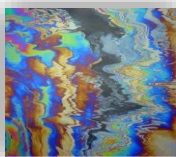




INVESTIGATE



REMEDiate



REGENERATE

TECHNICAL REPORT

**WALKOVER SURVEY
AND DESK STUDY
AT
KERESFORTH HALL FARM.
BARNSELY,
SOUTH YORKSHIRE
FOR
MS RACHEL WILSHAW**

**DESK STUDY NO. NE3698
MAY 2018**



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WALKOVER SURVEY AND DESK STUDY AT KERESFORTH HALL FARM.
BARNSELY, SOUTH YORKSHIRE

CLIENT: MS RACHEL WILSHAW

ENGINEER: ROBERT HALSTAD CHARTERED SURVEYORS & TOWN
PLANNERS (NCW PLANNING & DEVELOPMENT LIMITED)

1. INTRODUCTION

This report has been prepared in accordance with an email dated 27th March 2018 from the Engineer on behalf of the Client.

The brief was set out in our estimate, ref. E5829 and dated, 21st March 2018 and comprises a walkover survey and a desk study report including a historical, geological and environmental appraisal together with a conceptual ground model.

1.1 Site Location and Description

The site is located at Keresforth Hall Farm, Barnsley, South Yorkshire, as indicated on Figure 1. The approximate National Grid Reference of the centre of the site is 433406, 404790.

As shown on Figure 2, the irregular shaped is about 0.20 hectares bounded by Keresforth Hall to the north, The Cottage to the north east and by fields to the east, south and west.

1.2 Proposed Development and Purpose of the Desk Study

We understand that it is proposed to either demolish the barns and build residential dwellings or to convert them.

The purpose of the desk study is to obtain information regarding the sites historical, geological and environmental setting in order to produce a conceptual ground model, to assess the ground conditions, to undertake a preliminary assessment of contamination sources, pathways and receptors relating to potential hazards that exist or will potentially exist on the site and to assess the need for ground investigation.

1.3 Walkover Survey

The walkover survey was undertaken on 28th March 2018. Surface features observed were recorded on a plan of the site together with the positions and directions of photographs taken. The resulting Walkover Survey Plan and site photographs are appended.

The site is located south west of a lane accessed from Keresforth Hall Road. It is bound by a stone brick wall to the north, fields to the east and south and a garden to the west. The site is accessed from the northeast which is a high point that slopes down to the south, in the northern half of the site. The northern stone wall is acting as a retaining wall to the high land to the north of the site. The surface is primarily grassed and the south part of the site is occupied by two main barns. There is a larger one to the south west which is built from block with brick supporting columns. The smaller barn to the south east is open sided with a part block shed to the north containing a static caravan.

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To the southern side of this barn there is a small fenced off area with a large, mature deciduous tree.

The roofing to both of the barns looks to be of potential asbestos cement sheet construction. There is also a discarded sofa and fly tipped material in the eastern barn. A pile of stone to the north of this is covered by brambles and two old metal tanks. Drain covers are also present at the gated entrance of the site.

No visual or olfactory contamination was noted during the walkover survey.

2. DESK STUDY

2.1 Historical Appraisal

The past history of the site has been interpreted from the study of old Ordnance Survey plans supplied by GroundSure, as follows:

TABLE 1 SMALL SCALE SURVEYS

Date	Survey	Scale
1850	CS	1:10,560
1890-1891	CS	1:10,560
1904	CS	1:10,560
1929	CS	1:10,560
1938	OS	1:10,560
1948	OS	1:10,560
1956	OS	1:10,560
1965-1966	OS	1:10,560
1973-1977	OS	1:10,000
1982	OS	1:10,000
1993	OS	1:10,000
2002	OS	1:10,000
2010	OS	1:10,000
2014	OS	1:10,000

TABLE 2 LARGE SCALE SURVEYS

Date	Survey	Scale
1892	CS	1:2,500
1906	CS	1:2,500
1959-1960	OS	1:2,500
1969	OS	1:2,500
1970	OS	1:2,500
1993	OS	1:2,500

CS = County Survey, OS = Ordnance Survey, * Site not covered by the survey.
Extracts of the above surveys are appended.

