GEO Environmental Engineering

PHASE 1: DESK TOP STUDY REPORT

(PRELIMINARY RISK ASSESSMENT)

DEVELOPMENT OF LAND AT

SCALEGILL ROAD

MOOR ROW

CUMBRIA

FOR:

MESSRS SHARPE

GEO Environmental Engineering

DOCUMENT CONTROL SHEET

Report Ref:	2021-4638
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Prepared By:	Curtis Evans *B.Sc. (Hons) FGS* – Geo Environmental Engineer/Director
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Signature:	
Client Title:	Messrs Sharpe
Consultant:	Alpha Design

CONTENTS

1.0 Introduction

1.1 Instruction

GEO Environmental Engineering (GEO) Ltd has completed a Phase 1: Desk Top Study Report (Preliminary Geo-Environmental Risk Assessment) for a piece of land accessed off Scalegill Road, Moor Row, Cleator, Cumbria to determine any potential geohazards that may affect the residential redevelopment of the site. Geo Environmental Engineering Ltd has been commissioned to complete the report by the Consultant, Alpha Design on behalf of the Client, Messrs Sharpe.

The Phase 1: Desk Top Study (DTS) Report is to be used for submission to the Local Authority as part of the planning application as it is the Client's intention for the site to be redeveloped with residential properties. Further development details are available from the Consultant.

1.2 Aims and Objectives

The aims and objectives of this Phase 1: Desk Top Study (DTS) Report (Preliminary Risk Assessment) 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 or 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:

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

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

- British Geological Survey (BGS).
- Environment Agency (EA).
- Ground Sure Report (Enviro+GeoInsight – GSR – Appendix II).
- Historical Map Extracts (Appendix III).
- Historical Site Investigation (Appendix IV).
- The Coal Authority On-line Database (Appendix V).

A Site Reconnaissance Survey (SRS - Site Walkover) was completed during March 2021 with details of the visit summarised in Section 2.0 and photographs presented in Appendix I.

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 Location Plans 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. GEO accepts no responsibility for the accuracy of third party information involved within the completion of this report.

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 Geo Environmental Engineering Ltd standard terms and conditions.

2.0 Site Location and Development Proposals

2.1 Site Location

The development area comprises an irregular shaped piece of land accessed off Scalegill Road within the western extent of Moor Row, extending northwards from Scalegill Road to the former railway line, which forms the northern site boundary. Information indicates the site is centred on an OS national Grid Reference of 300183, 514426 and equates to c.1.56ha.

The site comprises agricultural fields. Playing fields are to the east with a newly constructed housing estate (Rusper Drive) to the west. To the north is the former railway line, beyond which are agricultural fields. The site is accessed via Ruskin Drive which comprises four newly-constructed residential properties.

2.2 Existing Site Levels

During the site reconnaissance survey (SRS) it was observed that the site is generally level with some slight undulations and a slight fall to the north and north-west. No significant slopes or retaining structures have been identified. No Ordnance Survey Benchmarks (OS BM) are noted on OS plans on site or within the vicinity of the site. It is therefore recommended that site levels and features be confirmed by a Topographical Survey.

2.3 Existing Site Surfacing and Buildings

The site is free from structures and the surfacing comprises vegetation. During the walkover no above ground or below ground fuel storage tanks were identified on site. During the SRS the majority of the site appeared to be in reasonable condition, with no significant surface staining and no stockpiles of fly-tipped materials. There was no evidence of bonfires at the time of the site visit.

2.4 Development Proposal

It is understood that the outline proposal is for a residential housing estate, with access road, areas of motor vehicle parking and general areas of soft landscaping/shared gardens. Further development details can be obtained from the Consultant.

3.0 Geo-Environmental Setting

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 plans and the GSR does not indicate the presence of made ground materials on site, however areas of made ground are noted around the site. The site is historically recorded as agricultural land and therefore it is unlikely that deep made ground is present. However, some shallow made ground may be noted associated with localised levelling and adjacent developments (railway line and depot). Made ground may potentially comprise a mixture of disturbed natural materials (clay, sand and gravel) with varying quantities of anthropogenic debris (fragments of ash, brick, clinker, coal, etc.).

3.1.2 Drift Geological Deposits

A review of published geological plans and the GSR indicates that Drift geological deposits across the site area comprise Glacial Till, typically comprising sandy gravelly clay materials with a potential for layers of sand and gravel, cobbles and boulders. The GSR (Section 4.0) within Appendix II identifies the following:

- Shrink-swell clays – very low
- Landslides – very low
- Compressible deposits – negligible risk
- Collapsible deposits – very low
- Running sands – very low

It is recommended that reference be made to Sections 15.0 to 17.0 of the GSR (Appendix II). Consequently, Phase 2: Ground Investigation works would be prudent to aid the design of foundations, retaining structures and highways, should they be deemed necessary by the Design Team.

3.1.3 Solid Geological Deposits

The BGS Geological Plan and GSR indicate that the development site is underlain by the following Solid geological units: Upper Carboniferous Lower Coal Measures, Brockram Breccia and St Bees Sandstone.

No coal seams are noted by the BGS/GSR as sub-cropping on site of within the vicinity of the site. Reference to the GSR suggests the nearest (historical) iron ore mine is around c.400m away. However, GEO is not responsible for third party information and records may be inaccurate or incomplete. Consequently, GEO recommends that care and consideration of potential mining features should be made by the developer during construction

The GSR notes the following: *"Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.".* The GSR indicates a negligible level of risk.

3.1.4 Geological Features

A geological structural fault line is inferred as passing c.15m north of the site. The fault line is not currently considered to pose a significant structural risk to the development site, although it may act as a conduit for the migration of surrounding ground gas emissions.

3.1.5 Mining and Quarrying Assessment

The underlying Solid geological deposits are recorded as variable. For completeness, site specific reference has been made to the Coal Authority (CA) by way of a CA Coal Mining Report and Online Database, referenced as follows:

- According to the records in CA possession, the property is within the zone of likely physical influence from workings in three seams of coal at 210m to 270m depth, and last worked in 1918. The CA states that any ground movement from these workings should have stopped by now. In addition, GEO notes that the CA does not record shallow sub cropping coal either on site or within the vicinity of the site, nor do they suggest a possibility of shallow unrecorded coal workings.
- The property is not in the likely zone of influence of any present underground coal workings.
- The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.
- The property is not in an area for which a licence has been granted to remove or otherwise work coal using underground methods.
- The property is not in an area that is likely to be affected at the surface from any planned future workings.
- No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.
- There are no known coal mine entries within, or within 20 metres of, the boundary of the property. GEO observes that CA records may be incomplete and there could be mine entries on site for which the CA has no record. GEO therefore recommends that care and consideration of potential mining features should always be made by the developer during construction.
- The CA is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.
- The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.
- The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.
- The property is not within 800 metres of the boundary of an opencast site for which the CA is determining whether to grant a licence to remove coal by opencast methods.
- The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.
- The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres.
- The Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
- There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.
- The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

In addition to the above information, reference has been made to the CA Online Database which notes the following:

- The site is not recorded as being a CA defined “High Risk Development Area”.
- The CA does not record areas of shallow coal mine workings (i.e. less than c.30m depth) either on site or close to the site.

- No coal mine entries are recorded by the CA as being on site or immediately adjacent to the site.
- Shallow sub-cropping coal seams are not recorded by the CA on site.
- Areas of former opencast (surface) coal mining are not recorded by the CA within close proximity to the site boundaries.

As a result of the above information, in-conjunction with the geological review using the desk based information available from the CA, BGS and GSR the development site is not currently considered to be at potential risk of shallow coal mining related geohazards. However, GEO is not responsible for third party information and records may be inaccurate or incomplete. Consequently. GEO recommends that care and consideration of potential mining features should be made by the developer during construction.

The area of Cleator and Moor Row is also well-known for historical iron ore mining activities. The GSR notes the nearest (historical) iron ore mine as being c.400m away. The GSR (Section 18.6) also notes that *"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."* GEO has previously consulted with a local expert (now retired) who had indicated that historical iron ore mining is unlikely at this location. However, GEO is not responsible for third party information and records may be inaccurate or incomplete. Consequently, GEO recommends that care and consideration of potential mining features should be made by the developer during construction.

A review of historical plans does not record any quarry features on or within close proximity to the site, although historical quarry features are noted elsewhere (beyond an influencing distance). In addition, a review of the GSR indicates that the following activities do not affect the site:

- Natural Cavities
- Brine Extraction
- Gypsum Extraction
- Clay Mining
- Tin Mining

3.1.6 Historical Borehole Logs

No historical borehole logs are recorded on site or within a representative distance.

3.1.7 Radon Gas Assessment

In accordance with the GSR (Section 19.1) the development site is not located within a Radon Affected Area, as less than 1% of properties are above the Action Level. Consequently, in accordance with the GSR no radon protective measures are necessary.

3.2 Development Area Hydrogeology (Groundwater)

3.2.1 Made Ground/Soils

The topsoil and made ground materials on site are likely to be classified as high permeability (worst case scenario) until site information is available.

3.2.2 Drift Geology

The Drift Geological deposits below the development site are noted as Glacial Till and are therefore likely to be classified by the EA as being unproductive with respect to water resources (Secondary Undifferentiated Aquifer Status).

3.2.3 Solid Geology

The Solid geological deposits are noted as variable and therefore a variable classification is determined by the EA. The northern site area is noted as Principal Aquifer status with the central and southern site area noted as Secondary A status.

3.3 Development Area Hydrology

3.3.1 Groundwater

Groundwater is anticipated to be present within the Drift geological deposits with the potential for shallow water within the made ground (where present). A review of the information in the GSR indicates the following:

- No groundwater abstractions are recorded within c.1km of the site.
- No surface water abstractions are recorded within c.250m of the development area.
- No potable water abstraction licences are held within c.1km of the site.
- The site is not recorded as being within a Source Protection Zone.

3.3.2 Surface Water Features

No surface water features are identified on site or within a plausible migration distance when considering the site setting.

3.3.3 Current Surface Water Run-off

It is considered that the majority of the site will exhibit infiltration into the topsoil/made ground via the surfacing, as hard-standing is not present. It is considered that due to the slightly undulating topography there is the potential for areas of standing water, particularly during high intensity rainfall events.

3.4 Development Area Environmental Sensitivity

3.4.1 Site Ecology

- No Sites of Special Scientific Interest (SSSI) are noted within c.250m.
- No Conserved wetland sites (RAMSAR) are recorded within c.250m.
- No Special Areas of Conservation (SAC) are noted within c.250m.
- No Special Protection Areas (SPA) is present within c.250m.
- No National Nature Reserves (NNR) are recorded within c.250m.
- No Local Nature Reserves (LNR) are present within c.250m.
- No designated Ancient Woodland recorded within c.250m.
- No World Heritage Sites 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 Vulnerable Zones (NVZ) or Nitrate Sensitive Areas are within c.250m.

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 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 held within c.250m.
- No records of COMAH and NIHHS sites are held within c.250m.
- No Environment Agency Recorded Pollution Incidents are recorded within c.250m.

3.4.3 Determination of Contaminated Land (Part IIA)

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

3.4.4 Current Industrial Land Uses

Due to the predominantly residential and rural nature of the area surrounding the site there are only two (current) Industrial Land Use within c.250m of the site, with details provided within the GSR. In summary the GSR industrial use relates to essential infrastructure (pylons) which are not considered to pose an unacceptable risk of contamination.

3.4.5 Fuel Station Entries

According to the GSR Section 4.2 there are no fuel filling sites recorded within c.250m of the development area.

3.4.6 Landfill and Waste Regulation/Management – Landfill Sites / Other Waste Sites

- No active or recent Landfill Sites are recorded within c.250m.
- No Historic Landfill Sites are recorded within c.250m.
- No Licensed Waste Sites are recorded within c.250m.

Whilst the above modern-day records do not indicate areas of landfill on site or within close proximity to the site, reference to the GSR and the historical map extracts do suggest areas of potential infilling such as railway cuttings. These features are considered to pose a potential risk of ground gas within the vicinity of the site that could pose a potential risk to the proposed end users. Ground gas monitoring is therefore recommended.

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 are included in Appendix III.

Between c.1863 and c.1925 the site and immediate surrounding area is noted as agricultural fields. A railway line is present to the north, with residential properties beyond and residential properties are also present at Moor Row to the east. Residential properties are noted at Scalegill to the south-west, where allotment gardens are also present. Around c.1925 a track is present along the western site area trending from south to north.

Around c.1993 a depot is recorded to the west, with a club present to the east. It is understood that the depot operated as a local haulier, which was used to park wagons.

Sometime between c.2002 and c.2008 residential properties are constructed to the south along Moor Row (as existing). Sometime around c.2010 Ruskin Drive is constructed to the west of the site.

Consequently, no industries, processes or land uses of potential significant contaminative concern are recorded on site, although some are noted close to the site.

4.0 Conceptual Site Model

A Conceptual Site Model (CSM) has been designed using the information presented within this P1 DTS to provide a tabulated 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/continued end use. The CSM is presented below and on the following page:

Anticipated Sources (Preliminary Screening Strategy – PSS):
S1 = Generic/Organic Made Ground. No significant sources identified. However, there is a potential for made ground across parts of the site that could likely to pose a risk of contamination associated with historical activities. Potential Contaminants of Concern (PCOC's) include Arsenic, Cadmium, Chromium (III and VI), Copper, Lead, Mercury, Nickel, Selenium, Zinc, Cyanide (free), pH, Soluble Sulphate, Total Organic Carbon, Speciated PAH, Speciated TPH, BTEX, MTBE, Phenol and Asbestos
S2 = Ground Gas (Carbon Dioxide and Methane) generation from adjacent areas of infilling (former railway) and deeper coal mine workings

Anticipated Pathways:
P1 = Inhalation of indoor / outdoor air (wind-blown particles)
P2 = Dermal/direct contact (limited risk present through areas of soft landscaping if envisaged)
P3 = Ingestion (soil and dust – limited risk present through areas of soft landscaping if envisaged)
P4 = Migration through existing services
P5 = Direct contact with building materials
P6 = Surface Run-off
P7 = Leaching from Soils (risk present where sources are exposed to surface water infiltration)

Anticipated Receptors:
R1 = Human Health (Residents)
R2 = Human Health (construction workforce – redevelopment works – not considered in this assessment)
R3 = Groundwater and trapped drainage
R4 = Building Materials and Buried Utilities

R5 = Flora and Fauna (potential future soft landscaping)

5.0 Preliminary Qualitative Risk Assessment (PQRA)

5.1 Preliminary Qualitative Geotechnical Risk Assessment – Risk Meter

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

GEOTECHNICAL ⇩						
RISK =	**NEGLIGIBLE**	**VERY LOW**	**LOW**	**MODERATE**	**HIGH**	**VERY HIGH**

A risk level of LOW is currently determined appropriate for this development area based on the information provided by the BGS, CA and GSR for the following reasons:

- Variable made ground is likely to be present on site associated with any localised levelling undertaken to form current site levels.
- Drift geological deposits may be variable in nature (clay, sand and gravel) and therefore no shallow homogenous bearing stratum may be present.
- Shallow groundwater could be present.

Information available from the CA, BGS and GSR suggests that the development site is not currently considered to be at potential risk of shallow coal mining related geohazards (i.e. ground disturbance/movement/mine entries etc.). However, GEO is not responsible for third party information and records may be inaccurate or incomplete. Consequently, GEO recommends that care and consideration of potential mining features should be made by the developer during construction.

The area of Cleator and Moor Row is also well-known for historical iron ore mining activities. The GSR notes the nearest (historical) iron ore mine as being c.400m away. The GSR (Section 18.6) also notes that *"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."* GEO has previously consulted with a local expert (now retired) who had indicated that historical iron ore mining is unlikely at this location. However, GEO is not responsible for third party information and records may be inaccurate or incomplete. Consequently, GEO recommends that care and consideration of potential mining features should be made by the developer during construction.

5.2 Preliminary Qualitative Contamination Risk Assessment – Risk Meter

The following Ground Contamination, Groundwater Contamination and Ground Gas Risk Meter determines the potential level of risk associated with the redevelopment of the site when taking into account the anticipated *Sources – Pathways – Receptors* within the pollutant linkage model and presented in the CSM (Section 4.0).

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 risk level of VERY LOW is deemed appropriate for this development with respect to ground contamination as no significant potential geohazards have been identified. In summary, the site has historically been agricultural (fields) and no previous development is noted. As a result, it is anticipated that topsoil deposits will be underlying the site surfacing.

There is a potential for made ground and atmospheric accumulations of contamination associated with historical developments on the site boundaries (former depot and railway line). As a result, it would be recommended that excavations be formed on site to determine the shallow ground conditions and recover samples for laboratory analysis. If topsoil is encountered, then samples can be tested to confirm the materials suitability for reuse in a residential setting.

If made ground is encountered that includes anthropogenic debris (such as ash and clinker) the Potential Contaminants Of Concern (PCOC's) could 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. Bulk fuel or chemical storage is not thought to have taken place on site, although contamination screening should be undertaken for organic analytes (i.e. Speciated TPH) due to the historical site use (depot), particularly if visual/olfactory evidence of fuel/oil type contamination is identified. The results of such contamination screening should be used to complete a human health risk assessment.

A risk level of NEGLIGIBLE is thought appropriate for this development with respect to potential groundwater contamination, as the immediate surrounding site area is considered to be of very low environmental sensitivity.

A risk level of VERY LOW is considered appropriate for the site with respect to potential harmful ground gas as sources have been identified within an influencing distance (i.e. within c.250m). In summary, coal mine workings are potentially present within the general area, with some areas of infilling (former railway cuttings) also noted within a plausible migration distance (within c.250m).

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.

6.0 Conclusions and Recommendations

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 very low risk is currently considered present of ground gas.

Consequently, a programme of Phase 2 Ground Investigation works will be required to fully characterise the ground/groundwater conditions and ground gas regime below the development site with the resulting information suitable for submission to the Local Authority for planning purposes and for the appointed design team. In summary the site works could include (as a minimum):

- Percussion boreholes.
- Mechanically excavated trial pits.
- Ground gas monitoring.
- Laboratory contamination screening for generic and organic analytes as per the PCOC's in Section 4.0.
- Human Health Ground Contamination and Ground Gas risk assessment.

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 as soon as practicably possible in order to seek their approval of the findings prior to undertaking any works on site. GEO accepts no responsibility for the accuracy of third party information involved within the completion of this report.

End of Report

Appendix I

- Site Location Plan
- Aerial Photograph Extract
- Existing Site Layout Plan
- Site Images (1st April 2021)

GEO2021-4638: Site Location Plan (Provided by Consultant)

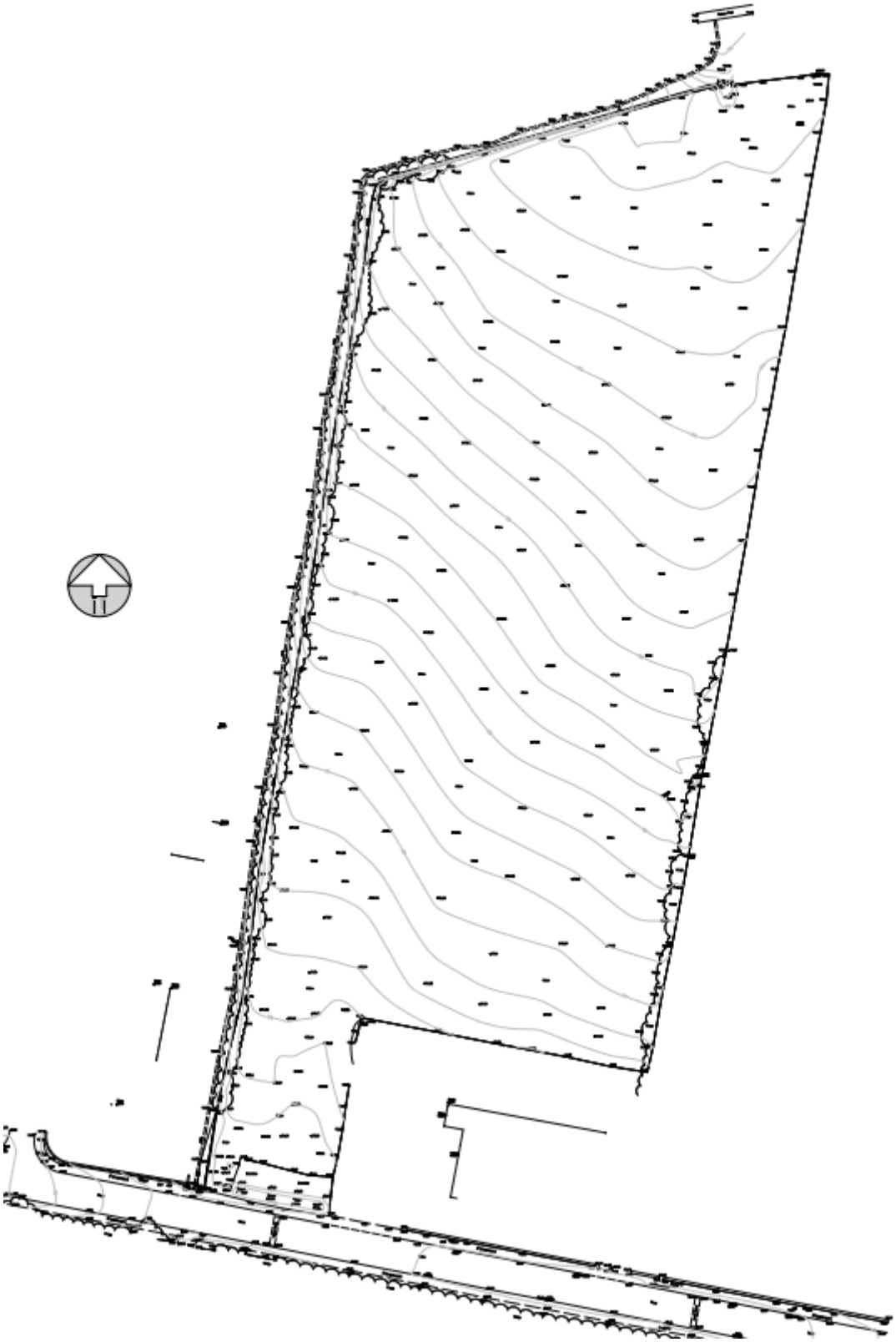
GEO Environmental Engineering

GEO2021-4638: Aerial Photograph Extract

Website: www.geoenvironmentalengineering.com
Email: info@geoenvironmentalengineering.com
Telephone: 08456 768 895

GEO Environmental Engineering

GEO2021-4638: Existing Site Layout Plan (Topographical Survey Extract Provided By Consultant)



Website: www.geoenvironmentalengineering.com
Email: info@geoenvironmentalengineering.com
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GEO Environmental Engineering

GEO2021-4638: Site Images (1st April 2021)

Website: www.geoenvironmentalengineering.com
Email: info@geoenvironmentalengineering.com
Telephone: 08456 768 895

Appendix II

- Ground Sure Report (GSR – Enviro+GeoInsight)

