GEO Environmental Engineering

PHASE 1: DESK TOP STUDY REPORT

(PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT)

PROPOSED RESIDENTIAL DEVELOPMENT

BRITISH LEGION SITE, CHURCH ROAD

DISTINGTON, CUMBRIA

FOR

DISTINGTON BIG LOCAL

GEO Environmental Engineering

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

DOCUMENT CONTROL SHEET

Report Ref:	2019-4032
Report Date:	31.01.2020
Report Type:	DRAFT DTS v1 for Design Team Review
Report Tracking	06.02.2020 - Draft Report Issued
Prepared By:	James Brock *BSc. (Hons), MSc* – Geo Environmental Engineer/Associate
Author Signature:	[redacted]
Checked By:	Curtis Evans B.Sc. (Hons) FGS – Geo Environmental Engineer/Director
Client:	Distington Big Local
Consultant	~

CONTENTS

1.0 Introduction

1.1 Instruction

Geo Environmental Engineering Ltd (GEO) has been commissioned by Distington Big Local, herein referred to as the Client to undertake a Phase 1: Desk Top Study Report (Preliminary Environmental Risk Assessment) for land located off Church Road in Distington, Cumbria to determine any potential geohazards that may affect the development of the site. The site was formerly used by the British Legion.

It is understood that the Client is considering the site for residential development. Further details relating to the full scope of development are available in Section 1.4.

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

1.2 Aims and Objectives

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

- CLR11: Model Procedures for the Management of Land Contamination. DEFRA/EA, 2004.
- BS10175:2011: Code of Practice for the Investigation of Potentially Contaminated Sites.
- BS5930:2015: Code of Practice for Site Investigations.
- UK Specification for Ground Investigation, 2nd Edition. Site Investigation Steering Group, 2011.
- Effective Site Investigation. Site Investigation Steering Group, 2013.

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

- British Geological Survey (BGS) Geological Mapping Data
- Environment Agency (EA).
- Ground Sure Report (Geoinsight and Enviroinsight – GSR – Appendix II)
- Ordnance Survey Historical Maps (Appendix III)
- The Coal Authority Online Database.

1.3 Limitations of Use

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

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

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

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

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

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

2.0 Site Location and Development Proposals

2.1 Development Proposal

It is understood that the site will be developed for residential end use. A proposed site layout has been provided by the Client and a copy is included in Appendix I. The plan indicates that the development will comprise 9 No. bungalows and 39 No. apartments as well as private gardens, communal soft landscaping, access roads, car parking and other associated infrastructure. It is also understood that the Client is considering the use of a soak-away drainage system should the ground conditions prove suitable.

Further details relating to the proposed development should be obtained from the Consultant.

2.2 Site Location

The site, occupying an area of c.0.74ha is located in the central part of Distington, c.5km south east of Workington town centre in Cumbria as indicated on the site location plan included in Appendix I. Access to the site is from Church Road to the north.

- National Grid Reference: 300565, 523506
- Post Code: CA14 5TG (approximate only)

2.3 Site Description and Levels

A site walkover was completed in December 2019 and a selection of photographs of the site are included in Appendix I.

It is understood that the site was previously used by the British Legion, however, the former building in the north of the site has been demolished and the land cleared. The northern part of the site comprises an unused car park and evidence of the former building (concrete floor slabs). Elsewhere, the land is surfaced with grass which was noted as particularly soft underfoot.

There was no evidence of any contamination sources (bulk fuel/oil or chemical storage) noted on the site during the walkover.

Overall, the site appears generally level with no retaining structures and only minor undulations. Topographical survey data has been provided by the Client which indicates that the lowest part is in the south west at c.72.8m AOD, rising gradually to 75.4m AOD in the north west.

2.5 Surrounding Land Uses

Existing residential properties and private gardens are present to the north, south and east. A primary school is present to the west.

There was no evidence of any contamination sources (heavy industry, fuel stations, etc.) noted in the area surrounding the site during the walkover.

2.6 Existing Infrastructure and Utilities

A review of statutory utility supplier records lies beyond the scope of this report. However, a brief review of the utility plans indicates that buried utilities including electric, drainage and telecommunications are present on site. A review of buried utility plans should be completed prior to any intrusive ground works.

3.0 Geo-Environmental Setting

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

- Section 3.1 refers to the Ground Sure Report (Geoinsight) contained in Appendix II.
- Sections 3.2 to 3.4 refer to the Ground Sure Report (Enviroinsight) contained in Appendix II.
- Section 3.5 refers to the Historical Map Extracts contained in Appendix III.

3.1 Development Area Geology

A geological review of the site has been undertaken using information provided on published geological maps (BGS Sheet 9 Rothbury, Solid and Drift Edition, 1:50,000 scale) and the Ground Sure Report (GSR) contained in Appendix II.

An extract of the geological map is included below as Figure 1.

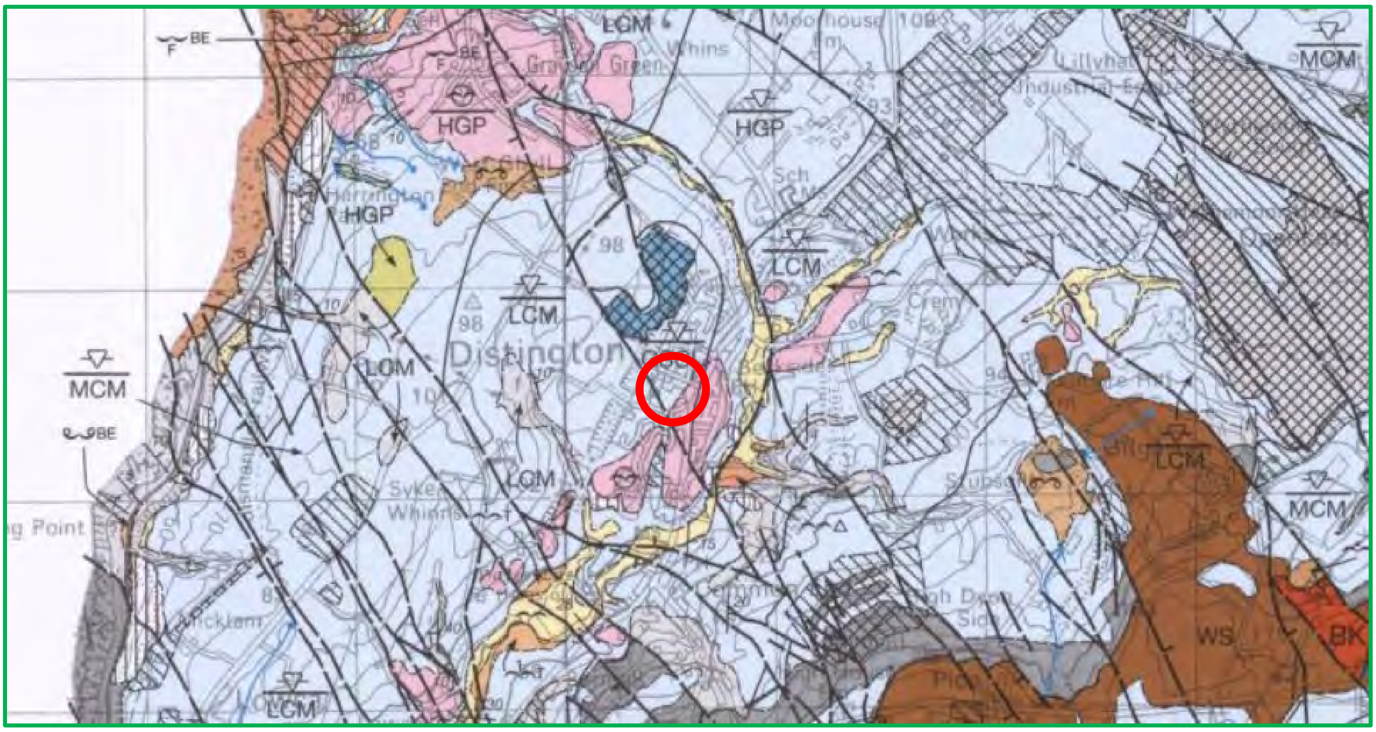


Figure 1. Geological Map Extract (red circle denotes approximate site location)

3.1.1 Made Ground

A review of the published geological map and the GSR does not indicate any made ground on the site. However, as the northern part of the site has previously been developed, some made ground should be expected in this part, although this is unlikely to be deep and significant contamination is not anticipated.

The GSR Geoinsight indicates an area of made ground c.209m south. Unspecified ground workings, heaps and gravel pits are also recorded within c.250m of the site. These could pose a potential risk of ground gas to the proposed development.

3.1.2 Drift Geological Deposits

A review of the published geological map indicates that the western part of the site is underlain by glacial till deposits and the eastern part is underlain by glaciofluvial deposits.

Glacial till deposits typically comprise firm and stiff gravelly clays with bands of sand and gravel. Boulders may also be encountered. Glaciofluvial deposits typically comprise sand and gravel with lenses of silt, clay or organic material. Organic materials can be a potential source of ground gas. The glaciofluvial deposits are likely to be underlain by till at depth.

Where clay deposits are encountered, the ground is unlikely to be suitable for a Sustainable Drainage System, however, were sands and gravel are present, the soil infiltration rate may be acceptable but will be dependent on the pore space and degree of silting. This should be confirmed as part of an intrusive ground investigation.

The Geoinsight GSR identifies the following geohazards and indicates a preliminary level of risk:

- Shrink-swell clays — negligible to very low risk.
- Landslides — very low risk.
- Compressible deposits — negligible risk.
- Collapsible deposits — very low risk.
- Running sands — very low risk.

The drift deposits are classified as a Secondary ‘A’ Aquifer.

It is recommended that reference be made to Section 6.0 of the Geoinsight GSR (Appendix II). Consequently, Phase 2: Ground Investigation works would be prudent to aid the design of foundations, any retaining structures and roads, should they be deemed necessary by the Design Team.

3.1.3 Bedrock Deposits

Reference to the published geological map and the GSR indicates the site is underlain by the Great Scar Limestone Group (GSLG - First Limestone). The GSLG is of Dinantian (Carboniferous) age.

The GSLG is classified as a Secondary ‘A’ Aquifer.

The GSR indicates a low to negligible risk associated with the dissolution of soluble rocks. The following comment is included in the GSR regarding ground dissolution:

> *“Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build - site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution.”*

As such, ground dissolution features are very unlikely to impact the proposed development and further investigations in this respect are not considered necessary at this stage.

3.1.4 Historical Investigation Records

No suitable historical borehole records are indicated within a suitable distance of the site (i.e. within c.100m).

3.1.5 Geological Features

An inspection of the geological map indicates that there are no geological faults on or immediately adjacent to the site.

3.1.6 Coal Mining Assessment

Reference to the published geological map and the GSR indicates the site is underlain by the Great Scar Limestone Group (GSLG - First Limestone). The GSLG is of Dinantian (Carboniferous) age.

The site is located within a faulted block with the Pennine Lower Coal Measures Strata present c.58m north east on the downthrow side of a large fault. The LCM typically comprises interbedded mudstone, siltstone and sandstone with thick coal seams of workable thickness. However, the LCM is of Westphalian (Carboniferous) age and is, therefore younger than the GSLG limestone beds underlying the site. As such, LCM strata will not be present beneath the site.

An inspection of the Coal Authority's (CA) online database indicates that the site is located within a coal mining reporting area due to its proximity to coal bearing strata. However, the database does not indicate any significant risks associated with possible coal mining on, or in the immediate vicinity of the site. No coal mining is recorded beneath or within c.500m of the site. No mine entries are noted.

Based on the information presented above, the risk to the site and the proposed development from shallow unrecorded mine workings is negligible.

3.1.7 Non-Coal Mining and Quarrying Assessment

The GSR indicates that the site is not located in an area where mineral veins are thought to exist or may have been mined.

Information presented within the GSR suggests that there is no risk to the development from brine extraction, tin mining, clay mining and gypsum extraction. The GSR also notes that the site is not at risk of natural cavities although a "swallow hole" is recorded c.325m north east.

3.1.8 Radon Gas Assessment

The GSR indicates that the development site is located within a Radon Affected Area as defined by the Health Protection Agency (HPA), as between 10% and 30% of properties are above the Action Level. Consequently, in accordance with BR211, <u>full radon protection measures are necessary</u>.

3.2 Development Area Hydrogeology (Groundwater)

3.2.1 Made Ground/Soils

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

3.2.2 Drift Geology

The drift deposits beneath the site are classified as a Secondary 'A' Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

3.2.3 Solid Geology

The underlying bedrock (Great Scar Limestone Group) is designated a Secondary 'A' Aquifer status. These are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

3.3 Development Area Hydrology

3.3.1 Groundwater

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

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

- The nearest groundwater abstraction is recorded c.1.7km north east.
- No active surface water abstractions are recorded within c.2km of the site.
- No potable water abstraction licences are held within c.2km of the site.
- The site is not recorded as being within or within c.500m of a Source Protection Zone.

3.3.2 Surface Water Features

There are no surface water features recorded within 250m of the site boundary.

3.3.3 Current Surface Water Run-off

Given the anticipated ground conditions, it is likely that any surface water will infiltrate directly into the ground except for areas of hardstand.

3.4 Development Area Environmental Sensitivity

3.4.1 Site Ecology

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

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

3.4.2 Authorisations, Incidents and Registers

- 4 No. Environment Agency Recorded Pollution Incidents (List 2) are recorded within c.250m. However, these were all rated category 4 (no impact) for land and water.
- 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 are held within c.250m.
- No records of Red List Discharge Consents are held within c.250m.
- No records of List 1 Dangerous Substances Inventory sites are held within c.250m.
- No records of List 2 Dangerous Substances Inventory sites are held within c.250m.
- No Part A(2) and Part B Activities are recorded within 250m of the site.
- No records of Category 3 or 4 Radioactive Substances Authorisations are held within c.250m.
- No Licensed Discharge Consents are present within c.250m.
- No records of Planning Hazardous Substance Consents or Enforcements are within c.250m.
- No records of COMAH and NIHHS sites are held within c.250m.

The Design Team should refer to Section 2.0 of the GSR (Enviroinsight – Appendix II).

3.4.3 Determination of Contaminated Land (Part IIA)

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

3.4.4 Historical Industrial Land Uses

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

- Potentially Contaminative Uses (PCU) – The GSR indicates several historical PCU's within 250m including saw pits (5m SE), lime kilns (124m NW), unspecified ground workings (127m NW), unspecified heaps (147m NW), cuttings (172m NW), refuse heap (189m S) and a gravel pit (193m S).
- Historical Tanks – The nearest historical tank is recorded c.187m west.
- Potentially Infilled Land – The nearest area of potentially infilled land is recorded immediately south east and relates to a former saw pit. Other areas within 250m include former ponds (63m N and 66m NW), grave yard (127m NW), unspecified ground workings (139m NW), cuttings, refuse heaps and gravel pits.
- Historical Energy Features – Electrical substations (nearest recorded c.47m SW).
- Historical Petrol and Fuel Site Database – None noted within c.250m.
- Historical Garage and Motor Vehicle Repair Database – The nearest garage was located c.200m NE

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

3.4.6 Current Industrial Land Uses

The GSR does not indicate any current industrial land uses of concern within 250m of the site.

3.4.6 Fuel Station Entries

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

3.4.7 Landfill and Waste Regulation/Management – Landfill Sites

- No Environment Agency Registered Landfill Sites recorded within c.250m.
- No Environment Agency Historic Landfill Sites are recorded within c.250m.
- No BGS/DoE Landfill Site Survey Landfill Sites are recorded within c.250m.
- No Operational or Non-Operational Waste Treatment, Transfer or Disposal Sites are recorded within c.250m.
- No Environment Agency Licensed Waste Sites are recorded within c.250m.

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

3.5 Development Area Historical Plan Appraisal

This section is based on historical Ordnance Survey map data that was obtained as part of the GSR and provides a summary of the site history and highlights any industries, processes or activities that may be considered as Geohazards. Copies of historical maps which date back to 1862 are provided in Appendix III and a summary of the site history is included below.

3.5.1 On-Site

The first historical map extract dated 1862 indicates that the site comprised agricultural fields. By 1899, the northern part of the site had been developed with a Hall. The rest of the site remained undeveloped, however, it was used as allotments gardens around 1925. By 1960, the Hall was used as a British Legion Club and appears to have been extended and a second small building constructed by 1982. There appears to be little change to the site until it was recently demolished, and the land cleared.

3.5.2 Off-Site

The first historical map extract dated 1862 shows several residential properties to the east of the site, a Methodist Chapel to the south east and a Sunday School to the north west. A large pond was present c.90m north west. By 1899 residential properties were constructed immediately north and south of the site, a railway had been constructed c. 200m north west and excavations were present c.90m to 120m north west. By 1960, the railway is noted as dismantled and the pits had been infilled and the land developed. The school had also been constructed immediately west of the site. There has been little significant development since.

The historical maps do not indicate any significant industrial land uses on or in the vicinity of the site.

4.0 Conceptual Site Model

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

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

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

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

Sources:
S1 = Possible Made Ground – No specific sources identified. Historical information suggests that the north western part of the site has previously been developed as a hall, which was later used as a British Legion Club. The hall was extended by the 1980s and appear to have been demolished recently. The rest of the site appears to have remained undeveloped, however, during the 1920s it was used as allotment gardens. Made ground is anticipated in the north of the site associated with the existing building and car park. Some localised made ground or reworked soils is also anticipated across the rest of the site due to the former allotments. However, made ground on site is unlikely to be deep and significant contamination is not anticipated As the client plans to develop the site for residential end use, it would be prudent to carry out some intrusive works to confirm the shallow ground conditions and to screen topsoil and made ground materials (where present) to determine their suitability for use in a residential context. If anthropogenic material or visual evidence of contamination is encountered, the scope of chemical laboratory screening should be increased appropriately. It is recommended that excavations be completed on site to confirm the shallow ground conditions. At this stage, it is recommended that the soils are screened for a generic suite of contaminants that should include: Metals and Metalloids, Cyanide, pH, Water Soluble Sulphate, Total Organic Carbon, Asbestos and Speciated PAH. The developer should implement a watching brief during the development works to ensure that if made ground and or visual/olfactory evidence of contamination is identified then works should be stopped, the Local Authority notified, and advice should be sought from an appropriately qualified and experienced Geo-Environmental Engineer.
S2 = Ground Gas - Potential Sources Identified. The site is located within 250m of several potential sources of ground gas including former ponds, ground workings/pits, former heaps and cuttings. There is also a potential for organic soils beneath the site or in the vicinity which could be a source of ground gas. The risk of significant ground gas migration is very low, however, it would be prudent to confirm the risk by recording the levels of carbon dioxide and methane within the ground. A programme of ground gas monitoring should therefore be completed. The site requires <u>Full Radon Protection</u> measures.
Pathways:
P1 = Inhalation of air (wind-blown particles, vapours, gasses)
P2 = Dermal/direct contact (limited risk through areas of private gardens and soft landscaping)
P3 = Ingestion (limited risk through areas of private gardens and soft landscaping)
P4 = Migration through services (potable water supply)
P5 = Direct contact with building materials (aggressive ground conditions for buried concrete)
P6 = Surface Run-off
P7 = Leaching from Soils (to underlying Secondary ‘A’ Aquifer)
Receptors:
R1 = Human Health (End users - Residents)
R2 = Human Health (Construction Workforce)
R3 = Groundwater (Secondary ‘A’ Aquifer)
R4 = Building Materials and Buried Utilities
R5 = Flora and Fauna (future private gardens and soft landscaping)

5.0 Preliminary Qualitative Risk Assessment

5.1 Qualitative Geotechnical Risk Assessment – Risk Meter

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

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

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

- Geological records indicate that the site is underlain by glacial till and glaciofluvial deposits. As such, there is a potential for variable ground conditions.
- Where clay soils are present, their soil shrinkability could be affected by mature vegetation such as trees.
- Historical information indicates that only the north western part of the site has previously been developed. The rest of the site appears to have remained undeveloped (except for the former car park).
- Information available from the CA, BGS and GSR suggests that the development site is not at risk of coal mining or non-coal mining related geohazards.
- Shallow groundwater is not anticipated although some trapped “perched” water may be present within any drift deposits.
- The site requires Full Radon Protection measures to be incorporated into the proposed structures.

Consequently, it would be prudent for a Phase 2: Ground Investigation to be completed to confirm the underlying ground conditions (i.e. the presence of any made ground and the drift deposits) and to allow samples to be recovered for geotechnical laboratory analysis to aid the design of foundations, highways and drainage.

5.2 Qualitative Contamination Risk Assessment – Risk Meter

The following Risk Meter determines the potential level of risk associated with the development with respect to ground contamination, groundwater contamination and ground gas. The risk meter takes into account the anticipated *Sources – Pathways – Receptors* within the pollutant linkage model and CSM.

Ground Contamination:		⇩				
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Groundwater Contamination:	⇩					
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Ground Gas:		⇩				
RISK =	NEGLIGIBLE	VERY LOW	LOW	MODERATE	HIGH	VERY HIGH

A risk level of VERY LOW is currently determined appropriate for this development with respect to ground contamination. In summary, the northern part of the site has previously been developed and some made ground materials are anticipated in this area, however, this is unlikely to be deep and significant contamination is not anticipated. The rest of the site has remained undeveloped but appears to have been used as allotment gardens during the 1920s.

Although significant contamination is not anticipated, it would be prudent to complete intrusive investigations to confirm the shallow ground conditions and recover representative soil samples for chemical laboratory screening to assess if the topsoil materials pose a risk to Human Health and are suitable for re-use in a residential context.

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

If, during the ground investigation, anthropogenic materials or evidence of contamination are identified, it may be necessary to increase the range of contaminant screening in accordance with the nature and type of potential contaminants encountered.

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

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

A risk level of VERY LOW is currently considered appropriate for the site with respect to potential harmful ground gas (carbon dioxide and methane) as potential ground gas sources have been identified within c.250m of the site. It is recommended that a phase of gas monitoring is carried out as part an intrusive ground investigation. Given the proposed end use (residential), the gas monitoring must comprise at least 6 visits over a minimum period of 3 months.

The GSR Geoinsight indicates that the development site is located within a Radon Affected Area as defined by the Health Protection Agency (HPA), as between 10% and 30% of properties are above the Action Level. Consequently, in accordance with BR211, full radon protection measures are necessary.

6.0 Conclusions

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

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

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 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 should include (as a minimum):

- Mini percussion boreholes and/or trial pits to determine the nature and in-situ strength of the underlying ground conditions across the development site.
- Soil logging by a suitably qualified and experienced Geo-Environmental Engineer.
- In-situ testing to aid foundation design.
- In-situ ground permeability analysis (if ground conditions appear favourable).
- Laboratory based geotechnical and contamination testing.
- Installation of ground gas monitoring wells.
- Ground gas monitoring for carbon dioxide and methane (minimum 6 visits over 3 months).
- Interpretive Phase 2: Ground Investigation Report incorporating a Level 1 Generic Quantitative Risk Assessment (GQRA) for Human Health for ground contamination and ground gas.

Laboratory screening of soil samples will be required to determine the risk to potential receptors, namely proposed residents (human health).