TABLE 3 HISTORICAL APPRAISAL

Date	On site	Beyond site boundary
1892-1893	The site is undeveloped in a field with only a small unspecified building in the east of the site.	The surrounding area is generally undeveloped with Keresforth Hall (residential) and associated buildings directly to the north. Pump 25m north. An old quarry is depicted 240m to the north west. River 125m south west in a north east to south west orientation.

1906	No change.	Old quarry potentially infilled. Pond 220m to the east.
1929	No visible change. (Poor detail map).	Embankments or raised ground approximately 50m to the east.
1938	No visible change (poor detail map).	No visible change.
1959-1960	The small building in the east has been demolished and open sided barn constructed in the east.	Tennis court directly west of the site. The buildings directly north east of the site once associated with Keresford Hall are now labelled as The Cottage, The Old Cottage and Lancaster house which is 65m to the north east. Pond to the east infilled.
1969-1970	Block-built shed constructed to the north of the open sided barn.	Lancaster House labelled Keresforth Hall Farm.
1993	No change.	No significant change.
2002-2014	Larger block-built barn constructed in the south of the site. (Poor detail map).	No significant change.

We are aware that the buildings in the south of the site have been used for agricultural purposes.

2.2 Geological Appraisal

Artificial/ Made Ground

The GeoInsight Report indicates that there are no records of made ground underlying the site however, as there has been some development in the south and east of the site, some may be expected.

Superficial Geology/ Drift Deposits

The appended GroundSure “GeoInsight Report” indicates that there are no records of superficial deposits underlying the site, however some residual clays from weathering of the rockhead would be expected.

Bedrock

According to the report the site is underlain by mudstone, siltstone and sandstone from the Pennine Middle Coal Measures. These strata have a low to moderate permeability via a fracture flow type. There are also multiple inferred coal seams within the surrounding area of the site with the nearest being 28m to the north east.

The bedded strata are anticipated to be lying subhorizontally and are apparently unaffected by geological faults.

Ground Workings

The GeoInsight Report indicates seven historical surface ground working features within 250m of the site boundary; these being unspecified ground workings and pits and the nearest being about 43m east from the site boundary. In addition, there are twelve features indicating historical underground working within 500m of the site

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boundary, the nearest being a disused colliery about 260m east from the site boundary. Also, thirty-four current ground workings (albeit ceased) are indicated within 500m of the site boundary, the nearest being ground workings related to a colliery about 136m south east from the site boundary.

Mining, Extraction & Natural Cavities

According to the GeoInsight report there are twenty-three historical mining features within 1,000m of the site boundary, the nearest being a disused colliery from 1951 about 260m from the site boundary. Information supplied by the Coal Authority and others indicates that the site is within a Coal Mining area. Information supplied by the British Geological Survey (BGS) and others indicates non-coal mining may have been undertaken beneath the site. This is in the form of localised small scale underground iron ore mining. The potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered.

In view of the above we recommend that a Coal Authority Mining Report for the site is obtained and is used in conjunction to this report to assess the potential risks due to mining, if required by planning conditions.

Natural Ground Subsidence

The GeoInsight Report indicates that the risk from shrinking/ swelling clays is very low, landslides is low, dissolution of soluble rocks is negligible, compressible strata is negligible, collapsible deposits is very low and running sands is negligible.

The low hazard rating of landslides indicates there is a possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place.

Railways and Tunnels

The GeoInsight Report indicates that there are no active or inactive underground or overground railway lines and no railway tunnels within 250m of the site boundary.

The GeoInsight report indicates that the site is within 5km of the route of the High Speed 2 rail project and is not within 500m of the Crossrail 1 rail project.

2.3 Environmental Appraisal

An environmental data search has been carried out by GroundSure and the results are given in the appended "EnviroInsight Report". A summary is as follows:

IPC/ IPPC/ Part 1(A) Authorisations

The environmental data report indicates that there are no IPC, IPPC or Part 1(A) Authorisations within 500m of the site boundary.

Potentially Harmful Discharges

According to the environmental data report there are no records of potentially harmful discharges to public sewers or controlled waters within 500m of the site boundary.

List 1 and List 2 Dangerous Substances Inventory Sites

The environmental data report indicates that there are no records of List 1 or List 2 Dangerous Substances Inventory Sites within 500m of the site boundary.

Part A(2) and Part B Authorisations

According to the environmental data report there are no Part A(2) or Part B Authorisations related to air pollution within 500m of the site boundary.