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

300183 514426

Order Details

Date: 30/03/2021

Your ref: EMS_681216_895315

Our Ref: EMS-681216_895315

Client: emapsite

Site Details

Location: 300183 514426

Area: 1.56 ha

Authority: Copeland Borough Council

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

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	0	3	14	43	-
17	1.2	Historical tanks	0	0	0	8	-
17	1.3	Historical energy features	0	0	1	3	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	6	-
19	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
20	2.1	Historical industrial land uses	0	5	20	53	-
23	2.2	Historical tanks	0	0	0	9	-
24	2.3	Historical energy features	0	0	1	4	-
24	2.4	Historical petrol stations	0	0	0	0	-
25	2.5	Historical garages	0	0	0	8	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
26	3.1	Active or recent landfill	0	0	0	0	-
26	3.2	Historical landfill (BGS records)	0	0	0	0	-
27	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
27	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
27	3.5	Historical waste sites	0	0	0	0	-
27	3.6	Licensed waste sites	0	0	0	0	-
27	3.7	Waste exemptions	0	0	0	8	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
29	4.1	Recent industrial land uses	0	0	2	-	-
30	4.2	Current or recent petrol stations	0	0	0	0	-
30	4.3	Electricity cables	0	0	0	0	-
30	4.4	Gas pipelines	0	0	0	0	-
30	4.5	Sites determined as Contaminated Land	0	0	0	0	-

30	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
31	4.7	Regulated explosive sites	0	0	0	0	-
31	4.8	Hazardous substance storage/usage	0	0	0	0	-
31	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
31	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	0	1	-
32	4.12	Radioactive Substance Authorisations	0	0	0	0	-
32	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	1	-
32	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.15	Pollutant release to public sewer	0	0	0	0	-
33	4.16	List 1 Dangerous Substances	0	0	0	0	-
33	4.17	List 2 Dangerous Substances	0	0	0	0	-
33	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	0	1	-
34	4.19	Pollution inventory substances	0	0	0	0	-
34	4.20	Pollution inventory waste transfers	0	0	0	0	-
34	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
35	**5.1**	**Superficial aquifer**	Identified (within 500m)				
37	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
39	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
40	**5.4**	**Groundwater vulnerability- soluble rock risk**	Identified (within 0m)				
40	5.5	Groundwater vulnerability- local information	None (within 0m)				
41	5.6	Groundwater abstractions	0	0	0	0	0
42	**5.7**	**Surface water abstractions**	0	0	0	2	2
43	5.8	Potable abstractions	0	0	0	0	0
43	5.9	Source Protection Zones	0	0	0	0	-
43	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
44	**6.1**	**Water Network (OS MasterMap)**	0	0	1	-	-

45	6.2	Surface water features	0	0	1	-	-
45	6.3	WFD Surface water body catchments	1	-	-	-	-
45	6.4	WFD Surface water bodies	0	0	0	-	-
46	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
47	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
47	7.2	Historical Flood Events	0	0	0	-	-
47	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
48	7.5	Flood Storage Areas	0	0	0	-	-
49	7.6	Flood Zone 2	None (within 50m)				
49	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
50	8.1	Surface water flooding	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding	
52	9.1	Groundwater flooding	Low (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
53	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	2
54	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
54	10.3	Special Areas of Conservation (SAC)	0	0	0	0	1
54	10.4	Special Protection Areas (SPA)	0	0	0	0	0
55	10.5	National Nature Reserves (NNR)	0	0	0	0	0
55	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
55	10.7	Designated Ancient Woodland	0	0	0	0	3
56	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
56	10.10	Marine Conservation Zones	0	0	0	0	0
56	10.11	Green Belt	0	0	0	0	0
56	10.12	Proposed Ramsar sites	0	0	0	0	0

57	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
57	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
57	10.15	Nitrate Sensitive Areas	0	0	0	0	0
57	**10.16**	**Nitrate Vulnerable Zones**	0	0	0	0	1
59	**10.17**	**SSSI Impact Risk Zones**	2	-	-	-	-
61	**10.18**	**SSSI Units**	0	0	0	0	3
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	World Heritage Sites	0	0	0	-	-
63	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
63	11.3	National Parks	0	0	0	-	-
63	11.4	Listed Buildings	0	0	0	-	-
64	11.5	Conservation Areas	0	0	0	-	-
64	11.6	Scheduled Ancient Monuments	0	0	0	-	-
64	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
65	**12.1**	**Agricultural Land Classification**	Grade 3 (within 250m)				
66	12.2	Open Access Land	0	0	0	-	-
66	12.3	Tree Felling Licences	0	0	0	-	-
66	**12.4**	**Environmental Stewardship Schemes**	0	1	2	-	-
66	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
67	**13.1**	**Priority Habitat Inventory**	0	0	2	-	-
68	13.2	Habitat Networks	0	0	0	-	-
68	13.3	Open Mosaic Habitat	0	0	0	-	-
68	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
69	**14.1**	**10k Availability**	Identified (within 500m)				
70	14.2	Artificial and made ground (10k)	0	0	0	0	-
71	14.3	Superficial geology (10k)	0	0	0	0	-

71	14.4	Landslip (10k)	0	0	0	0	-
72	14.5	Bedrock geology (10k)	0	0	0	0	-
72	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
73	**15.1**	**50k Availability**	Identified (within 500m)				
74	15.2	Artificial and made ground (50k)	0	0	0	0	-
74	15.3	Artificial ground permeability (50k)	0	0	-	-	-
75	**15.4**	**Superficial geology (50k)**	1	0	1	2	-
76	**15.5**	**Superficial permeability (50k)**	Identified (within 50m)				
76	15.6	Landslip (50k)	0	0	0	0	-
76	15.7	Landslip permeability (50k)	None (within 50m)				
77	**15.8**	**Bedrock geology (50k)**	3	1	6	11	-
79	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
79	**15.10**	**Bedrock faults and other linear features (50k)**	1	1	5	9	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
81	**16.1**	**BGS Boreholes**	0	0	1	-	-
Page	Section	Natural ground subsidence					
82	**17.1**	**Shrink swell clays**	Very low (within 50m)				
83	**17.2**	**Running sands**	Very low (within 50m)				
84	**17.3**	**Compressible deposits**	Negligible (within 50m)				
85	**17.4**	**Collapsible deposits**	Very low (within 50m)				
86	**17.5**	**Landslides**	Very low (within 50m)				
87	**17.6**	**Ground dissolution of soluble rocks**	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
89	18.1	Natural cavities	0	0	0	0	-
90	**18.2**	**BritPits**	0	0	0	1	-
90	**18.3**	**Surface ground workings**	0	4	7	-	-
91	**18.4**	**Underground workings**	0	0	0	6	23
92	18.5	Historical Mineral Planning Areas	0	0	0	0	-

92	**18.6**	**Non-coal mining**	1	0	7	4	13
95	**18.7**	**Mining cavities**	0	0	0	0	2
96	18.8	JPB mining areas	None (within 0m)				
96	**18.9**	**Coal mining**	Identified (within 0m)				
96	18.10	Brine areas	None (within 0m)				
96	18.11	Gypsum areas	None (within 0m)				
97	18.12	Tin mining	None (within 0m)				
97	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
98	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
99	**20.1**	**BGS Estimated Background Soil Chemistry**	4	1	-	-	-
99	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
100	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
101	21.1	Underground railways (London)	0	0	0	-	-
101	21.2	Underground railways (Non-London)	0	0	0	-	-
102	21.3	Railway tunnels	0	0	0	-	-
102	**21.4**	**Historical railway and tunnel features**	0	5	7	-	-
103	21.5	Royal Mail tunnels	0	0	0	-	-
103	21.6	Historical railways	0	0	0	-	-
103	21.7	Railways	0	0	0	-	-
103	21.8	Crossrail 1	0	0	0	0	-
103	21.9	Crossrail 2	0	0	0	0	-
104	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 10/10/2018

Site Area: 1.56ha

Recent site history - 2016 aerial photograph

Capture Date: 16/08/2016

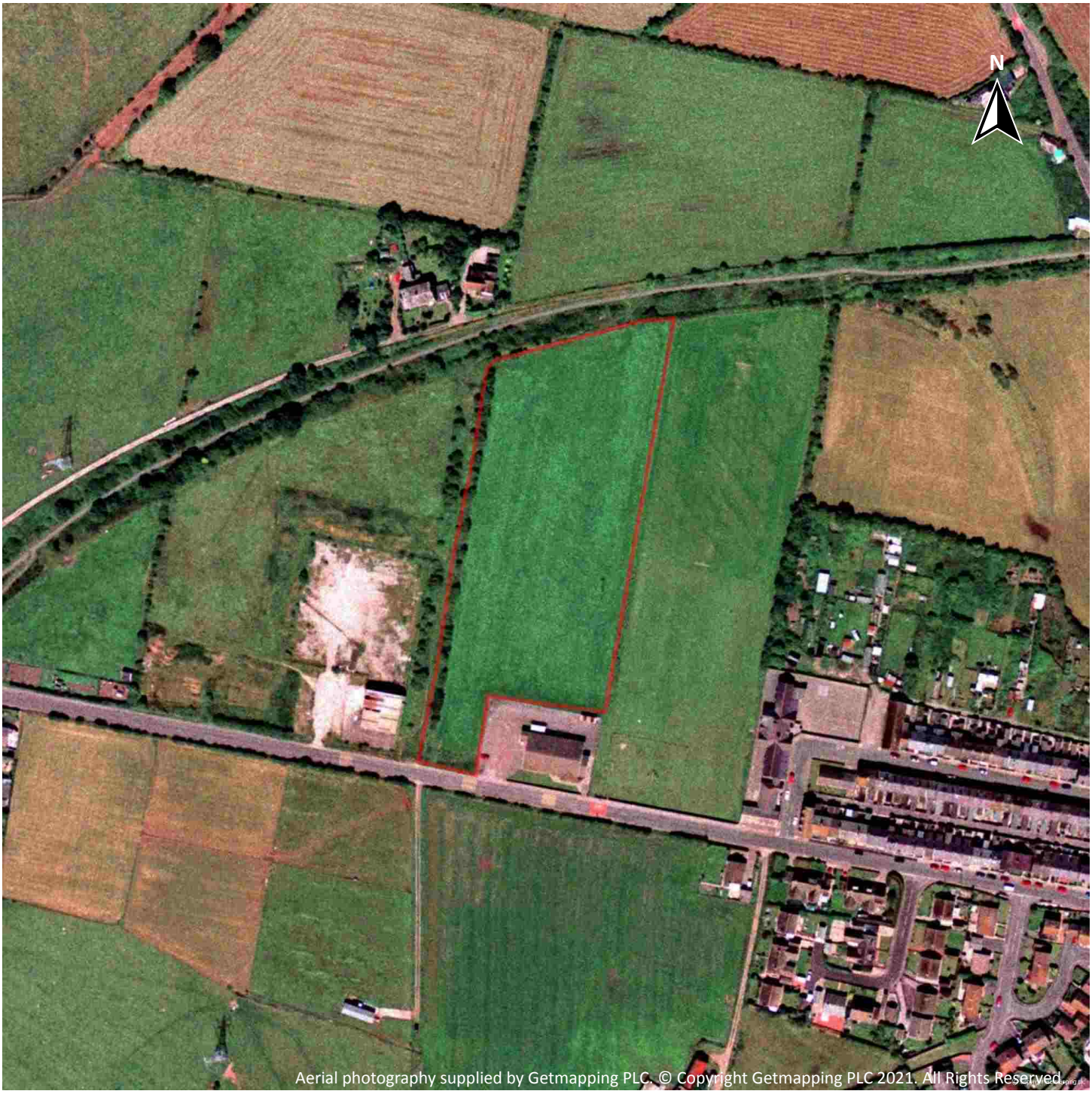
Site Area: 1.56ha

Recent site history - 2008 aerial photograph

Capture Date: 05/10/2008

Site Area: 1.56ha

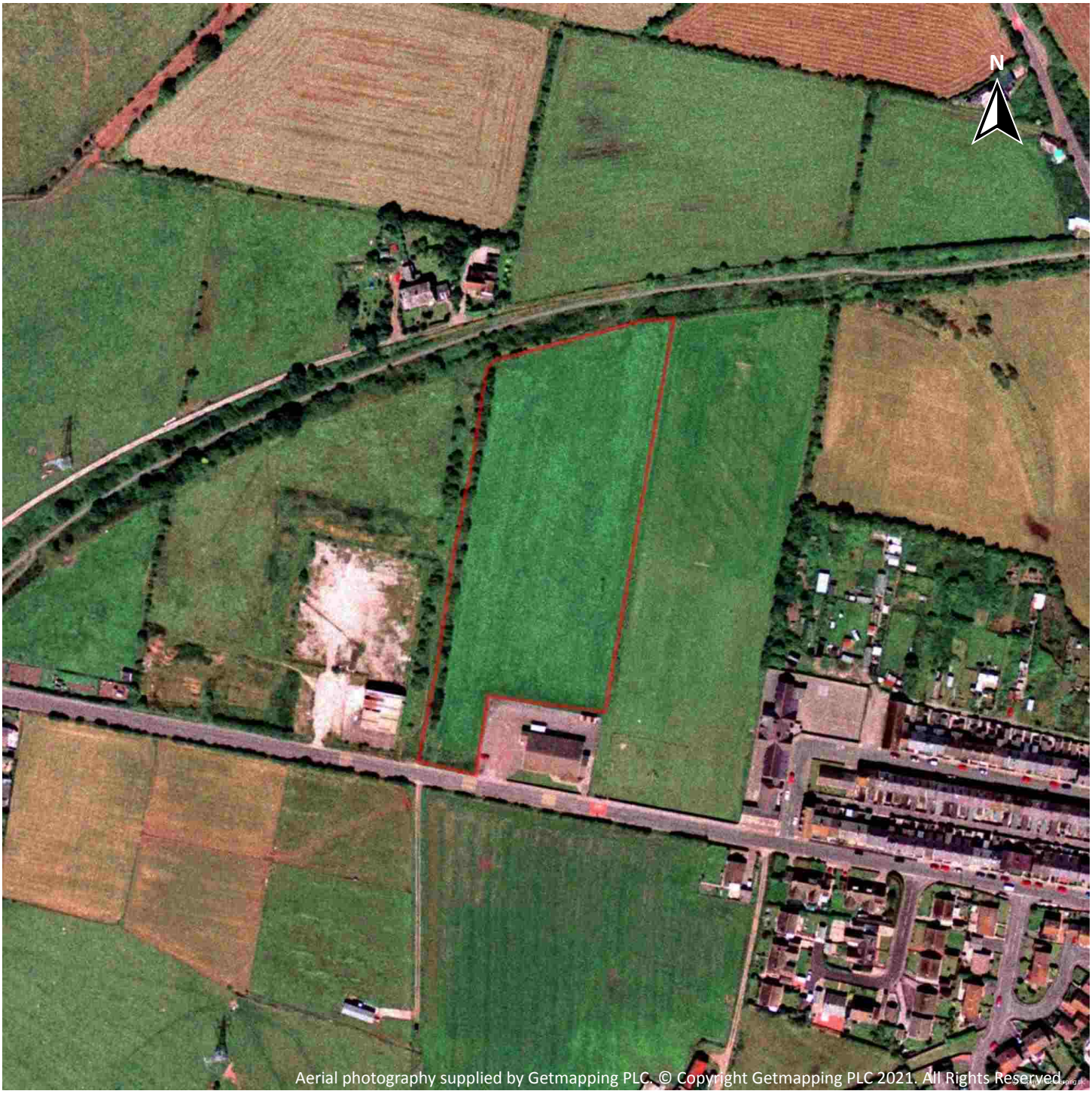
Recent site history - 2000 aerial photograph



Capture Date: 16/06/2000

Site Area: 1.56ha

Recent site history - 1999 aerial photograph



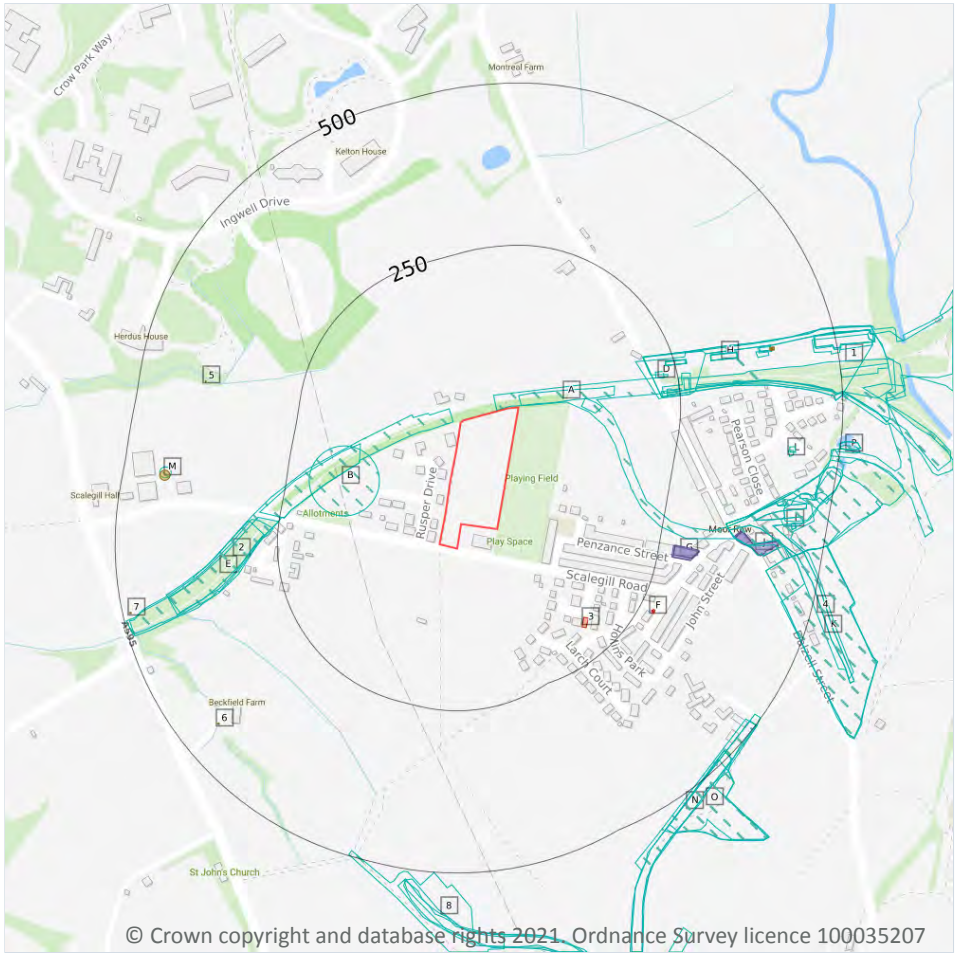
Capture Date: 26/07/1999

Site Area: 1.56ha

OS MasterMap site plan

Site Area: 1.56ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	60

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	2m N	Mineral Railway Sidings	1926	637602

ID	Location	Land use	Dates present	Group ID
A	5m NE	Cuttings	1863	604505
2	12m W	Cuttings	1863 - 1988	2366128
A	97m E	Cuttings	1926	595327
B	108m W	Electric Telegraph	1863	2366575
B	143m W	Cuttings	1993	2368274
C	194m E	Railway Sidings	1948	593036
C	207m E	Railway Sidings	1898	605084
C	207m E	Railway Sidings	1938	609896
D	217m E	Goods Shed	1898	560777
D	221m E	Railway Station	1948	600412
D	224m E	Railway Station	1898 - 1938	599804
D	230m E	Railway Station	1863	611067
D	236m E	Railway Building	1938	600226
D	236m E	Railway Building	1898	621717
D	236m E	Railway Sidings	1926	633527
E	250m W	Cuttings	1863	203706
C	257m E	Cuttings	1863	593364
E	257m W	Cuttings	1951	200671
E	271m W	Cuttings	1967 - 1993	206142
C	273m E	Cuttings	1948	621480
H	305m E	Railway Building	1938	592444
H	305m E	Railway Building	1898	612795
H	306m E	Railway Building	1926	597243
H	333m E	Railway Building	1948	557753
I	346m E	Unspecified Commercial/Industrial	1898	576968
I	346m E	Unspecified Disused Pit	1938	617466
I	346m E	Mineral Railway Sidings	1938	619135
I	346m E	Mineral Railway Sidings	1898	631500

ID	Location	Land use	Dates present	Group ID
4	348m E	Iron Ore Mine	1926	622092
C	376m E	Railway Building	1948	628092
C	380m E	Railway Building	1926	631169
C	382m E	Railway Building	1938	593022
I	417m E	Railway Building	1938	557755
K	419m E	Iron Ore Mines	1938	579170
K	419m E	Iron Ore Mine	1898	609476
L	421m E	Unspecified Old Shaft	1948	620454
L	423m E	Unspecified Old Shaft	1898 - 1938	611086
M	427m W	Unspecified Tank	1993	192827
I	428m E	Unspecified Disused Pit	1938 - 1948	605515
I	430m E	Refuse Heap	1926	625112
I	445m E	Unspecified Disused Pit	1926	609663
I	445m E	Unspecified Disused Pit	1926	625897
I	451m E	Unspecified Pit	1898	582461
C	464m E	Engine Shed	1948	604298
C	466m E	Engine Shed	1938	597856
C	466m E	Engine Shed	1898	628339
C	468m E	Engine Shed	1926	637957
I	474m E	Refuse Heap	1938	630702
N	482m SE	Mineral Railway Sidings	1926	590465
N	489m SE	Mineral Railway Sidings	1898	624349
O	489m SE	Unspecified Commercial/Industrial	1898	576967
N	489m SE	Mineral Railway Sidings	1938	626081
O	489m SE	Iron Ore Mine	1938	600432
8	491m S	Unspecified Pit	1938	2367447
O	493m SE	Iron Ore Mine	1926	590556
P	497m E	Refuse Heap	1948	601379

ID	Location	Land use	Dates present	Group ID
P	498m E	Refuse Heap	1926	624463
P	499m E	Refuse Heap	1938	606955
9	500m E	Railway Building	1938	629228

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m **8**

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
5	397m W	Tank or Trough	1863	28579
C	398m E	Unspecified Tank	1899	76644
C	398m E	Unspecified Tank	1925	76795
C	401m E	Unspecified Tank	1966	77310
C	401m E	Unspecified Tank	1961	77740
M	428m W	Unspecified Tank	1990 - 1993	29530
6	437m SW	Tank or Trough	1863	28581
7	487m W	Tank or Trough	1864	28580

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m **4**

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
3	191m SE	Electricity Substation	1966	42076
F	269m SE	Gas Governor	1989 - 1991	43083
F	270m SE	Gas Governor	1995	42708
F	272m SE	Gas Governor House	1984	42559

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	**6**

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
G	272m E	Garage	1989 - 1991	14072
G	274m E	Garage	1984	13951
G	274m E	Garage	1995	13817
J	361m E	Garage	1989 - 1991	14265
J	364m E	Garage	1995	13962
J	364m E	Garage	1984	13863

This data is sourced from Ordnance Survey / Groundsure.