GEO is not responsible for the accuracy and completeness of third-party information and cannot be held responsible for any errors or omissions that may occur. The contents of this report have been specifically requested by the client and therefore any items not specifically mentioned cannot be assumed to be covered.

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 inferred within this investigation report then advice should be sought from a suitably qualified and experienced Geo-Environmental Engineer. In the event that made ground is identified during works on site then sampling of those materials should be completed by an appropriate Geo-Environmental Engineer to facilitate contamination screening in-conjunction with a Human Health Risk Assessment.

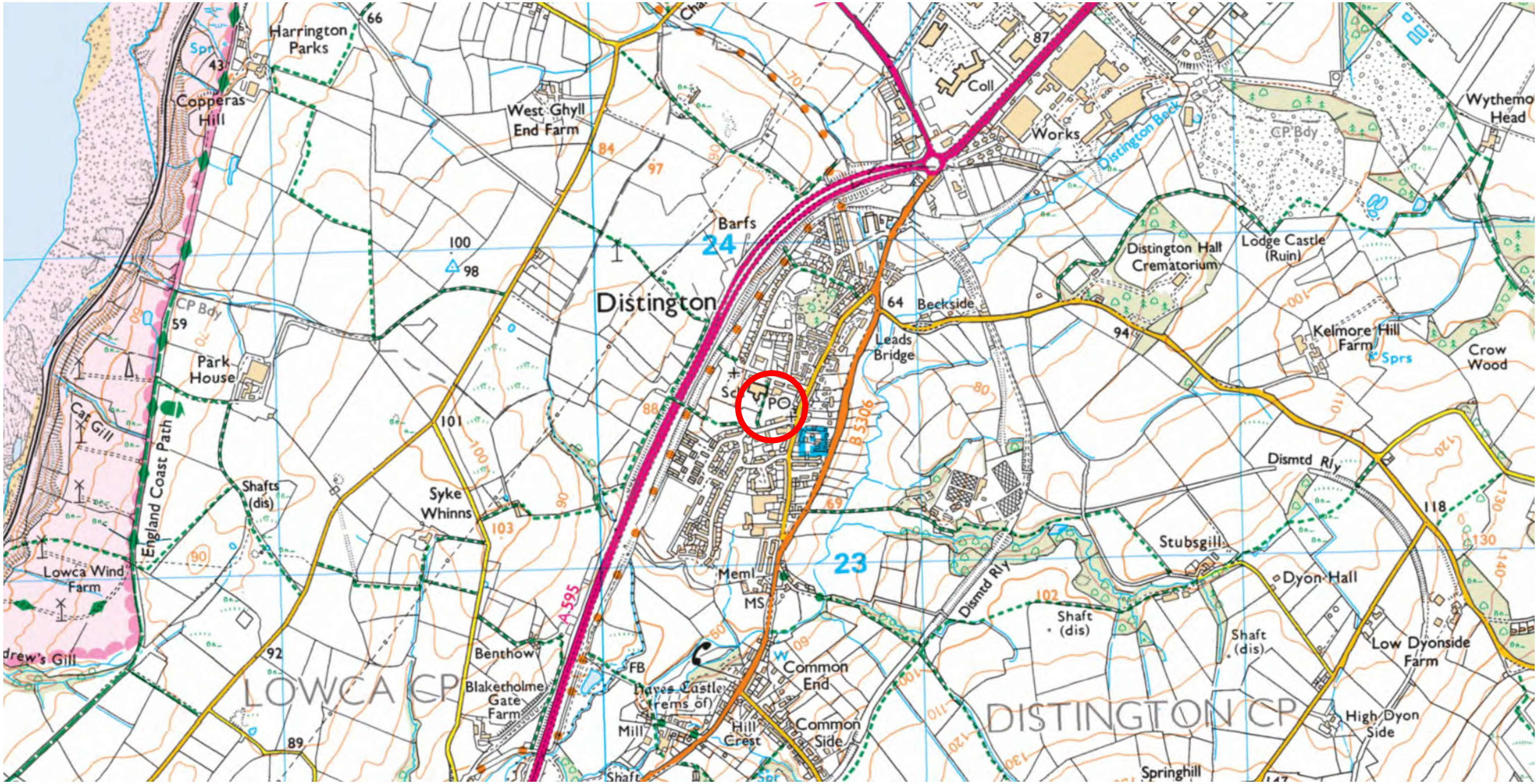
The conclusions and recommendations presented within this report are considered reasonable based on the available information. However, these cannot be guaranteed to gain regulatory approval. Therefore, the report should be passed to the appropriate Regulatory Authorities and/ or other key stakeholders in order to seek their approval of the findings prior to finalising any land values as part of a site acquisition or prior to undertaking any construction or redevelopment works on site.

End of Report

Appendix I

- Site Location Plan
- Aerial Photograph Extract
- Site Walkover Photographs (December 2019)
- Proposed Site Layout Plan

GEO2019-4032: British Legion Site, Church Road, Distington – Site Location

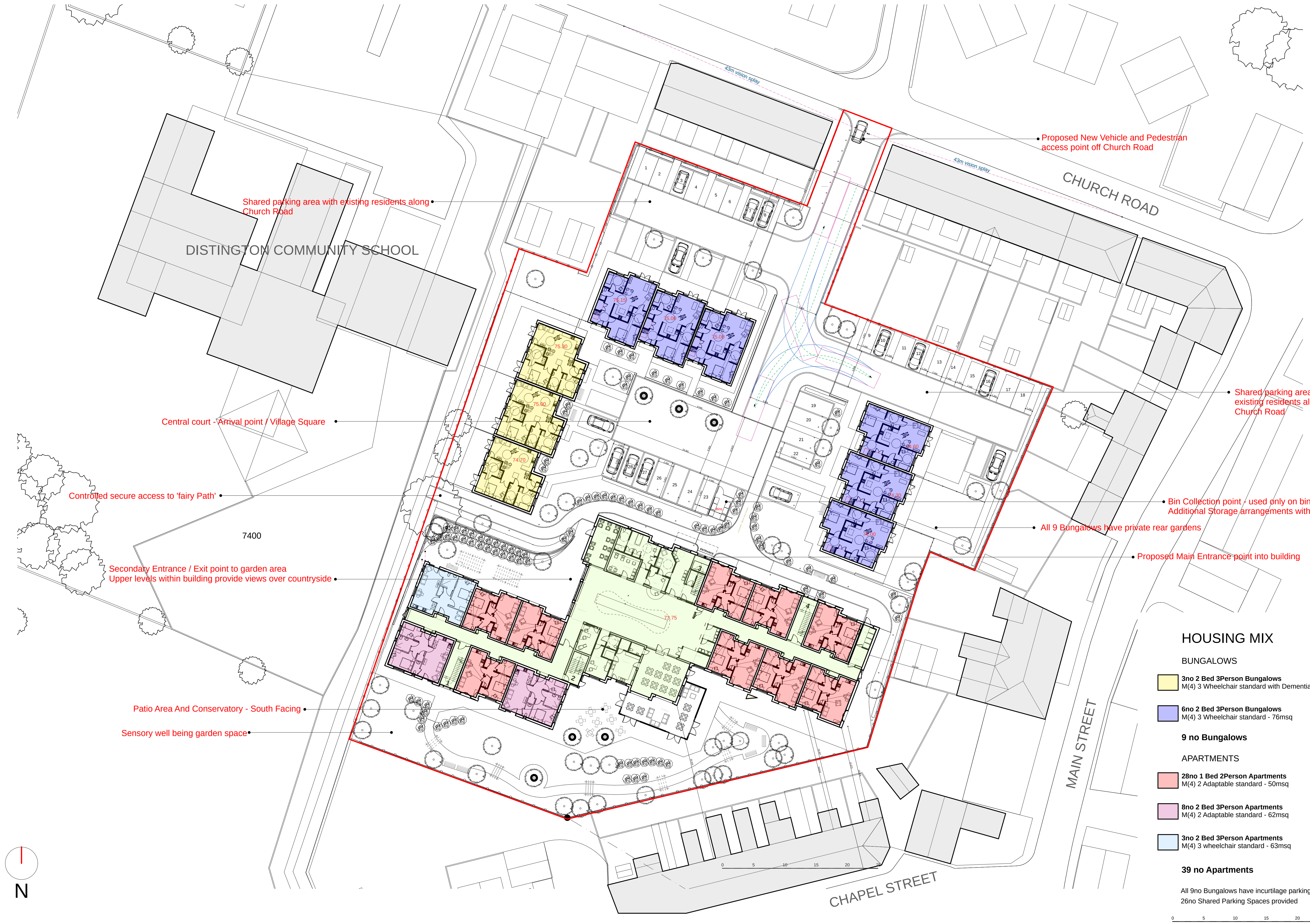


GEO Environmental Engineering

GEO2019-4032: British Legion Site, Church Road, Distington – Aerial Photograph

Website: www.geoenvironmentalengineering.com
Email: info@geoenvironmentalengineering.com
Telephone: 08456 768 895 / 07883 440 186

GEO2019-4032: British Legion Site, Church Road, Distington – Site Photographs (December 2019)



HOUSING MIX

BUNGALOWS

3no 2 Bed 3Person Bungalows
M(4) 3 Wheelchair standard with Dementia adaptations - 81msq

6no 2 Bed 3Person Bungalows
M(4) 3 Wheelchair standard - 76msq

9 no Bungalows

APARTMENTS

28no 1 Bed 2Person Apartments
M(4) 2 Adaptable standard - 50msq

8no 2 Bed 3Person Apartments
M(4) 2 Adaptable standard - 62msq

3no 2 Bed 3Person Apartments
M(4) 3 wheelchair standard - 63msq

39 no Apartments

All 9no Bungalows have incurtilage parking provided
26no Shared Parking Spaces provided

0 5 10 15 20 25

North Scale

Rev.	Date	Description	Drwn.

Note :
Do not scale off this drawing. Do not rely on this drawing for purposes other than the recorded 'Status'. Constructors must be familiar with the client's building asbestos register ahead of facilitating any work contained on this drawing.

Office Liverpool Nottingham Newcastle Preston
Liverpool
Address: 98-100 Duke Street
Post Code: L1 5AG
Tel: 0151 708 8944
Website: www.hlpdesign.com

Drawing Title: SITE PLAN DRAFT LAYOUT
Project: Distington Big Local
Client: Big Local
Scales @ A0: 1:200 Date Drawn Check
Job Number: 2808 Drg. No - Revision: SK018 Status: Preliminary

Halsall Lloyd Partnership
ARCHITECTS & DESIGNERS

Appendix II

- Groundsure Reports (Geoinsight and Enviroinsight Reports) emapsite

emapsite

Building A2 Office 1052 Cody Technology Park,
Old Ively Road,
Farnborough, GU14 0LX

Report Reference:	EMS-584941_784352
Your Reference:	EMS_584941_784352
Report Date	2 Jan 2020
Report Delivery Method:	Email - pdf

Geo Insight

Address: British Legion Site, Church Road, Distington, Cumbria,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Geo Insight

Geo Insight

Address: British Legion Site, Church Road, Distington, Cumbria,

Date: 2 Jan 2020

Reference: EMS-584941_784352

Client: emapsite

NW N NE

W

E

SW S SE

Aerial Photograph Capture date: 16-Aug-2016
Grid Reference: 300565,523506
Site Size: 0.7401ha

Contents Page

Overview of Findings

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

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

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

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

Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	Yes
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?	Yes
	2.3.3 Are there any records of linear features within 500m of the study site boundary?	Yes

Section 3: Radon

3. Radon	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.
	3.2Radon Protection	Full radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	1	0	47	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	3

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	1	0	1
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	1	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Very Low
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Low
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Very Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	0	3

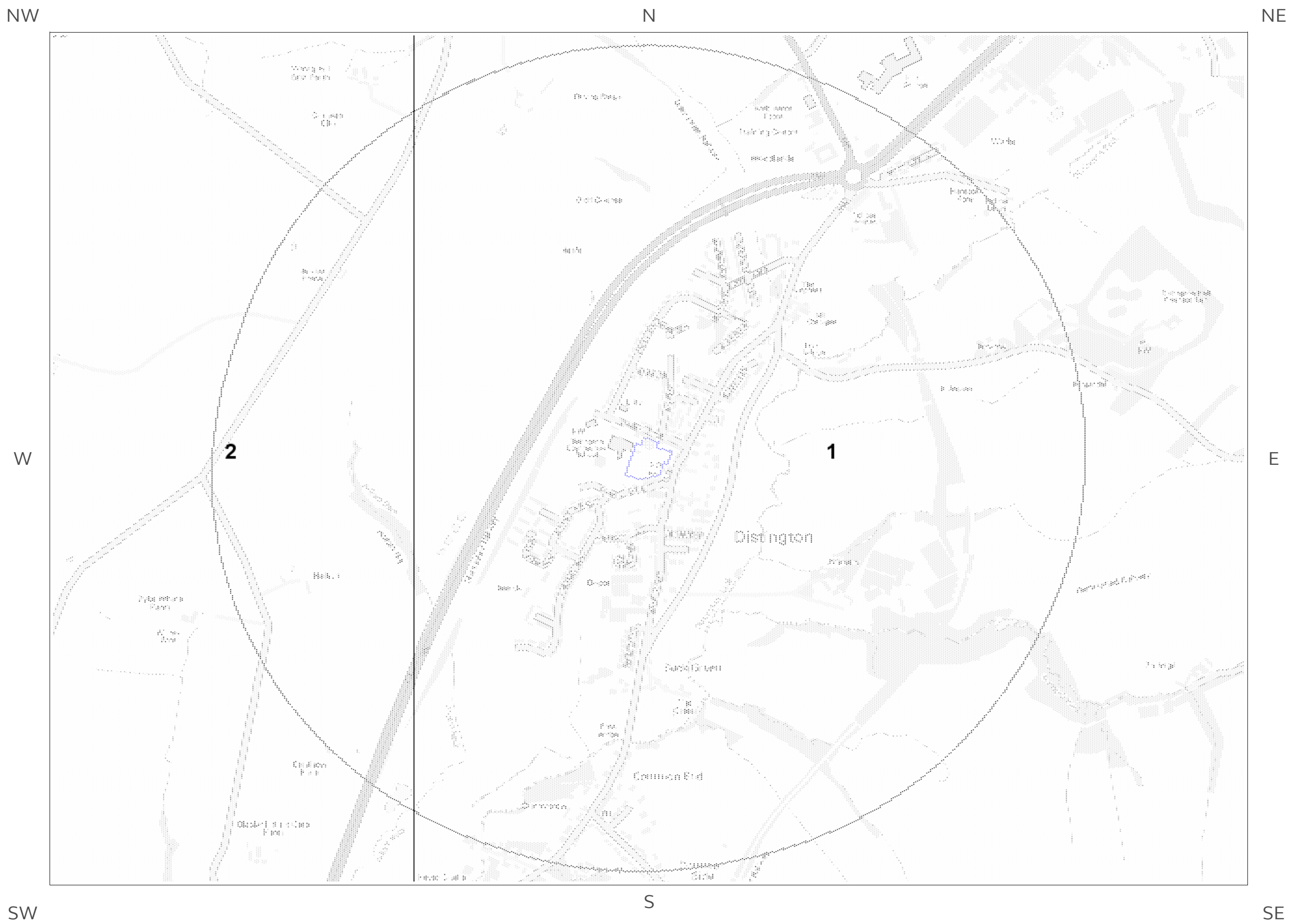
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	4	4	0

Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched
9.3 Historical Railways	0	0	2	Not Searched
9.4 Active Railways	0	0	0	Not Searched
9.5 Railway Projects	0	0	0	0

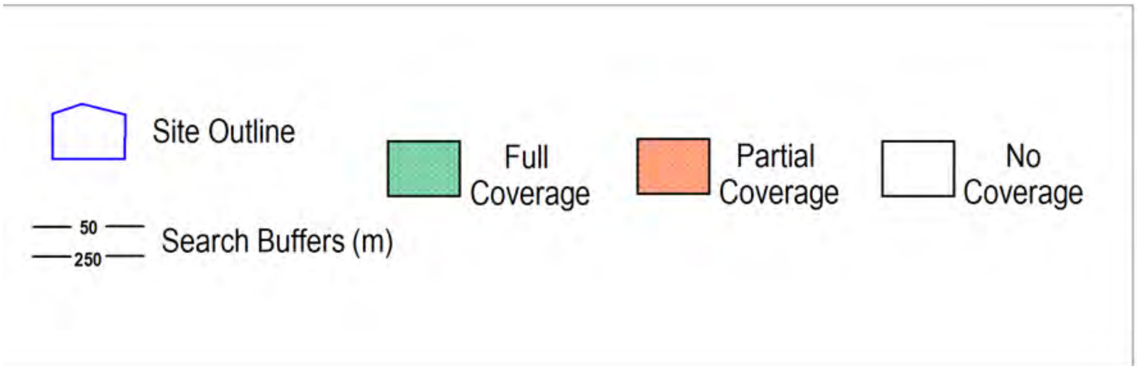
Groundsure LOCATION INTELLIGENCE

emapsite™

1:10,000 Scale Availability



1_10,000 Availability Legend



Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	No coverage	No coverage	No coverage
2	512.0	No deposits are mapped	No coverage	No coverage	No coverage

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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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

Artificial Ground Legend

1. Geology 1:10,000 scale

1.1 Artificial Ground

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

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

Database searched and no data found.

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

NW N NE

W E

SW S SE

Artificial Ground Legend

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

Database searched and no data found.

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

No

Database searched and no data found.

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

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

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

NW N NE

W E

SW S SE

Bedrock and linear features Legend

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

Database searched and no data found at this scale.

1.3.2 Linear features

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

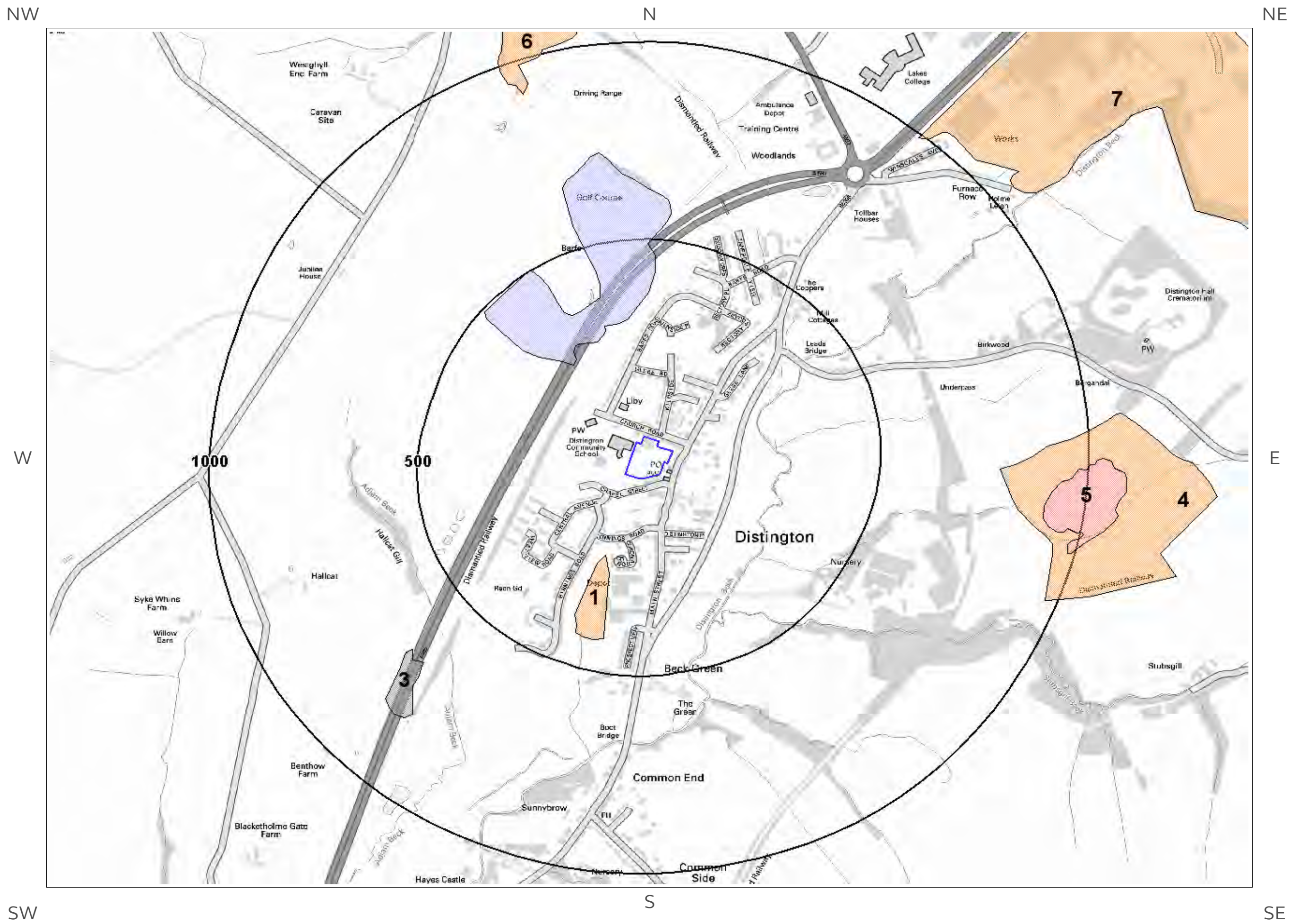
Database searched and no data found at this scale.