Radioactive Substance Licences

The environmental data report indicates that there are no records of Category 3 or Category 4 Radioactive Substance Licences within 500m of the site boundary.

Discharges

According to the environmental data report there are eight licensed discharge consents within 500m of the site boundary with the nearest being 234m to the north east.

Planning Hazardous Substances Consents and Enforcements

There are no records of Planning Hazardous Substances Consents and Enforcements within 500m of the site boundary according to the environmental data report.

Dangerous or Hazardous Sites

Records of Control of Major Accident Hazards (COMAH) and Notification of Installations Handling Hazardous Substances (NIHHS) indicate that there are no dangerous or hazardous sites within 500m of the site boundary.

Pollution Incidents

The environmental data report indicates that there have been no pollution incidents within 500m of the site boundary.

Contaminated Land

There are no sites determined as contaminated under Section 78R of the Environmental Protection Act (1990) within 500m of the site boundary.

Registered Landfill Sites

According to the environmental data report there are no registered landfill sites within 250m of the site boundary.

Unregistered Landfill Sites

The historical appraisal has identified four areas of potentially infilled land within 250m of the site boundary in the form of unspecified ground workings and unspecified pits which if infilled with unknown material may be a source of ground gas. The nearest being unspecified ground working from 1951, 43m to the east. However, due to their age and distance in our opinion, the risk would be negligible.

Other Waste Treatment, Transfer and Disposal Sites

According to the environmental data report there are no waste treatment, transfer and disposal sites within 500m of the site boundary.

Current Land Use

Current potentially contaminative industrial land uses are recorded by the environmental data report. Within the site boundary are none. Within 250m of the site boundary there are none.

Past Land Use

Past potentially contaminative land uses are identified in the historical appraisal and include, in addition to the above, fourteen within 250m of the site. These are unspecified pumps, pits and ground workings with the nearest being an unspecified pump on site from 1851. The Historical Tank Database indicates there are no records of tanks within 250m of the site boundary. The Historical Energy Features Database indicates that there are no records of electricity substations within 250m of the site boundary.

Hydrogeology and Hydrology

Designation of aquifers in the environmental data report are in accordance with the Environment Agency's April 2010 Groundwater Protection Policy.

There are no records of superficial/ drift deposits underlying the site.

The bedrock comprises permeable layers which are indicated to be a Secondary A aquifer. A Secondary A aquifer comprises permeable layers capable of supporting water supplies at a local scale and in some cases forming an important source of base flow to rivers.

According to the environmental data report there are no surface water abstraction licences, six groundwater abstraction licences and four potable water abstraction licences within 2,000m of the site boundary. With both of the nearest groundwater and potable water abstraction licenses being 1,219m to the north.

There are no Source Protection Zones, set up to protect a water source within 500m of the site of boundary, present according to the environmental data report.

The environmental data report indicates that there is a watercourse about 120m to the south east of the site boundary which is an unnamed tertiary river.

There are no Floodplains, Flood Defences and/ or Flood Storage Areas present within the 250m of the site boundary according to the environmental data.

According to the environmental data report there are British Geological Survey groundwater flooding susceptibility areas within 50m of the site boundary and these relate to "Clearwater Flooding".

Ground conditions, as determined from the British Geological Survey records, indicate that the highest potential susceptibility to groundwater flooding in the area of the site is "Limited Potential".

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The confidence level for the above classification is Low.

Environmental Sensitivity

According to the environmental data report the site is within a Nitrate Vulnerable Zone.

There are also 3 records of ancient woodland within 2,000m of the site boundary with the nearest being 1,552m to the south west.

There is also one record of a Local Nature Reserve within 2,000m of the site boundary which is 1,241m to the south east.

The environmental data report also indicates that there are two records of Greenbelt Land within 2,000m of the site with the nearest being the Liverpool, Manchester and West Yorkshire Greenbelt that is on site.

Radon

Public Health England (PHE) and the British Geological Survey indicate that the site is in a Radon Affected Area where between 1% and 3% of surrounding properties are above the Action Level. The Action Level is 200 Becquerels/ m³.

Also, the GroundSure "GeoInsight Report" indicates that for new properties or extensions to existing properties, in accordance with the Building Research Establishment (BRE) publication BR211, no radon protection measures are required.