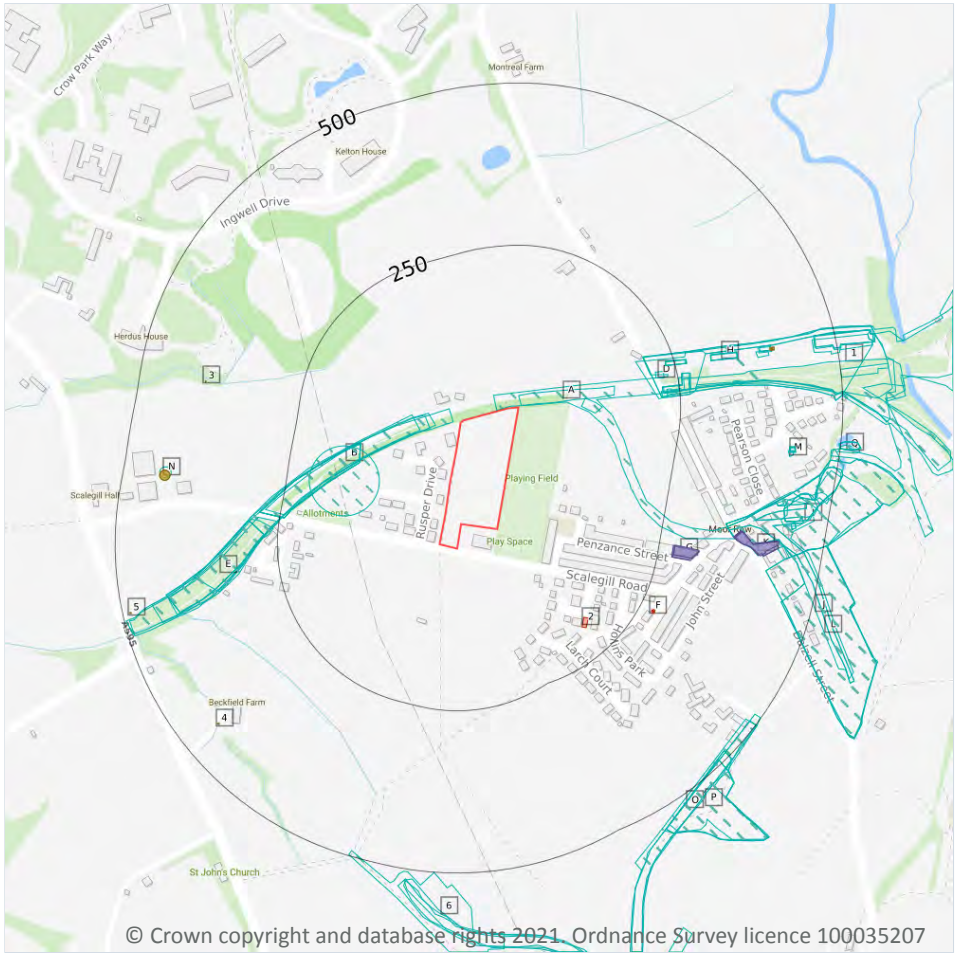
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	78

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

Features are displayed on the Past land use - un-grouped map on **page 20**

ID	Location	Land Use	Date	Group ID
1	2m N	Mineral Railway Sidings	1926	637602
A	5m NE	Cuttings	1863	604505
B	12m W	Cuttings	1863	2366128

ID	Location	Land Use	Date	Group ID
B	38m W	Cuttings	1926	2366128
B	45m W	Cuttings	1938	2366128
B	60m W	Cuttings	1898	2366128
A	97m E	Cuttings	1926	595327
B	108m W	Electric Telegraph	1863	2366575
B	143m W	Cuttings	1951	2366128
B	143m W	Cuttings	1988	2366128
B	143m W	Cuttings	1967	2366128
B	143m W	Cuttings	1993	2368274
C	194m E	Railway Sidings	1948	593036
C	207m E	Railway Sidings	1938	609896
C	207m E	Railway Sidings	1898	605084
D	217m E	Goods Shed	1898	560777
D	221m E	Railway Station	1948	600412
D	224m E	Railway Station	1938	599804
D	224m E	Railway Station	1898	599804
D	226m E	Railway Station	1926	599804
D	230m E	Railway Station	1863	611067
D	236m E	Railway Building	1938	600226
D	236m E	Railway Building	1898	621717
D	236m E	Railway Sidings	1926	633527
E	250m W	Cuttings	1863	203706
C	257m E	Cuttings	1863	593364
E	257m W	Cuttings	1951	200671
E	271m W	Cuttings	1988	206142
E	271m W	Cuttings	1967	206142
E	271m W	Cuttings	1993	206142
C	273m E	Cuttings	1948	621480

ID	Location	Land Use	Date	Group ID
H	305m E	Railway Building	1938	592444
H	305m E	Railway Building	1898	612795
H	306m E	Railway Building	1926	597243
H	333m E	Railway Building	1948	557753
I	346m E	Unspecified Disused Pit	1938	617466
I	346m E	Mineral Railway Sidings	1938	619135
I	346m E	Mineral Railway Sidings	1898	631500
I	346m E	Unspecified Commercial/Industrial	1898	576968
J	348m E	Iron Ore Mine	1926	622092
J	348m E	Iron Ore Mine	1926	622092
C	376m E	Railway Building	1948	628092
C	380m E	Railway Building	1926	631169
C	382m E	Railway Building	1938	593022
I	417m E	Railway Building	1938	557755
L	419m E	Iron Ore Mines	1938	579170
L	419m E	Iron Ore Mine	1898	609476
M	421m E	Unspecified Old Shaft	1948	620454
M	423m E	Unspecified Old Shaft	1938	611086
M	423m E	Unspecified Old Shaft	1898	611086
M	424m E	Unspecified Old Shaft	1926	611086
M	424m E	Unspecified Old Shaft	1926	611086
N	427m W	Unspecified Tank	1993	192827
I	428m E	Unspecified Disused Pit	1948	605515
I	430m E	Refuse Heap	1926	625112
I	430m E	Refuse Heap	1926	625112
I	431m E	Unspecified Disused Pit	1938	605515
I	445m E	Unspecified Disused Pit	1926	609663
I	445m E	Unspecified Disused Pit	1926	625897

ID	Location	Land Use	Date	Group ID
I	451m E	Unspecified Pit	1898	582461
C	464m E	Engine Shed	1948	604298
C	466m E	Engine Shed	1938	597856
C	466m E	Engine Shed	1898	628339
C	468m E	Engine Shed	1926	637957
I	474m E	Refuse Heap	1938	630702
O	482m SE	Mineral Railway Sidings	1926	590465
O	489m SE	Mineral Railway Sidings	1898	624349
P	489m SE	Unspecified Commercial/Industrial	1898	576967
O	489m SE	Mineral Railway Sidings	1938	626081
P	489m SE	Iron Ore Mine	1938	600432
6	491m S	Unspecified Pit	1938	2367447
P	493m SE	Iron Ore Mine	1926	590556
P	493m SE	Iron Ore Mine	1926	590556
Q	497m E	Refuse Heap	1948	601379
Q	498m E	Refuse Heap	1926	624463
Q	498m E	Refuse Heap	1926	624463
Q	499m E	Refuse Heap	1938	606955
7	500m E	Railway Building	1938	629228

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m **9**

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

Features are displayed on the Past land use - un-grouped map on **page 20**

ID	Location	Land Use	Date	Group ID
3	397m W	Tank or Trough	1863	28579

ID	Location	Land Use	Date	Group ID
C	398m E	Unspecified Tank	1899	76644
C	398m E	Unspecified Tank	1925	76795
C	401m E	Unspecified Tank	1966	77310
C	401m E	Unspecified Tank	1961	77740
N	428m W	Unspecified Tank	1990	29530
N	428m W	Unspecified Tank	1993	29530
4	437m SW	Tank or Trough	1863	28581
5	487m W	Tank or Trough	1864	28580

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**5**

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

Features are displayed on the Past land use - un-grouped map on **page 20**

ID	Location	Land Use	Date	Group ID
2	191m SE	Electricity Substation	1966	42076
F	269m SE	Gas Governor	1989	43083
F	269m SE	Gas Governor	1991	43083
F	270m SE	Gas Governor	1995	42708
F	272m SE	Gas Governor House	1984	42559

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	**0**

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	**8**

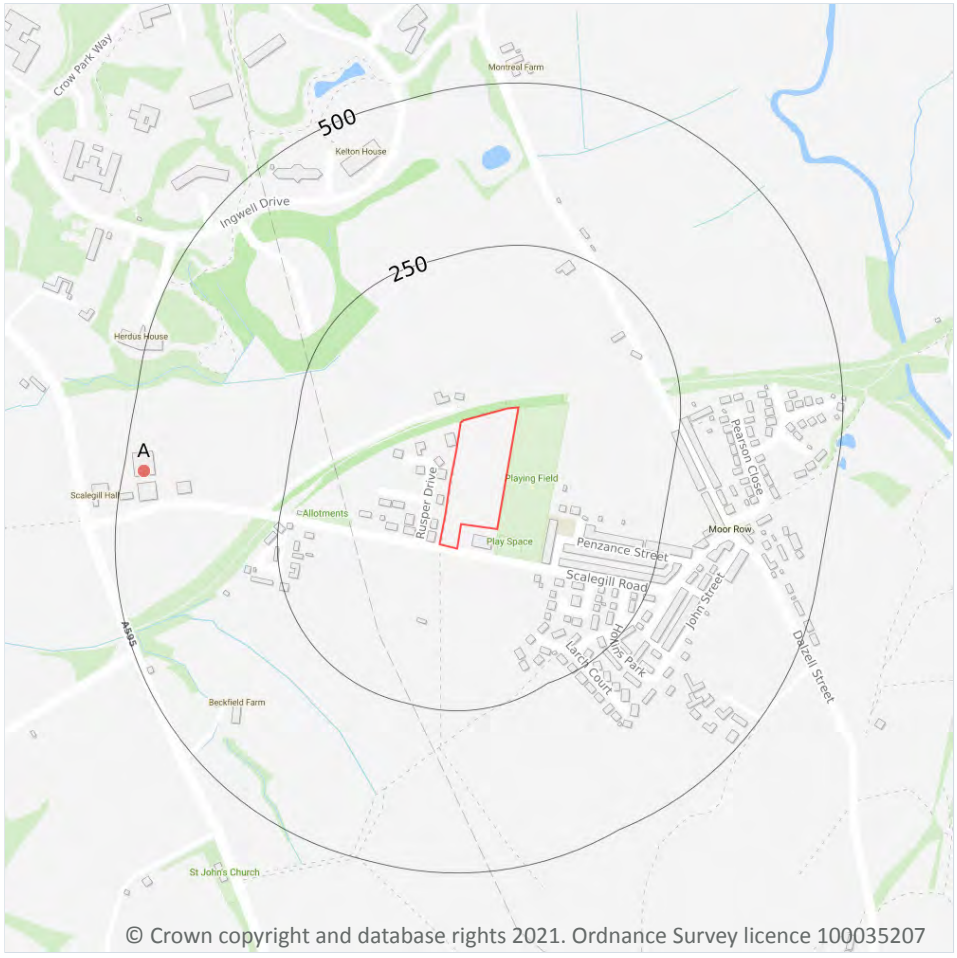
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 20**

ID	Location	Land Use	Date	Group ID
G	272m E	Garage	1989	14072
G	272m E	Garage	1991	14072
G	274m E	Garage	1984	13951
G	274m E	Garage	1995	13817
K	361m E	Garage	1989	14265
K	361m E	Garage	1991	14265
K	364m E	Garage	1995	13962
K	364m E	Garage	1984	13863

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

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

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	8

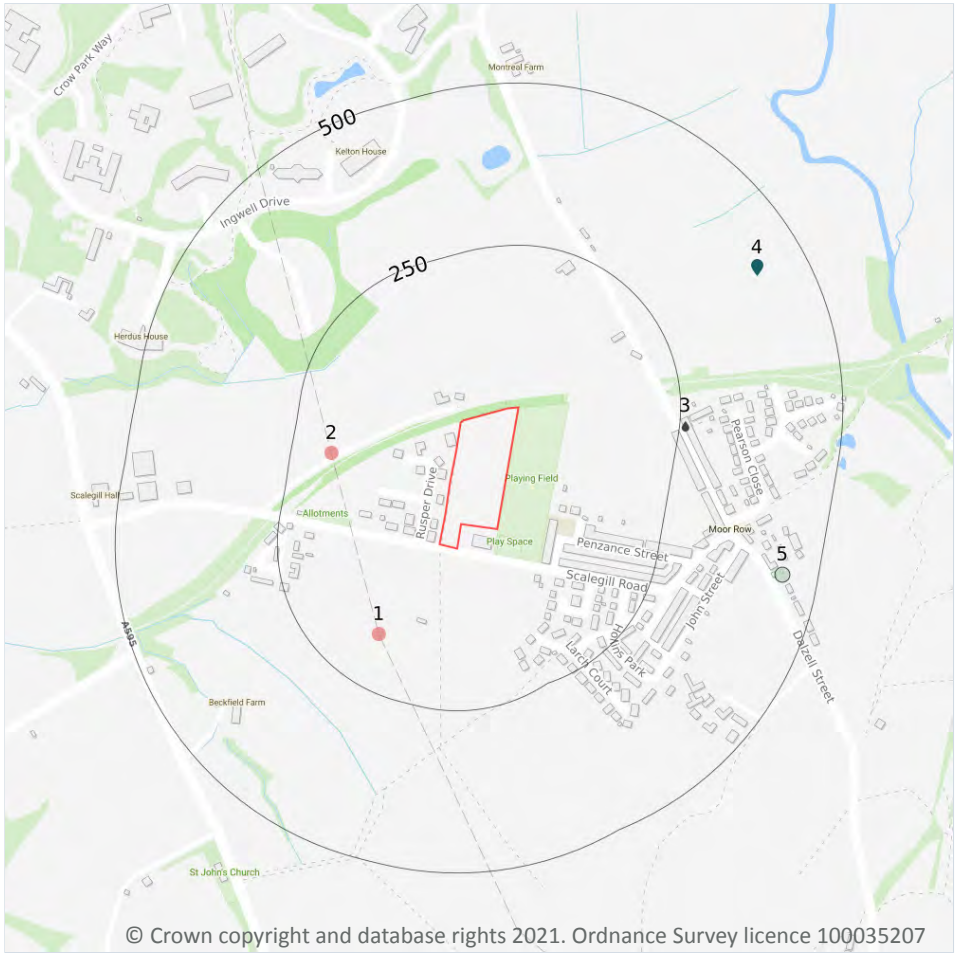
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 26**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in secure containers
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Treating waste exemption	Agricultural Waste Only	Cleaning, washing, spraying or coating relevant waste
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
A	469m W	Scalegill Hall	EPR/YE5882HD/A001	Using waste exemption	Non-Agricultural Waste Only	Spreading waste on agricultural land to confer benefit

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

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

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	**2**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Company	Address	Activity	Category
1	168m SW	Pylon	Cumbria, CA24	Electrical Features	Infrastructure and Facilities
2	189m W	Pylon	Cumbria, CA24	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Address	Details	
4	425m NE	Rmc Technical Services Ltd, Moor Row Station, Moor Row, CA24 3LQ	Process: cement/lime/mortar process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	**1**

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

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Address	Details	
3	257m E	RMC (NORTHERN), MOOR ROW, CLEATOR	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 017490015 Permit Version: 1 Receiving Water: RIVER KEEKLE	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 30/04/1981 Revocation Date: 17/03/1995

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Details	
5	444m E	Incident Date: 25/09/2003 Incident Identification: 192466 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

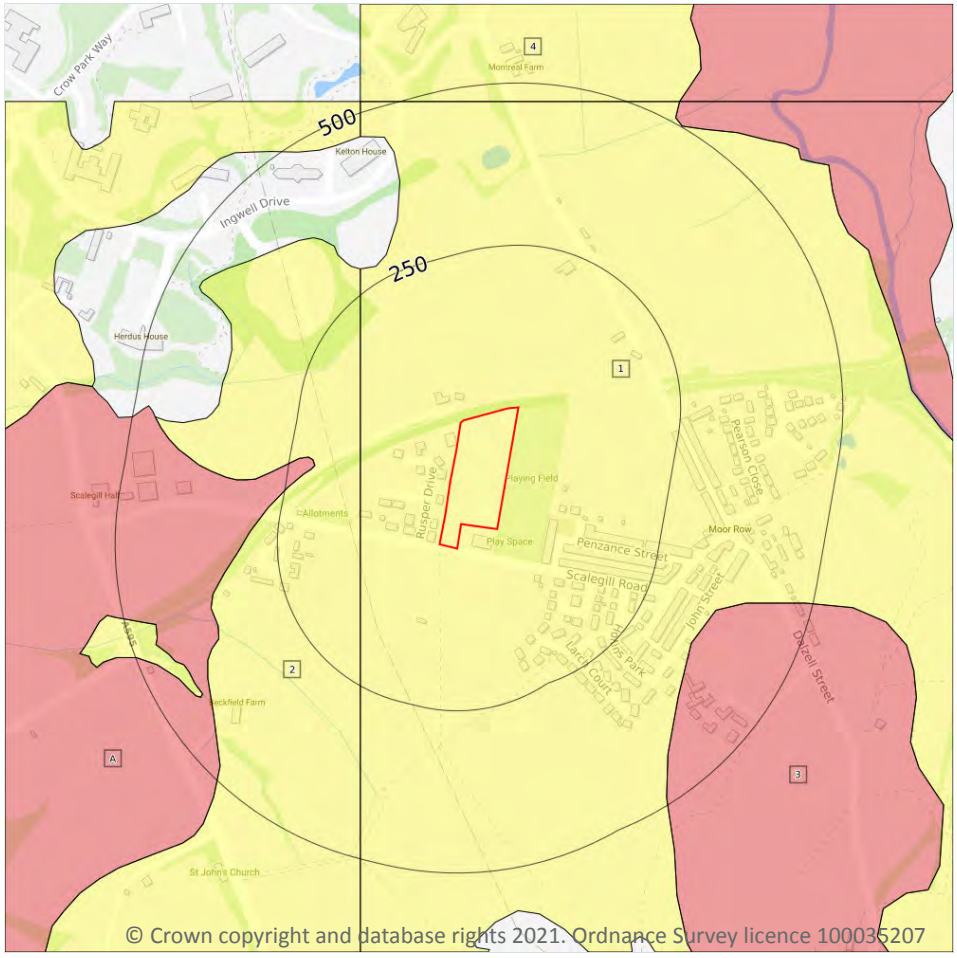
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	6

Aquifer status of groundwater held within superficial geology.

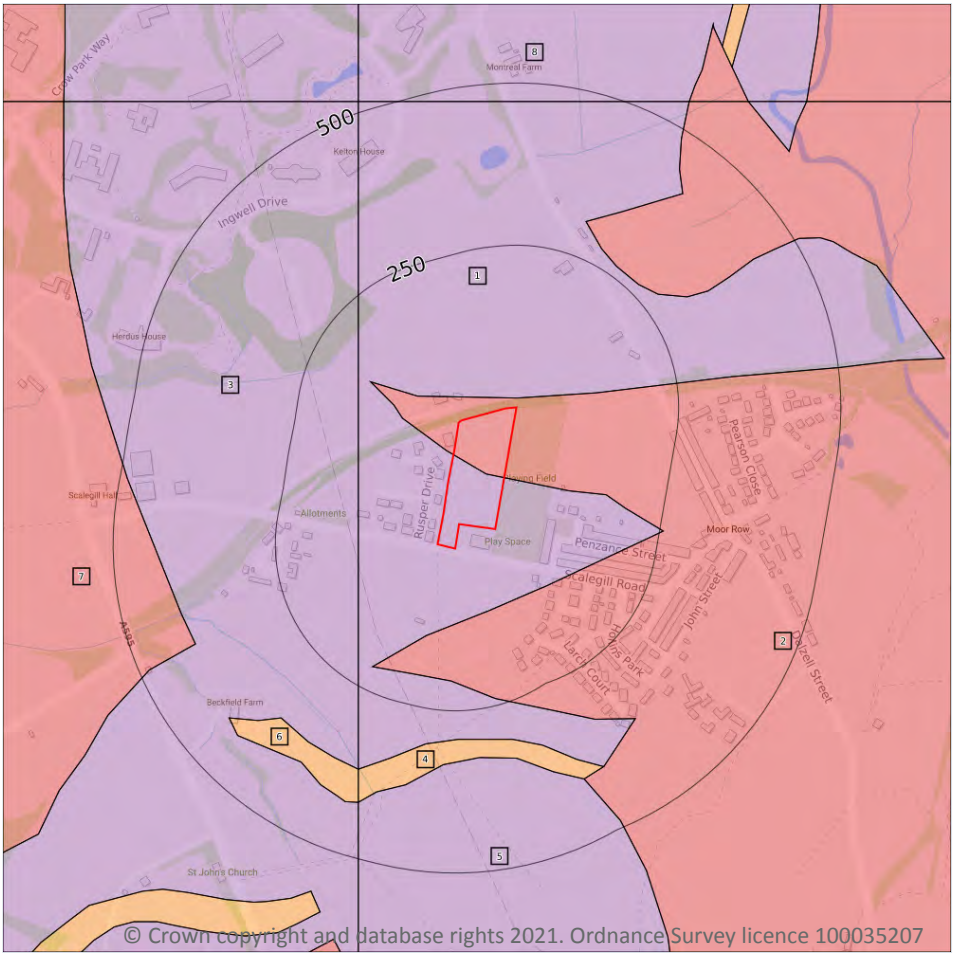
Features are displayed on the Hydrogeology map on **page 35**

ID	Location	Designation	Description
1	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
2	122m W	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

ID	Location	Designation	Description
A	210m 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	347m SE	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
A	432m SW	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
4	471m N	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

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

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

5.2 Bedrock aquifer

Records within 500m	8

Aquifer status of groundwater held within bedrock geology.