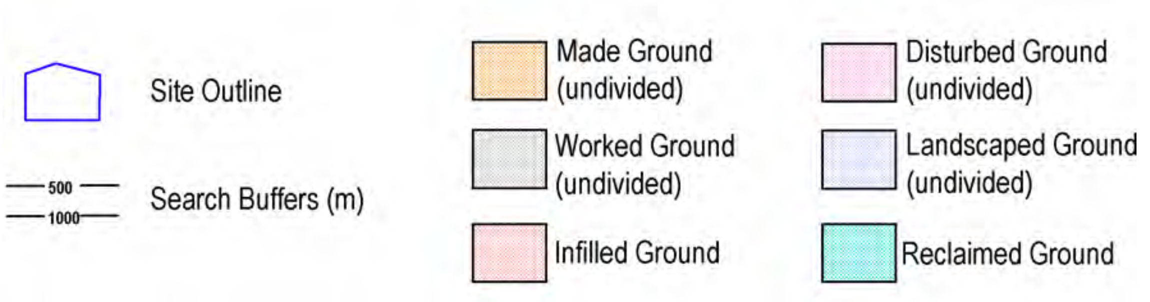
The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground map





Groundsure LOCATION INTELLIGENCE

emapsite™

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 028

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

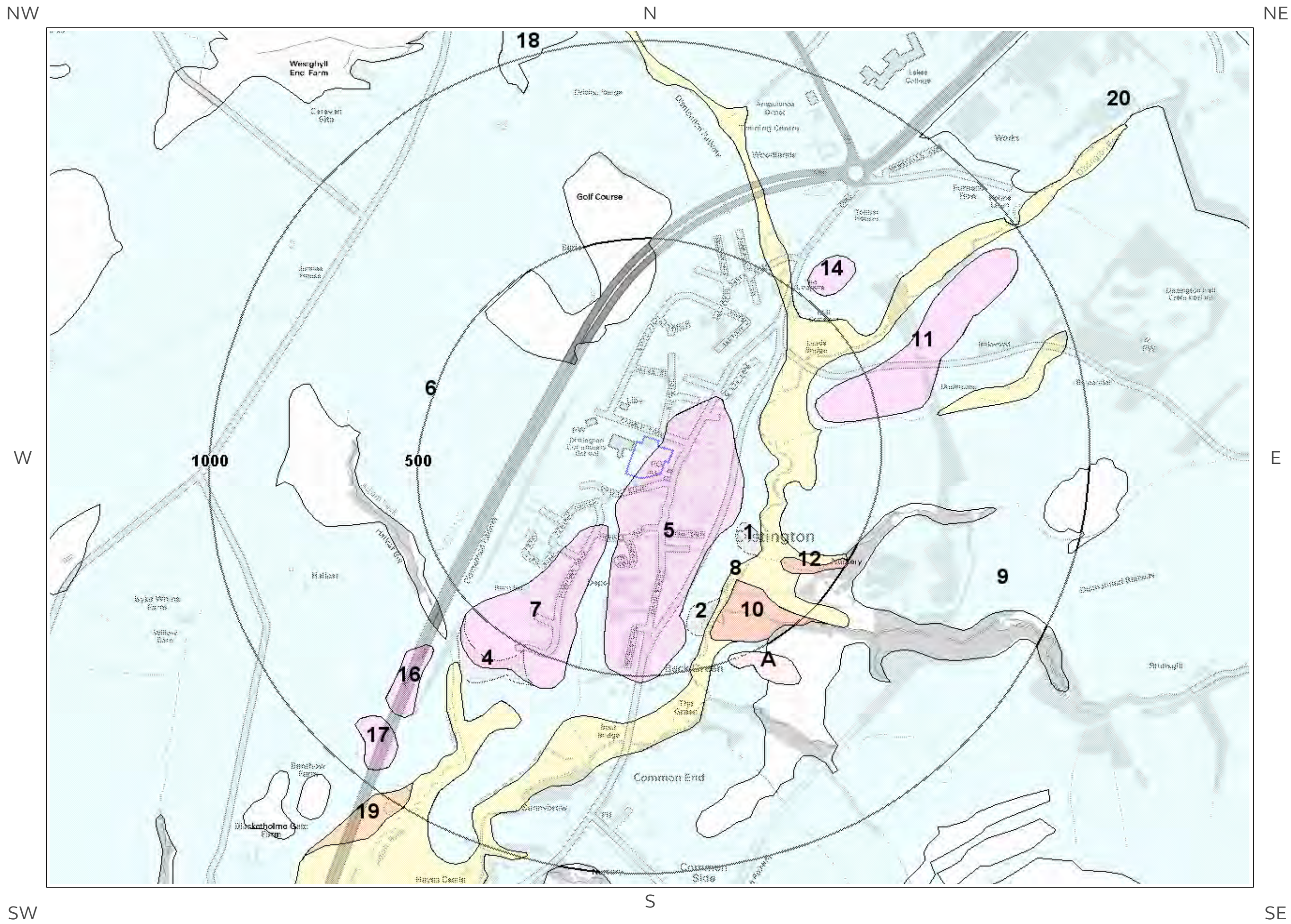
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	209.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	249.0	NW	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND

2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.

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



Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
5	0.0	On Site	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
6	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	140.0	SW	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
8	214.0	E	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
9	282.0	E	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
10	323.0	SE	ALF-XSV	ALLUVIAL FAN DEPOSITS	SAND AND GRAVEL
11	359.0	E	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
12	363.0	SE	ALF-XSV	ALLUVIAL FAN DEPOSITS	SAND AND GRAVEL
13A	487.0	S	SUPNM-UKNOWN	SUPERFICIAL THEME NOT MAPPED [FOR DIGITAL MAP USE ONLY]	UNKNOWN/UNCLASSIFIED ENTRY

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	227.0	SE	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
2	341.0	S	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
3A	487.0	S	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

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

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

2.2.4 Landslip Permeability

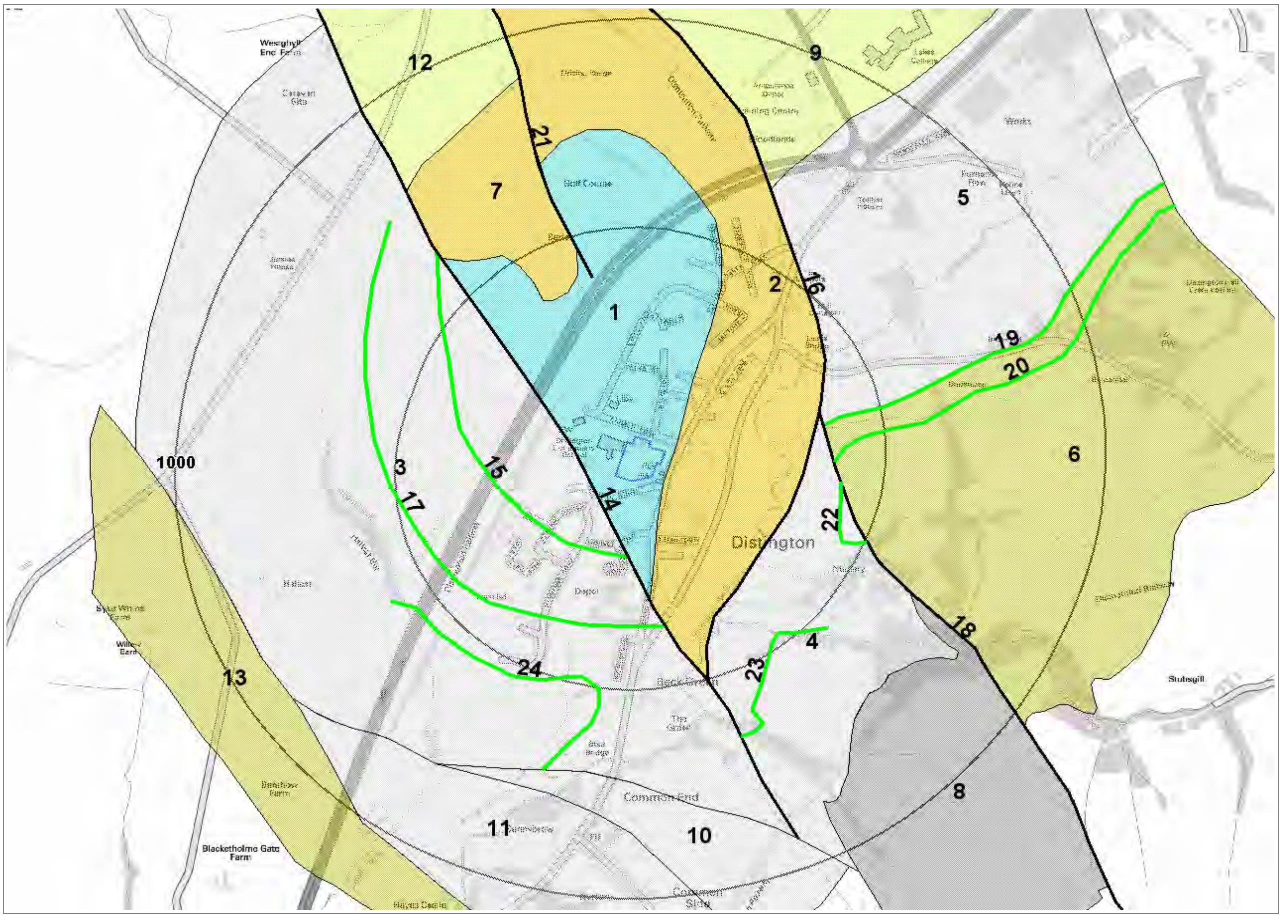
Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

Groundsure
LOCATION INTELLIGENCE

emapsite™

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



Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 028

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	LM1-LMST	FIRST LIMESTONE (CUMBRIA) - LIMESTONE	NAMURIAN
2	18.0	E	HG-SDST	HENSINGHAM GRIT - SANDSTONE	NAMURIAN
3	58.0	SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	305.0	SE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	363.0	E	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	364.0	E	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	375.0	NW	HG-SDST	HENSINGHAM GRIT - SANDSTONE	NAMURIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Very High	High
18.0	E	Fracture	High	Moderate

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
14	58.0	SW	FAULT	Fault, inferred, displacement unknown
15	179.0	S	ROCK	Coal seam, inferred
16	305.0	SE	FAULT	Fault, inferred, displacement unknown
17	347.0	S	ROCK	Coal seam, inferred
18	363.0	E	FAULT	Fault, inferred, displacement unknown
19	364.0	E	ROCK	Coal seam, inferred

ID	Distance	Direction	Category Description	Feature Description
20	384.0	E	ROCK	Coal seam, inferred
21	391.0	N	FAULT	Fault, inferred, displacement unknown
22	404.0	E	ROCK	Coal seam, inferred
23	473.0	SE	ROCK	Coal seam, inferred
24	482.0	S	ROCK	Coal seam, inferred

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

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

3 Radon Data

3.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.

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

3.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

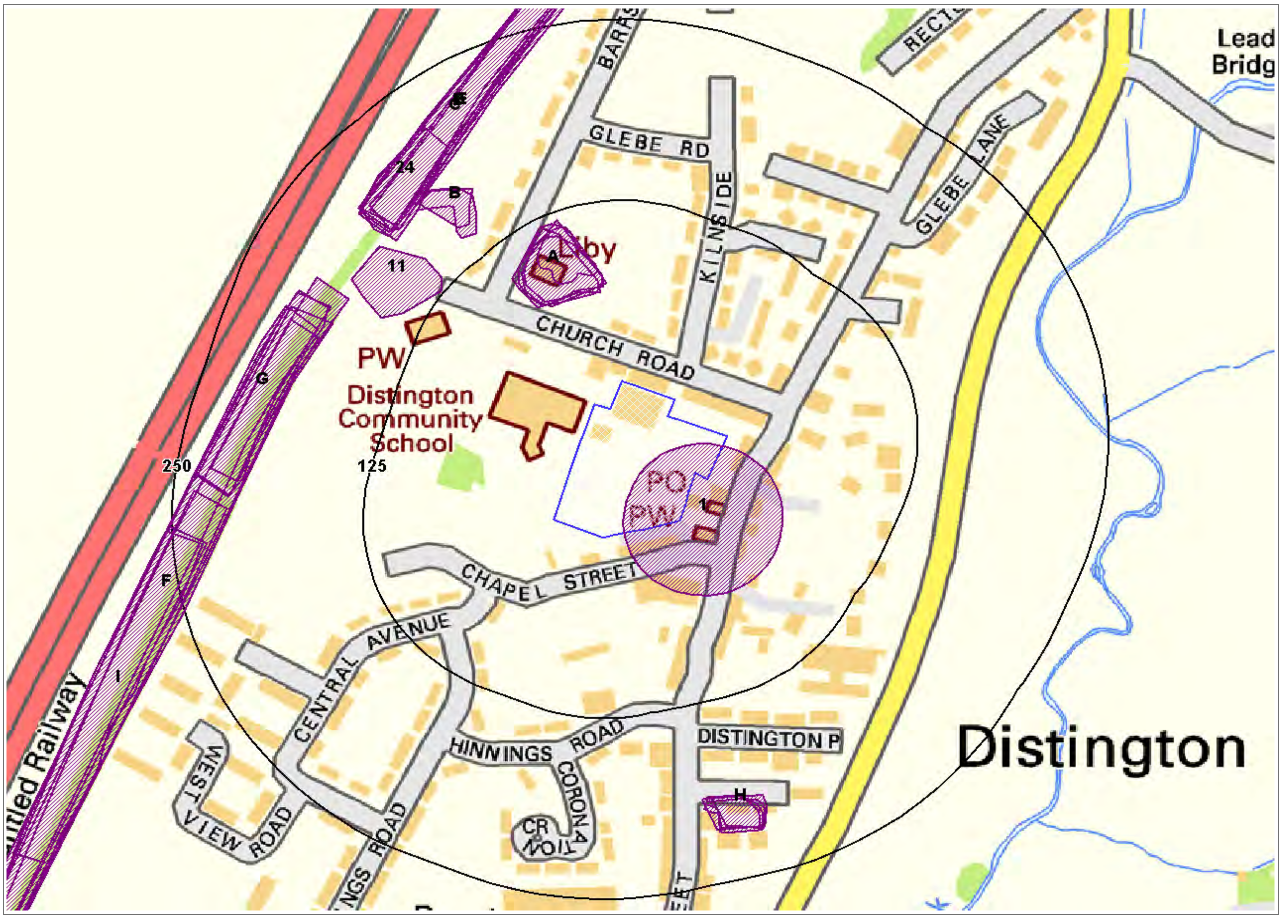
---

4 Ground Workings map

NW N NE

W E

SW S SE



Ground Workings Legend

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

Groundsure LOCATION INTELLIGENCE

emapsite™

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	300609 523468	Saw Pit	1864
2A	63.0	N	300513 523642	Pond	1951
3A	63.0	N	300516 523645	Pond	1923
4A	63.0	N	300516 523645	Pond	1923
5A	63.0	N	300516 523645	Pond	1923
6A	63.0	N	300516 523645	Pond	1923
7A	66.0	NW	300518 523640	Pond	1947
8A	66.0	NW	300518 523640	Pond	1898
9A	67.0	N	300518 523647	Pond	1938
10A	76.0	NW	300521 523651	Pond	1864
11	127.0	NW	300409 523633	Grave Yard	1864
12B	139.0	NW	300454 523680	Unspecified Ground Workings	1923
13B	139.0	NW	300454 523680	Unspecified Ground Workings	1923
14B	139.0	NW	300454 523680	Unspecified Ground Workings	1923
15B	139.0	NW	300454 523680	Unspecified Ground Workings	1923
16B	147.0	NW	300440 523684	Unspecified Heap	1947
17C	172.0	NW	300556 523881	Cuttings	1923
18C	172.0	NW	300556 523881	Cuttings	1923
19C	172.0	NW	300556 523881	Cuttings	1923
20C	172.0	NW	300556 523881	Cuttings	1923
21E	175.0	NW	300522 523848	Cuttings	1991

ID	Distance (m)	Direction	NGR	Use	Date
22D	176.0	NW	300546 523886	Cuttings	1967
23F	176.0	NW	300257 523401	Cuttings	1967
24	178.0	NW	300414 523702	Cuttings	1898
25D	179.0	NW	300551 523880	Cuttings	1951
26D	179.0	NW	300543 523881	Cuttings	1938
27E	180.0	NW	300497 523818	Cuttings	1947
28F	180.0	W	300250 523398	Cuttings	1923
29F	180.0	W	300250 523398	Cuttings	1923
30F	180.0	W	300250 523398	Cuttings	1923
31F	180.0	W	300250 523398	Cuttings	1923
32G	185.0	W	300320 523555	Cuttings	1947
33G	185.0	W	300320 523555	Cuttings	1898
34G	185.0	W	300322 523555	Cuttings	1938
35G	186.0	W	300322 523550	Cuttings	1991
36F	188.0	W	300255 523434	Cuttings	1951
37H	189.0	S	300631 523267	Refuse Heap	1938
38H	189.0	S	300631 523267	Refuse Heap	1938
39H	190.0	S	300628 523266	Refuse Heap	1951
40H	191.0	S	300632 523267	Refuse Heap	1947
41H	193.0	S	300630 523264	Gravel Pit	1923
42H	193.0	S	300630 523264	Gravel Pit	1923
43H	193.0	S	300630 523264	Gravel Pit	1923
44H	193.0	S	300630 523264	Gravel Pit	1923
45I	214.0	W	300232 523365	Cuttings	1991
46I	228.0	W	300212 523322	Cuttings	1938
47I	231.0	W	300220 523346	Cuttings	1898
48I	231.0	W	300220 523346	Cuttings	1947

4.2 Historical Underground Working Features derived from Historical Mapping

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

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

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

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

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

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	790.0	N	300430 524344	Sandstone	Barfs Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	830.0	W	299683 523522	Coal, Deep	Harrington Colliery Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	970.0	SW	299656 523011	Coal, Deep	Harrington Colliery, East Pit South	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

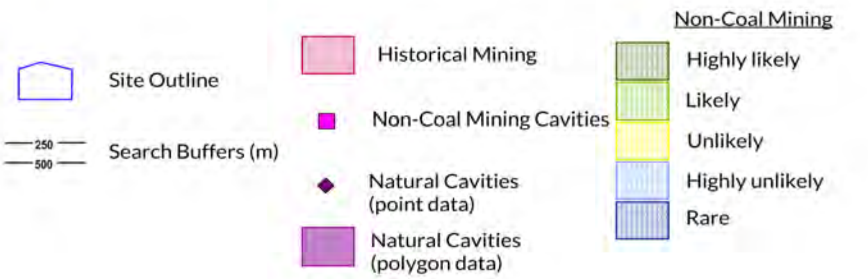
5 Mining, Extraction & Natural Cavities map

NW N NE

W E

SW S SE

Mining, Extraction and Natural Cavities Legend



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

Database searched and no data found.

5.2 Coal Mining

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

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

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

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

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	58.0	SW	Not available	Iron Ore (Bedded)	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	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	512.0	W	Not available	Iron Ore (Bedded)	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

5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

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

Are there any Natural Cavities within 1000m of the study site boundary? Yes

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
3	325.0	NE	300900 523700	-	Upper Carboniferous Limestone	Swallow Hole x 1

5.7 Brine Extraction

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

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

This dataset provides information on metalliferous mining areas in Cornwall/Devon and is derived from records held by Mining Searches UK.

Are there any Cornwall and Devon Metalliferous Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

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

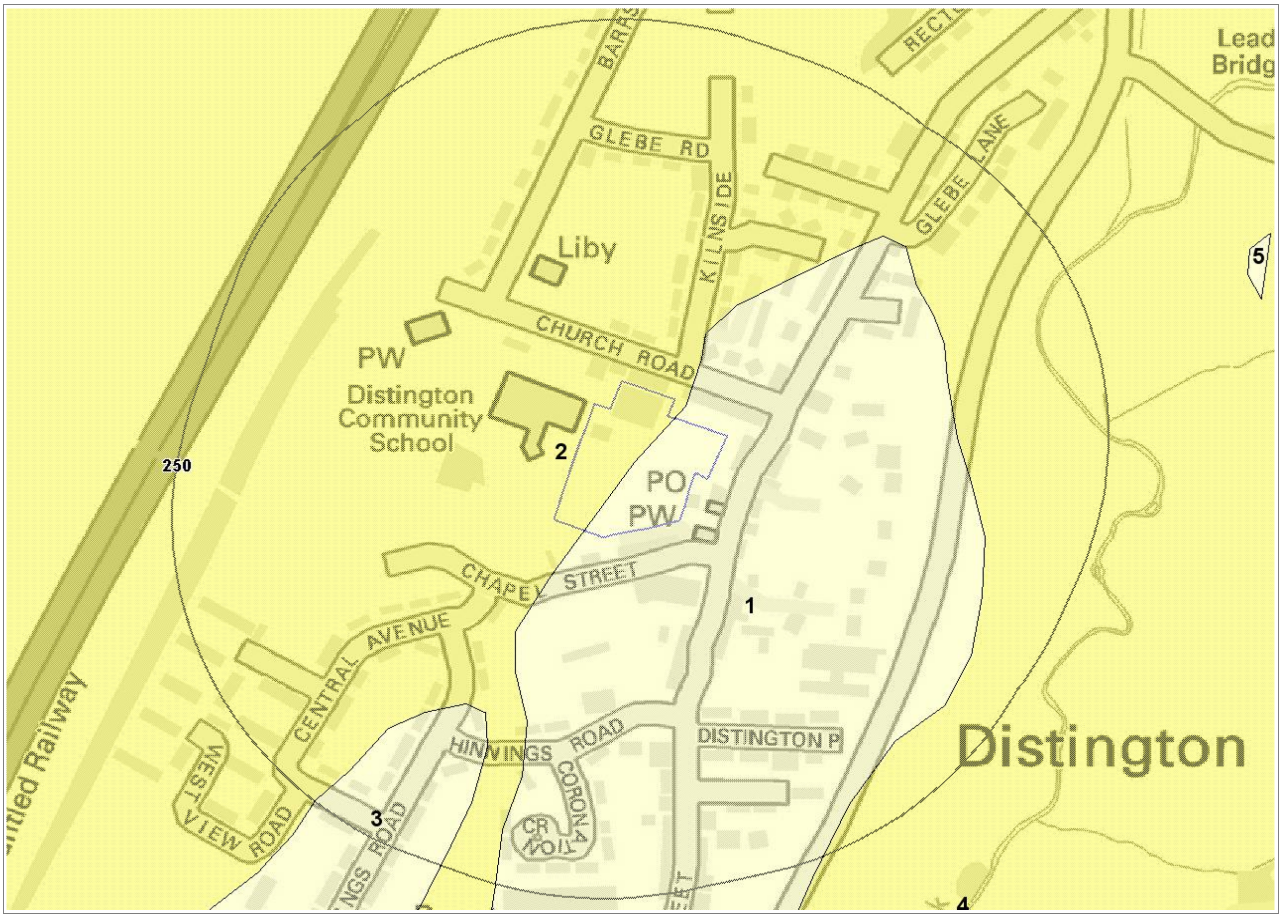
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