2.4 Conceptual Ground Model

A conceptual ground model of a site and its environs uses available information to form a preliminary assessment of contamination sources, pathways and receptors, and the significance of hazards that exist or will potentially exist on the site. Its purpose is to identify the relationships between sources of contamination, pathways and receptors to allow exposure scenarios to be determined and thereby aid in the design of any intrusive investigation. It also forms the basis of the risk assessment.

Sources

Potential sources of contamination identified in the desk study are:

- General contaminants in possible made ground underlying the site from building and demolition processes.
- Potential hydrocarbon contamination through spillage and leakage of any vehicles that have been on site.
- Agricultural and possible livestock use of the barn.
- Any asbestos that may have been used in building processes.
- Ground gas present from potential made ground on site and the unspecified ground workings to the east of the site.

Pathways

Potential pathways between sources and receptor for future development are:

- Direct contact with and ingestion of contaminated soils and inhalation of dust by site operatives during construction and by end users.
- Migration of contaminants to the underlying aquifer.
- Ingestion of contaminated vegetable produce grown in potential garden areas.
- Uptake of contaminated groundwater by plants grown in garden areas.
- Accumulation of ground gases in enclosed spaces.

Receptors

Potential receptors for the proposed development are:

- Site operatives during construction.
- The end users of the site.
- Controlled waters including the underlying aquifer.
- Plants grown in garden areas.

Conclusions

An appraisal of the sources, pathways and receptors has been considered and we have produced a conceptual ground model based upon the available information, as follows:

TABLE 4 CONCEPTUAL GROUND MODEL

Potential Source	Nature of Hazard	Contaminants Associated with the Source	Pathway	Receptor	Preliminary Risk Rating
Made Ground (if present on site)	Contaminants in Made Ground	<u>Gen. Contaminants</u> Arsenic Cadmium Chromium Lead Mercury Nickel Selenium Boron Copper Zinc Cyanide Sulphide Sulphate pH Phenols Polynuclear Aromatic Hydrocarbons (PAH) Total Petroleum Hydrocarbons (TPH)	Ingestion of soil	Site Operatives	Very Low
			Ingestion of dust	End Users	
			Ingestion of contaminated vegetable produce		
			Dermal contact		
			Inhalation of dust		
			Inhalation of vapours		
			Uptake via contaminated groundwater	Vegetation	Very Low
			Vertical and lateral movement of mobile contaminants to surface water and groundwater	Controlled Waters	Very Low
			Direct contact	Structures and Services	Very Low
Asbestos on/ in ground	Asbestos fibres	Asbestos fibres	Inhalation of fibres	Site Operatives End Users	Moderate

TABLE 4 (Cont'd) CONCEPTUAL GROUND MODEL

Potential Source	Nature of Hazard	Contaminants Associated with the Source	Pathway	Receptor	Preliminary Risk Rating
Tanks/ Machinery/ Vehicles	Fuel/ oil spillage and/or leakage from machinery, fuel/oil tanks and/or vehicles	Total Petroleum Hydrocarbons (TPH) and/ or Benzene/ Toluene/ Ethylbenzene/ Xylene (BTEX)	Ingestion of soil	Site Operatives	Very Low
			Ingestion of dust	End Users	
			Ingestion of contaminated vegetable produce		
			Dermal contact		
			Inhalation of dust		
			Inhalation of vapours		
			Uptake via contaminated groundwater	Vegetation	Very Low
			Vertical and lateral movement of mobile contaminants to surface water and groundwater	Controlled Waters	Very Low
			Direct contact	Structures and Services	Very Low
Landfill (registered/ unregistered)	Ground Gas (Asphyxiation, fire and explosion)	Methane Carbon Dioxide	Inhalation of gas Ignition of gas	Site Operatives End Users	Negligible

TABLE 4 (Cont'd) CONCEPTUAL GROUND MODEL

Livestock	Pathogens and Bacteria in Organic Residues	Pathogens Bacteria	Ingestion of soil Ingestion of dust Ingestion of contaminated vegetable produce Dermal contact Inhalation of dust Inhalation of vapours	Site Operatives End Users	Low
			Uptake via contaminated groundwater	Vegetation	Low
			Vertical and lateral movement of mobile contaminants to surface water and groundwater	Controlled Waters	Low
Agricultural site usage	Use of/ spillage/ leachate of Pesticides	Pesticides	Ingestion of soil Ingestion of dust Ingestion of contaminated vegetable produce Dermal contact Inhalation of dust Inhalation of vapours	Site Operatives End Users	Low
			Uptake via contaminated groundwater	Vegetation	Low
			Vertical and lateral movement of mobile contaminants to surface water and groundwater	Controlled Waters	Low