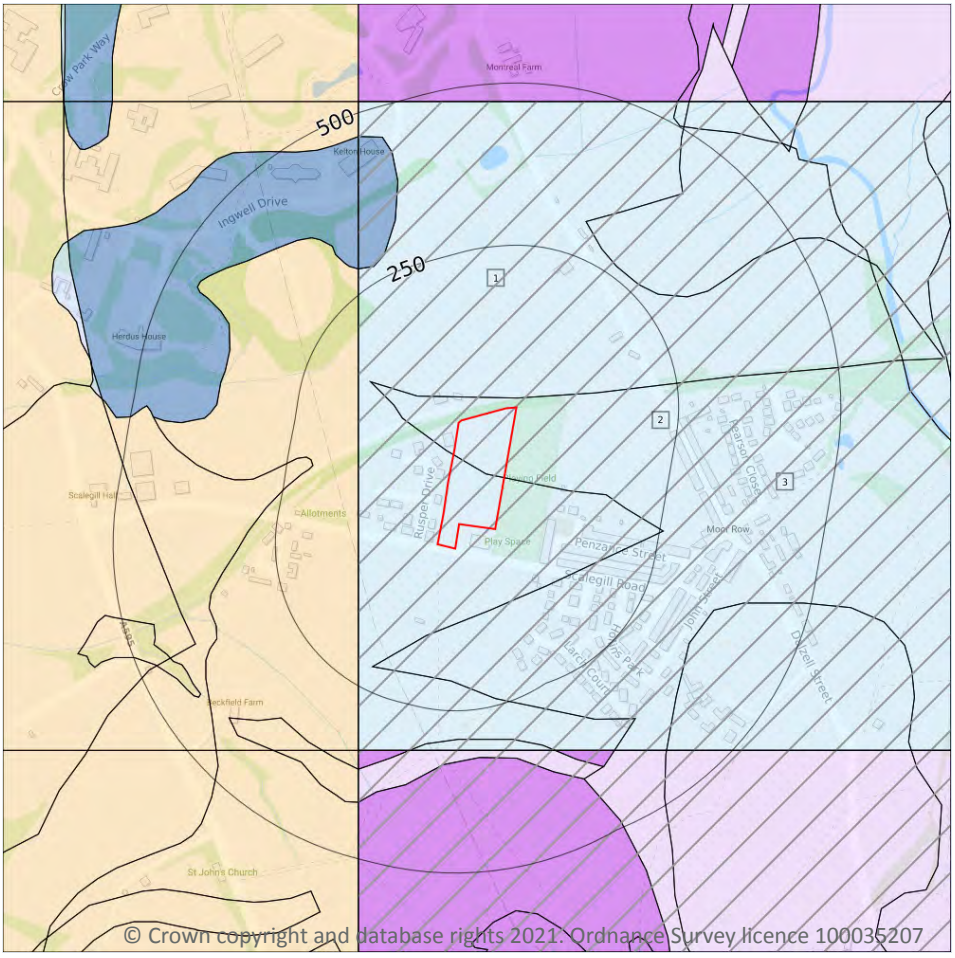
Features are displayed on the Bedrock aquifer map on **page 37**

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

ID	Location	Designation	Description
3	122m W	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
4	294m S	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
5	324m S	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	360m SW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
7	404m 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
8	471m N	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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

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

Features are displayed on the Groundwater vulnerability map on **page 39**

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

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**1**

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
2	**Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow.**	**1.0%**

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

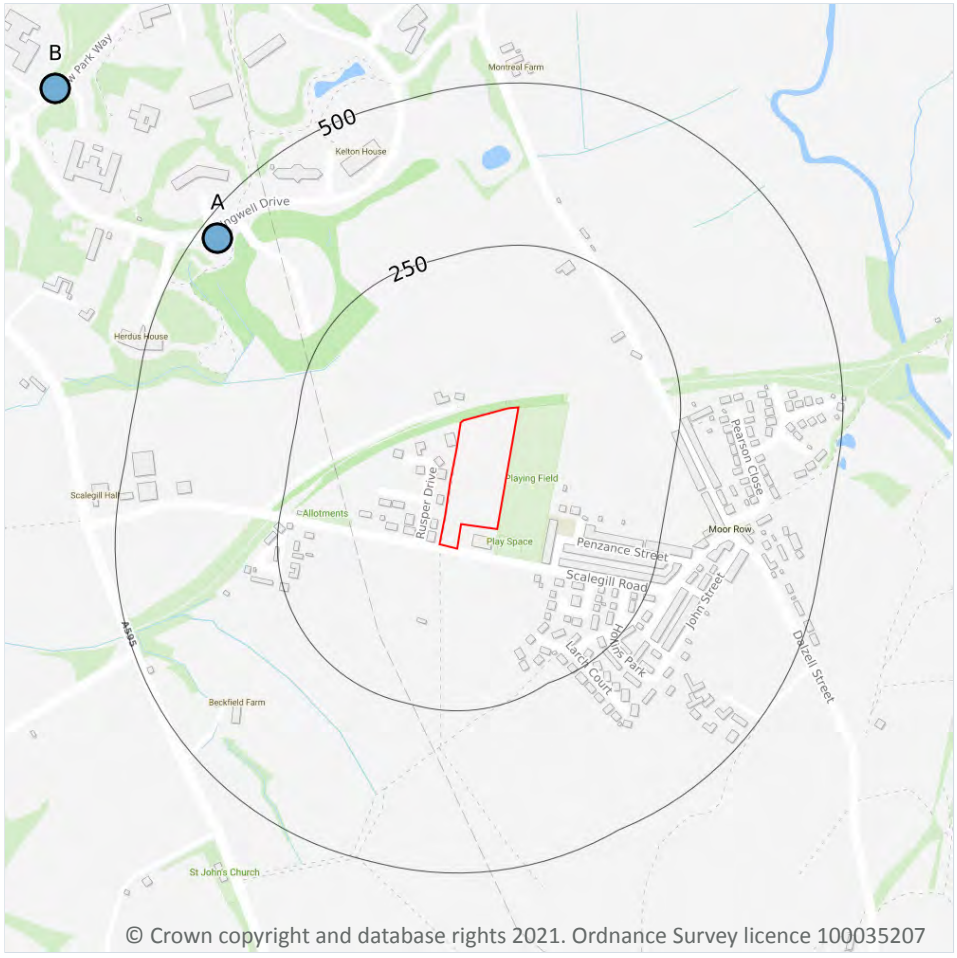
5.5 Groundwater vulnerability- local information

Records on site	**0**

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	0

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

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

5.7 Surface water abstractions

Records within 2000m	**4**

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 41**

ID	Location	Details	
A	470m NW	Status: Historical Licence No: 2774002010 Details: Make-Up or Top Up Water Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED CATCHPIT @ WESTLAKES S&T PARK, MOOR ROW" Data Type: Point Name: WESTLAKES PROPERTIES LTD Easting: 299780 Northing: 514790	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 28-Dec-15 Issue No: 1 Version Start Date: 29/12/2000 Version End Date: -
A	470m NW	Status: Historical Licence No: 2774002010 Details: Make-Up or Top Up Water Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED CATCHPIT @ WESTLAKES S&T PARK, MOOR ROW Data Type: Point Name: WESTLAKES PROPERTIES LTD Easting: 299780 Northing: 514790	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 28/12/2015 Issue No: 2 Version Start Date: 29/12/2000 Version End Date: -
B	809m NW	Status: Historical Licence No: 2774002010 Details: Make-Up or Top Up Water Direct Source: "Surface, Non-Tidal - North West Region" Point: "SPRING FED CATCHPIT @ WESTLAKES S&T PARK, MOOR ROW" Data Type: Point Name: WESTLAKES PROPERTIES LTD Easting: 299530 Northing: 515020	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 28-Dec-15 Issue No: 1 Version Start Date: 29/12/2000 Version End Date: -

ID	Location	Details	
B	809m NW	Status: Historical Licence No: 2774002010 Details: Make-Up or Top Up Water Direct Source: Surface, Non-Tidal - North West Region Point: SPRING FED CATCHPIT @ WESTLAKES S&T PARK, MOOR ROW Data Type: Point Name: WESTLAKES PROPERTIES LTD Easting: 299530 Northing: 515020	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 28/12/2015 Issue No: 2 Version Start Date: 29/12/2000 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

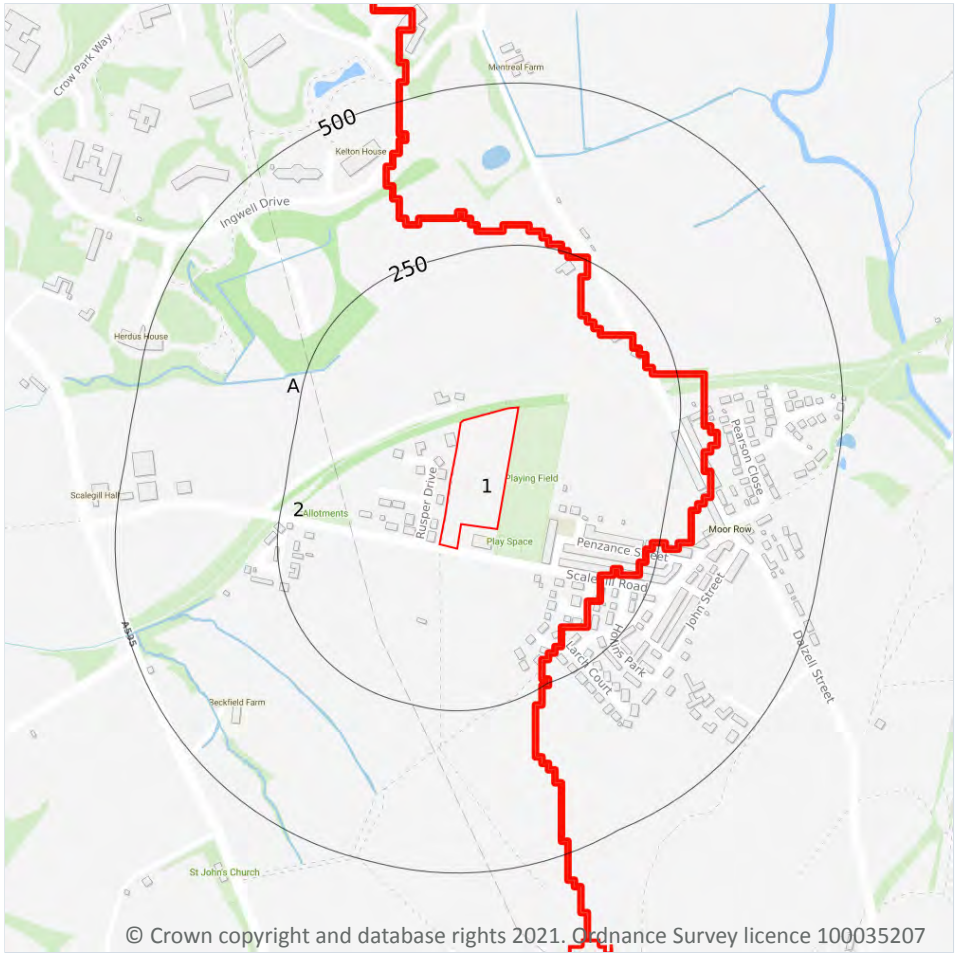
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	**1**

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

Features are displayed on the Hydrology map on **page 44**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	213m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	1

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

Features are displayed on the Hydrology map on **page 44**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on **page 44**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Pow Beck (South West Lakes)**	**GB112074069990**	**Ehen-Calder**	**South West Lakes**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 44**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1689m W	River	Pow Beck (South West Lakes)	GB112074069990	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site	**1**

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

Features are displayed on the Hydrology map on **page 44**

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

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

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding

Site Outline
Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**1 in 1000 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

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

Features are displayed on the Surface water flooding map on **page 50**

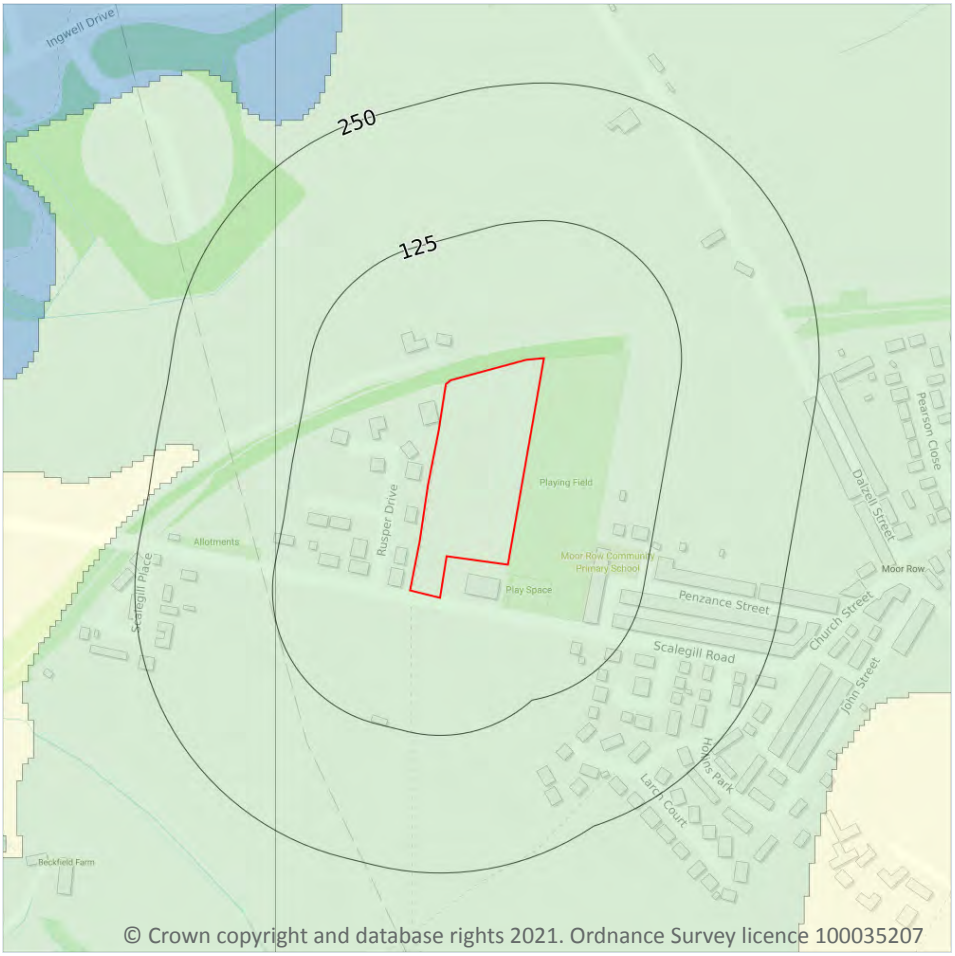
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on

a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.1m and 0.3m
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

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

9.1 Groundwater flooding

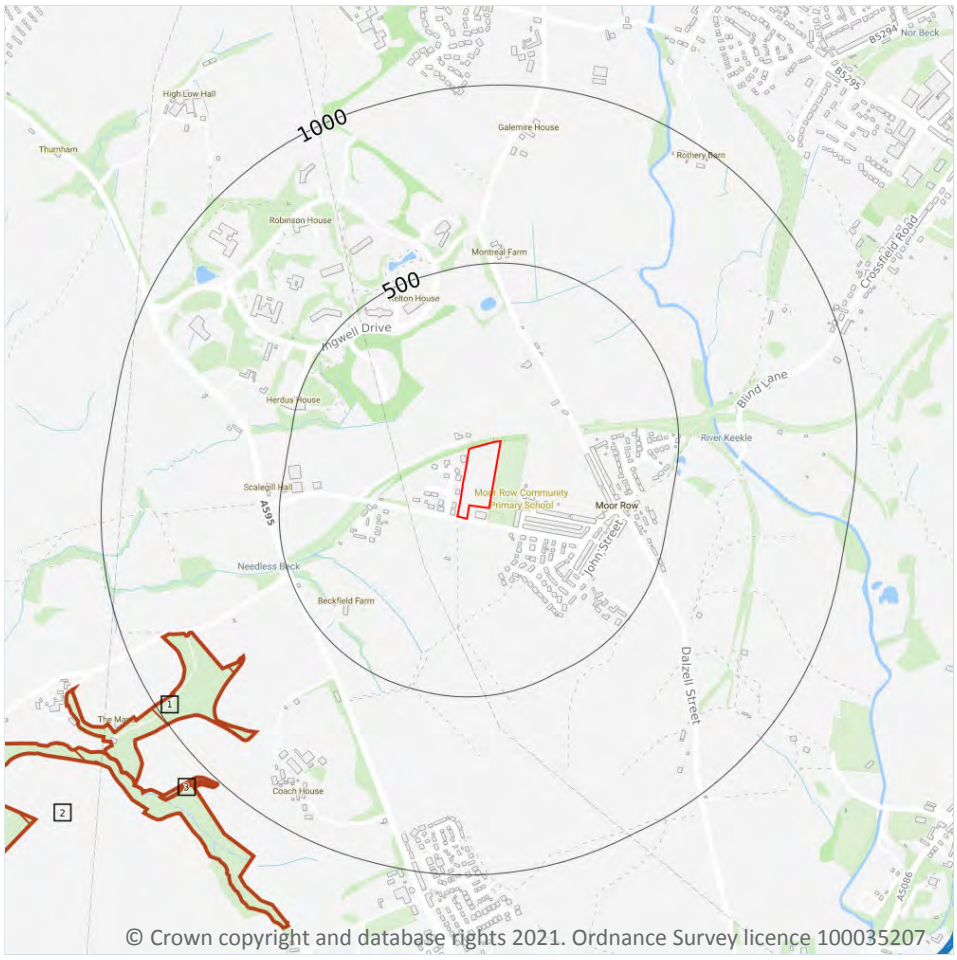
Highest risk on site	**Low**
Highest risk within 50m	**Low**

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

Features are displayed on the Groundwater flooding map on **page 52**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Special Areas of Conservation (SAC)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	2

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

Features are displayed on the Environmental designations map on **page 53**

ID	Location	Name	Data source
A	1648m SE	River Ehen (Ennerdale Water to Keekle Confluence)	Natural England

ID	Location	Name	Data source
-	1840m S	Clints Quarry	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	**1**

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

Features are displayed on the Environmental designations map on **page 53**

ID	Location	Name	Features of interest	Habitat description	Data source
A	1648m SE	River Ehen	Brook lamprey; Atlantic salmon; Freshwater pearl mussel.	Inland water bodies (Standing water, Running water); Coniferous woodland; Broad-leaved deciduous woodland	Natural England

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

10.4 Special Protection Areas (SPA)

Records within 2000m	**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

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

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

10.7 Designated Ancient Woodland

Records within 2000m	3

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

Features are displayed on the Environmental designations map on **page 53**

ID	Location	Name	Woodland Type
1	718m SW	Low Walton Wood	Ancient & Semi-Natural Woodland
2	1010m SW	Low Walton Wood	Ancient Replanted Woodland
3	1010m SW	Low Walton Wood	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

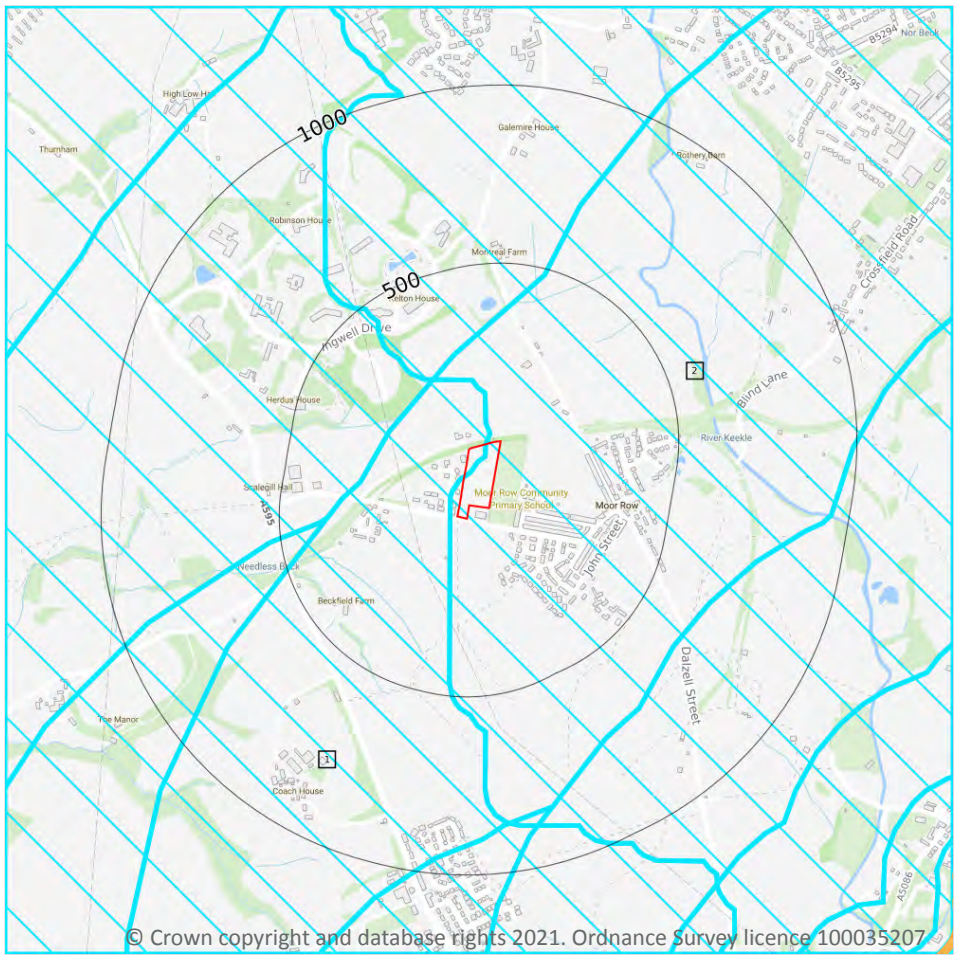
Records within 2000m	1

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

Location	Name	Type	NVZ ID	Status
1622m W	St Bees	Groundwater	G180	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

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

10.17 SSSI Impact Risk Zones

Records on site	2

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

Features are displayed on the SSSI Impact Zones and Units map on **page 59**

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	3

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

Features are displayed on the SSSI Impact Zones and Units map on **page 59**

ID: 16
Location: 1648m SE
SSSI name: River Ehen (Ennerdale Water to Keekle Confluence)
Unit name: Old Units 3-6
Broad habitat: Rivers And Streams
Condition: Unfavourable - Declining
Reportable features:

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

ID: -
Location: 1840m S
SSSI name: Clints Quarry
Unit name: 2
Broad habitat: Earth Heritage
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
ED - Dinantian	Unfavourable - Recovering	26/03/2008
Lowland calcareous grassland (CG7)	Not Recorded	01/01/1900
Lowland dry acid grassland (U1b,c,d,f)	Not Recorded	01/01/1900
Upland neutral grassland (MG3)	Not Recorded	01/01/1900

ID: -
Location: 1875m S
SSSI name: Clints Quarry
Unit name: 1
Broad habitat: Earth Heritage
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
ED - Dinantian	Not Recorded	01/01/1900
Lowland calcareous grassland (CG2)	Favourable	30/01/2013
Lowland calcareous grassland (CG7)	Not Recorded	01/01/1900

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	0

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

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

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

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m	0

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

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

12 Agricultural designations

Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	1

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

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

ID	Location	Classification	Description
1	On site	Grade 3	**Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.**

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	3

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

Location	Reference	Scheme	Start Date	End date
10m S	AG00626952	Entry Level Stewardship	01/10/2014	30/09/2019
140m W	AG00423071	Entry Level Stewardship	01/05/2013	30/04/2018
141m W	AG00423071	Entry Level Stewardship	01/05/2013	30/04/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations

Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

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

13.1 Priority Habitat Inventory

Records within 250m	2

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

Features are displayed on the Habitat designations map on **page 67**

ID	Location	Main Habitat	Other habitats
A	214m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	230m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

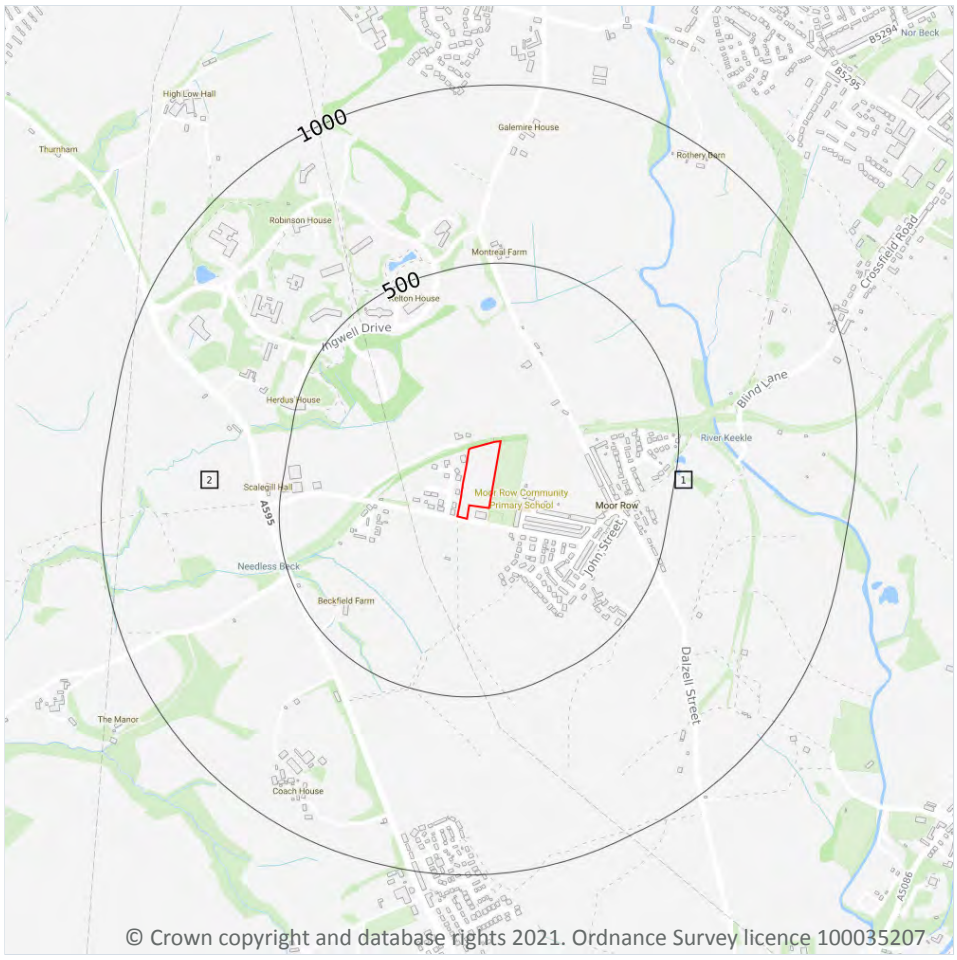
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

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

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

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**No coverage**	**No coverage**	**No coverage**	**NoCov**
2	122m W	No coverage	No coverage	No coverage	No coverage	NoCov

This data is sourced from the British Geological Survey.