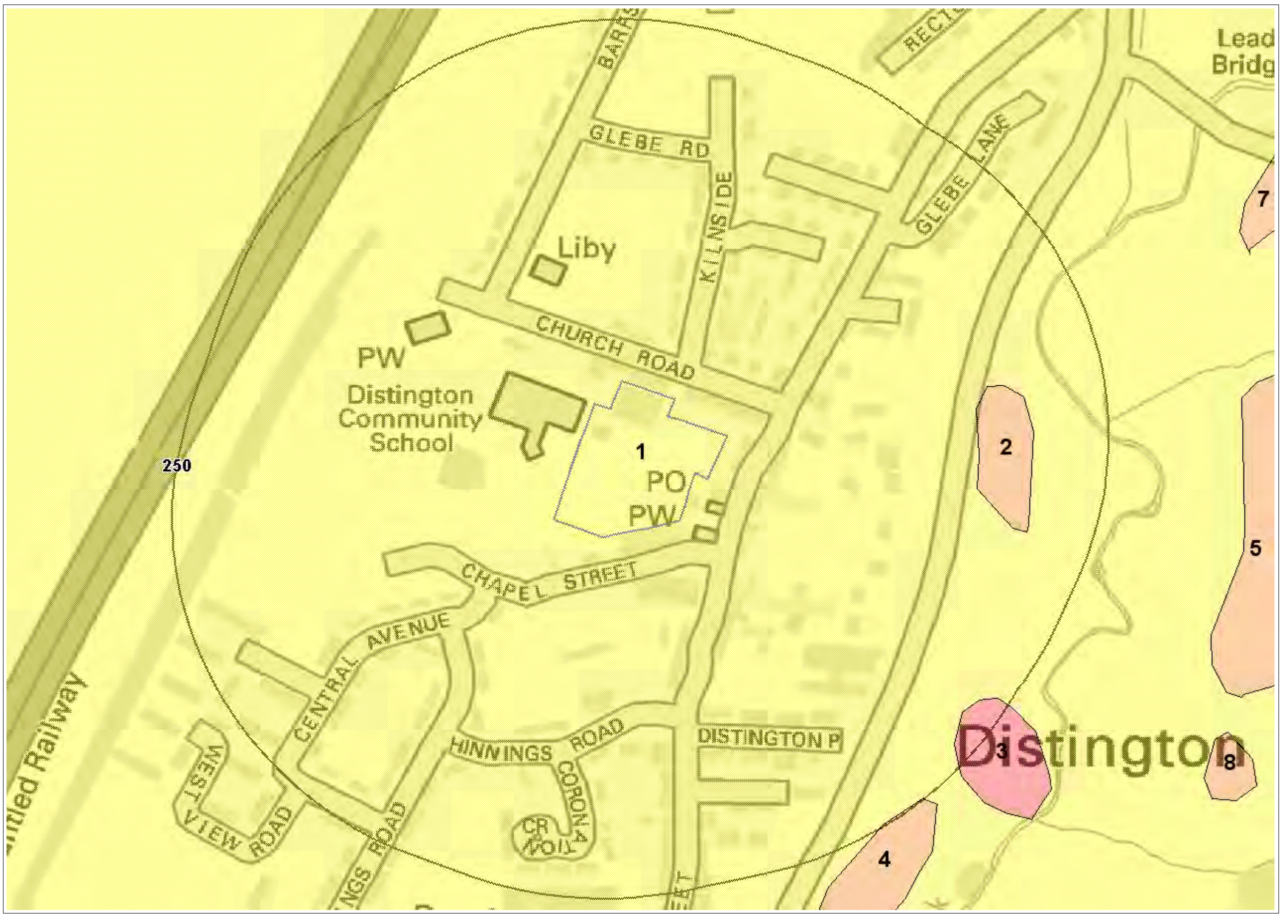


Shrink Swell Clay Legend

6.2 Landslides map

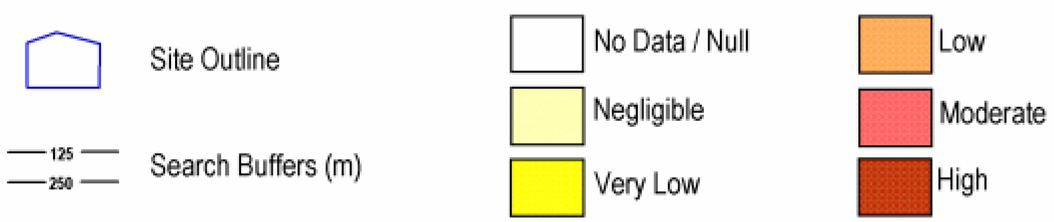
NW N NE

W E



SW S SE

Landslides Legend



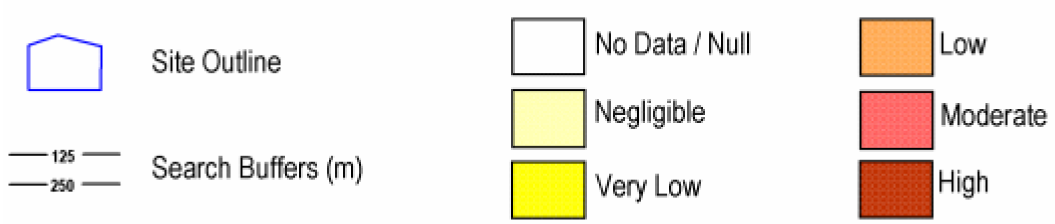
6.3 Ground Dissolution of Soluble Rocks map

NW N NE

W E

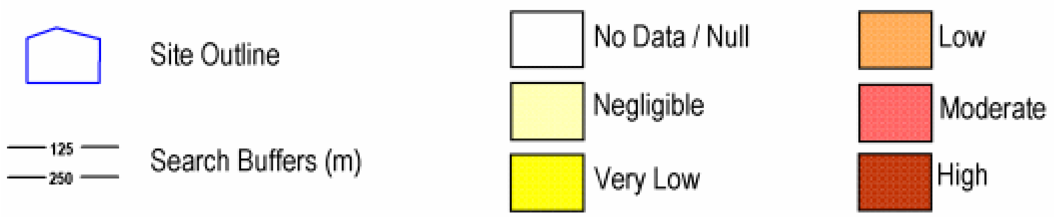
SW S SE

Ground Dissolution
Soluble Rocks Legend



6.4 Compressible Deposits map

Compressible Deposits Legend



Groundsure
LOCATION INTELLIGENCE

emapsite™

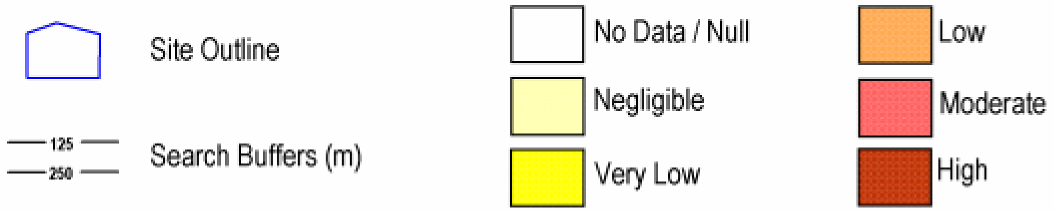
6.5 Collapsible Deposits map

NW N NE

W E

SW S SE

Collapsible Deposits Legend



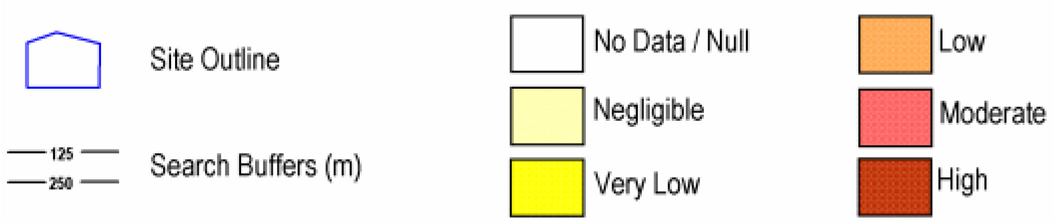
6.6 Running Sand map

NW N NE

W  E

SW S SE

Running Sand Legend



6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

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

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build - site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property - possible increase in insurance risk due to soluble rocks.
2	18.0	E	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

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

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

6.5 Collapsible Deposits

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

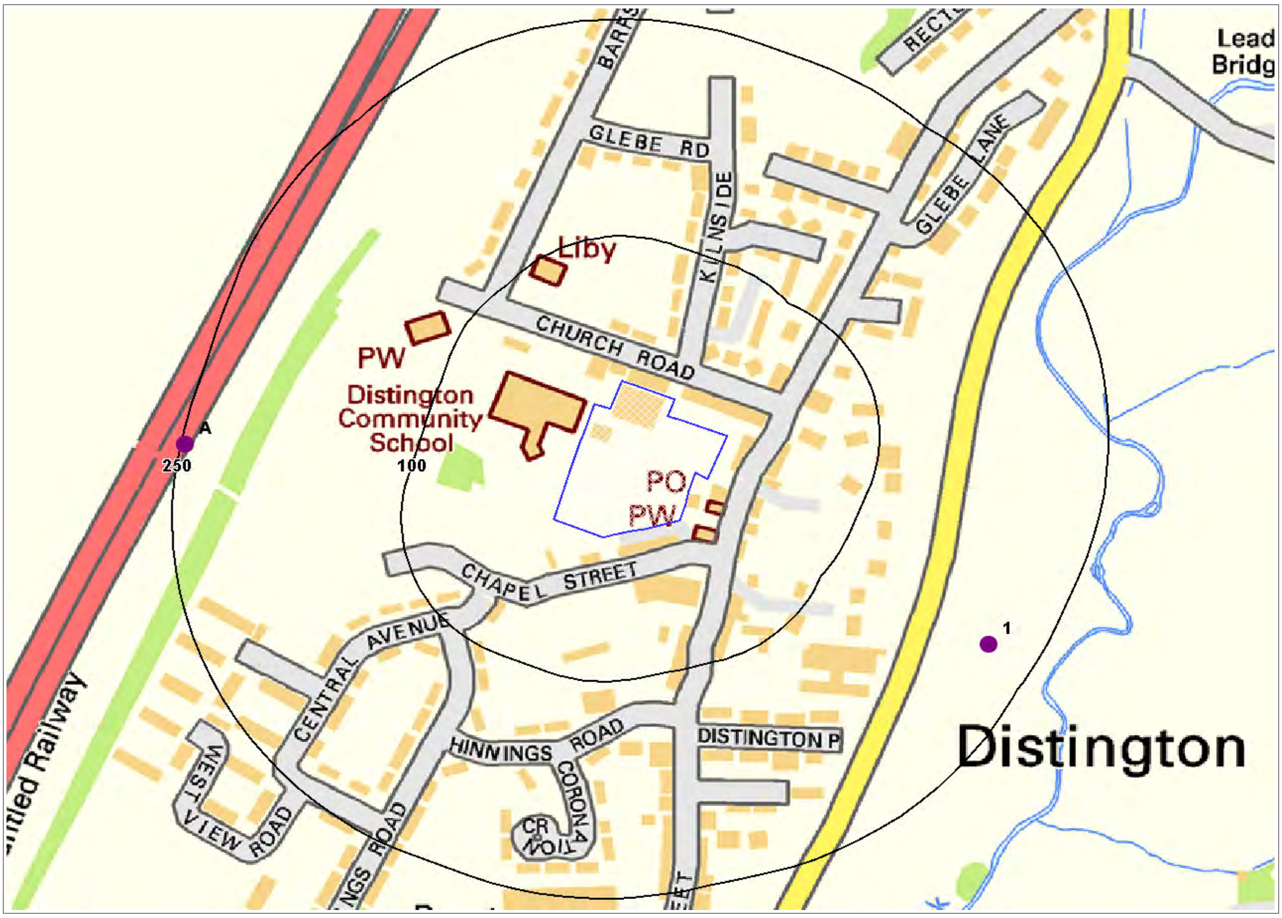
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

6.6 Running Sands

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

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

7 Borehole Records map



Borehole Records Legend

Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

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

Records of boreholes within 250m of the study site boundary: 3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	216.0	SE	300796 523382	NY02SW44	No details	DISTINGTON BYPASS, PART 1
2A	247.0	W	300270 523520	NY02SW153	No details	A595 PARTON TO LILLYHALL IMPROVEMENT PHASE II TP1007
3A	247.0	W	300270 523520	NY02SW141	No details	A595 PARTON TO LILLYHALL IMPROVEMENT PHASE II 2003

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

Groundsure
LOCATION INTELLIGENCE

emapsite™

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary: 8

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
12.0	W	Sediment	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
18.0	E	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
20.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
20.0	W	Sediment	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

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

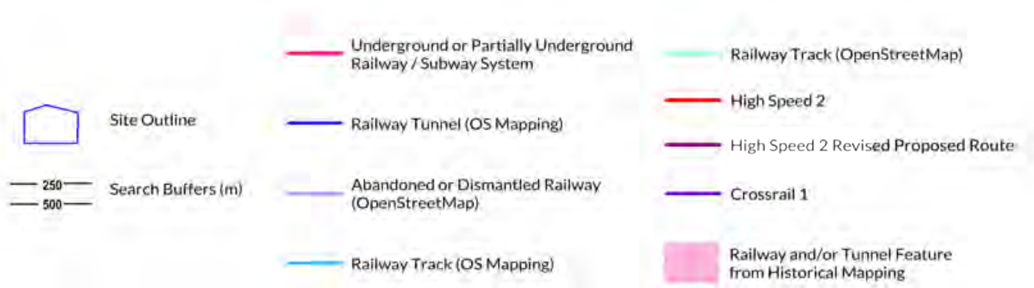
9 Railways and Tunnels map

NW N NE

W E

SW S SE

Railways and Tunnels Legend



9 Railways and Tunnels

9.1 Tunnels

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

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

Database searched and no data found.

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

Have any historical railway or tunnel features been identified within the study site boundary?	No
Have any historical railway or tunnel features been identified within 250m of the study site boundary?	No

Database searched and no data found.

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

9.3 Historical Railways

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

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

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

Distance (m)	Direction	Status
189	NW	Razed
189	NW	Abandoned

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

9.4 Active Railways

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

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

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

Database searched and no data found.

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

9.5 Railway Projects

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

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

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

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

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

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

Contact Details

emapsite

Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: **http://www.ordnancesurvey.co.uk/**

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-feb11-2019

emapsite

Building A2 Office 1052 Cody Technology Park,
Old Ively Road,
Farnborough, GU14 0LX

Groundsure Reference:	EMS-584941_784353
Your Reference:	EMS_584941_784353
Report Date	2 Jan 2020
Report Delivery Method:	Email - pdf

Enviro Insight

Address: British Legion Site, Church Road, Distington, Cumbria,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**British Legion Site, Church Road, Distington, Cumbria,**
Date:	**2 Jan 2020**
Reference:	**EMS-584941_784353**
Client:	**emapsite**

NW N NE

W E

SW S SE

Aerial Photograph Capture date: 16-Aug-2016
Grid Reference: 300565,523506
Site Size: 0.7401ha

Groundsure LOCATION INTELLIGENCE

emapsite™

Contents Page

Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	0	42	46
1.2 Additional Information – Historical Tank Database	0	0	2	1
1.3 Additional Information – Historical Energy Features Database	0	2	2	2
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	5	3
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	1	0	48	42

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	3
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	21	35	31
2.3.2 National Incidents Recording System, List 1	1	42	29	17
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

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

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

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

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site	Identified
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site	Identified

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	4
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	Yes	No	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	12	34	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

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

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	3	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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

Section 9: Natural Hazards

9.1 Maximum risk of natural ground subsidence	Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Low
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Full radon protective measures are necessary.

Section 10: Mining

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

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

Note: Maps

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

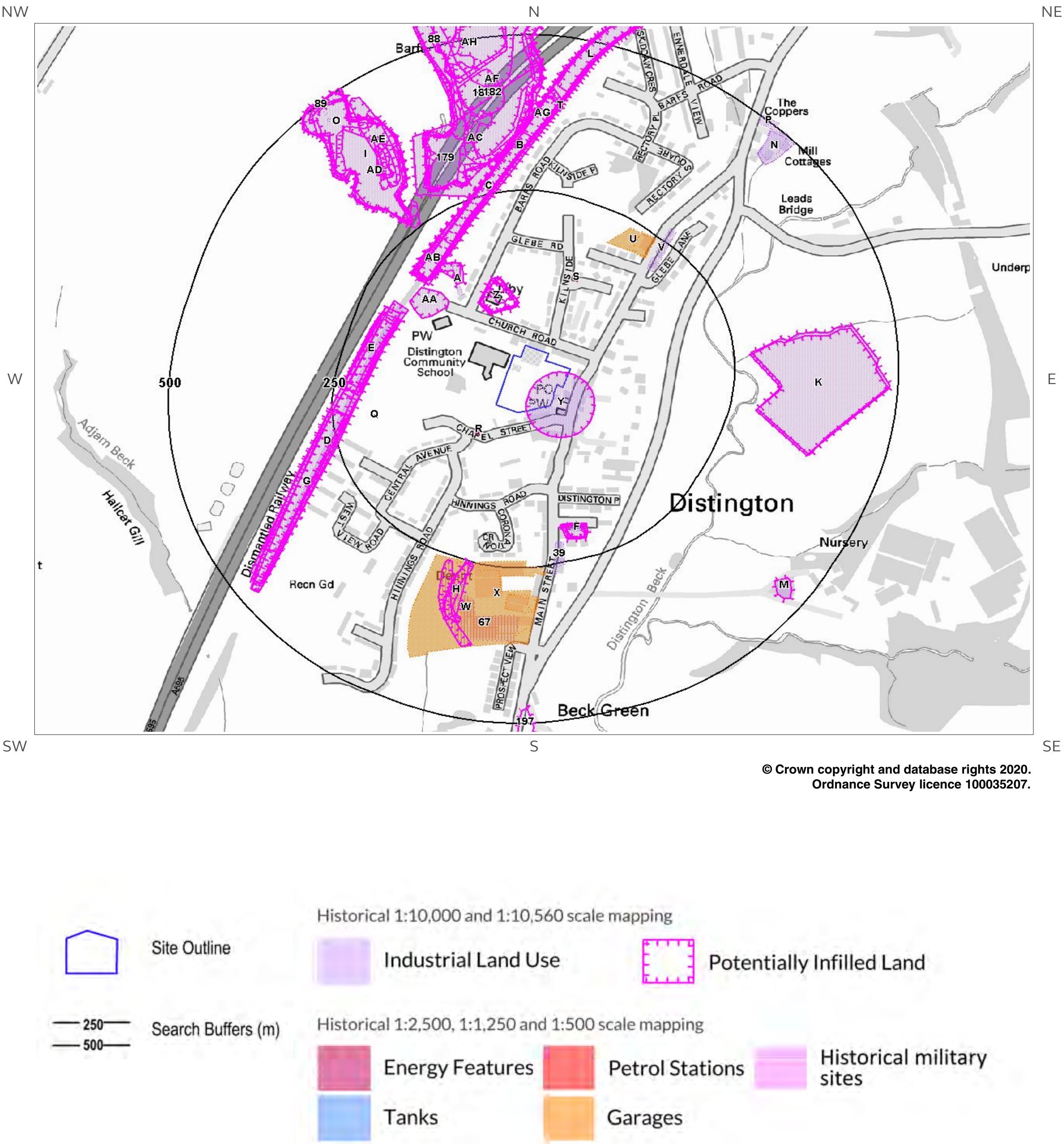
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

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

Groundsure LOCATION INTELLIGENCE

emapsite™

1. Historical Land Use



1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 89

ID	Distance [m]	Direction	Use	Date
1Y	0	On Site	Saw Pit	1864
2A	124	NW	Lime Kilns	1864
3AA	127	NW	Grave Yard	1864
4A	139	NW	Unspecified Ground Workings	1923
5A	139	NW	Unspecified Ground Workings	1923
6A	139	NW	Unspecified Ground Workings	1923
7A	139	NW	Unspecified Ground Workings	1923
8A	147	NW	Unspecified Heap	1947
9B	172	NW	Cuttings	1923
10B	172	NW	Cuttings	1923
11B	172	NW	Cuttings	1923
12B	172	NW	Cuttings	1923
13C	175	NW	Cuttings	1991
14B	176	NW	Cuttings	1967
15D	176	NW	Cuttings	1967
16AB	178	NW	Cuttings	1898
17B	179	NW	Cuttings	1951
18B	179	NW	Cuttings	1938
19C	180	NW	Cuttings	1947
20D	180	W	Cuttings	1923
21D	180	W	Cuttings	1923
22D	180	W	Cuttings	1923
23D	180	W	Cuttings	1923
24E	185	W	Cuttings	1898
25E	185	W	Cuttings	1947
26E	185	W	Cuttings	1938
27E	186	W	Cuttings	1991
28D	188	W	Cuttings	1951
29F	189	S	Refuse Heap	1938
30F	189	S	Refuse Heap	1938
31F	190	S	Refuse Heap	1951
32F	191	S	Refuse Heap	1947

33F	193	S	Gravel Pit	1923
34F	193	S	Gravel Pit	1923
35F	193	S	Gravel Pit	1923
36F	193	S	Gravel Pit	1923
37V	199	NE	Smithy	1898
38G	214	W	Cuttings	1991
39	216	S	Smithy	1898
40G	228	W	Cuttings	1938
41G	231	W	Cuttings	1947
42G	231	W	Cuttings	1898
43H	250	S	Unspecified Ground Workings	1947
44AC	251	N	Unspecified Disused Workings	1991
45I	253	NW	Unspecified Disused Quarries	1967
46H	253	S	Unspecified Pit	1951
47H	258	S	Refuse Heap	1967
48AD	264	NW	Unspecified Pit	1951
49I	265	NW	Disused Quarries	1923
50I	265	NW	Disused Quarries	1923
51I	265	NW	Disused Quarries	1923
52I	265	NW	Disused Quarries	1923
53I	269	NW	Unspecified Disused Quarries	1938
54J	270	N	Unspecified Disused Quarries	1967
55J	270	N	Unspecified Disused Quarries	1951
56I	271	NW	Unspecified Disused Quarries	1947
57I	271	NW	Unspecified Disused Quarries	1898
58J	272	N	Disused Quarries	1923
59J	272	N	Disused Quarries	1923
60J	272	N	Disused Quarries	1923
61J	272	N	Disused Quarries	1923
62J	275	N	Unspecified Disused Quarries	1938
63K	275	E	Sewage Works	1951
64J	276	N	Unspecified Disused Quarries	1898
65J	276	N	Unspecified Disused Quarries	1947
66K	277	E	Sewage Works	1947
67	304	S	Garage	1991
68AE	324	NW	Unspecified Disused Quarries	1864
69AG	333	N	Cuttings	1898
70L	400	N	Cuttings	1947

71L	400	N	Cuttings	1898
72O	406	NW	Unspecified Ground Workings	1951
73L	412	N	Cuttings	1991
74AH	434	N	Unspecified Disused Quarries	1864
75N	441	NE	Unspecified Mill	1938
76M	443	SE	Unspecified Ground Workings	1938
77M	443	SE	Unspecified Ground Workings	1938
78N	443	NE	Mill	1923
79N	443	NE	Mill	1923
80N	443	NE	Mill	1923
81N	443	NE	Mill	1923
82N	443	NE	Unspecified Mill	1898
83N	450	NE	Corn Mill	1864
84O	469	NW	Old Lime Kiln	1864
85O	480	NW	Old Lime Kiln	1864
86P	487	NE	Police Station	1991
87P	487	NE	Police Station	1967
88	491	N	Old Lime Kilns	1864
89	492	NW	Old Lime Kiln	1864

1.2 Additional Information – Historical Tank Database

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

Records of historical tanks within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
90Q	187	W	Tank or Trough	1862
91Q	187	W	Tank or Trough	1862
92H	289	S	Unspecified Tank	1987

1.3 Additional Information – Historical Energy Features Database

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

Records of historical energy features within 500m of the search boundary: 6

ID	Distance (m)	Direction	Use	Date

93R	47	SW	Electricity Substation	1987
94R	50	SW	Electricity Substation	1985
95S	124	N	Electricity Substation	1985
96S	126	N	Electricity Substation	1987
97T	381	N	Electricity Substation	1985
98T	383	N	Electricity Substation	1987

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 8

ID	Distance (m)	Direction	Use	Date
99U	200	NE	Garage	1982
100U	200	NE	Garage	1985
101V	210	NE	Garage	1987
102U	210	NE	Garage	1960
103X	239	S	Garage	1960
104W	251	S	Garage	1982
105W	251	S	Garage	1985
106X	292	S	Garage	1987