The conceptual ground model indicates that a nominal ground investigation is required to assess the ground conditions. The ground investigation should obtain soil and, where possible, water samples for contamination analysis. Should fibres or friable asbestos material be found on site during the investigation it should also be sampled and analysed.

In addition, the conceptual ground model indicates that ground gases might be present if made ground is found to a significant depth. If a significant depth is found then gas standpipes should be installed and monitored over an extended period of time to allow for an assessment to be made.

2.5 General

No consideration has been given to flora and fauna as this was outside our brief.

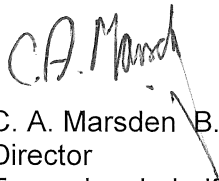
This Phase I walkover survey and desk study is to be followed by a Phase II ground investigation. It should be noted that dependent upon the findings of the ground investigation a Phase III remediation statement and Phase IV: validation with report may be required.

We trust that this report fulfils your present requirements but if you have any queries or we can be of further assistance please contact the undersigned or Mr David Simpson at our Ossett office.

SUB SURFACE CONSULTANTS LIMITED
REPORT No. NE3698
MAY 2018



D. A. Fisher B.Sc.(Hons).
Geoenvironmental Engineer
For and on behalf of
Sub Surface Consultants Limited



C. A. Marsden B.Sc.(Hons.), C.Eng., M.I.C.E.
Director
For and on behalf of
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PHOTOGRAPHS



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Photographs

Site: KERESFORTH HALL FARM, BARSNLEY, SOUTH YORKSHIRE

Client: MS RACHEL WILSHAW

Engineer: ROBERT HALSTEAD CHARTERED SURVEYORS & TOWN PLANNERS

Job No.

NE3698

Sheet

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Survey Date

28/03/18

WALKOVER SURVEY PHOTOGRAPHS



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WALKOVER SURVEY PHOTOGRAPHS



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Survey Date

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WALKOVER SURVEY PHOTOGRAPHS



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Survey Date

28/03/18

WALKOVER SURVEY PHOTOGRAPHS



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NE3698

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Survey Date

28/03/18

WALKOVER SURVEY PHOTOGRAPHS



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GEOINSIGHT REPORT

Address: Agricultural Barn, Keresforth Hall Drive, Kingstone, S70 6NH

Date: 27 Mar 2018

Reference: CMAPS-CM-700844-4199-270318GEO

Client: CENTREMAPS



Aerial Photograph Capture date: 07-Jun-2013

Grid Reference: 433406,404790

Site Size: 0.20ha

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Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslide 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?	Yes

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?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

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

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

Yes

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

Yes

Section 3: Radon

3. Radon

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

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	2	5	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	12	11
4.3 Current Ground Workings	0	0	7	27	39

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	12	11
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*	1	0	1	0	1
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

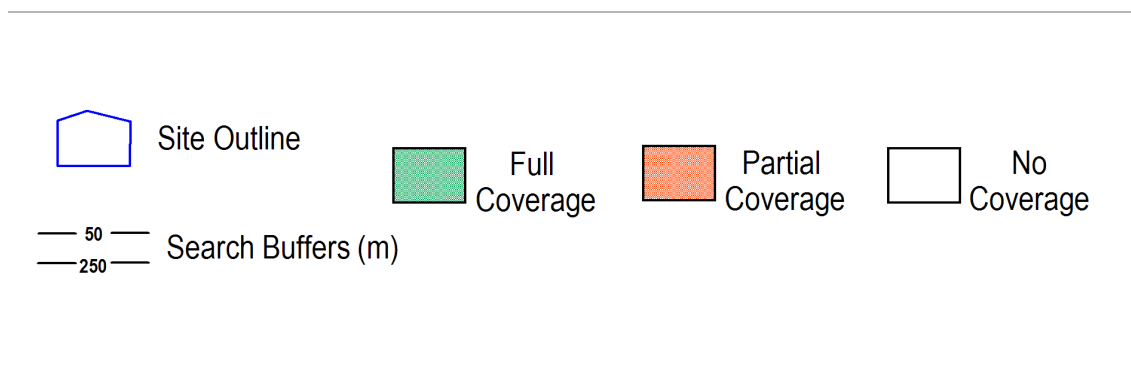
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Low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