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

14.2 Artificial and made ground (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock

14.5 Bedrock geology (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

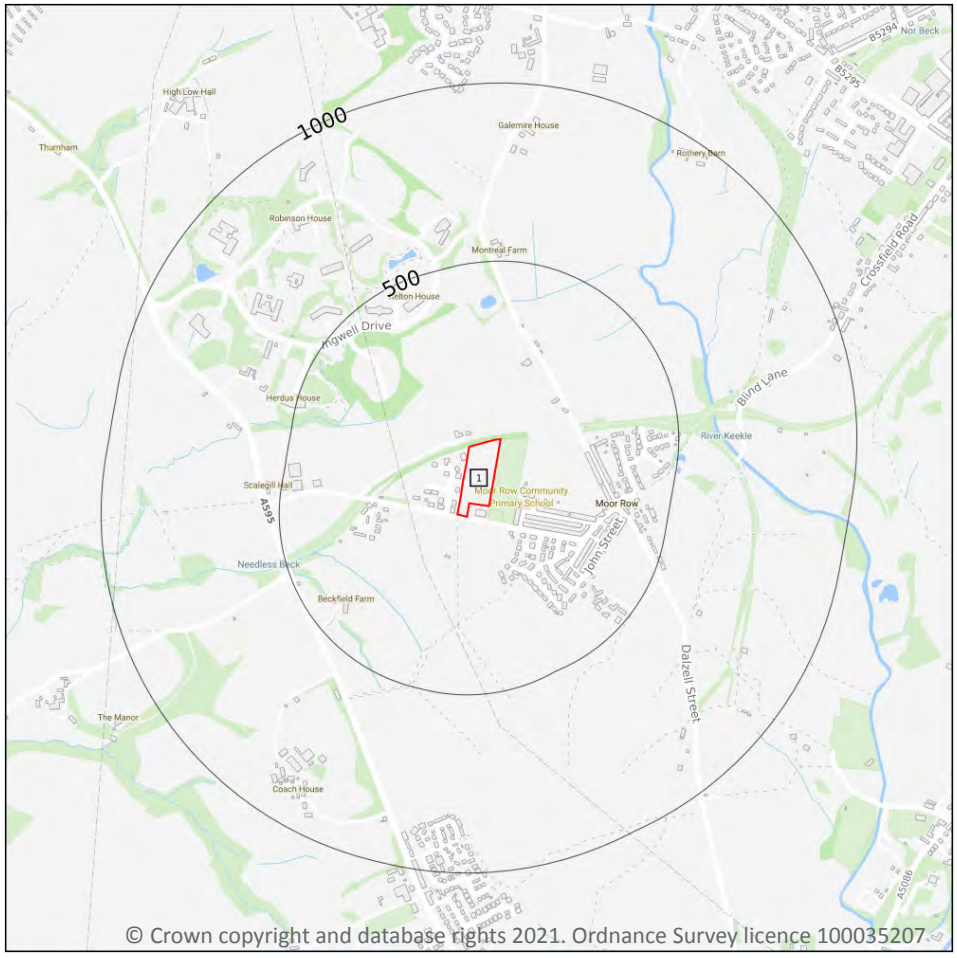
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 73**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW028_whitehaven_v4**

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

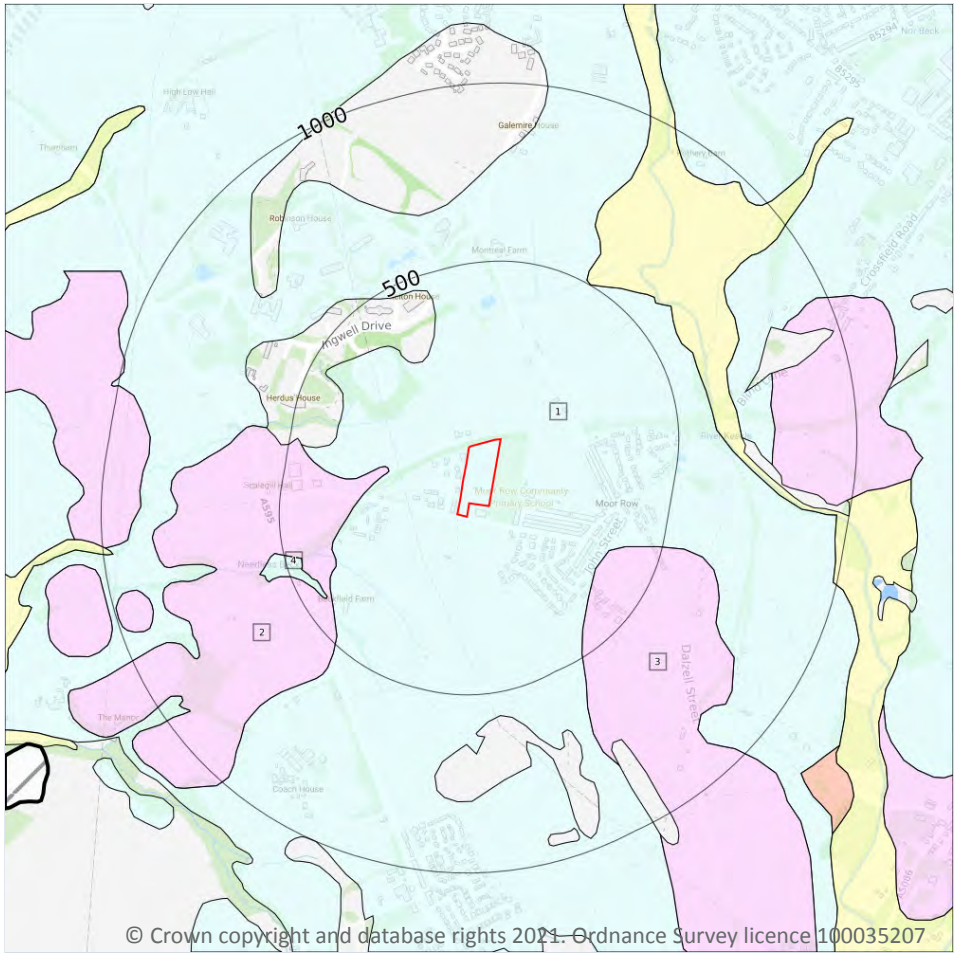
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m **4**

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

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

ID	Location	LEX Code	Description	Rock description
1	**On site**	**TILLD-DMTN**	**TILL, DEVENSIAN**	**DIAMICTON**
2	210m W	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	347m SE	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
4	432m SW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

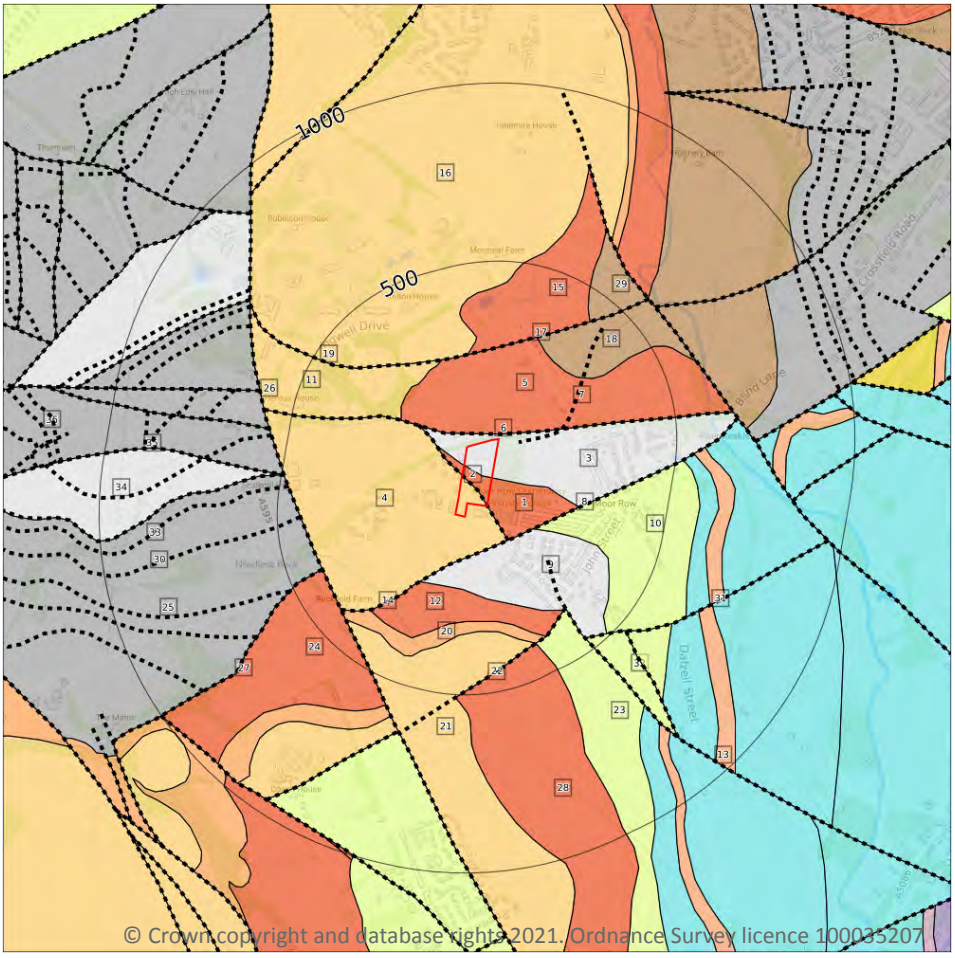
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	21

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 77**

ID	Location	LEX Code	Description	Rock age
1	On site	BK-BREC	BROCKRAM - BRECCIA	-
3	On site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	On site	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-

ID	Location	LEX Code	Description	Rock age
5	15m N	BK-BREC	BROCKRAM - BRECCIA	-
9	108m S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	144m SE	SMGP-MDSS	STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	NAMURIAN
11	200m NW	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-
12	202m S	BK-BREC	BROCKRAM - BRECCIA	-
15	249m N	BK-BREC	BROCKRAM - BRECCIA	-
16	249m N	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-
18	266m NE	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
20	294m S	SBSH-SIMD	ST BEES SHALE FORMATION - SILTSTONE AND MUDSTONE, INTERBEDDED	-
21	324m S	SBS-SDST	ST BEES SANDSTONE MEMBER - SANDSTONE	-
23	361m SE	SMGP-MDSS	STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	NAMURIAN
24	403m SW	BK-BREC	BROCKRAM - BRECCIA	-
25	404m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	407m SE	BK-BREC	BROCKRAM - BRECCIA	-
29	417m NE	WS-SDST	WHITEHAVEN SANDSTONE FORMATION - SANDSTONE	WESTPHALIAN
32	461m SE	SMGP-MDSS	STAINMORE FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	NAMURIAN
34	494m W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
36	494m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	4

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Moderate**
On site	**Fracture**	**High**	**High**
On site	**Fracture**	**High**	**Low**
14m NE	Fracture	High	High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	16

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 77**

ID	Location	Category	Description
2	**On site**	**FAULT**	**Fault, inferred, displacement unknown**
6	15m N	FAULT	Fault, inferred, displacement unknown
7	57m E	LANDFORM	Glacial meltwater channel centre line, undifferentiated
8	108m S	FAULT	Fault, inferred, displacement unknown
13	228m SE	FAULT	Fault, inferred, displacement unknown
14	236m SW	FAULT	Fault, inferred, displacement unknown
17	249m N	FAULT	Fault, inferred, displacement unknown
19	279m NW	FAULT	Fault, inferred, displacement unknown
22	361m SE	FAULT	Fault, inferred, displacement unknown
26	404m SW	FAULT	Fault, inferred, displacement unknown
27	404m W	FAULT	Fault, inferred, displacement unknown

ID	Location	Category	Description
30	435m W	ROCK	Coal seam, inferred
31	461m SE	FAULT	Fault, inferred, displacement unknown
33	475m W	ROCK	Coal seam, inferred
35	494m W	FAULT	Fault, inferred, displacement unknown
37	494m W	FOSSIL_HORIZON	Marine band

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m **1**

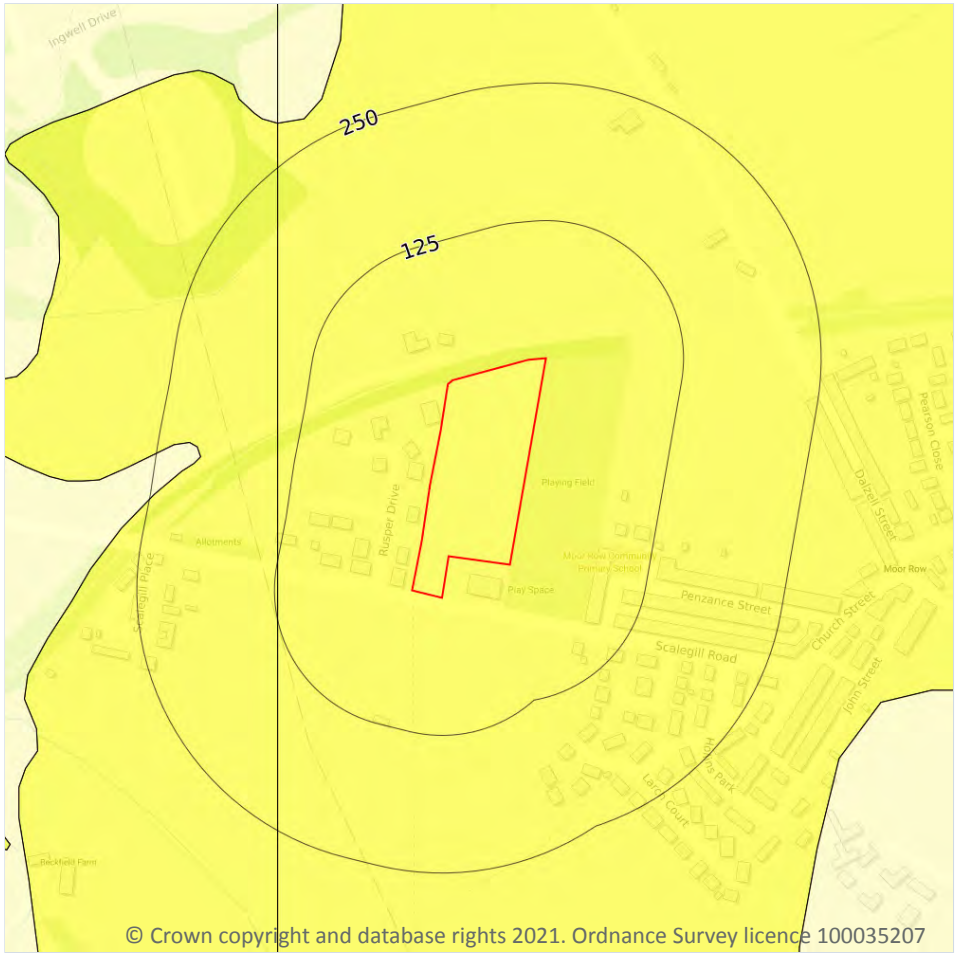
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several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

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

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	165m SW	299982 514230	BH NO. 2 MOOR ROW	428.0	N	773276

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	1

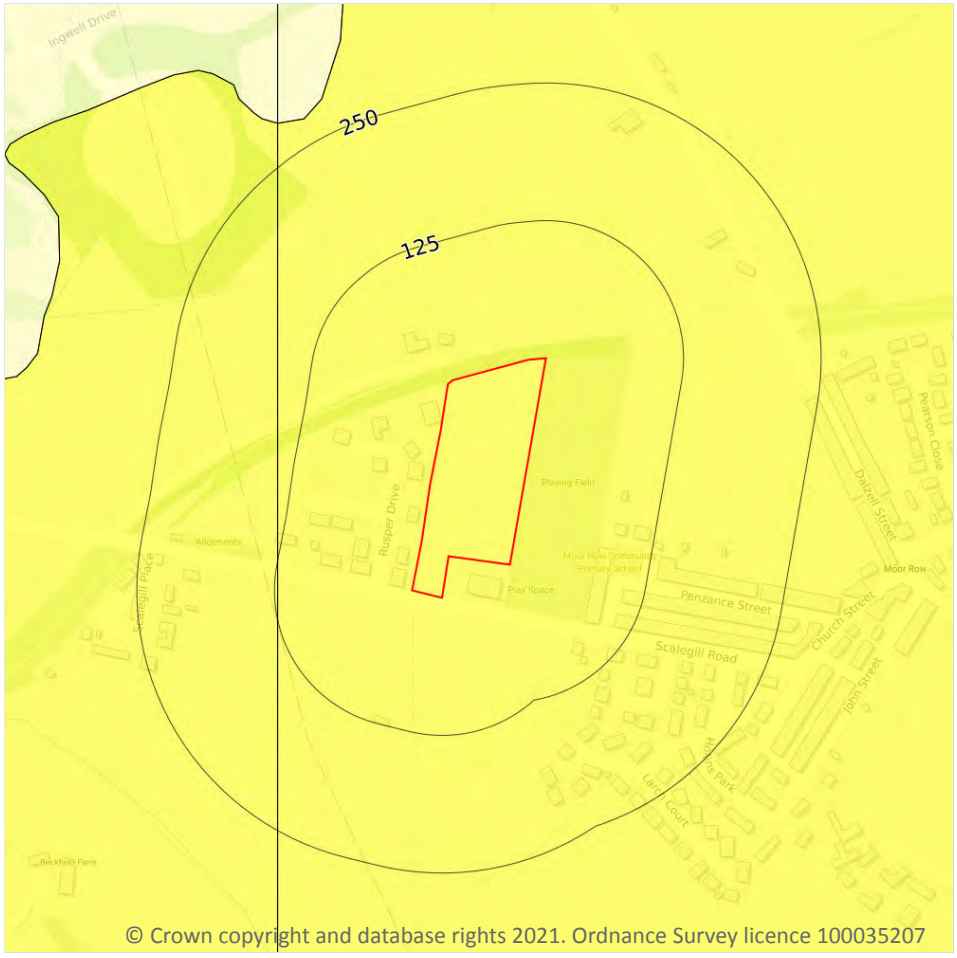
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 82**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

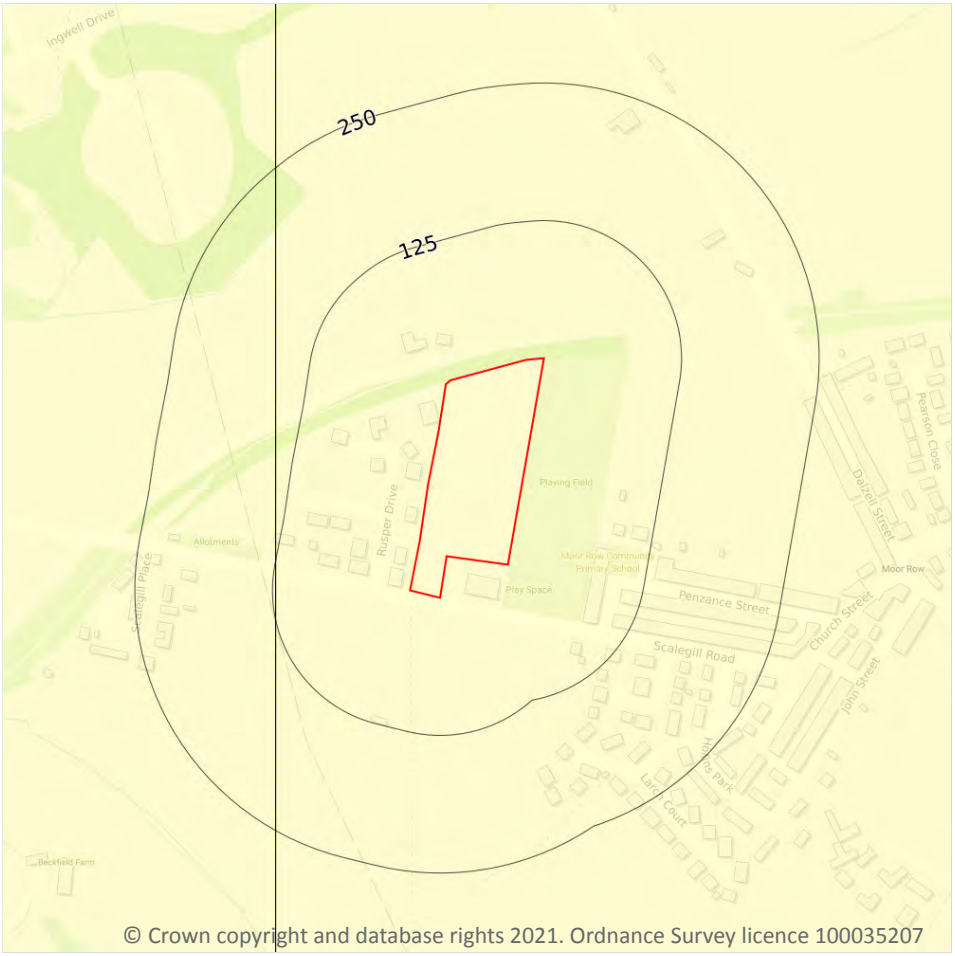
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 83**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

