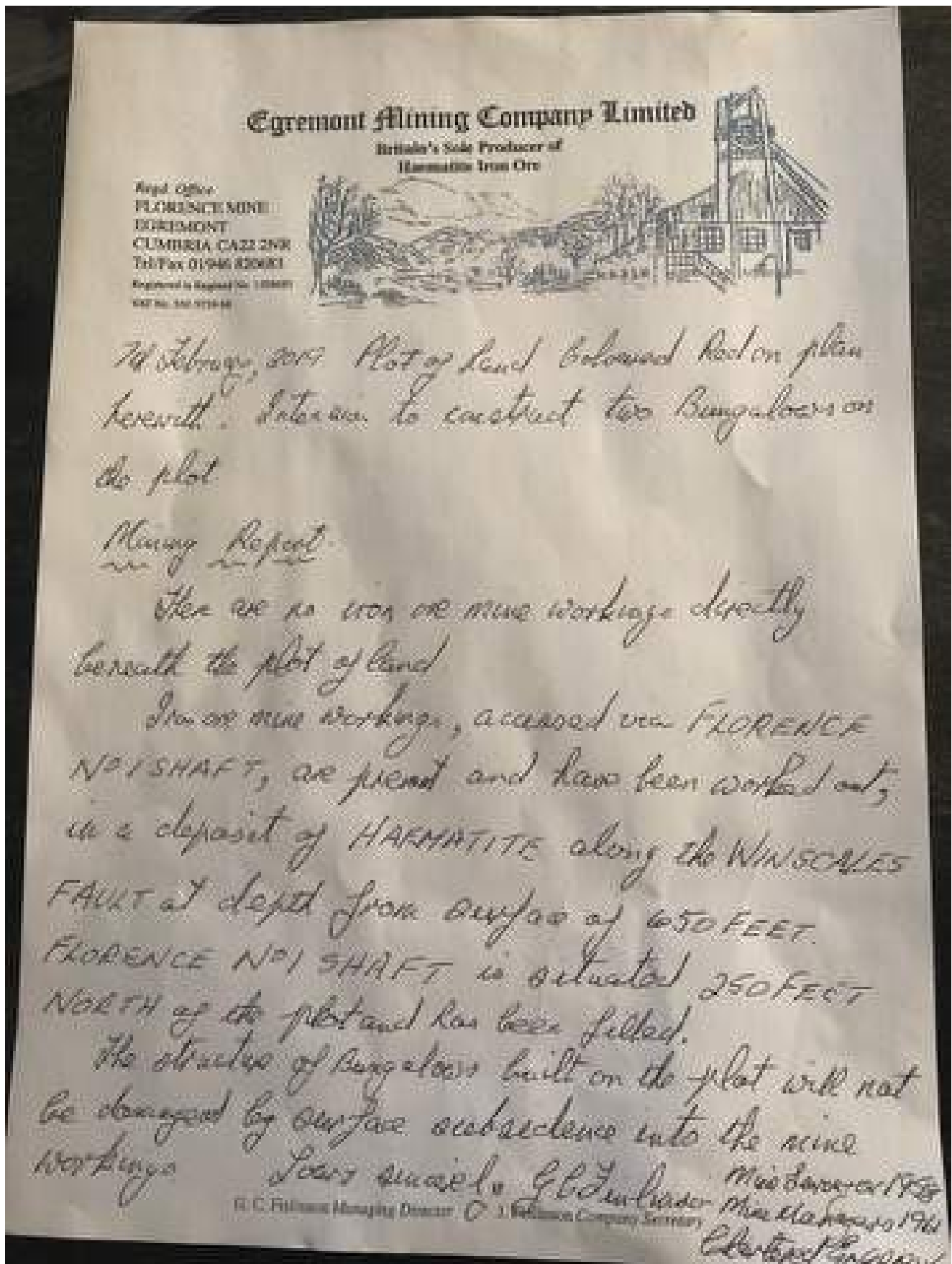
Appendix IV

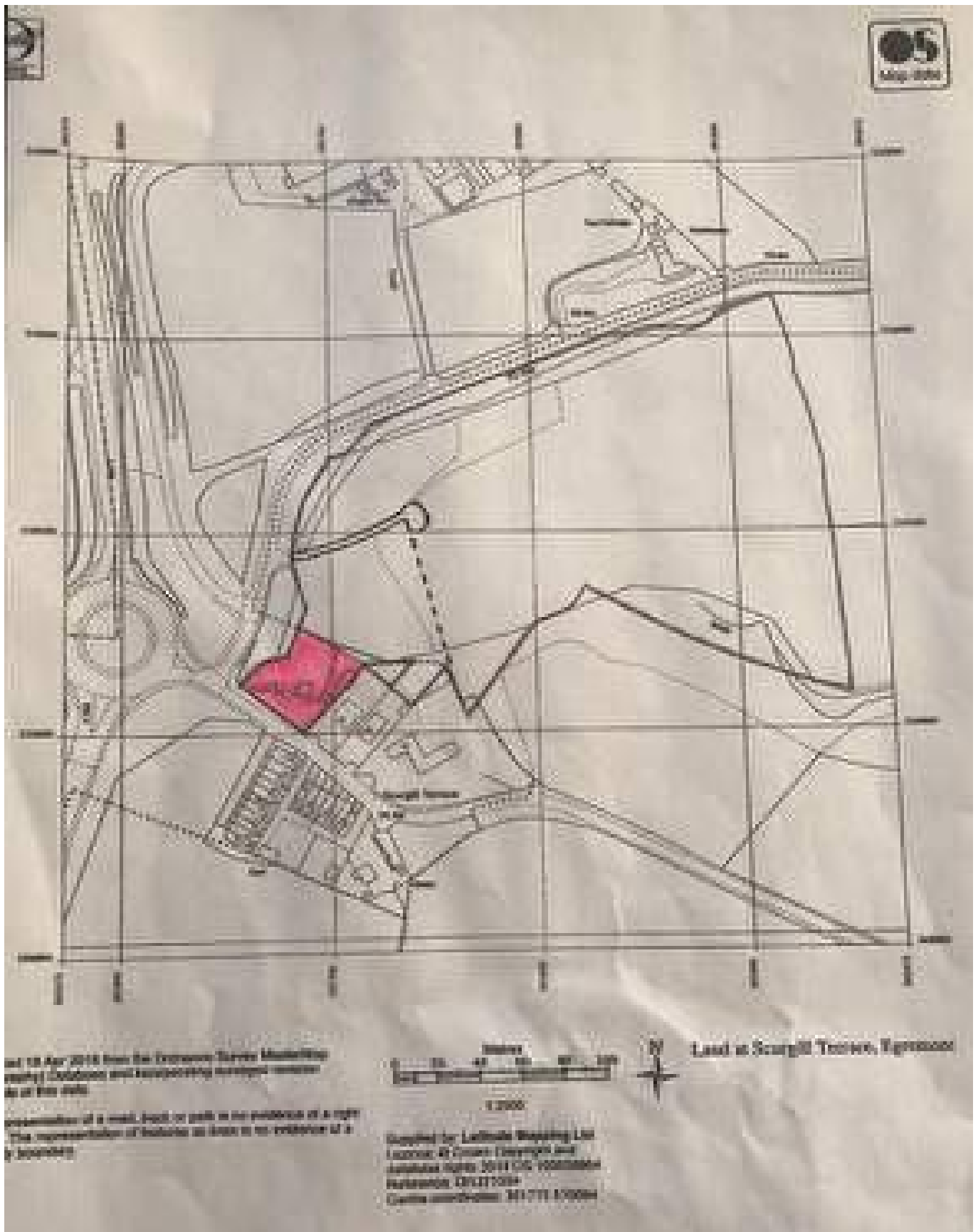
- Historical Mining Enquiries

The Coal Authority Correspondence (On-line Database)



Egremont Mining Company (Iron Ore Mining)







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