1.6 Historical military sites

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

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 91

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

ID	Distance(m)	Direction	Use	Date
107Y	0	On Site	Saw Pit	1864
108Z	63	N	Pond	1951
109Z	63	N	Pond	1923
110Z	63	N	Pond	1923
111Z	63	N	Pond	1923
112Z	63	N	Pond	1923
113Z	66	NW	Pond	1947
114Z	66	NW	Pond	1898
115Z	67	N	Pond	1938
116Z	76	NW	Pond	1864
117AA	127	NW	Grave Yard	1864
118AB	139	NW	Unspecified Ground Workings	1923
119A	139	NW	Unspecified Ground Workings	1923
120A	139	NW	Unspecified Ground Workings	1923
121A	139	NW	Unspecified Ground Workings	1923
122A	147	NW	Unspecified Heap	1947
123B	172	NW	Cuttings	1923
124B	172	NW	Cuttings	1923
125B	172	NW	Cuttings	1923
126B	172	NW	Cuttings	1923
127C	175	NW	Cuttings	1991
128B	176	NW	Cuttings	1967
129D	176	NW	Cuttings	1967
130AB	178	NW	Cuttings	1898
131B	179	NW	Cuttings	1951
132B	179	NW	Cuttings	1938
133C	180	NW	Cuttings	1947
134D	180	W	Cuttings	1923
135D	180	W	Cuttings	1923
136D	180	W	Cuttings	1923
137D	180	W	Cuttings	1923
138E	185	W	Cuttings	1947
139E	185	W	Cuttings	1898

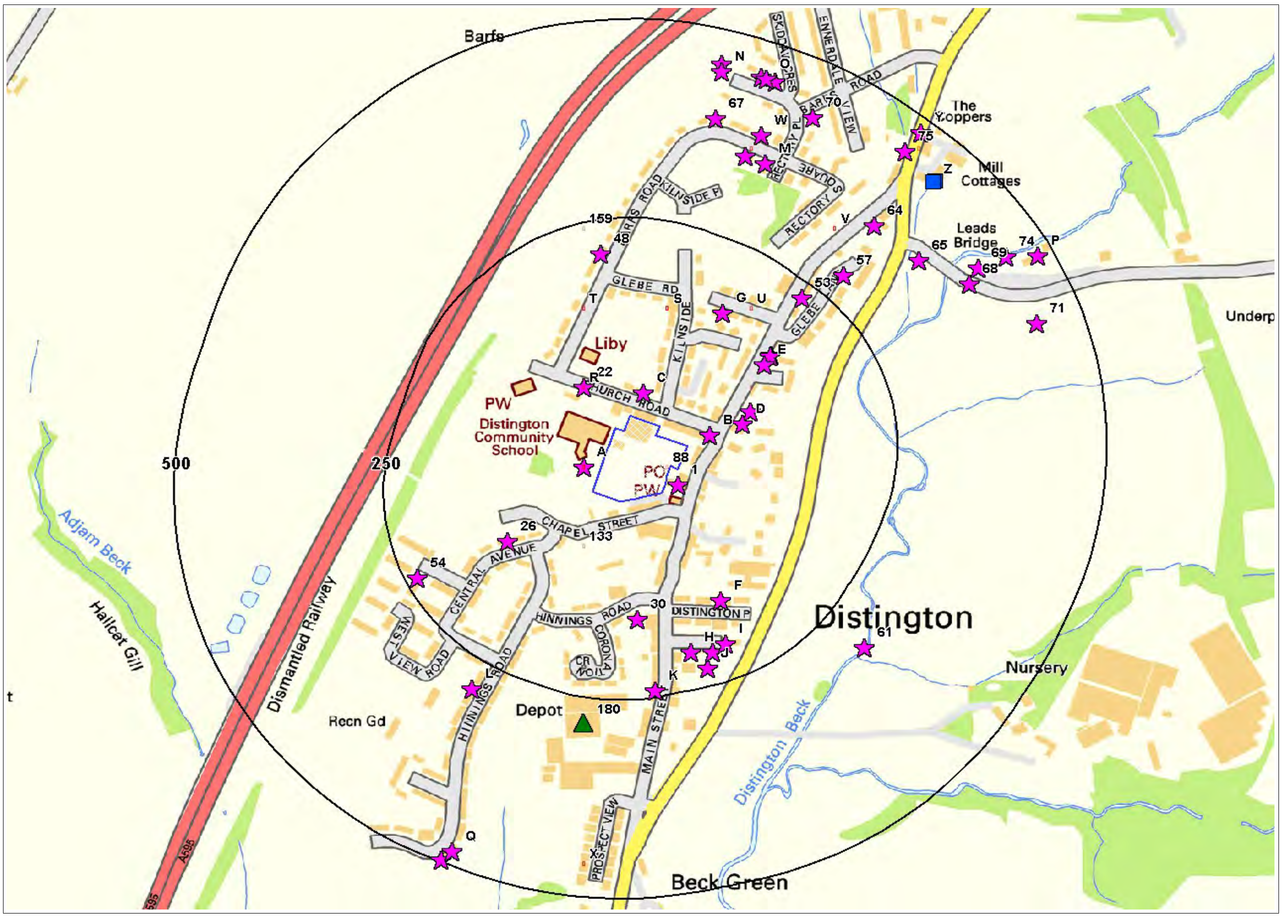
140E	185	W	Cuttings	1938
141E	186	W	Cuttings	1991
142D	188	W	Cuttings	1951
143F	189	S	Refuse Heap	1938
144F	189	S	Refuse Heap	1938
145F	190	S	Refuse Heap	1951
146F	191	S	Refuse Heap	1947
147F	193	S	Gravel Pit	1923
148F	193	S	Gravel Pit	1923
149F	193	S	Gravel Pit	1923
150F	193	S	Gravel Pit	1923
151G	214	W	Cuttings	1991
152G	228	W	Cuttings	1938
153G	231	W	Cuttings	1898
154G	231	W	Cuttings	1947
155H	250	S	Unspecified Ground Workings	1947
156AC	251	N	Unspecified Disused Workings	1991
157I	253	NW	Unspecified Disused Quarries	1967
158H	253	S	Unspecified Pit	1951
159W	258	S	Refuse Heap	1967
160AD	264	NW	Unspecified Pit	1951
161AE	265	NW	Disused Quarries	1923
162AE	265	NW	Disused Quarries	1923
163AE	265	NW	Disused Quarries	1923
164AE	265	NW	Disused Quarries	1923
165AE	269	NW	Unspecified Disused Quarries	1938
166J	270	N	Unspecified Disused Quarries	1951
167J	270	N	Unspecified Disused Quarries	1967
168I	271	NW	Unspecified Disused Quarries	1898
169I	271	NW	Unspecified Disused Quarries	1947
170J	272	N	Disused Quarries	1923
171J	272	N	Disused Quarries	1923
172J	272	N	Disused Quarries	1923
173J	272	N	Disused Quarries	1923
174J	275	N	Unspecified Disused Quarries	1938
175K	275	E	Sewage Works	1951
176J	276	N	Unspecified Disused Quarries	1947
177J	276	N	Unspecified Disused Quarries	1898
178K	277	E	Sewage Works	1947

179	282	NW	Ponds	1991
180AF	299	N	Water Body	1951
181AF	308	N	Water Body	1898
182	309	N	Pond	1967
183AE	324	NW	Unspecified Disused Quarries	1864
184AD	324	NW	Pond	1967
185AG	333	N	Cuttings	1898
186AD	339	NW	Pond	1947
187AD	340	NW	Pond	1951
188	358	N	Water Body	1864
189L	400	N	Cuttings	1947
190L	400	N	Cuttings	1898
191O	406	NW	Unspecified Ground Workings	1951
192L	412	N	Cuttings	1991
193AH	434	N	Unspecified Disused Quarries	1864
194J	441	N	Water Body	1864
195M	443	SE	Unspecified Ground Workings	1938
196M	443	SE	Unspecified Ground Workings	1938
197	476	S	Pond	1938

2. Environmental Permits, Incidents and Registers Map

NW N NE

W E



SW S SE

- Site Outline
- Search Buffers (m) — 250, 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

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

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	NGR	Details	
180	285	S	300500 523175	Address: Tyson H Burridge Ltd, Prospect Garage, Distington, Workington, Cumbria, CA14 5XJ Process: Waste oil burner Status: New Legislation Applies Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

3

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

ID	Distance (m)	Direction	NGR	Details	
177Z	443	NE	300917 523859	Address: MILL COTTAGES CSO, DISTINGTON, WORKINGTON, CUMBRIA, ., CA14 5SR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01COP0024 Permit Version: 3	Receiving Water: DISTINGTON BECK Status: VARIED UNDER EPR 2010 Issue date: 05/02/2016 Effective Date: 05-Feb-2016 Revocation Date: -
178Z	445	NE	300920 523860	Address: MILL COTTAGES CSO, DISTINGTON, WORKINGTON, CUMBRIA, ., CA14 5SR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01COP0024 Permit Version: 1	Receiving Water: DISTINGTON BECK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 02/09/2010
179Z	445	NE	300920 523860	Address: MILL COTTAGES CSO, DISTINGTON, WORKINGTON, CUMBRIA, ., CA14 5SR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01COP0024 Permit Version: 2	Receiving Water: DISTINGTON BECK Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 04/02/2016

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

87

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

ID	Distance (m)	Direction	NGR	Details	
1	14	E	300612.0 523477.0	Incident Date: 30-Oct-2002 Incident Identification: 117576.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
2A	20	W	300500.0 523500.0	Incident Date: 05-May-2001 Incident Identification: 4498.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
3A	20	W	300500.0 523500.0	Incident Date: 06-May-2001 Incident Identification: 4646.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
4A	20	W	300500.0 523500.0	Incident Date: 23-Apr-2001 Incident Identification: 3139.0	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
				Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Air Impact: Category 2 (Significant)
5A	20	W	300500.0 523500.0	Incident Date: 24-Apr-2001 Incident Identification: 3306.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
6A	20	W	300500.0 523500.0	Incident Date: 24-Apr-2001 Incident Identification: 3218.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
7A	20	W	300500.0 523500.0	Incident Date: 08-May-2001 Incident Identification: 4741.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
8A	20	W	300500.0 523500.0	Incident Date: 07-May-2001 Incident Identification: 4656.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
9A	20	W	300500.0 523500.0	Incident Date: 07-May-2001 Incident Identification: 4657.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
10A	20	W	300500.0 523500.0	Incident Date: 06-May-2001 Incident Identification: 4653.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
11A	20	W	300500.0 523500.0	Incident Date: 03-May-2001 Incident Identification: 4225.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
12A	20	W	300500.0 523500.0	Incident Date: 09-May-2001 Incident Identification: 4963.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
13A	20	W	300500.0 523500.0	Incident Date: 23-Apr-2001 Incident Identification: 3139.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
14A	20	W	300500.0 523500.0	Incident Date: 05-Jul-2001 Incident Identification: 13837.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
15A	20	W	300500.0 523500.0	Incident Date: 09-May-2001 Incident Identification: 4963.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
16A	20	W	300500.0	Incident Date: 05-Jul-2001	Water Impact: Category 4 (No Impact)

Groundsure LOCATION INTELLIGENCE

emapsite™

ID	Distance (m)	Direction	NGR	Details	
			523500.0	Incident Identification: 13837.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
17A	20	W	300500.0 523500.0	Incident Date: 12-Jun-2001 Incident Identification: 8824.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
18B	28	NE	300650.0 523540.0	Incident Date: 05-May-2001 Incident Identification: 4521.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
19B	28	NE	300650.0 523540.0	Incident Date: 05-May-2001 Incident Identification: 4521.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
20C	32	N	300571.0 523593.0	Incident Date: 01-May-2001 Incident Identification: 3924.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
21C	32	N	300571.0 523593.0	Incident Date: 25-Apr-2001 Incident Identification: 3347.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
22	64	NW	300500.0 523600.0	Incident Date: 20-Mar-2001 Incident Identification: 576.0 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
23D	70	NE	300689.0 523554.0	Incident Date: 09-May-2001 Incident Identification: 4957.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
24D	70	NE	300689.0 523554.0	Incident Date: 09-May-2001 Incident Identification: 4957.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
25D	85	NE	300698.0 523569.0	Incident Date: 21-Sep-2002 Incident Identification: 109463.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
26	120	SW	300409.0 523406.0	Incident Date: 06-May-2001 Incident Identification: 4614.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
27E	136	NE	300715.0 523628.0	Incident Date: 09-May-2001 Incident Identification: 4960.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
28E	136	NE	300715.0 523628.0	Incident Date: 09-May-2001 Incident Identification: 4960.0 Pollutant: Atmospheric Pollutants and	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

ID	Distance (m)	Direction	NGR	Details	
				Effects Pollutant Description: Chemical Odour	
29E	149	NE	300722.0 523639.0	Incident Date: 27-Jun-2001 Incident Identification: 11759.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
30	150	S	300564.0 523308.0	Incident Date: 11-May-2001 Incident Identification: 5208.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
31E	150	NE	300723.0 523640.0	Incident Date: 01-Mar-2002 Incident Identification: 61243.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
32E	150	NE	300723.0 523640.0	Incident Date: 01-Mar-2002 Incident Identification: 61243.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
33F	152	SE	300663.0 523332.0	Incident Date: 09-May-2001 Incident Identification: 4949.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
34F	152	SE	300663.0 523332.0	Incident Date: 09-May-2001 Incident Identification: 4949.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
35G	161	NE	300665.0 523694.0	Incident Date: 09-May-2001 Incident Identification: 4943.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
36G	161	NE	300665.0 523694.0	Incident Date: 08-May-2001 Incident Identification: 4897.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
37G	161	NE	300665.0 523694.0	Incident Date: 06-May-2001 Incident Identification: 4583.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
38G	161	NE	300665.0 523694.0	Incident Date: 23-Apr-2001 Incident Identification: 3056.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
39G	161	NE	300665.0 523694.0	Incident Date: 06-May-2001 Incident Identification: 4583.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
40G	161	NE	300665.0 523694.0	Incident Date: 09-May-2001 Incident Identification: 4943.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

ID	Distance (m)	Direction	NGR	Details	
41G	161	NE	300665.0 523694.0	Incident Date: 21-Apr-2001 Incident Identification: 2916.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
42G	161	NE	300665.0 523694.0	Incident Date: 02-Oct-2002 Incident Identification: 112202.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
43G	161	NE	300665.0 523694.0	Incident Date: 22-Apr-2001 Incident Identification: 3039.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
44G	161	NE	300665.0 523694.0	Incident Date: 06-Jun-2002 Incident Identification: 83128.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
45G	161	NE	300665.0 523694.0	Incident Date: 23-May-2001 Incident Identification: 6516.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
46H	203	S	300627.0 523267.0	Incident Date: 09-May-2001 Incident Identification: 4907.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
47I	205	S	300669.0 523277.0	Incident Date: 08-May-2001 Incident Identification: 4886.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
48	207	N	300520.0 523768.0	Incident Date: 06-May-2001 Incident Identification: 4652.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
49H	209	S	300653.0 523267.0	Incident Date: 09-May-2001 Incident Identification: 4947.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
50I	209	S	300653.0 523267.0	Incident Date: 09-May-2001 Incident Identification: 4947.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
51J	227	S	300647.0 523247.0	Incident Date: 09-May-2001 Incident Identification: 4923.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
52J	227	S	300647.0 523247.0	Incident Date: 03-May-2001 Incident Identification: 4302.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
53	230	NE	300760.0	Incident Date: 04-May-2001	Water Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
			523713.0	Incident Identification: 4398.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
54	237	SW	300301.0 523360.0	Incident Date: 04-May-2001 Incident Identification: 4476.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
55K	242	S	300585.0 523218.0	Incident Date: 09-May-2001 Incident Identification: 4946.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
56K	242	S	300585.0 523218.0	Incident Date: 09-May-2001 Incident Identification: 4946.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
57	283	NE	300810.0 523741.0	Incident Date: 15-Dec-2001 Incident Identification: 48304.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
58L	288	SW	300366.0 523220.0	Incident Date: 01-May-2001 Incident Identification: 3996.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
59L	288	SW	300366.0 523220.0	Incident Date: 08-May-2001 Incident Identification: 4817.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
60L	288	SW	300366.0 523220.0	Incident Date: 08-May-2001 Incident Identification: 4817.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
61	310	SE	300835.0 523273.0	Incident Date: 10-Jul-2001 Incident Identification: 15264.0 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
62M	354	N	300716.0 523882.0	Incident Date: 07-May-2001 Incident Identification: 4659.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
63M	354	N	300693.0 523891.0	Incident Date: 09-May-2001 Incident Identification: 4994.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
64	355	NE	300846.0 523804.0	Incident Date: 06-May-2001 Incident Identification: 4648.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

ID	Distance (m)	Direction	NGR	Details	
65	361	NE	300900.0 523760.0	Incident Date: 24-Sep-2002 Incident Identification: 110022.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
66W	385	N	300712.0 523917.0	Incident Date: 10-May-2001 Incident Identification: 5057.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
67	387	N	300657.0 523938.0	Incident Date: 04-May-2001 Incident Identification: 4469.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
68	392	NE	300960.0 523730.0	Incident Date: 22-Aug-2002 Incident Identification: 102329.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
69	411	NE	300970.0 523750.0	Incident Date: 13-Sep-2002 Incident Identification: 107546.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
70	429	NE	300773.0 523940.0	Incident Date: 07-May-2001 Incident Identification: 4658.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
71	443	E	301040.0 523680.0	Incident Date: 19-Dec-2002 Incident Identification: 126723.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
72N	446	N	300664.0 523997.0	Incident Date: 29-Apr-2001 Incident Identification: 3766.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
73N	446	N	300664.0 523997.0	Incident Date: 04-May-2001 Incident Identification: 4375.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
74	447	NE	301003.0 523764.0	Incident Date: 06-Jun-2002 Incident Identification: 83349.0 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
75	452	NE	300883.0 523897.0	Incident Date: 06-May-2001 Incident Identification: 4647.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
76O	453	N	300717.0 523988.0	Incident Date: 21-Apr-2001 Incident Identification: 2939.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

ID	Distance (m)	Direction	NGR	Details	
77O	453	N	300728.0 523984.0	Incident Date: 10-May-2001 Incident Identification: 5130.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
78O	453	N	300728.0 523984.0	Incident Date: 24-Apr-2001 Incident Identification: 3329.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
79O	453	N	300728.0 523984.0	Incident Date: 03-May-2001 Incident Identification: 4341.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
80O	454	N	300712.0 523990.0	Incident Date: 21-Apr-2001 Incident Identification: 2918.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
81N	456	N	300664.0 524007.0	Incident Date: 10-May-2001 Incident Identification: 5061.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
82P	480	NE	301041.0 523766.0	Incident Date: 21-Apr-2003 Incident Identification: 152680.0 Pollutant: Sewage Materials:Oils and Fuel Pollutant Description: Storm Sewage:Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
83P	480	NE	301041.0 523766.0	Incident Date: 21-Apr-2003 Incident Identification: 152680.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
84P	480	NE	301041.0 523766.0	Incident Date: 21-Apr-2003 Incident Identification: 152680.0 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
85Y	482	NE	300902.0 523921.0	Incident Date: 06-Dec-2001 Incident Identification: 46757.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
86Q	483	S	300342.0 523016.0	Incident Date: 09-May-2001 Incident Identification: 4904.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
87Q	498	S	300330.0 523005.0	Incident Date: 06-May-2001 Incident Identification: 4635.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)

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

89

The following NIRS List 1 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance(m)	Direction	NGR	Details	
88	0	On Site		Incident Date: 04-Sep-1999 Incident Identification: 32091.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
89A	20	W		Incident Date: 20-Nov-2000 Incident Identification: 44072.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
90A	20	W		Incident Date: 15-Sep-2000 Incident Identification: 42434.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
91A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35242.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
92A	20	W		Incident Date: 29-Jan-2001 Incident Identification: 45833.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
93A	20	W		Incident Date: 16-Jan-2000 Incident Identification: 35233.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
94A	20	W		Incident Date: 21-Aug-2000 Incident Identification: 41746.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
95A	20	W		Incident Date: 20-Aug-2000 Incident Identification: 41742.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
96A	20	W		Incident Date: 13-Jan-2000 Incident Identification: 35147.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
97A	20	W		Incident Date: 29-Jan-2001 Incident Identification: 45832.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action

ID	Distance(m)	Direction	NGR	Details	
98A	20	W		Incident Date: 23-Nov-2000 Incident Identification: 44176.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
99A	20	W		Incident Date: 30-Sep-1999 Incident Identification: 32901.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: Other
100A	20	W		Incident Date: 18-Jan-2000 Incident Identification: 35327.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
101A	20	W		Incident Date: 24-Jul-2000 Incident Identification: 40940.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
102A	20	W		Incident Date: 18-Jan-2000 Incident Identification: 35309.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
103A	20	W		Incident Date: 14-Nov-1999 Incident Identification: 33980.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
104A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35914.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
105A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35279.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
106A	20	W		Incident Date: 21-Oct-2000 Incident Identification: 43412.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
107A	20	W		Incident Date: 03-Oct-2000 Incident Identification: 42915.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
108A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35284.0	Priority Description: Immediate (2 Hours)

ID	Distance(m)	Direction	NGR	Details	
				Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
109A	20	W		Incident Date: 01-May-2000 Incident Identification: 38079.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
110A	20	W		Incident Date: 25-Jan-2000 Incident Identification: 35886.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
111A	20	W		Incident Date: 03-May-2000 Incident Identification: 38168.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
112A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35285.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
113A	20	W		Incident Date: 25-Jan-2000 Incident Identification: 35482.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
114A	20	W		Incident Date: 11-Oct-2000 Incident Identification: 43299.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
115A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35244.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
116A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35277.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
117A	20	W		Incident Date: 18-Apr-2000 Incident Identification: 37734.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action

ID	Distance(m)	Direction	NGR	Details	
118A	20	W		Incident Date: 06-Apr-2000 Incident Identification: 37393.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
119A	20	W		Incident Date: 15-Feb-2001 Incident Identification: 46445.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Civic amenity waste Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
120A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35280.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
121A	20	W		Incident Date: 15-Sep-2000 Incident Identification: 42449.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
122A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35278.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
123A	20	W		Incident Date: 16-Dec-2000 Incident Identification: 44685.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
124A	20	W		Incident Date: 12-Oct-2000 Incident Identification: 43200.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
125A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35283.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
126A	20	W		Incident Date: 18-Jan-2000 Incident Identification: 35286.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
127A	20	W		Incident Date: 21-Jan-2000 Incident Identification: 35390.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact

ID	Distance(m)	Direction	NGR	Details	
				Incident Substantiated: Yes	Action Taken: No Further Action
128A	20	W		Incident Date: 20-Aug-2000 Incident Identification: 41741.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
129A	20	W		Incident Date: 21-Aug-2000 Incident Identification: 41747.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
130A	20	W		Incident Date: 17-Jan-2000 Incident Identification: 35281.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
131R	64	NW		Incident Date: 22-Mar-2000 Incident Identification: 36983.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
132R	64	NW		Incident Date: 22-Mar-2000 Incident Identification: 36984.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
133	68	S		Incident Date: 17-Jan-2000 Incident Identification: 35921.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: 1 Day (24 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
134E	105	NE		Incident Date: 19-Dec-2000 Incident Identification: 44901.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
135S	143	N		Incident Date: 07-Aug-1999 Incident Identification: 31088.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
136S	143	N		Incident Date: 28-Jan-2000 Incident Identification: 35612.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
137S	143	N		Incident Date: 05-Oct-1999 Incident Identification: 33041.0 Catchments Name: NOT APPLICABLE	Priority Description: Immediate (2 Hours) Waste Description: Not Available