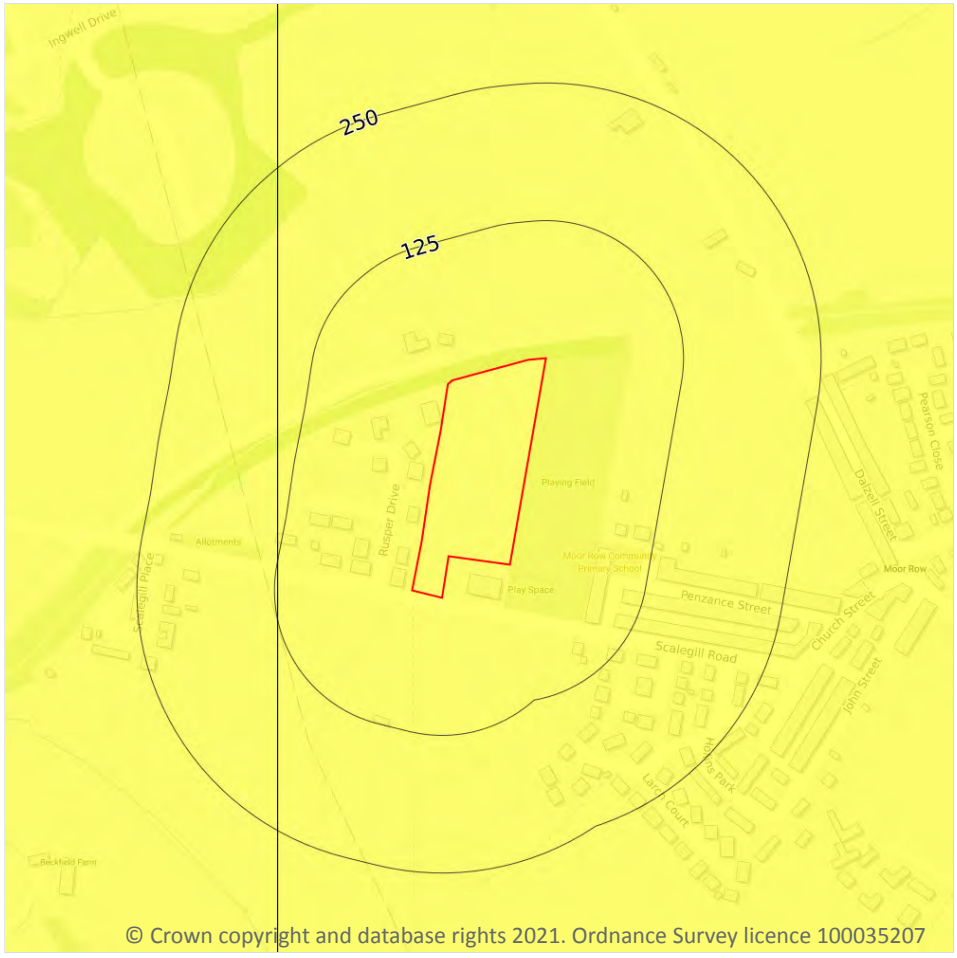
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 84**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

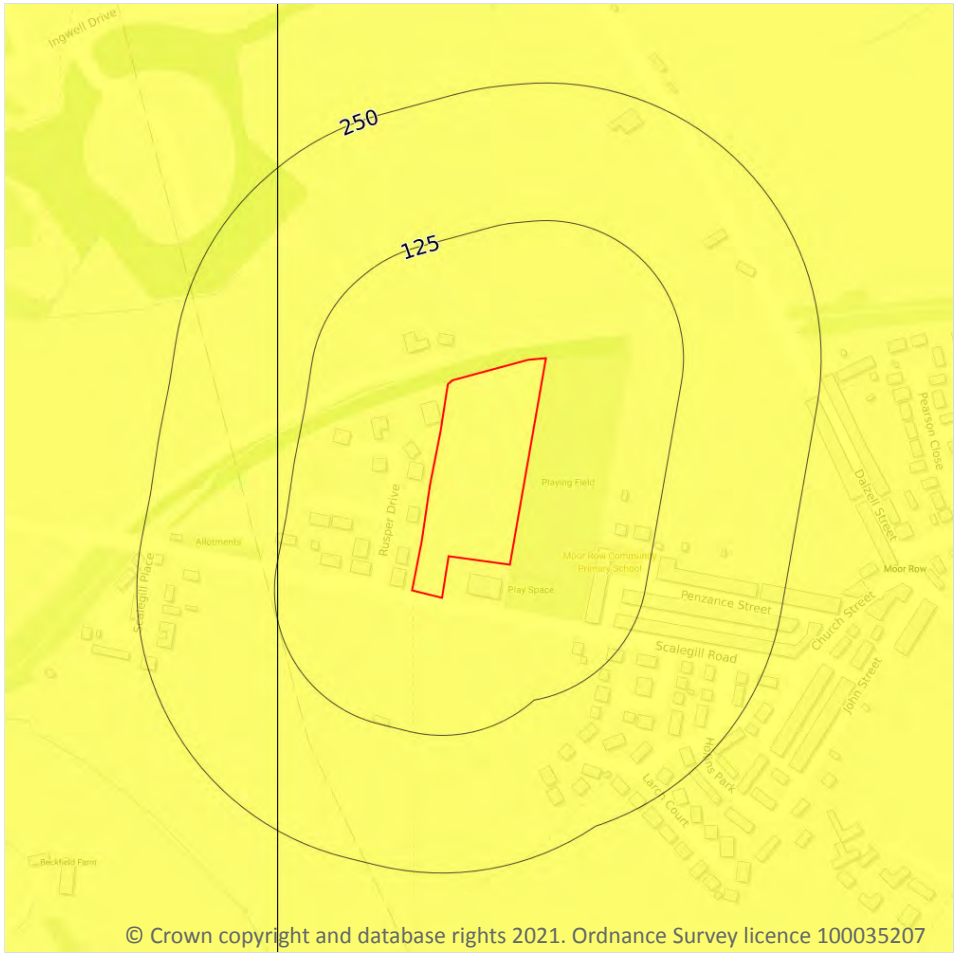
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

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

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

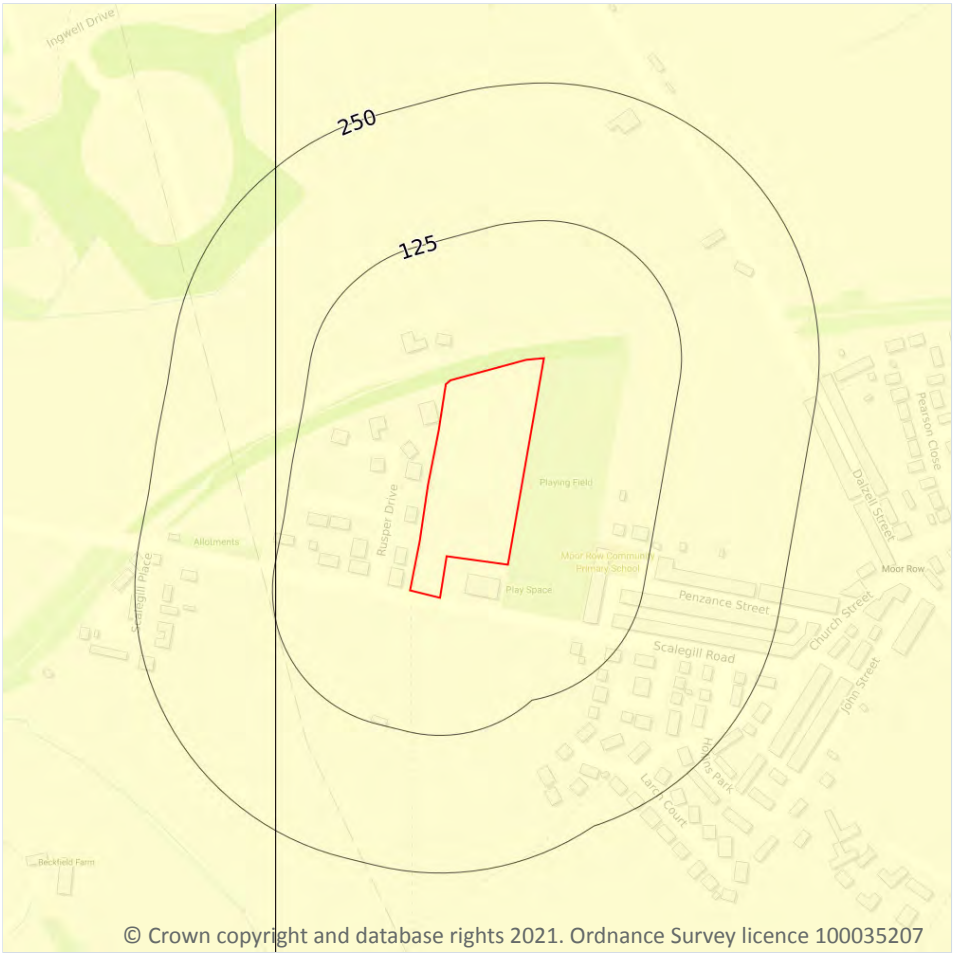
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 86**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

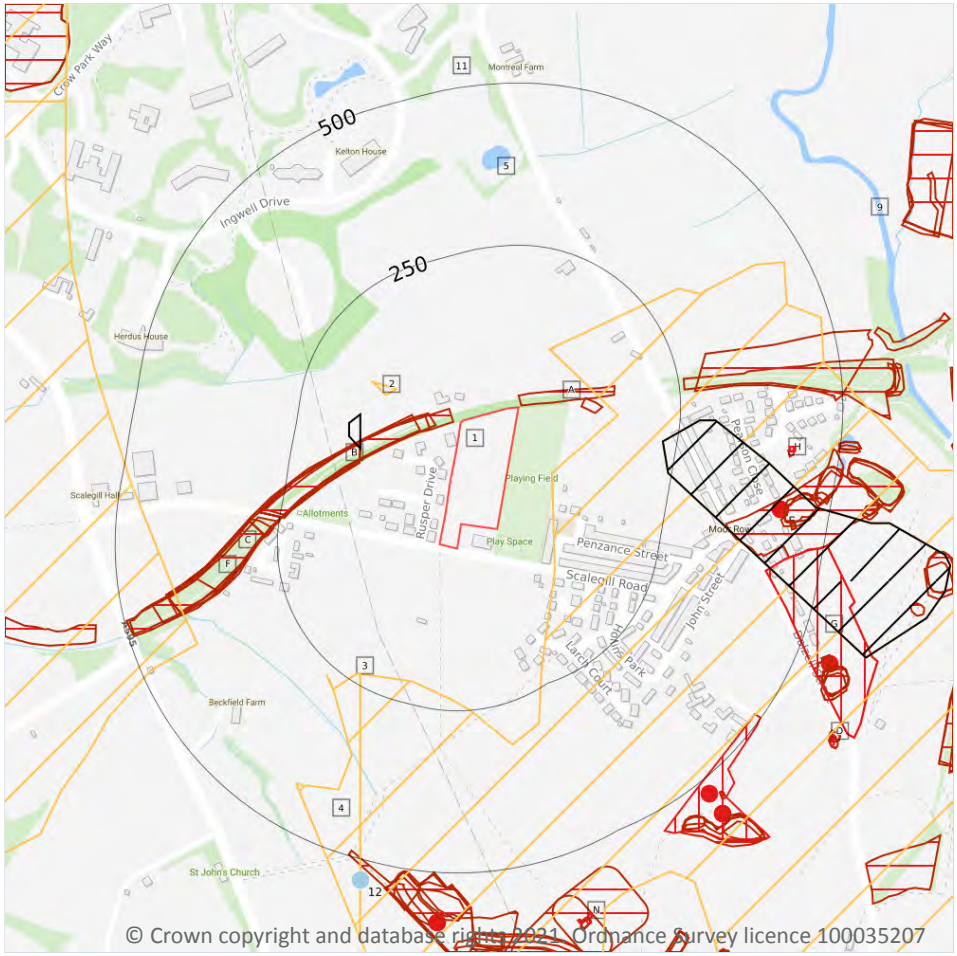
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 87**

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

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



18.1 Natural cavities

Records within 500m	0

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

This data is sourced from Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m	1

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 89**

ID	Location	Details	Description
E	425m E	Name: Moor Row Iron Ore Mine Address: CLEATOR MOOR, Cumbria Commodity: Hematite (Iron Ore) Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	11

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 89**

ID	Location	Land Use	Year of mapping	Mapping scale
A	5m NE	Cuttings	1863	1:10560
B	12m W	Cuttings	1863	1:10560
C	38m W	Cuttings	1926	1:10560
C	45m W	Cuttings	1938	1:10560
C	60m W	Cuttings	1898	1:10560
A	97m E	Cuttings	1926	1:10560
C	143m W	Cuttings	1951	1:10560
C	143m W	Cuttings	1988	1:10000
C	143m W	Cuttings	1967	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	143m W	Cuttings	1993	1:10000
F	250m W	Cuttings	1863	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**29**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 89**

ID	Location	Land Use	Year of mapping	Mapping scale
G	419m E	Iron Ore Mines	1938	1:10560
G	419m E	Iron Ore Mine	1898	1:10560
H	421m E	Unspecified Old Shaft	1948	1:10560
H	423m E	Unspecified Old Shaft	1938	1:10560
H	423m E	Unspecified Old Shaft	1898	1:10560
I	489m SE	Iron Ore Mine	1938	1:10560
N	599m S	Unspecified Old Shaft	1938	1:10560
N	599m S	Unspecified Old Shaft	1898	1:10560
N	602m S	Unspecified Old Shaft	1948	1:10560
D	605m SE	Unspecified Old Shaft	1938	1:10560
D	605m SE	Unspecified Old Shaft	1898	1:10560
N	606m S	Unspecified Old Shaft	1948	1:10560
D	610m SE	Unspecified Old Shaft	1948	1:10560
N	636m S	Unspecified Old Shaft	1898	1:10560
-	743m SE	Unspecified Old Shaft	1863	1:10560
-	752m E	Iron Ore Mine	1938	1:10560
-	799m E	Disused Iron Ore Mine	1948	1:10560
-	817m SE	Old Iron Shaft	1863	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	846m E	Iron Ore Mine	1898	1:10560
-	872m E	Iron Ore Mine	1898	1:10560
-	881m E	Old Iron Shaft	1863	1:10560
-	892m E	Unspecified Old Shafts	1948	1:10560
-	899m E	Unspecified Old Shaft	1898	1:10560
-	902m E	Unspecified Old Shaft	1938	1:10560
-	930m E	Unspecified Old Shaft	1898	1:10560
-	975m S	Unspecified Disused Mine	1988	1:10000
-	975m S	Unspecified Disused Mine	1967	1:10560
-	985m E	Unspecified Old Shaft	1948	1:10560
-	985m E	Unspecified Old Shaft	1938	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	25

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 89**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Iron Ore (Non Vein)**	**E**	**Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered**
D	69m E	Not available	Iron Ore (Non Vein)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
2	112m NW	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
B	146m W	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
3	221m SW	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
E	228m E	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
4	234m SW	Not available	Iron Ore (Non Vein)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
5	249m N	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
6	254m SW	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
9	308m NE	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered

ID	Location	Name	Commodity	Class	Likelihood
10	404m W	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
11	471m N	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
14	558m NE	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
16	589m SE	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
17	620m S	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
22	785m NW	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	798m E	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	814m SE	Not available	Vein Mineral	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
-	835m NE	Not available	Haematite	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	848m NE	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Location	Name	Commodity	Class	Likelihood
-	850m E	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	891m NE	Not available	Haematite	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	926m NE	Not available	Iron Ore (Non Vein)	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	942m NE	Not available	Haematite	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	945m NE	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m **2**

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 89**

ID	Location	Mine Address	Mineral	Data source	Publisher
12	532m S	Sir John Walsh Pit, Cumbria	Hematite	CATALOGUE OF MINING INFORMATION (OTHER THAN COAL, FIRECLAY & SLATE) FOR THE L.D	BGS
-	959m E	Montreal Mine, Cumbria	Hematite	CATALOGUE OF MINING INFORMATION (OTHER THAN COAL, FIRECLAY & SLATE) FOR THE L.D	BGS

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

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

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

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

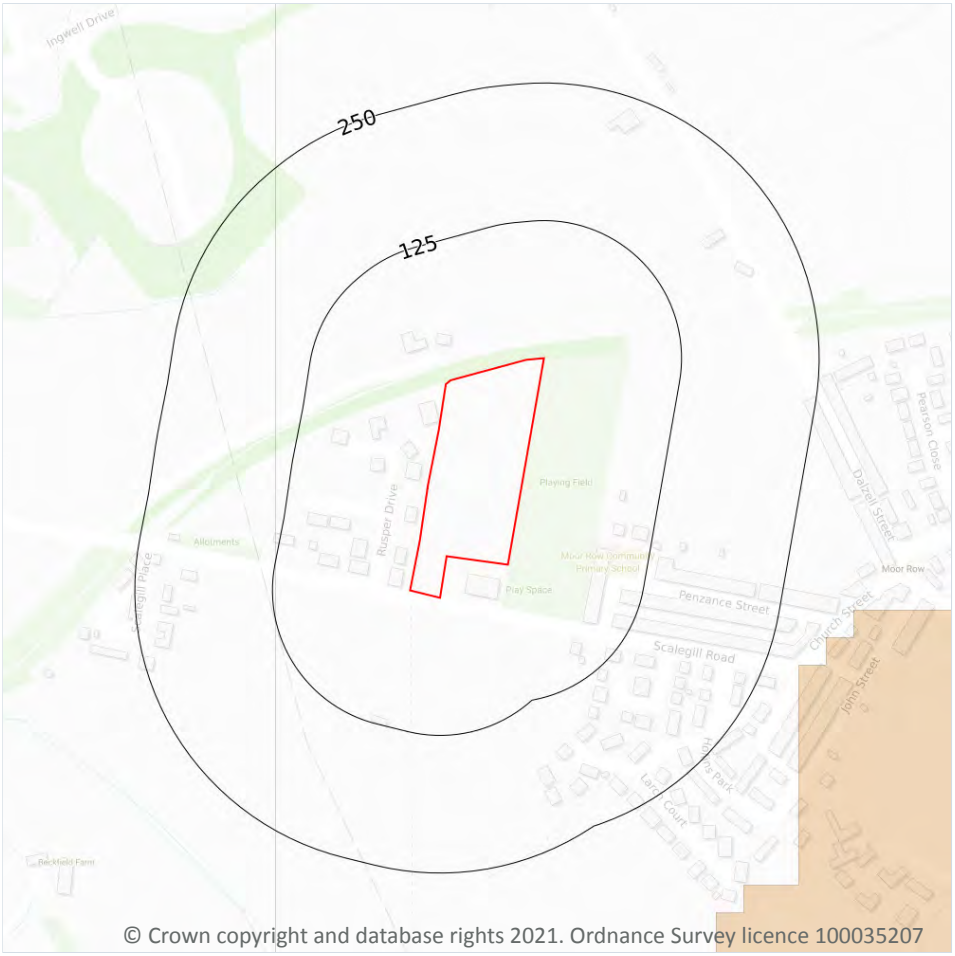
18.13 Clay mining

Records on site	0

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

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

19 Radon



Site Outline

Search buffers in metres (m)

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

19.1 Radon

Records on site	1

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

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

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

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

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
14m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	12

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

Features are displayed on the Railway infrastructure and projects map on **page 101**

Location	Land Use	Year of mapping	Mapping scale
2m N	Mineral Railway Sidings	1926	10560
7m N	Railway Sidings	1863	2500
11m N	Railway Sidings	1899	2500
19m NE	Disused Railway Sidings	1989	2500
19m NE	Disused Railway Sidings	1984	2500
194m E	Railway Sidings	1948	10560
207m E	Railway Sidings	1938	10560
207m E	Railway Sidings	1898	10560
209m E	Mineral Railway Sidings	1925	2500
209m E	Railway Sidings	1899	2500
211m E	Mineral Railway Sidings	1961	2500
236m E	Railway Sidings	1926	10560

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

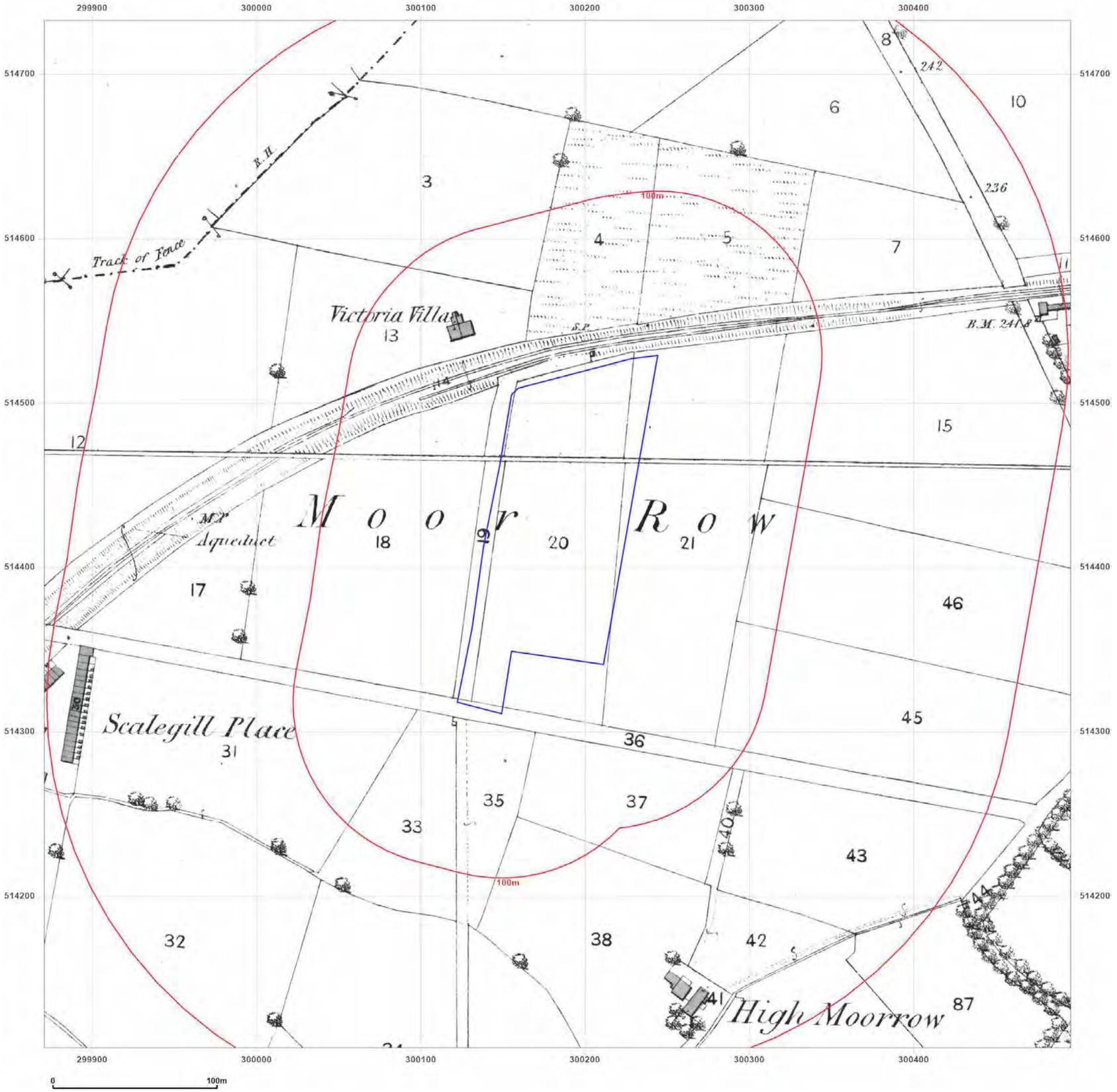
Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