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	179.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1555.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1567.0	Some deposits are mapped	Full	Full	No coverage

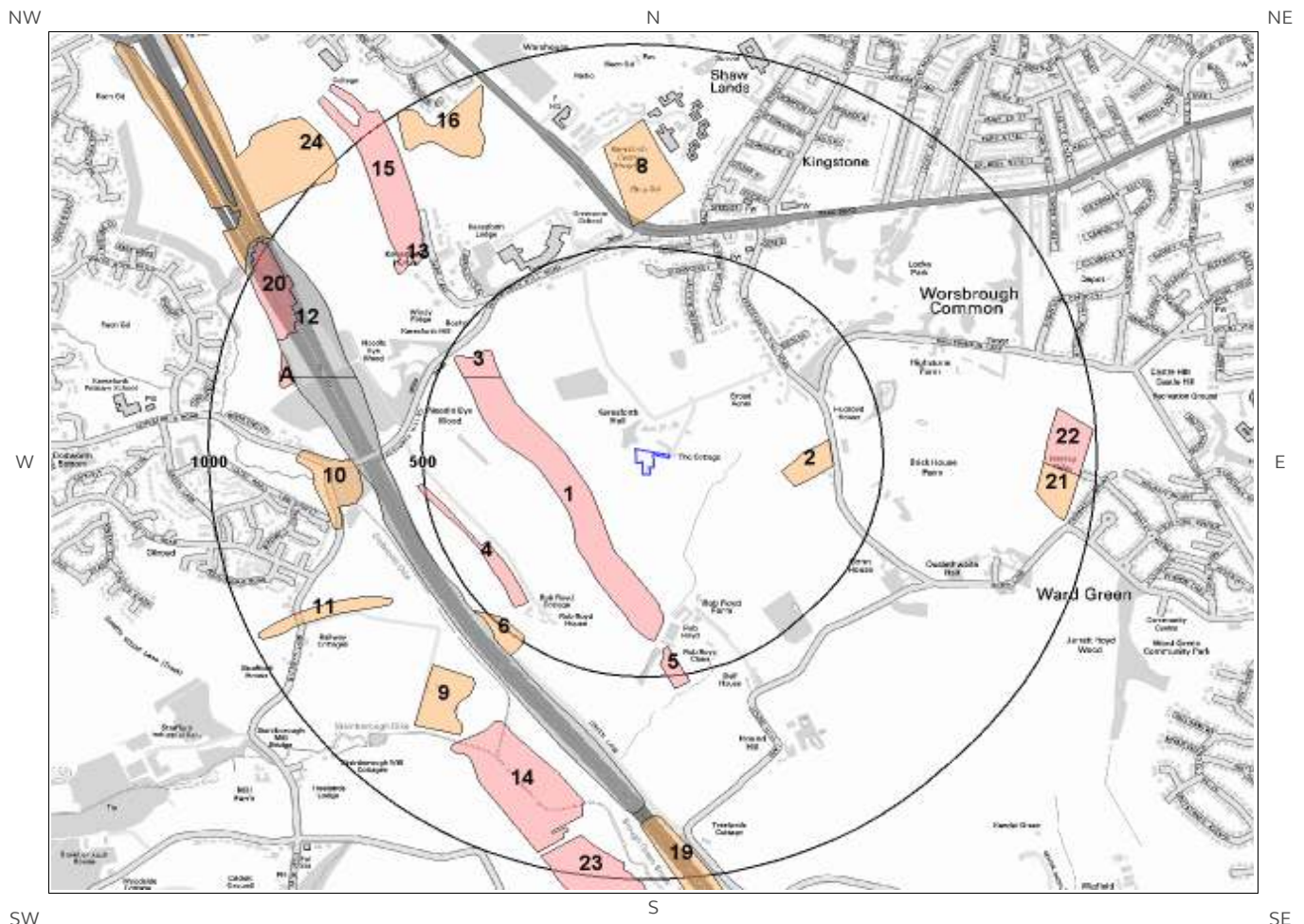
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