ID	Distance(m)	Direction	NGR	Details	
				Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
138S	143	N		Incident Date: 09-Nov-1999 Incident Identification: 33872.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: Significant Impact Air Impact: No Impact Action Taken: No Further Action
139S	143	N		Incident Date: 19-Jan-2000 Incident Identification: 35335.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
140S	143	N		Incident Date: 05-Oct-1999 Incident Identification: 33042.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
141S	143	N		Incident Date: 29-Sep-1999 Incident Identification: 32893.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: Significant Impact Air Impact: No Impact Action Taken: No Further Action
142S	143	N		Incident Date: 06-Oct-1999 Incident Identification: 33172.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
143S	143	N		Incident Date: 06-Oct-1999 Incident Identification: 33045.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
144S	143	N		Incident Date: 19-Jan-2000 Incident Identification: 35331.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
145S	143	N		Incident Date: 05-Oct-1999 Incident Identification: 33038.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
146S	143	N		Incident Date: 18-Jan-2000 Incident Identification: 35326.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
147S	143	N		Incident Date: 05-Oct-1999 Incident Identification: 33044.0	Priority Description: Immediate (2 Hours)

ID	Distance(m)	Direction	NGR	Details	
				Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
148S	143	N		Incident Date: 09-Nov-1999 Incident Identification: 33863.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
149S	143	N		Incident Date: 19-Jan-2000 Incident Identification: 35328.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
150S	143	N		Incident Date: 05-Oct-1999 Incident Identification: 33043.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
151S	143	N		Incident Date: 06-Oct-1999 Incident Identification: 33169.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
152T	147	N		Incident Date: 19-Feb-2000 Incident Identification: 36402.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
153T	147	N		Incident Date: 19-Feb-2000 Incident Identification: 36129.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
154T	147	N		Incident Date: 19-Feb-2000 Incident Identification: 36128.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
155T	147	N		Incident Date: 19-Feb-2000 Incident Identification: 36126.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
156U	185	NE		Incident Date: 05-Aug-1999 Incident Identification: 31022.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
157U	185	NE		Incident Date: 10-Apr-2000 Incident Identification: 37508.0	Priority Description: No attendance Waste Description: Not Available

ID	Distance(m)	Direction	NGR	Details	
				Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
158U	185	NE		Incident Date: 10-Apr-2000 Incident Identification: 37560.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
159	242	N		Incident Date: 15-Sep-1999 Incident Identification: 32490.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: Warning Letter
160V	325	NE		Incident Date: 16-Jan-2001 Incident Identification: 45498.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
161V	325	NE		Incident Date: 13-Feb-2001 Incident Identification: 46337.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
162V	325	NE		Incident Date: 16-Feb-2001 Incident Identification: 46473.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
163V	325	NE		Incident Date: 17-Feb-2001 Incident Identification: 46516.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
164V	325	NE		Incident Date: 17-Feb-2001 Incident Identification: 46517.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
165V	325	NE		Incident Date: 16-Jan-2001 Incident Identification: 45393.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
166V	325	NE		Incident Date: 08-Feb-2001 Incident Identification: 46194.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
167W	365	N		Incident Date: 26-Jun-2000 Incident Identification: 40636.0	Priority Description: Three Days Waste Description: Not Available

ID	Distance(m)	Direction	NGR	Details	
				Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
168W	365	N		Incident Date: 26-Jun-2000 Incident Identification: 40641.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Three Days Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
169W	365	N		Incident Date: 26-Jun-2000 Incident Identification: 40642.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: Three Days Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
170X	458	S		Incident Date: 04-Sep-1999 Incident Identification: 32118.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
171X	458	S		Incident Date: 03-Sep-1999 Incident Identification: 32088.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: Significant Impact Air Impact: No Impact Action Taken: No Further Action
172X	458	S		Incident Date: 04-Sep-1999 Incident Identification: 32115.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
173X	458	S		Incident Date: 04-Sep-1999 Incident Identification: 32117.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
174X	458	S		Incident Date: 12-Aug-1999 Incident Identification: 31287.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: Significant Impact Air Impact: No Impact Action Taken: No Further Action
175Y	464	NE		Incident Date: 16-Jan-2001 Incident Identification: 45426.0 Catchments Name: NOT APPLICABLE Water Description: NOT APPLICABLE Water Course: NOT APPLICABLE Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action
176Y	464	NE		Incident Date: 16-Jan-2001 Incident Identification: 45425.0 Catchments Name: R DERWENT (BASSENTHWAITE) Water Description: RIVER STRETCH (FRESHWATER) Water Course: COASTLINE TRIB Incident Substantiated: Yes	Priority Description: No attendance Waste Description: Not Available Water Impact: No Impact Land Impact: No Impact Air Impact: Significant Impact Action Taken: No Further Action

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

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

Database searched and no data found.

Groundsure
LOCATION INTELLIGENCE

emapsite™

3. Landfill and Other Waste Sites Map

NW N NE

W E

SW S SE

Site Outline

250 500 Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

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

0

Database searched and no data found.

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

3

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

ID	Distance (m)	Direction	NGR	Details	
2	246	NW		Site Address: Barfs Quarry, Distington, Workington, Cumbria Waste Licence: Yes Site Reference: R44, E160.129 Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 21-Feb-1979 Licence Surrendered: Licence Holder Address: The Courts, Carlisle, Cumbria Operator: - Licence Holder: Cumbria County Council First Recorded: 23-Aug-1982 Last Recorded: 14-Dec-1985
Not shown	921	N		Site Address: Distington Tip, Charity Lane, Cumberland Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Ennerdale Rural District Council Licence Holder: - First Recorded: 31-Dec-1956 Last Recorded: -
Not shown	1395	NE		Site Address: Distington Landfill, Pitwood Road, Workington, Lillyhall, Cumbria Waste Licence: Yes Site Reference: - Waste Type: Special Environmental Permitting Regulations (Waste) Reference: NR1/L/CUM009	Licence Issue: 01-Jul-1993 Licence Surrendered: Licence Holder Address: 5a Wavell Drive, Carlisle, Rosehill Estate, Cumbria Operator: Cumbria Waste Management Ltd Licence Holder: Cumbria Waste Management Ltd First Recorded: - Last Recorded: -

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

1

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1067	N	300300.0 524600.0	Address: Distington Tip, Charity Lane, Cumberland BGS Number: 2478.0	Risk: No risk to aquifer Waste Type: N/A

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

1

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	922	N	300299 524567	Refuse Tip	1976 mapping	Polygon

3.2 Other Waste Sites

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

0

Database searched and no data found.

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

7

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	890	N	300445 524447	Site Address: Distington Golf Club, Charity Lane, High Harrington, Workington, Cumbria, CA14 5RT Type: Deposit of waste to land as a recovery operation Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAR099 EPR reference: EA/EPR/UP3995VF/A001	Issue Date: 01/03/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Distington Golf Club Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
				Operator: Gate Robert Dickinson Waste Management licence No: 102532 Annual Tonnage: 275000.0	
Not shown	1409	NE	301832 524254	Site Address: Distington Landfill Site, Pittwood Road, Lillyhall, Workington, Cumbria, CA14 4JP Type: 75kte HCI Waste TS + treatment + asbestos Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CWM012 EPR reference: EA/EPR/LP3690VH/A001 Operator: Cumbria Waste Management Ltd Waste Management licence No: 101889 Annual Tonnage: 74999.0	Issue Date: 09/09/2010 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Distington Materials Recycling Facility Correspondence Address: -
Not shown	1436	NE	301300 524800	Site Address: Workington Depot, Hallwood Road, Lillyhall Ind Est, Workington, Cumbria, CA14 4PW Type: Special Waste Transfer Station Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NOR008 EPR reference: - Operator: United Utilities Electricity Plc Waste Management licence No: 57511 Annual Tonnage: 17950.0	Issue Date: 03/03/2000 Effective Date: - Modified: 14/01/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: United Utilities Depot Correspondence Address: Lingley Mere Business Park, Lingley Mere Avenue, Great Sankey, Warrington, Cheshire, WA5 3UU
Not shown	1436	NE	301300 524800	Site Address: Workington Depot, Hallwood Road, Lillyhall Ind Est, Workington, Cumbria, CA14 4PN Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NOR008 EPR reference: - Operator: United Utilities Waste Management licence No: 57511 Annual Tonnage: 17950.0	Issue Date: 03/03/2000 Effective Date: - Modified: 28/08/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: United Utilities Correspondence Address: -
Not shown	1436	NE	301300 524800	Site Address: Workington Depot, Hallwood Road, Lillyhall Ind Est, Workington, Cumbria, CA14 4PN Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NOR008 EPR reference: - Operator: United Utilities Electricity Plc Waste Management licence No: 57511 Annual Tonnage: 17950.0	Issue Date: 03/03/2000 Effective Date: - Modified: 14/01/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: United Utilities Depot Correspondence Address: Lingley Mere Business Park, Lingley Mere Avenue, Great Sankey, Warrington, Cheshire, WA5 3UU
Not shown	1436	NE	301300 524800	Site Address: Hallwood Road, Lillyhall Ind Est, Workington, Cumbria, CA14 4PW Type: Storage of electrical insulating oils Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NOR008 EPR reference: EA/EPR/AP3593ZG/V005 Operator: Electricity North West Ltd Waste Management licence No: 57511 Annual Tonnage: 499.0	Issue Date: 03/03/2000 Effective Date: - Modified: 30/04/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Workington Depot Correspondence Address: -
Not shown	1436	NE	301300 524800	Site Address: Workington Depot, Hallwood Road, Lillyhall Ind Est, Workington, Cumbria, CA14 4PW Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations	Issue Date: 03/03/2000 Effective Date: - Modified: 26/05/2006 Surrendered Date: - Expiry Date: - Cancelled Date: -

ID	Distance (m)	Direction	NGR	Details	
				(Waste) Licence Number: NOR008 EPR reference: EA/EPR/AP3593ZG/V004 Operator: Electricity North West Ltd Waste Management licence No: 57511 Annual Tonnage: 17950.0	Status: Modified Site Name: Workington Depot Correspondence Address: -

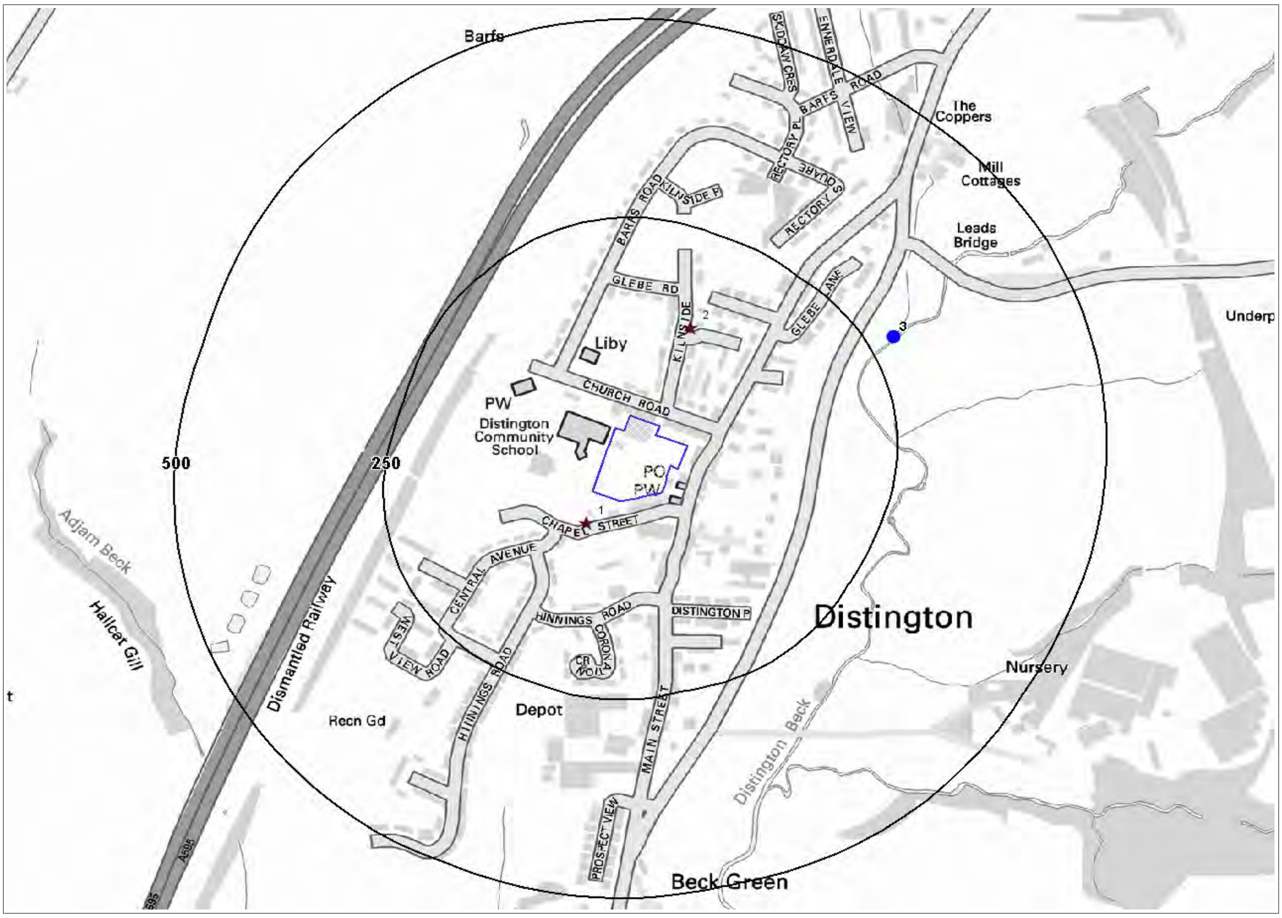
Groundsure
LOCATION INTELLIGENCE

emapsite™

4. Current Land Use Map

NW N NE

W E



SW S SE

Site Outline

Search Buffers (m) 250 500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 2

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	40	S	Electricity Sub Station	300503 523429	Cumbria, CA14	Electrical Features	Infrastructure and Facilities
2	129	N	Electricity Sub Station	300627 523675	Cumbria, CA14	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
3	280	NE	300869 523664	OBSOLETE	Main Street, Distington, Workington, Cumbria, CA14 5SS	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

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

Lex Code	Description	Rock Type
LM1-LMST	FIRST LIMESTONE (CUMBRIA)	LIMESTONE
HG-SDST	HENSINGHAM GRIT	SANDSTONE

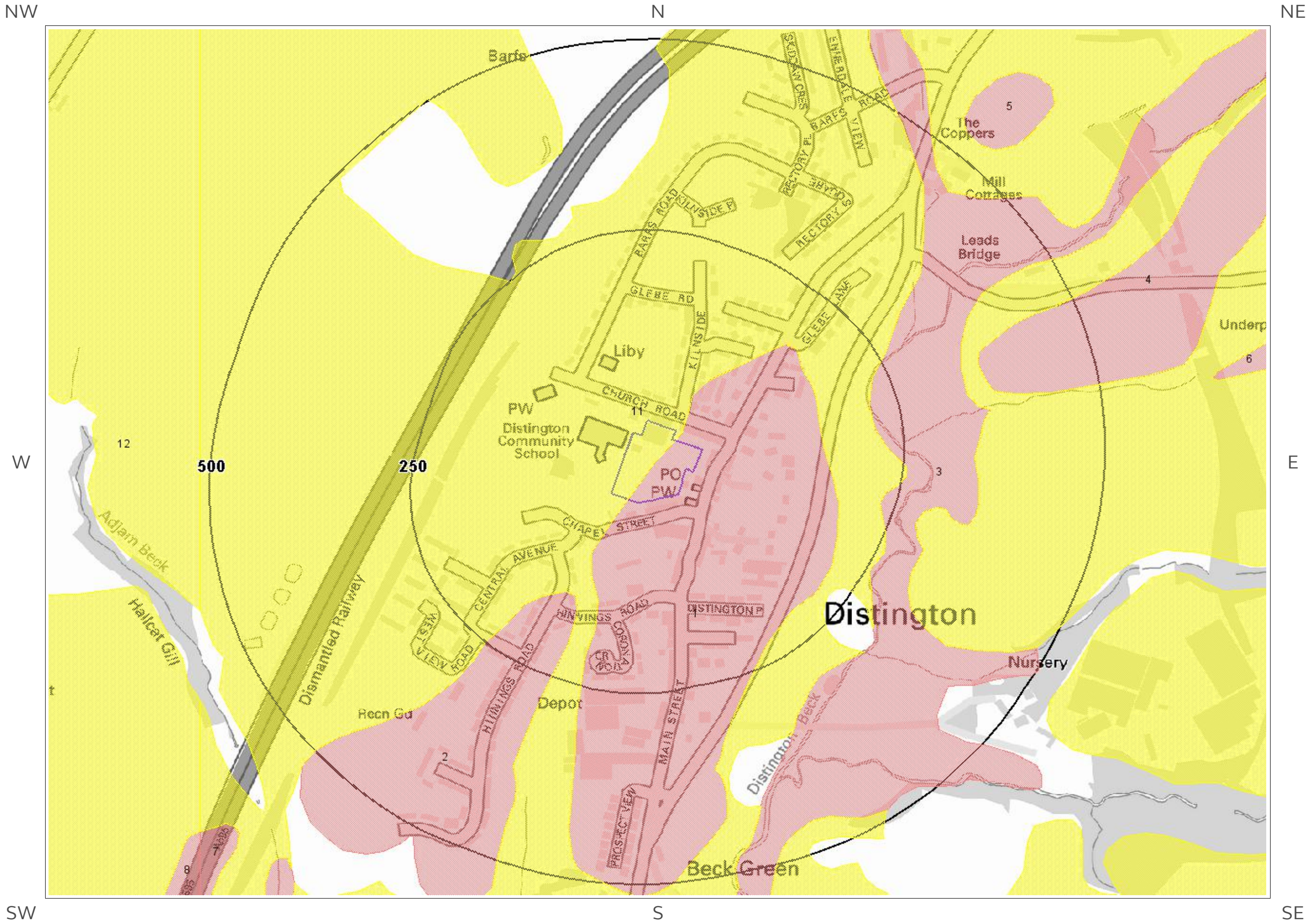
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

Groundsure
LOCATION INTELLIGENCE

emapsite™

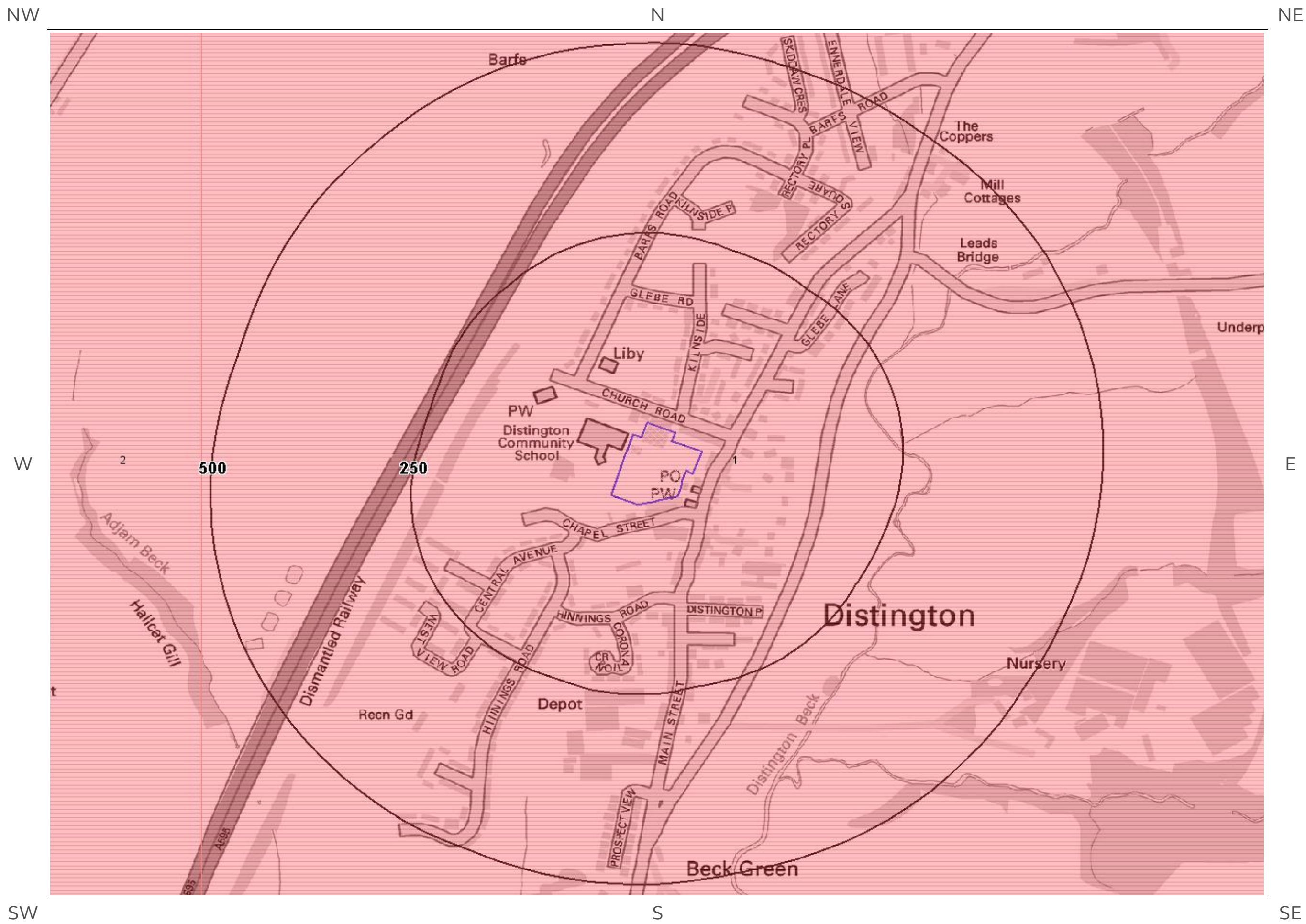
6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



Site Outline	Principal Aquifer	Secondary Aquifer - Undifferentiated Layers
250 / 500 Search Buffers (m)	Secondary (A) Aquifer - Permeable Layers	Unproductive
	Secondary (B) Aquifer - Lower Permeability Layers	Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licences



Site Outline	Principal Aquifer	Secondary Aquifer - Undifferentiated Layers
Search Buffers (m) 250 / 500	Secondary (A) Aquifer - Permeable Layers	Unproductive
	Secondary (B) Aquifer - Lower Permeability Layers	Unknown (lakes and landslip)
	Groundwater Abstraction Licence	Surface Water Abstraction Licence