Terms and conditions

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

Appendix III

- Ground Sure Report Historical Map Extracts (GSR – Mapinsight)



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Site Details:

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

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

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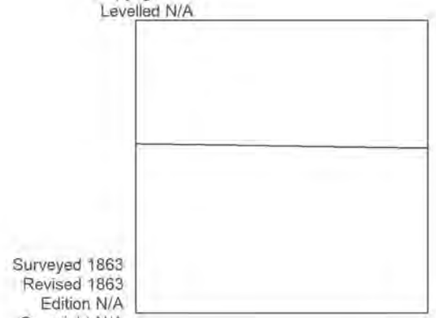
Surveyed 1863
Revised 1863
Edition N/A
Copyright N/A
Levelled N/A



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

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Map legend available at:
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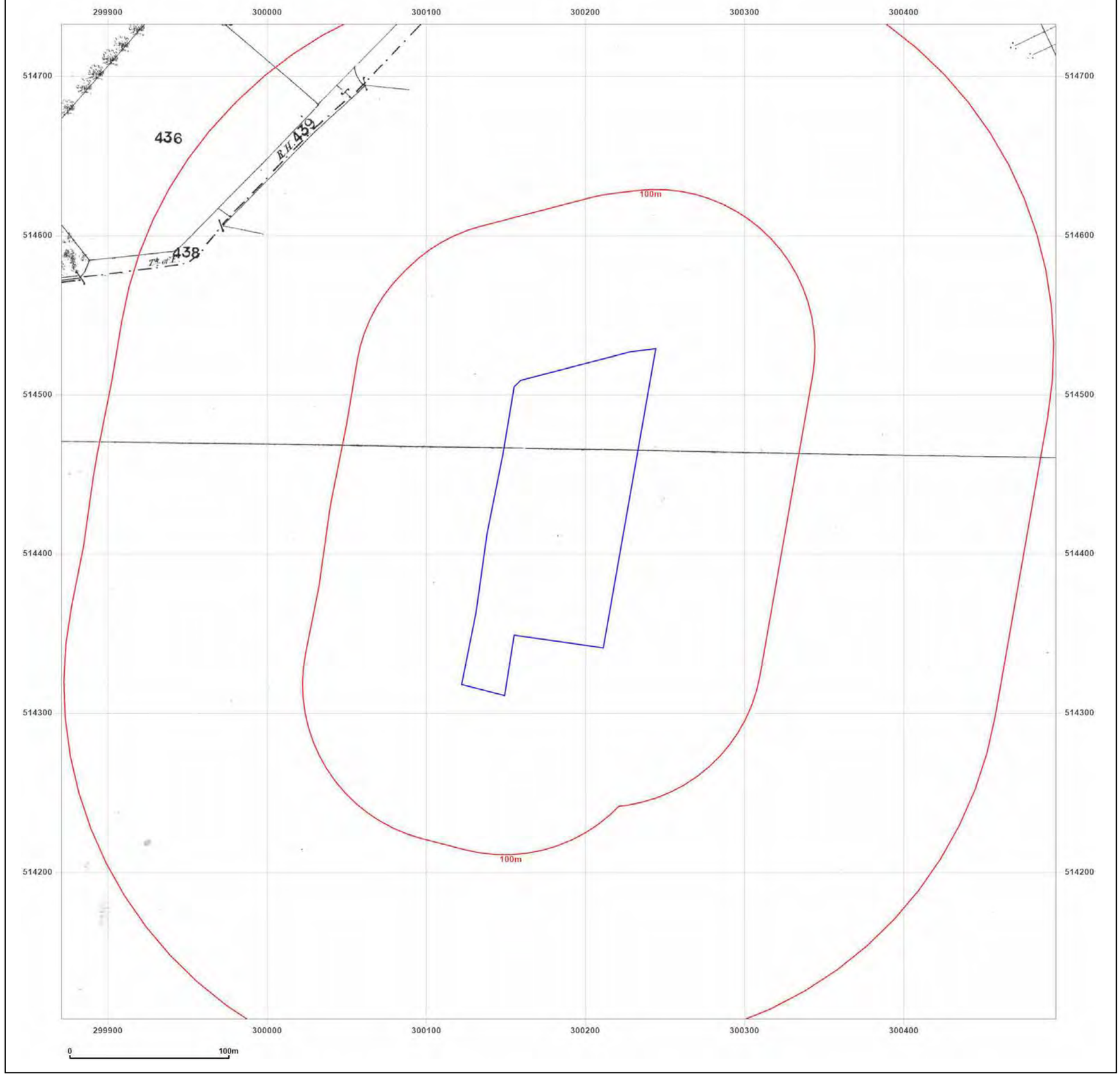

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: County Series

Map date: **1864-1865**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1865
Revised 1865
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1864
Revised 1864
Edition N/A
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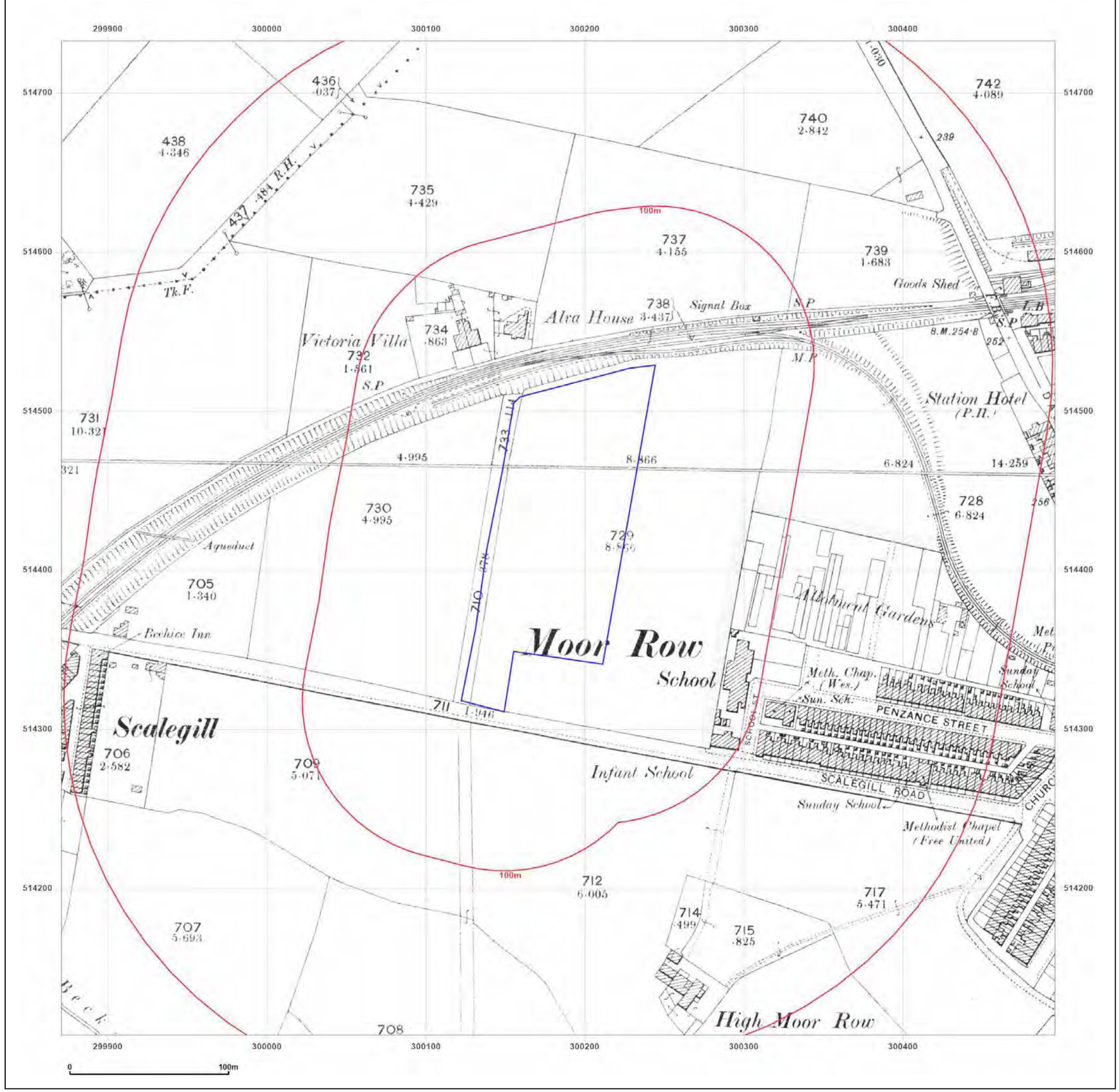

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Grid Ref: 300183, 514420

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

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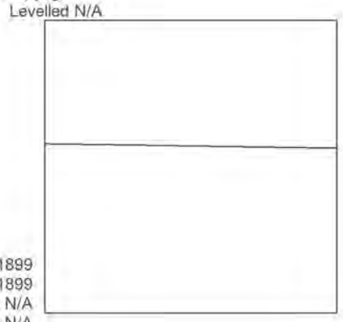
Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1899
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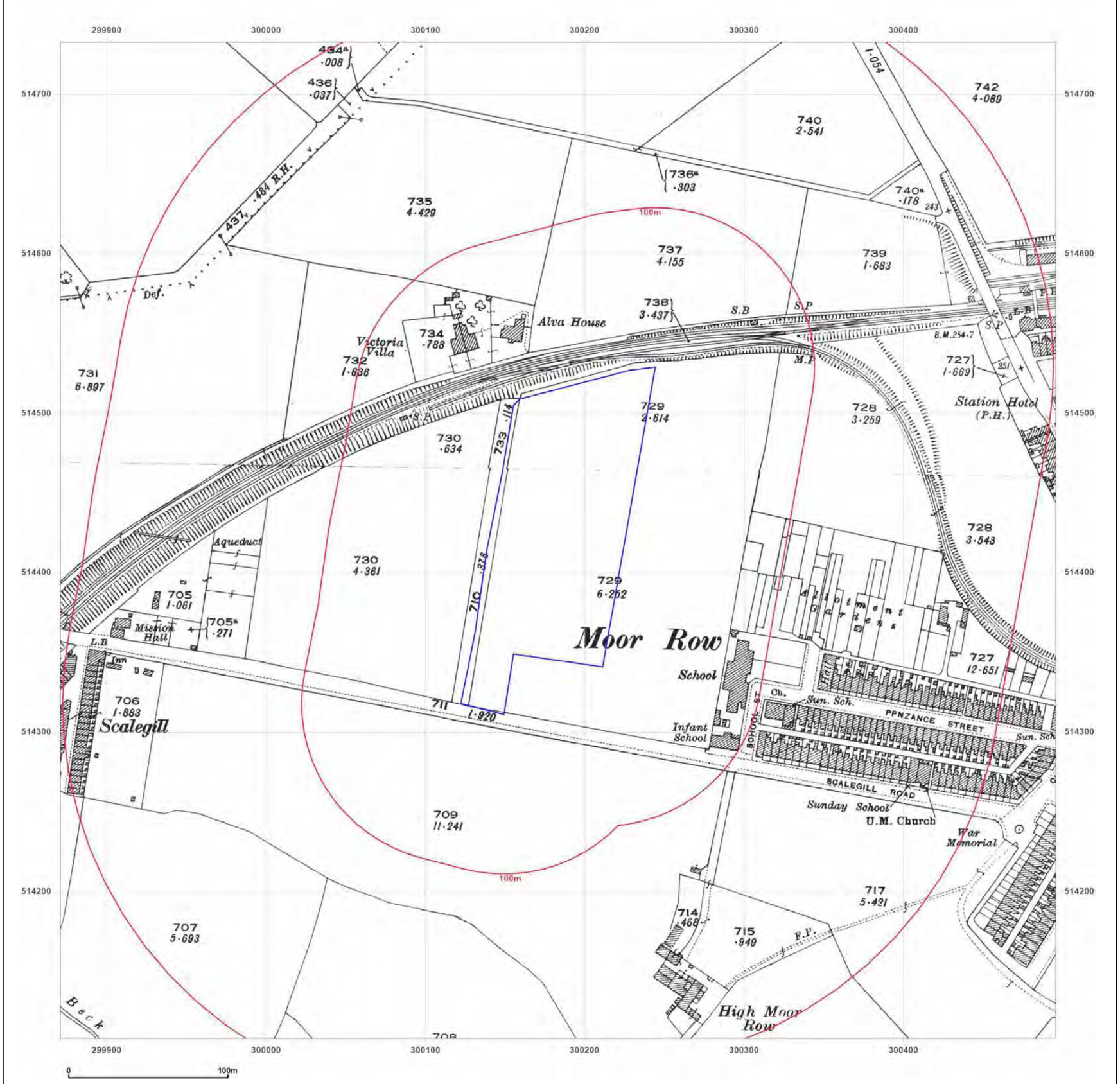

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Grid Ref: 300183, 514420

Map Name: County Series

Map date: **1925**

Scale: 1:2,500

Printed at: 1:2,500

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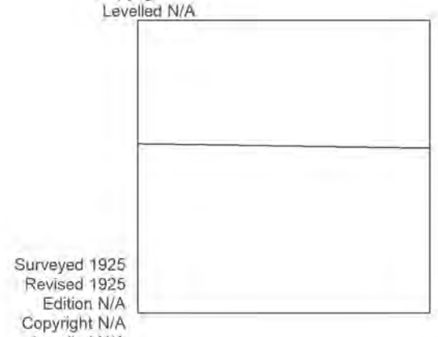
Surveyed 1925
Revised 1925
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1925
Revised 1925
Edition N/A
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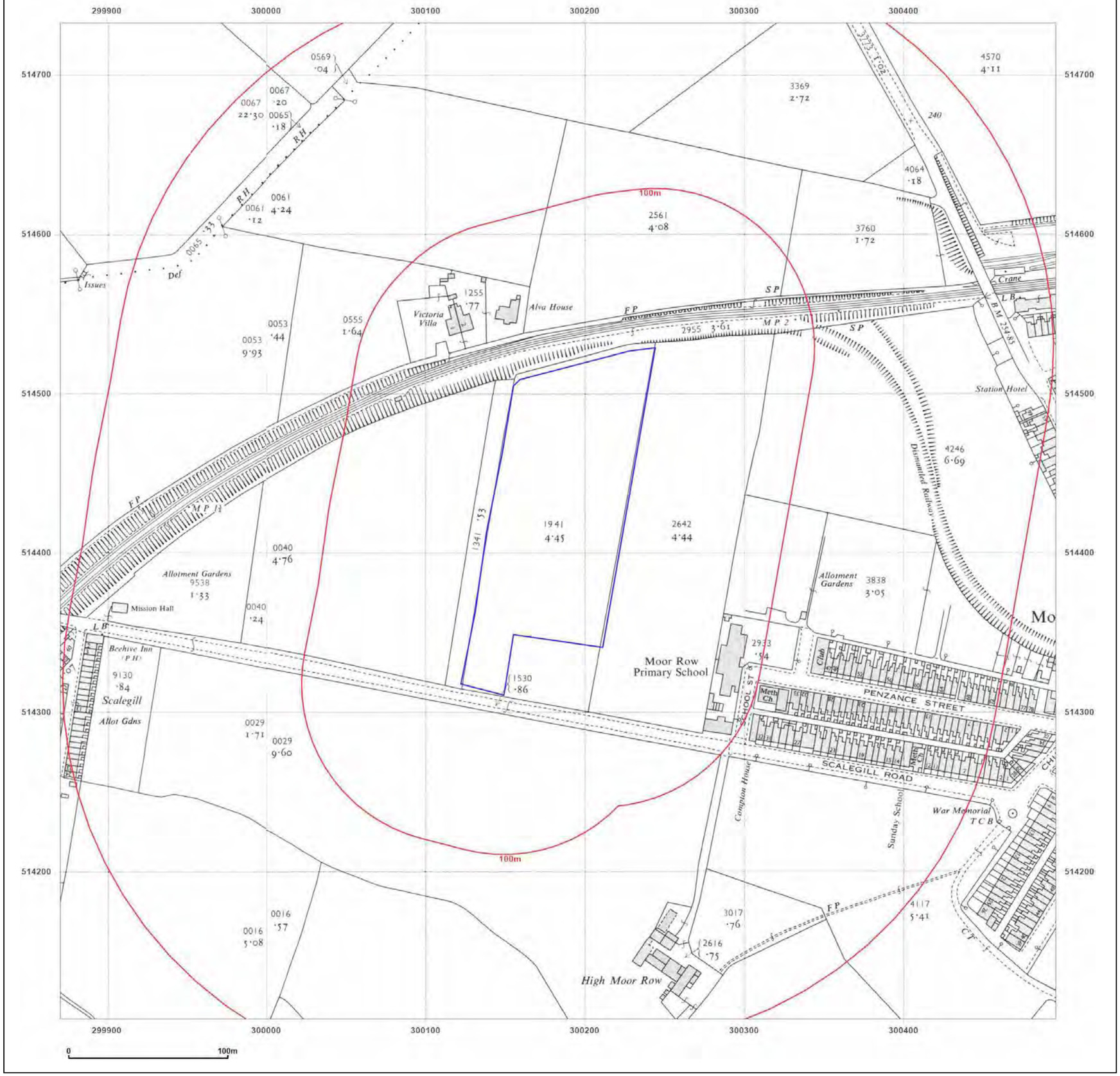

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Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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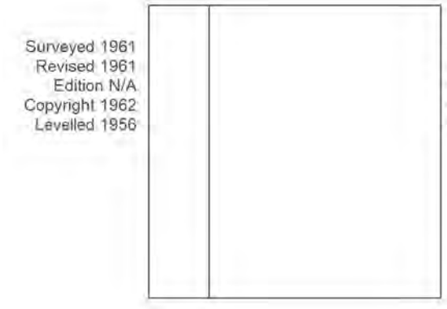

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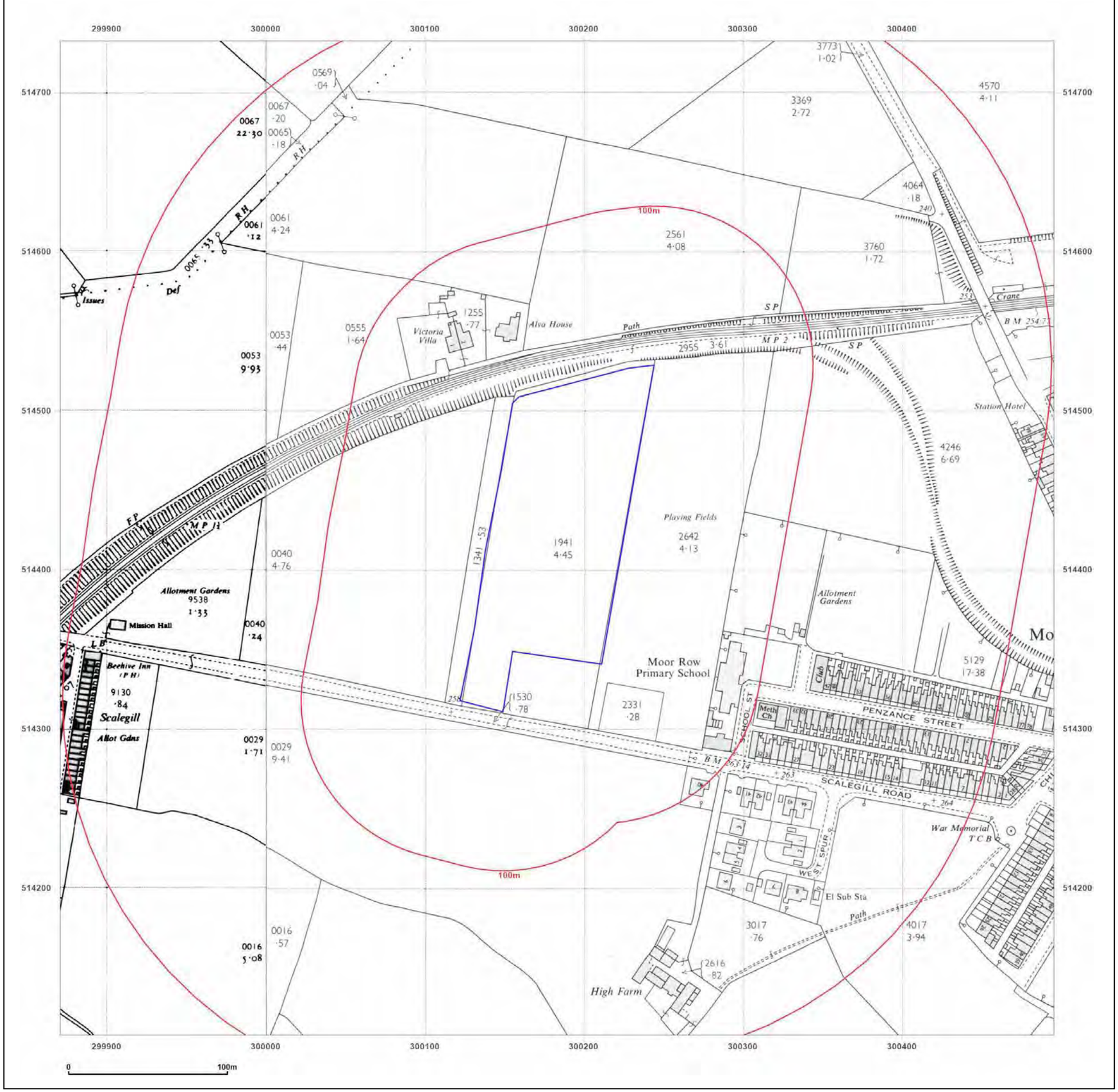

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: National Grid

Map date: **1962-1966**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1966
Revised 1966
Edition N/A
Copyright 1967
Levelled 1965

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: National Grid

Map date: **1984-1985**

Scale: 1:2,500

Printed at: 1:2,500

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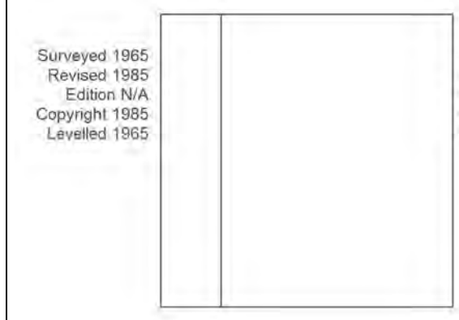

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Production date: 30 March 2021