Groundsure
LOCATION INTELLIGENCE

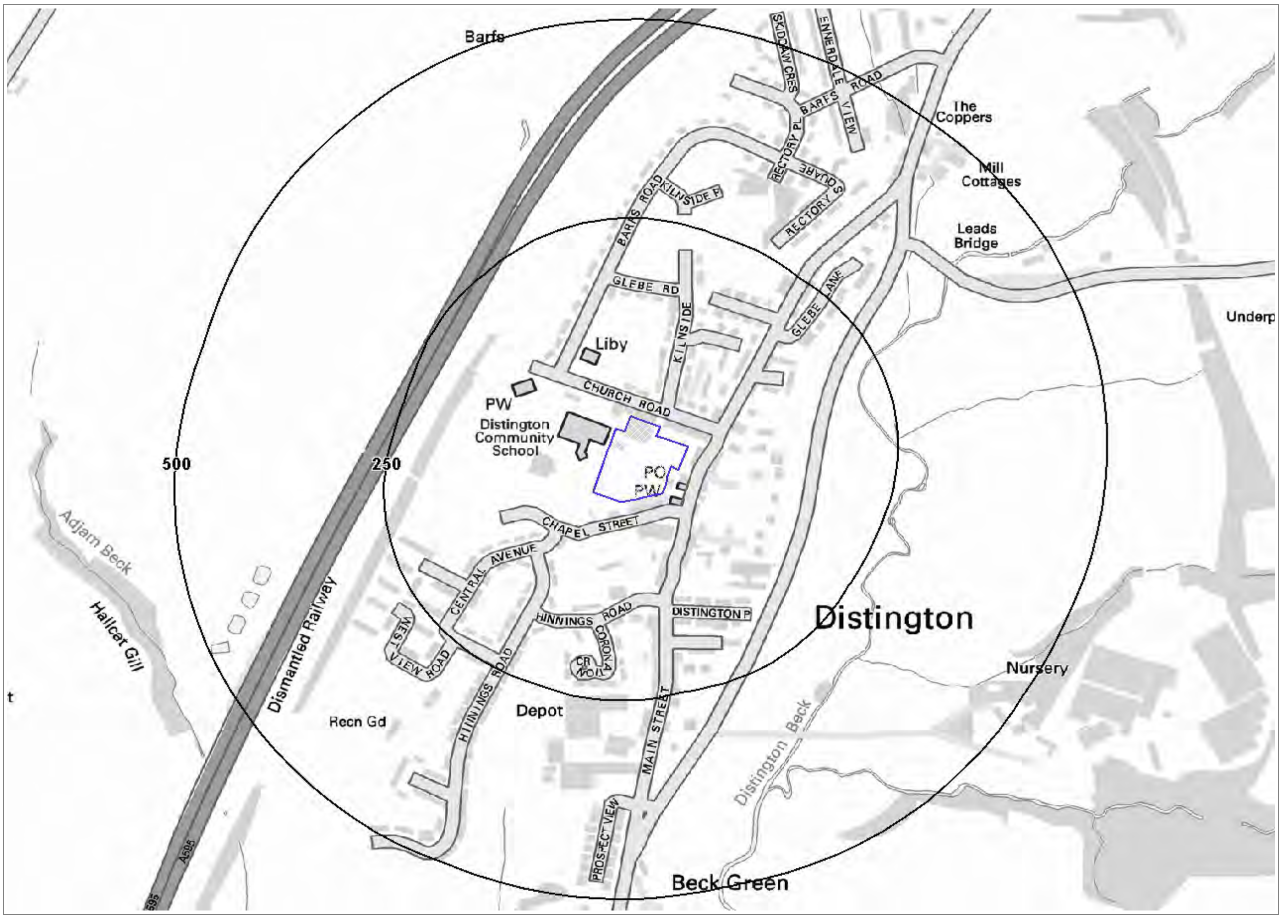
emapsite™

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

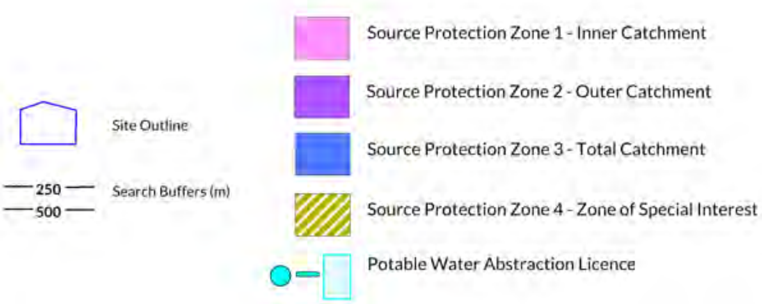
NW N NE

W E

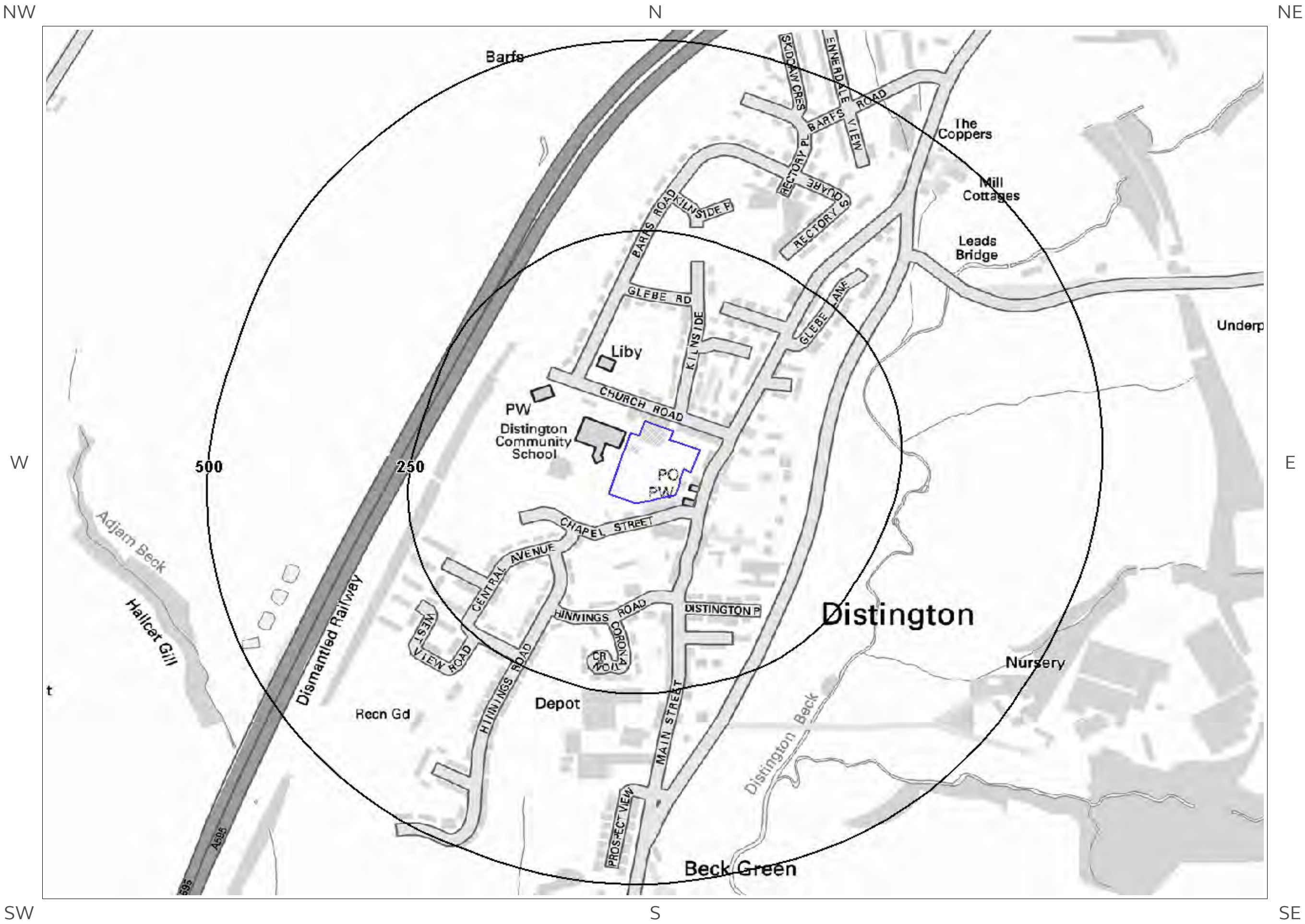
SW S SE



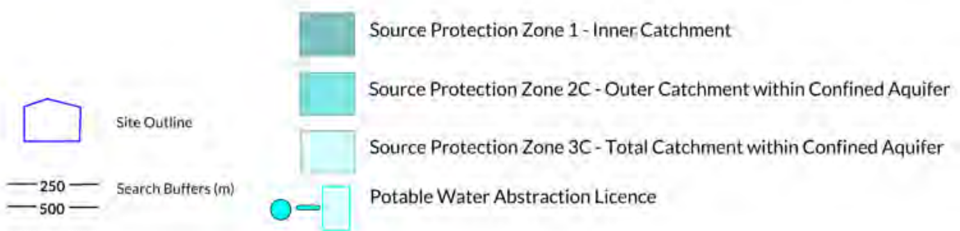
© Crown copyright and database rights 2020
Ordnance Survey licence 100035207.



6d. Hydrogeology – Source Protection Zones within confined aquifer



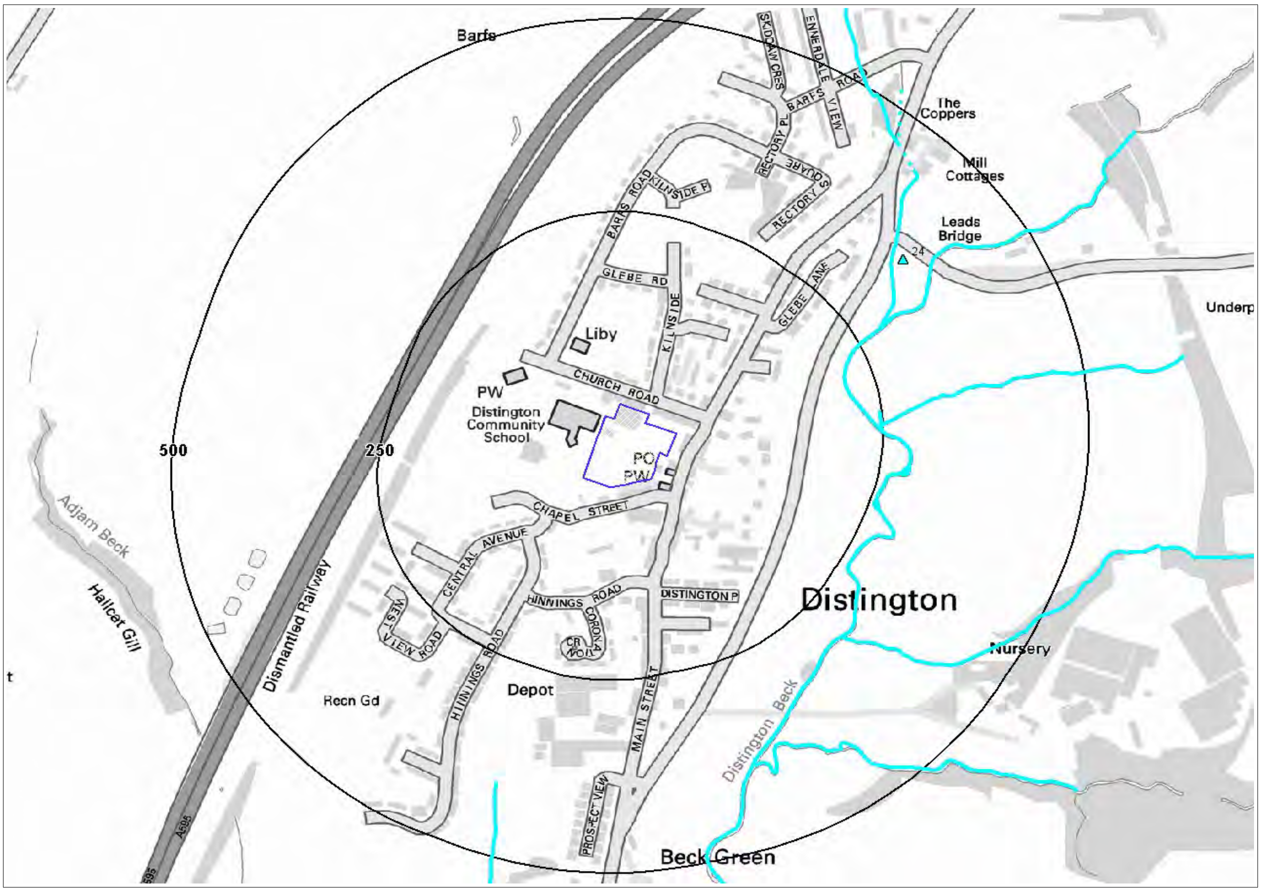
© Crown copyright and database rights 2020
Ordnance Survey licence 100035207.



6e. Hydrology – Watercourse Network and River Quality

NW N NE

W E



SW S SE

Site Outline

250
500
Search Buffers (m)

Watercourse type
- Tidal River
- Inland River
- Canal
- Lock or Flight of Locks
- Lake, Reservoir, or Marsh
- Foreshore
- Drain or Transfer

Watercourse level
- On ground surface
- Underground or Elevated
- Level unknown
- General Quality Assessment: Biology
- General Quality Assessment: Chemistry

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	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
11	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	140	SW	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	214	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	359	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site — Identified

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1735	NE	301953 524643	Status: Active Licence No: NW/074/0001/001 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE - LOWER COAL MEASURES - PITTWOOD ROAD Data Type: Point Name: Handy Concrete (Cumbria) Limited	Annual Volume (m^3): 10,010 Max Daily Volume (m^3): 35 Original Application No: - Original Start Date: 28/09/2010 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 28/09/2010 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site — Identified

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1324	NE	301700 524300	Status: Historical Licence No: 2774001001 Details: Non-Evaporative Cooling Direct Source: "Surface, Non-Tidal - North West Region" Point: "DISTINGTON BECK AT LILLYHALL, WORKINGTON" Data Type: Point Name: PECHINEY AVIATUBE LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date:
Not shown	1324	NE	301700 524300	Status: Historical Licence No: 2774001001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "DISTINGTON BECK AT LILLYHALL, WORKINGTON" Data Type: Point Name: PECHINEY AVIATUBE LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date:
Not shown	1324	NE	301700 524300	Status: Historical Licence No: 2774001001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: DISTINGTON BECK AT LILLYHALL, WORKINGTON Data Type: Point Name: PECHINEY AVIATUBE LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: - Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date:
Not shown	1324	NE	301700 524300	Status: Historical Licence No: 2774001001 Details: Non-Evaporative Cooling	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: -

ID	Distance (m)	Direction	NGR	Details	
				Direct Source: Surface, Non-Tidal - North West Region Point: DISTINGTON BECK AT LILLYHALL, WORKINGTON Data Type: Point Name: PECHINEY AVIATUBE LTD	Original Start Date: 29/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site | None identified

Database searched and no data found.

6.6 Source Protection Zones

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

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

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

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
253	E	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.

6.9 River Quality

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

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

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

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

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
24	354	NE	300900 523750	River Name: Lowca Beck Reach: Leeds Br To Fwl(nr Parton) End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A

6.10 Ordnance Survey MasterMap Water Network

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

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

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

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	214 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
4	214 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
2	248 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	248 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	248 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	248 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	249 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	249 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	249 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
7	249 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	249 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	249 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
7	256 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
8	256 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
10	256 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
11	256 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
9	257 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
12	257 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
10	262 SE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
13	262 SE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
11	276 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
12	276	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	E			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
14	276 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
15	276 E	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.4
13	283 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	283 NE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
16	283 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	283 NE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
15	305 SE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.0
18	305 SE	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.0
16	309 SE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	309 SE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	377 SE	Stubsgill Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
Not shown	377 SE	Stubsgill Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 3.3
18	392 S	Stubsgill Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
19	392 S	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.7
Not shown	392 S	Stubsgill Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
Not shown	392 S	Distington Beck Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.7
20	407 S	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	407 S	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	447 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	447 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
22	461 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	461 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	461 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	461 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Ehen-Calder Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

6.11 Surface Water Features

Surface water features within 250m of the study site — Identified

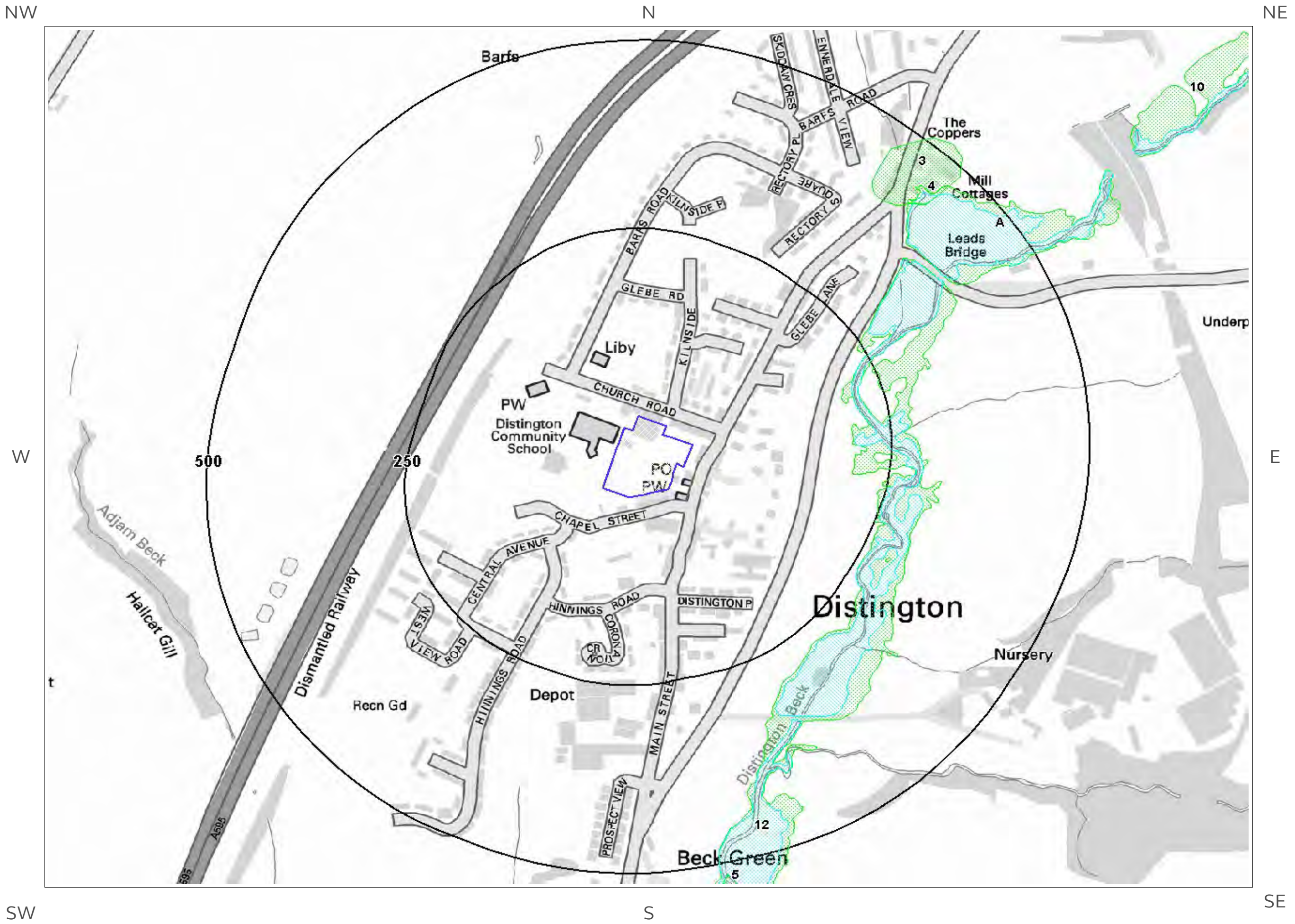
The following surface water records are not represented on mapping:

Distance (m)	Direction
213	E
248	E
249	E

Groundsure
LOCATION INTELLIGENCE

emapsite™

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



© Crown copyright and database rights 2020.
Ordnance Survey licence 100035207.

Site Outline
100
250
Search Buffers (m)
Zone 2 Floodplain
Zone 3 Floodplain
Flood Defences
Area used for Flood Storage
Area Benefiting from Flood Defences

Groundsure
LOCATION INTELLIGENCE

emapsite™

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

Site Outline

100
250
Search Buffers (m)

RoFRaS Rating
- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m — Identified

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

ID	Distance (m)	Direction	Update	Type
1	197	E	19-Nov-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m — Identified

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

ID	Distance (m)	Direction	Update	Type
1	203	E	19-Nov-2019	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite — Very Low

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

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

7.4 Flood Defences

Flood Defences within 250m of the study site — None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

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

---

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site — None identified

---

7.7 Groundwater Flooding Susceptibility Areas

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

Clearwater Flooding or Superficial Deposits Flooding — Clearwater Flooding

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

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

Limited potential

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

7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result — High

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

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

8. Designated Environmentally Sensitive Sites Map

8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site | Identified

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

3

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
1	563	SE	Unknown	Ancient & Semi-Natural Woodland
2	785	SE	Unknown	Ancient & Semi-Natural Woodland
3	829	SE	Unknown	Ancient & Semi-Natural Woodland

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

---

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

9.1.2 Landslides

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

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

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

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site — Low

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

Hazard
Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property possible increase in insurance risk due to soluble rocks.

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site — Negligible

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site — Very Low

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

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

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site — Very Low

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.

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

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site — Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary — None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site — None identified
Guidance: No Guidance Required.

Groundsure
LOCATION INTELLIGENCE

emapsite™

Contact Details

emapsite
Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: **www.environment-agency.gov.uk**
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Copeland Borough Council
Phone: 01946 59 8300
Web: http://www.copeland.gov.uk
Address: The Copeland Centre, Catherine Street, Whitehaven,

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

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

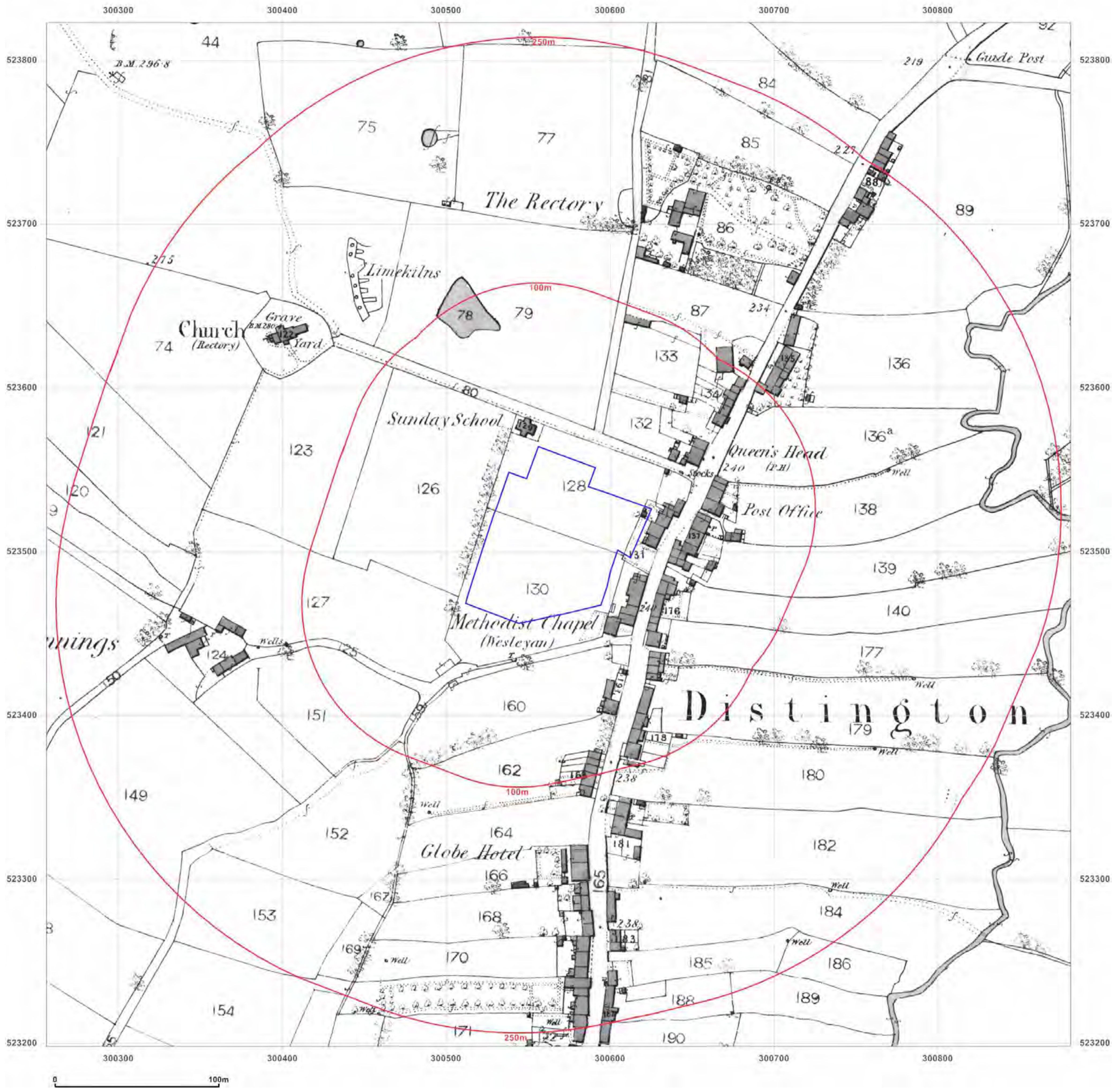
Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:

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

Appendix III

- Historical Map Extracts



Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref:	EMS_584941_784351
Report Ref:	EMS-584941_784351
Grid Ref:	300568, 523510

Map Name:	County Series
Map date:	**1862**
Scale:	1:2,500
Printed at:	1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

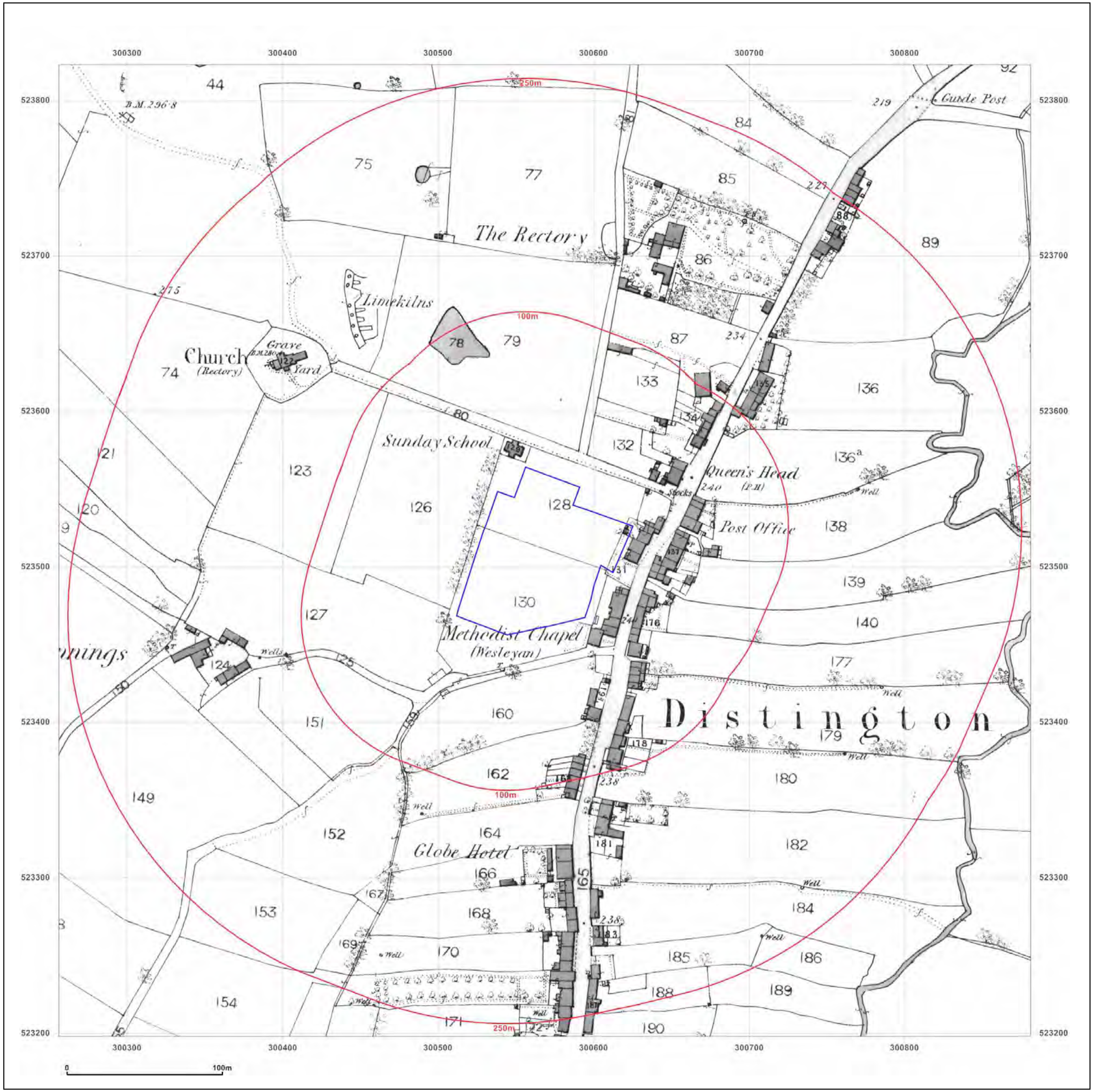
Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: County Series

Map date: 1862

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1862
Revised 1862
Edition N/A
Copyright N/A
Levelled N/A

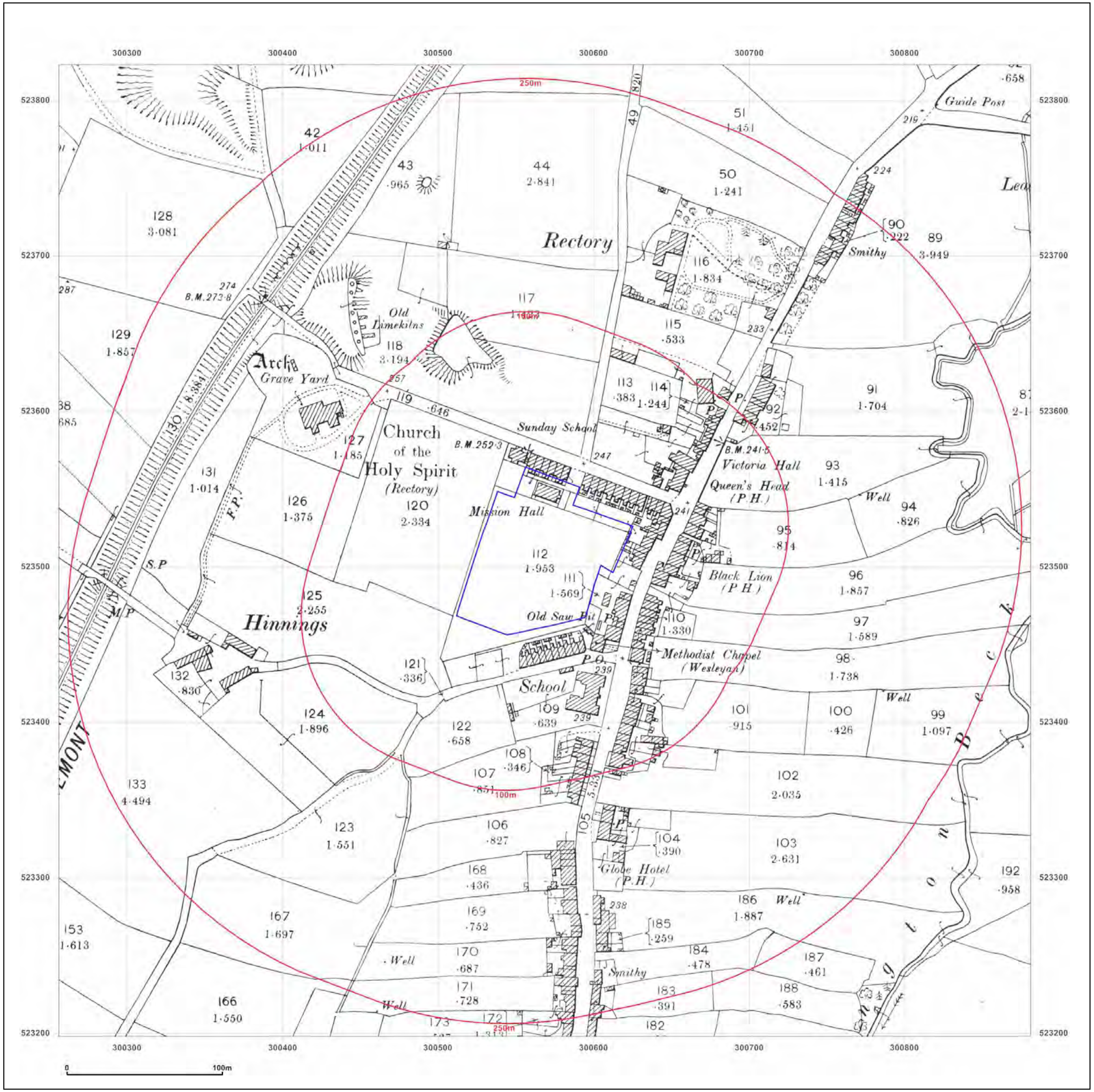
Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: County Series

Map date: **1899**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

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

Groundsure INSIGHTS

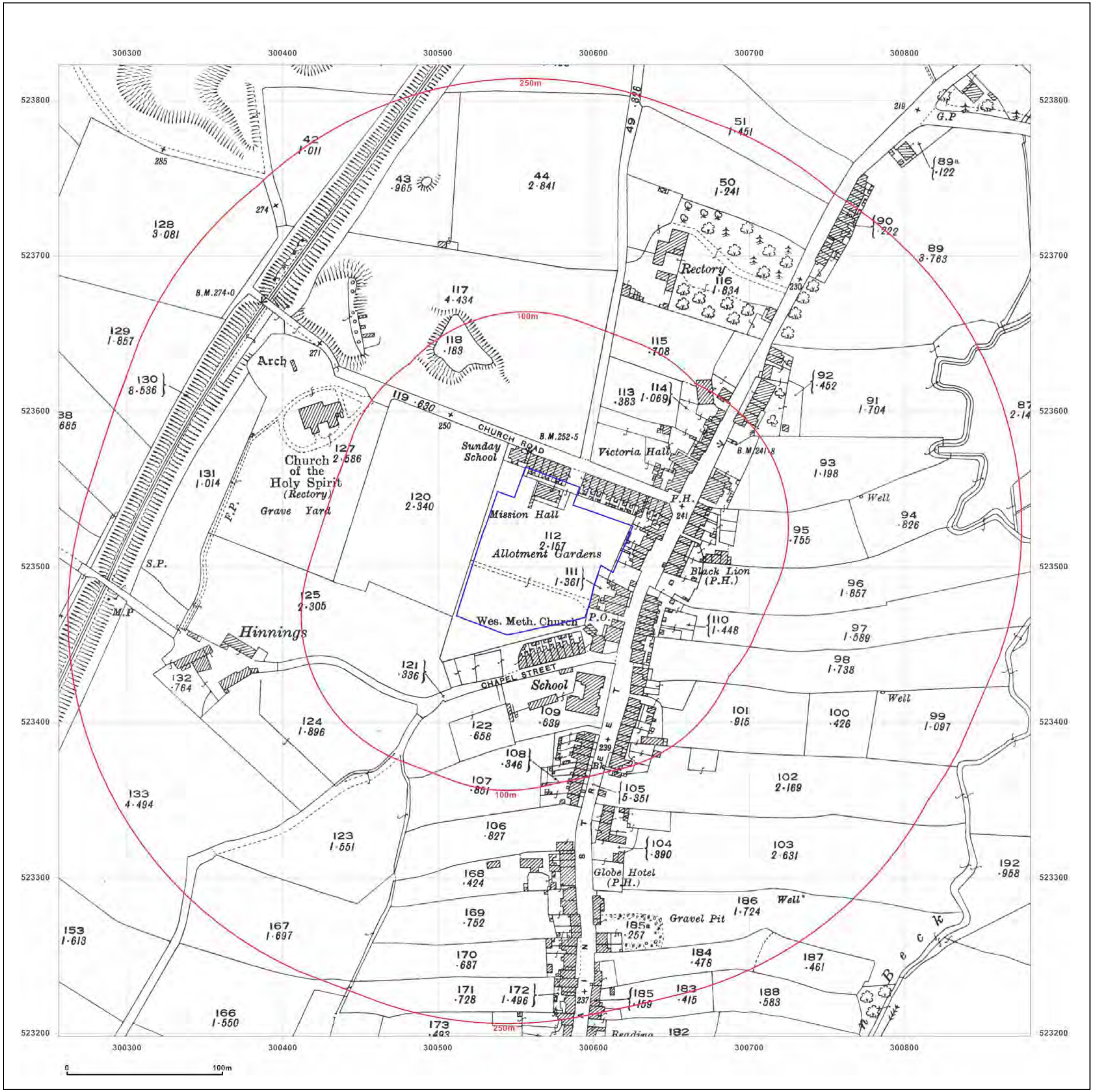
Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



emapsite™

Site Details:

British Legion Site, Church Road,
Distington, Cumbria

Client Ref:	EMS_584941_784351
Report Ref:	EMS-584941_784351
Grid Ref:	300568, 523510

Map Name:	County Series
Map date:	**1925**
Scale:	1:2,500
Printed at:	1:2,500

N
W E
S

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

Groundsure INSIGHTS

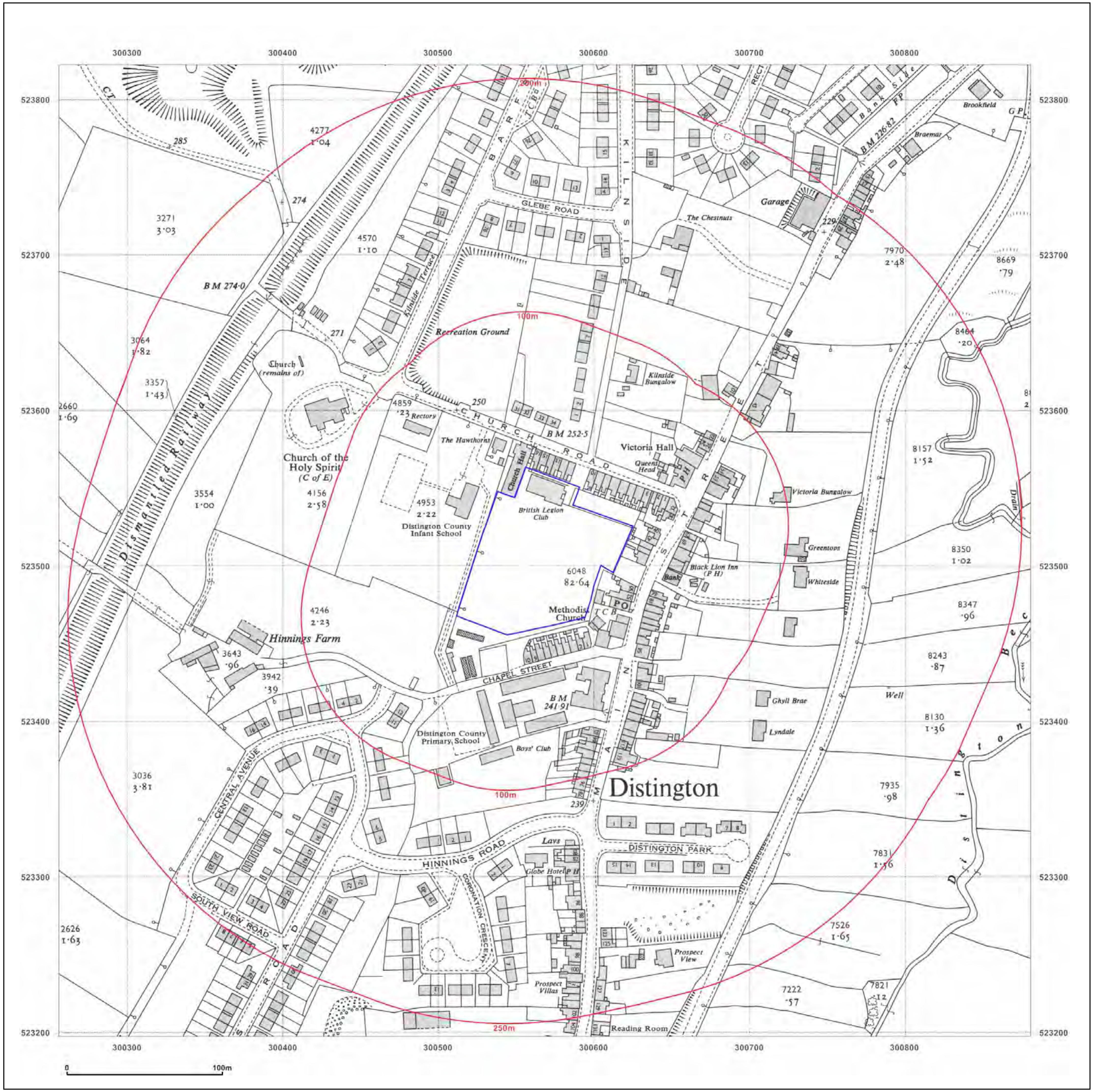
Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



emapsite™

Site Details:

British Legion Site, Church Road,
Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: National Grid

Map date: 1960

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: National Grid

Map date: 1982

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1965
Revised 1982
Edition N/A
Copyright 1982
Levelled 1965

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

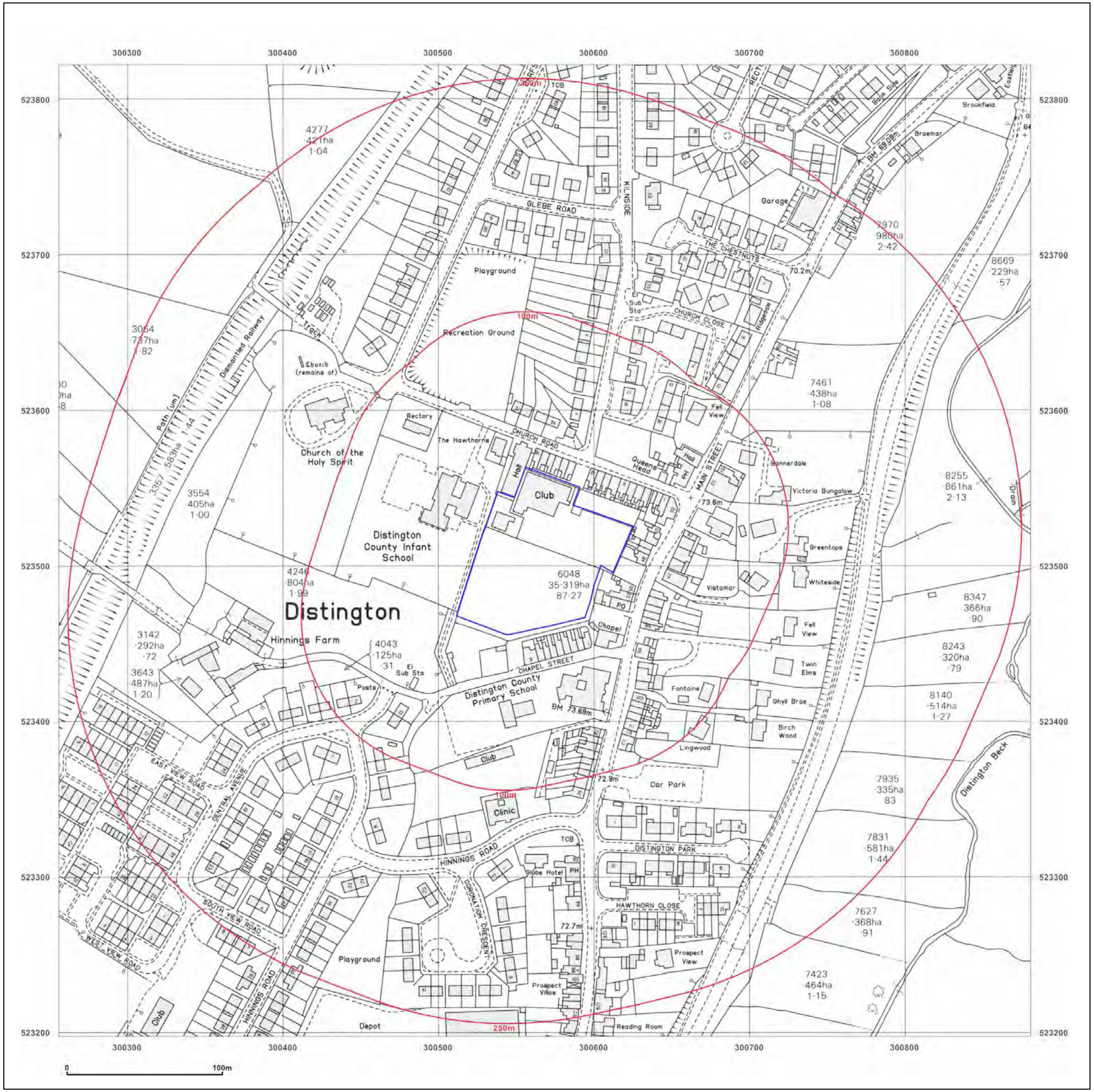
Printed at: 1:2,500

Produced by Groundsure Insights www.groundsure.com

Supplied by: www.emapsite.com sales@emapsite.com

Production date: 02 January 2020

Map legend available at: www.groundsure.com/sites/default/files/groundsure_legend.pdf



emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: National Grid

Map date: **1987**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1987
Revised 1987
Edition N/A
Copyright 1988
Levelled 1965

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

emapsite™

Site Details:

British Legion Site, Church Road,
Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: National Grid

Map date: **1994**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Groundsure INSIGHTS

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

emapsite™

Site Details:

British Legion Site, Church Road, Distington, Cumbria

Client Ref: EMS_584941_784351
Report Ref: EMS-584941_784351
Grid Ref: 300568, 523510

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250

N
W E
S

Groundsure INSIGHTS

Produced by Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

Production date: 02 January 2020

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

GEO Environmental Engineering

GEO Environmental Engineering Ltd
Geotechnical
&
Environmental Drilling Experts
&
Consultants