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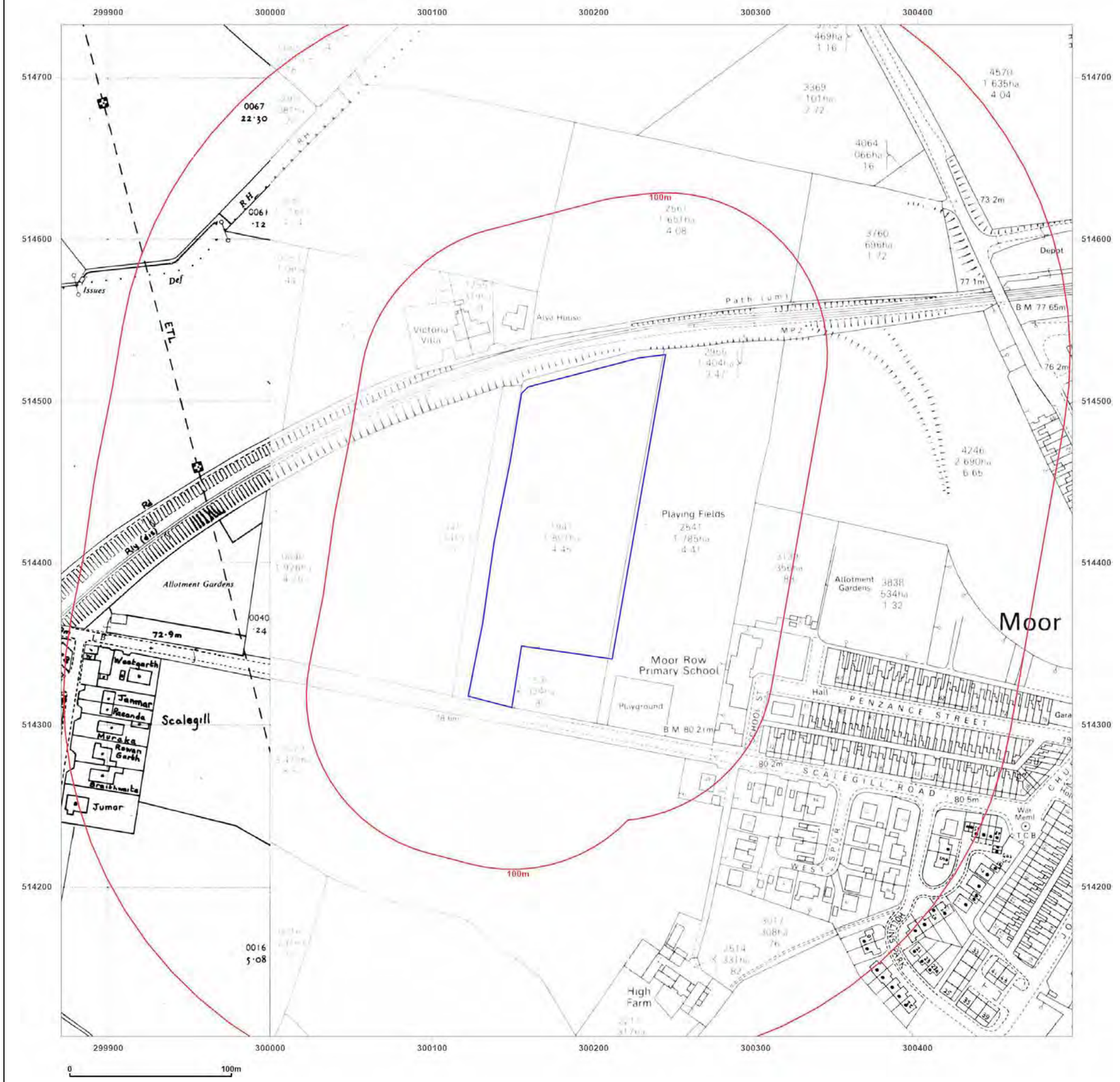

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: National Grid
Map date: **1989-1990**
Scale: 1:2,500
Printed at: 1:2,500

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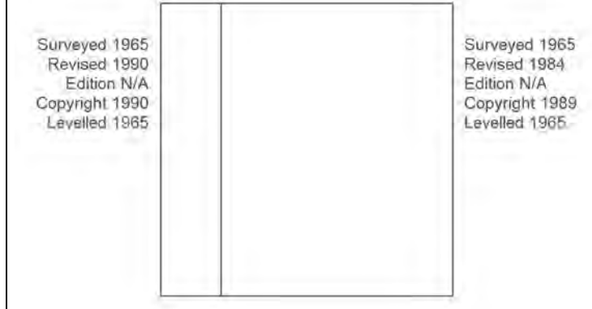

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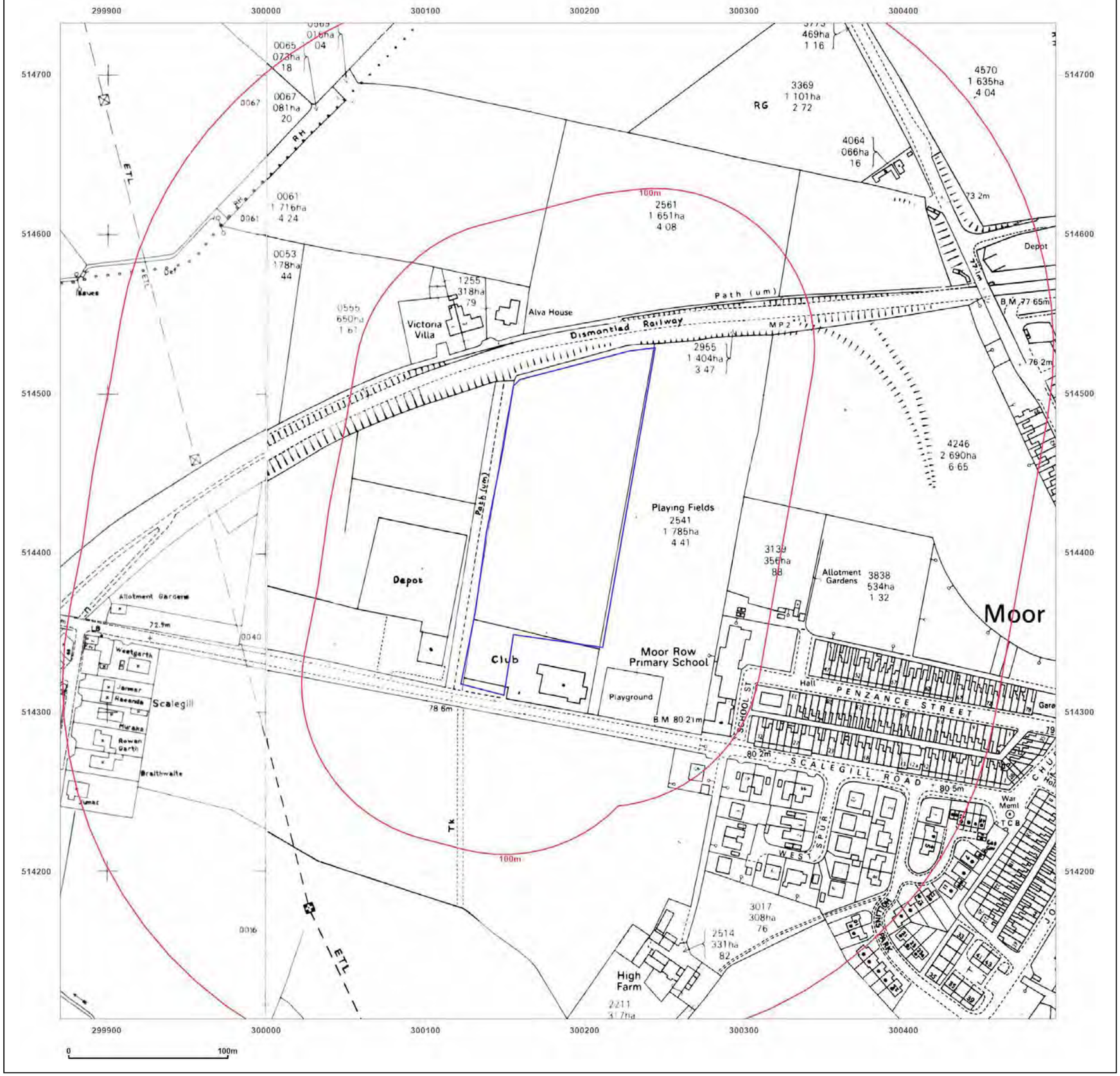

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: National Grid

Map date: **1991-1993**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1993
Revised 1993
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1965
Revised 1991
Edition N/A
Copyright 1991
Levelled 1965

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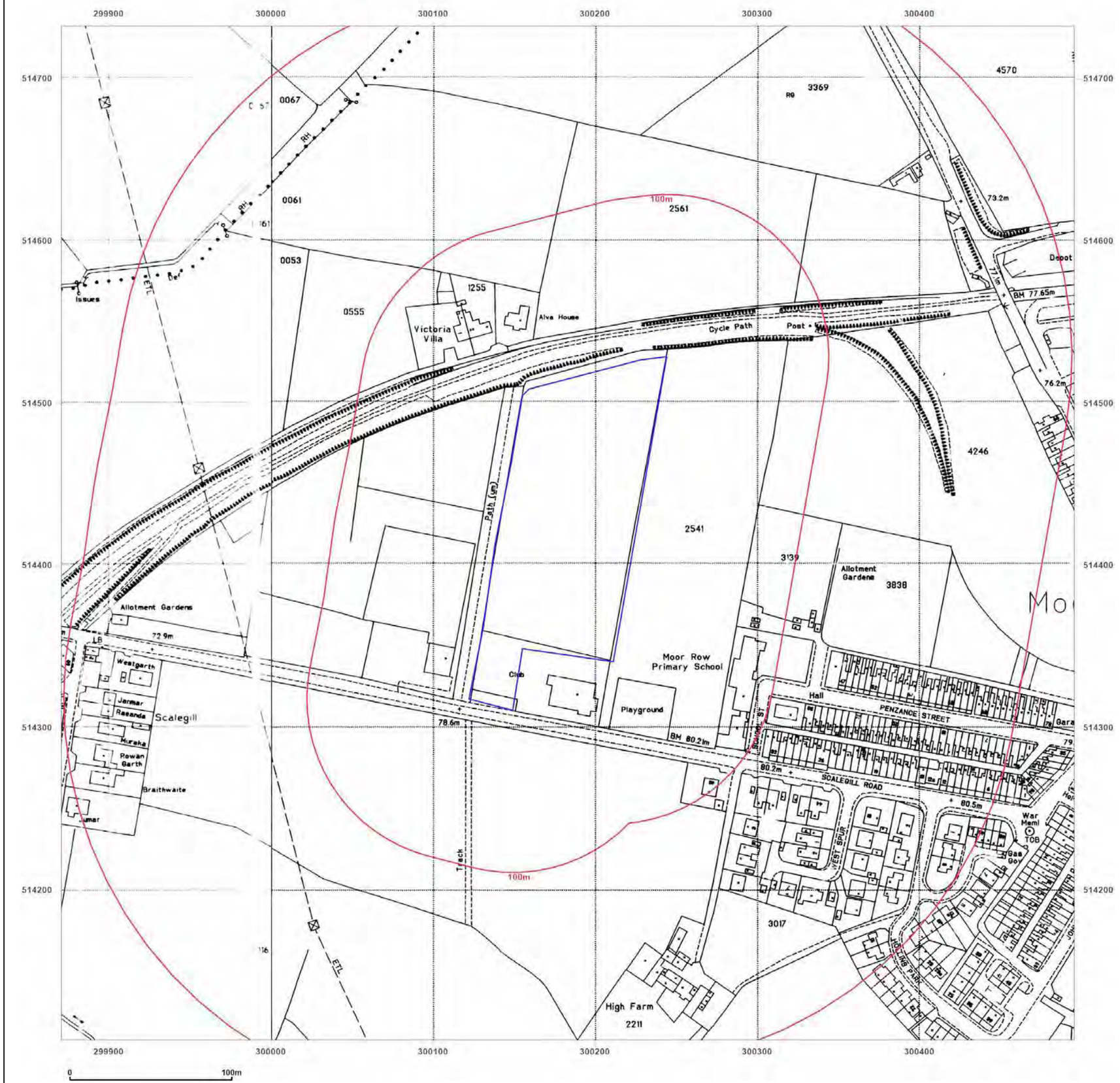

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Map Name: National Grid
Map date: **1994**
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Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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Surveyed 1994
Revised N/A
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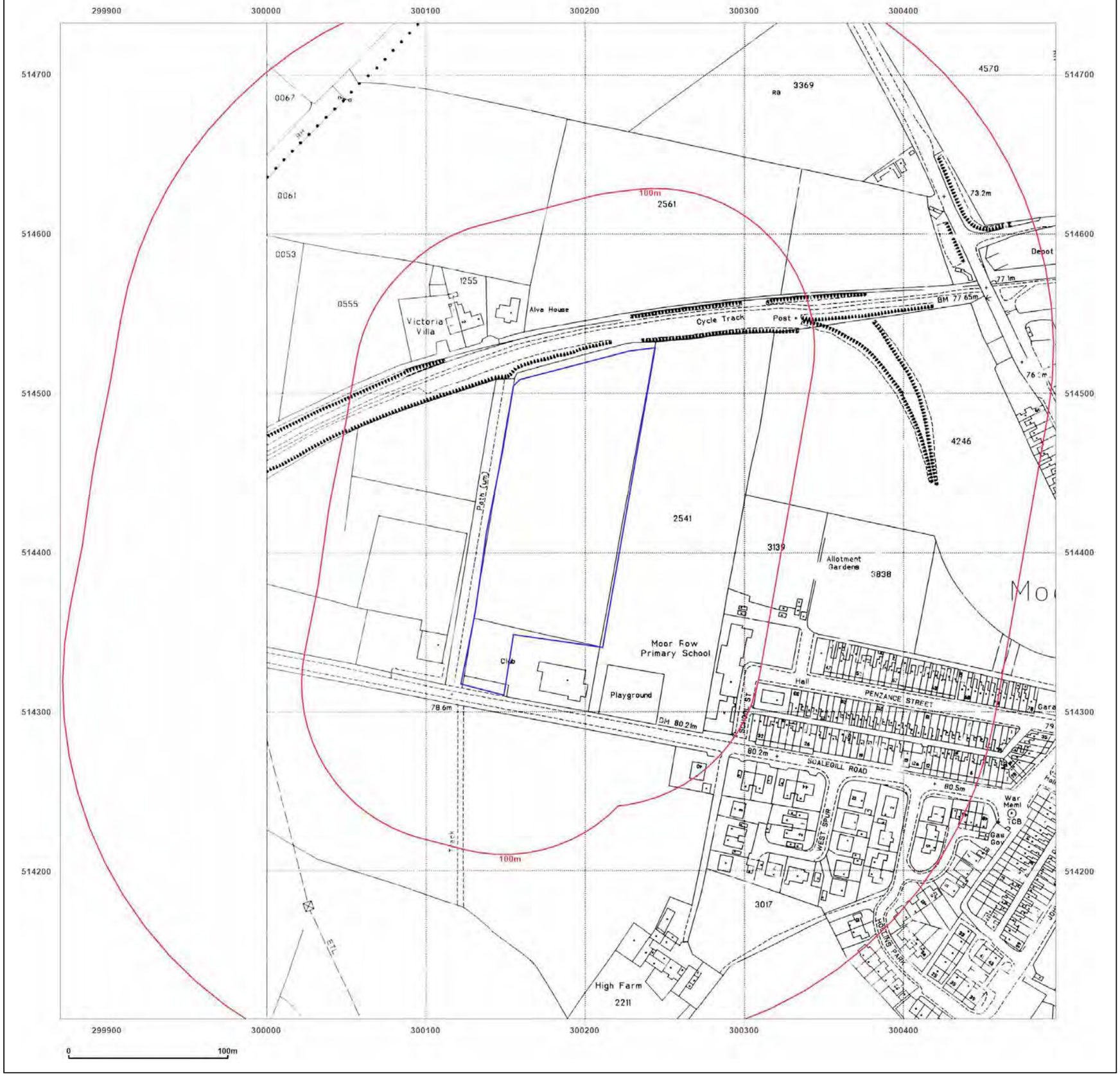

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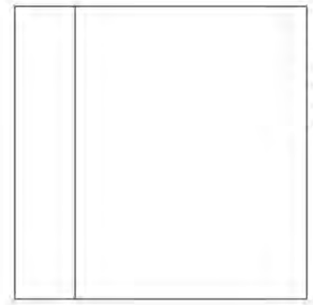

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Revised N/A
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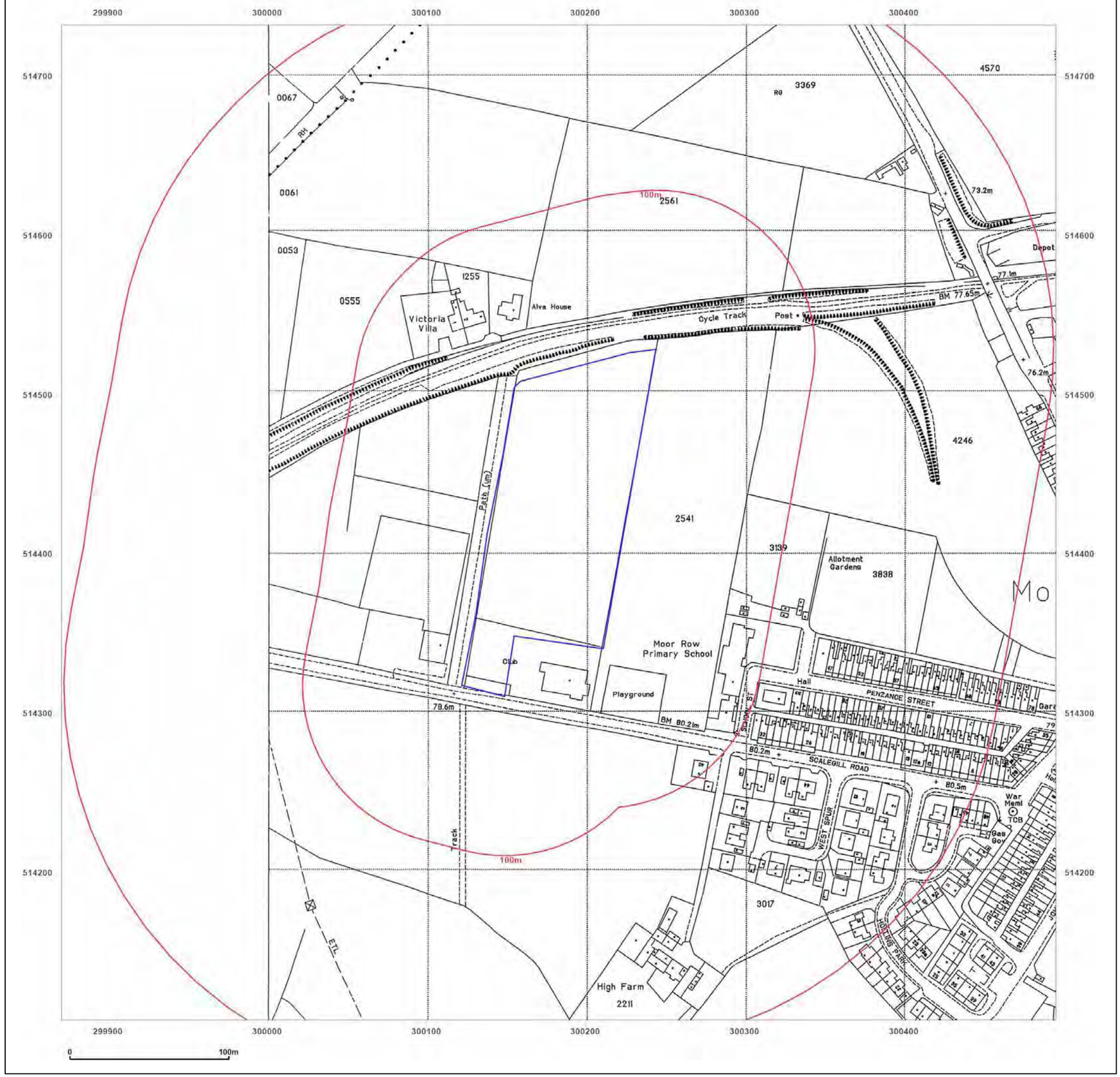

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Site Details:

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: National Grid

Map date: **1995**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed N/A
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Site Details:

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Report Ref: EMS-681216_895314
Grid Ref: 300183, 514420

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Appendix IV

- The Coal Authority Coal Mining Report

The Coal Authority

CON29M
coal mining report

SCALEGILL ROAD, MOOR ROW, CUMBRIA, CA24 3JL

Known or potential coal mining risks

Further action

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

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

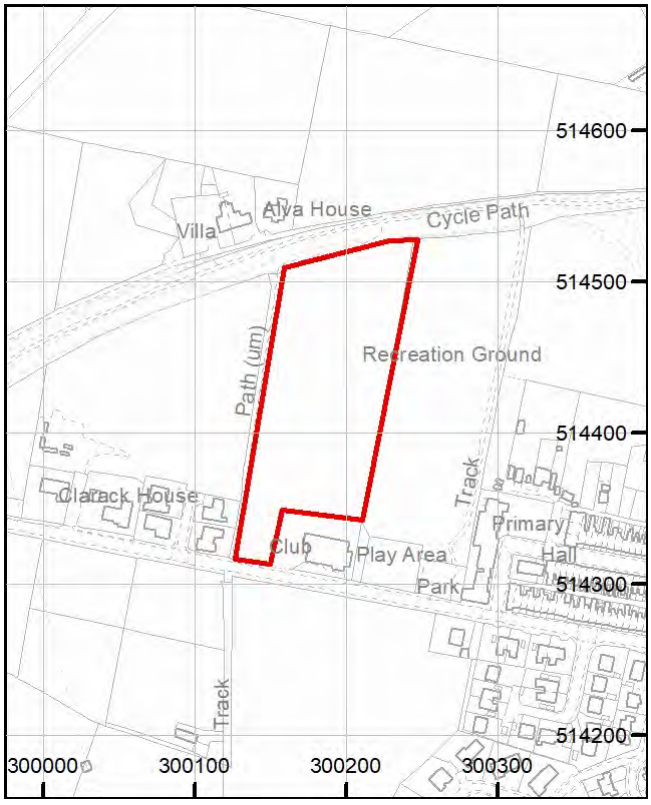
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. It is unlikely that these features will impact on the stability of the enquiry boundary.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



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

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

Accessibility

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

Detailed findings

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

1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 3 seams of coal at 210m to 270m depth, and last worked in 1918.

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

2 Present underground coal mining

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

3 Future underground coal mining

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

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

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

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

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

4 Mine entries

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

5 Coal mining geology

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

6 Past opencast coal mining

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

7 Present opencast coal mining

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

8 Future opencast coal mining

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

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

9 Coal mining subsidence

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

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

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

10 Mine gas

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

11 Hazards related to coal mining

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

12 Withdrawal of support

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

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

13 Working facilities order

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

14 Payments to owners of former copyhold land

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

Statutory cover

Coal mining subsidence

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

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

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

Coal mining hazards

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

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

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

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

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

coal seams - bed of coal of varying thickness

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

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

mine entries - collective name for shafts and adits

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

shaft - vertical entry into a mine

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

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

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

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

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

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