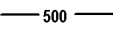
1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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

1. Geology 1:10,000 scale

1.1 Artificial Ground

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

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	128.0	SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	263.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	363.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	390.0	SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	425.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	484.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	485.0	SW	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

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

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.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
2	4.0	W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
3T	29.0	NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4	39.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	102.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6Z	122.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7	179.0	N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
8	181.0	N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9A	195.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
10	208.0	E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
11W	231.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12C	253.0	E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
13A	264.0	NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14	288.0	NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15B	297.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
16	306.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
17B	312.0	NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
18C	313.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
19E	321.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
20	337.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
21I	340.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
22D	343.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
23D	352.0	NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
24E	375.0	E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25F	388.0	NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
26E	392.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
27	406.0	E	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
28	409.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
29F	416.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
30G	418.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
31G	418.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
32H	420.0	SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
33G	427.0	E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
34	430.0	NE	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
35AC	431.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
36AD	435.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
37H	436.0	SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
38G	442.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
39AA	447.0	E	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
40I	451.0	NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
41AG	484.0	W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
42	490.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
43AE	491.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
44J	492.0	E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
45	493.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
46J	500.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

1.3.2 Linear features

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

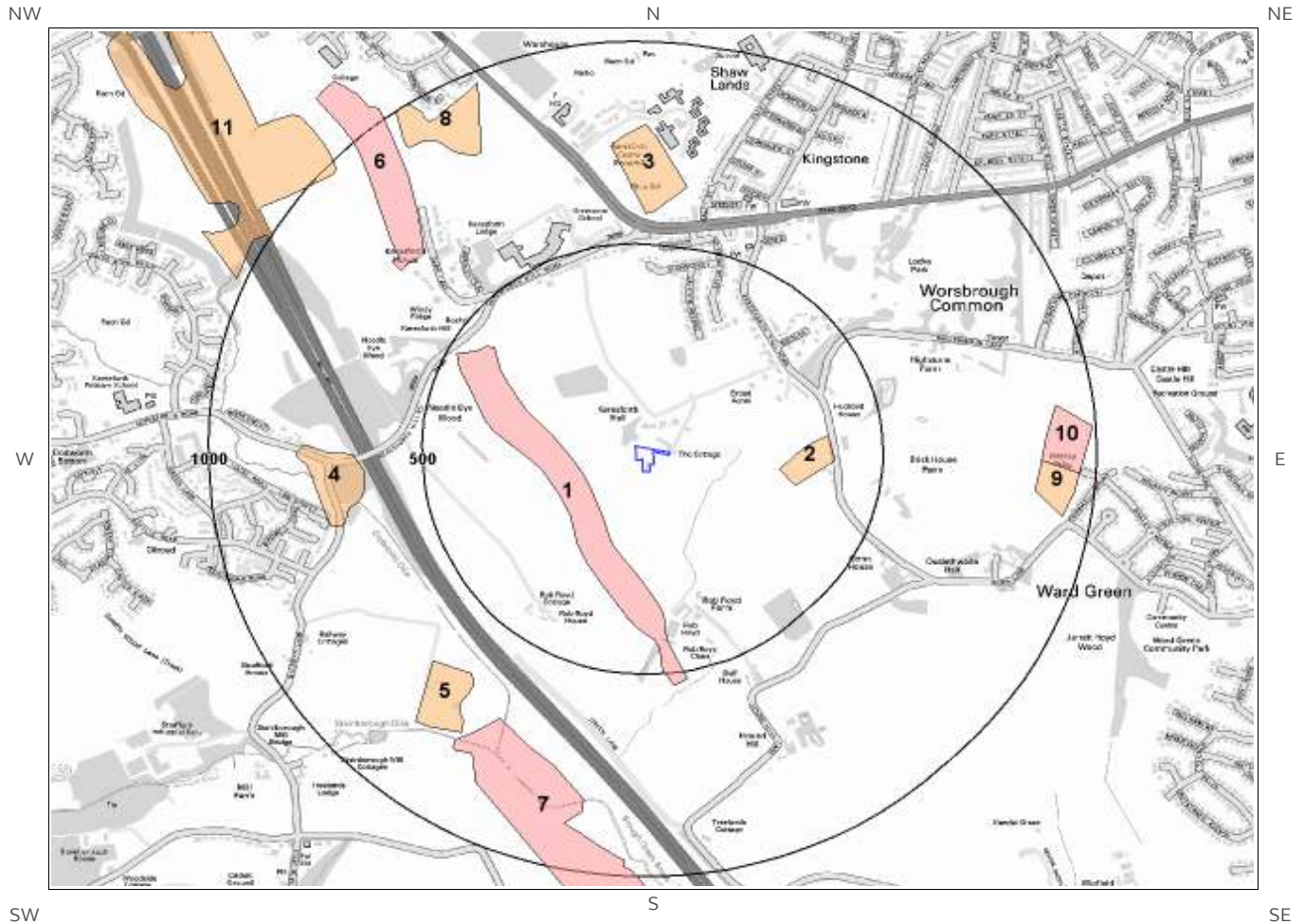
ID	Distance (m)	Direction	Category Description	Feature Description
113V	28.0	SW	ROCK	Coal seam, observed
114T	29.0	NE	ROCK	Coal seam, observed
115U	128.0	SW	ROCK	Coal seam, observed
116	148.0	NE	ROCK	Coal seam, observed
117U	148.0	SW	ROCK	Coal seam, observed
118	160.0	SW	ROCK	Coal seam, observed
119	161.0	W	ROCK	Coal seam, observed
120V	161.0	W	ROCK	Coal seam, observed
121	166.0	W	ROCK	Coal seam, observed
122	194.0	N	ROCK	Coal seam, inferred
123A	195.0	NW	ROCK	Coal seam, inferred
124W	199.0	SW	ROCK	Coal seam, observed
125W	210.0	SW	ROCK	Coal seam, observed
126X	284.0	W	ROCK	Coal seam, observed
127X	284.0	W	ROCK	Coal seam, observed
128W	292.0	SW	ROCK	Coal seam, observed
129B	304.0	NW	ROCK	Coal seam, inferred
130C	321.0	E	ROCK	Coal seam, observed
131D	343.0	NE	ROCK	Coal seam, inferred
132AB	348.0	NW	ROCK	Coal seam, inferred
133Y	363.0	NW	ROCK	Coal seam, observed
134Y	369.0	NW	ROCK	Coal seam, observed
135Z	390.0	SW	ROCK	Coal seam, observed
136Y	397.0	NW	ROCK	Coal seam, observed
137E	405.0	E	ROCK	Coal seam, observed
138Y	417.0	NW	ROCK	Coal seam, observed
139AA	418.0	E	FAULT	Normal fault, inferred
140	425.0	S	ROCK	Coal seam, observed
141AB	426.0	NW	ROCK	Coal seam, inferred
142	430.0	NE	ROCK	Coal seam, inferred
143	432.0	W	ROCK	Coal seam, observed
144AC	435.0	SE	FAULT	Normal fault, inferred
145Z	435.0	SW	ROCK	Coal seam, observed
146AC	439.0	E	ROCK	Coal seam, observed
147H	443.0	SE	ROCK	Coal seam, observed
148I	451.0	NW	ROCK	Coal seam, inferred
149I	451.0	NW	ROCK	Coal seam, inferred
150AD	491.0	E	FAULT	Normal fault, inferred
151AE	491.0	E	ROCK	Coal seam, observed

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

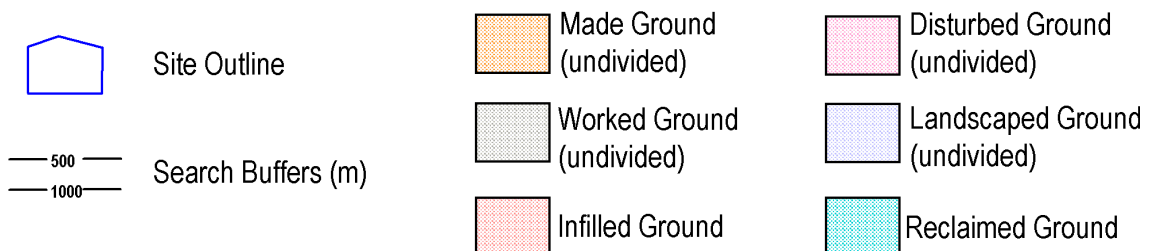
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 087

2.1.1 Artificial/ Made Ground

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

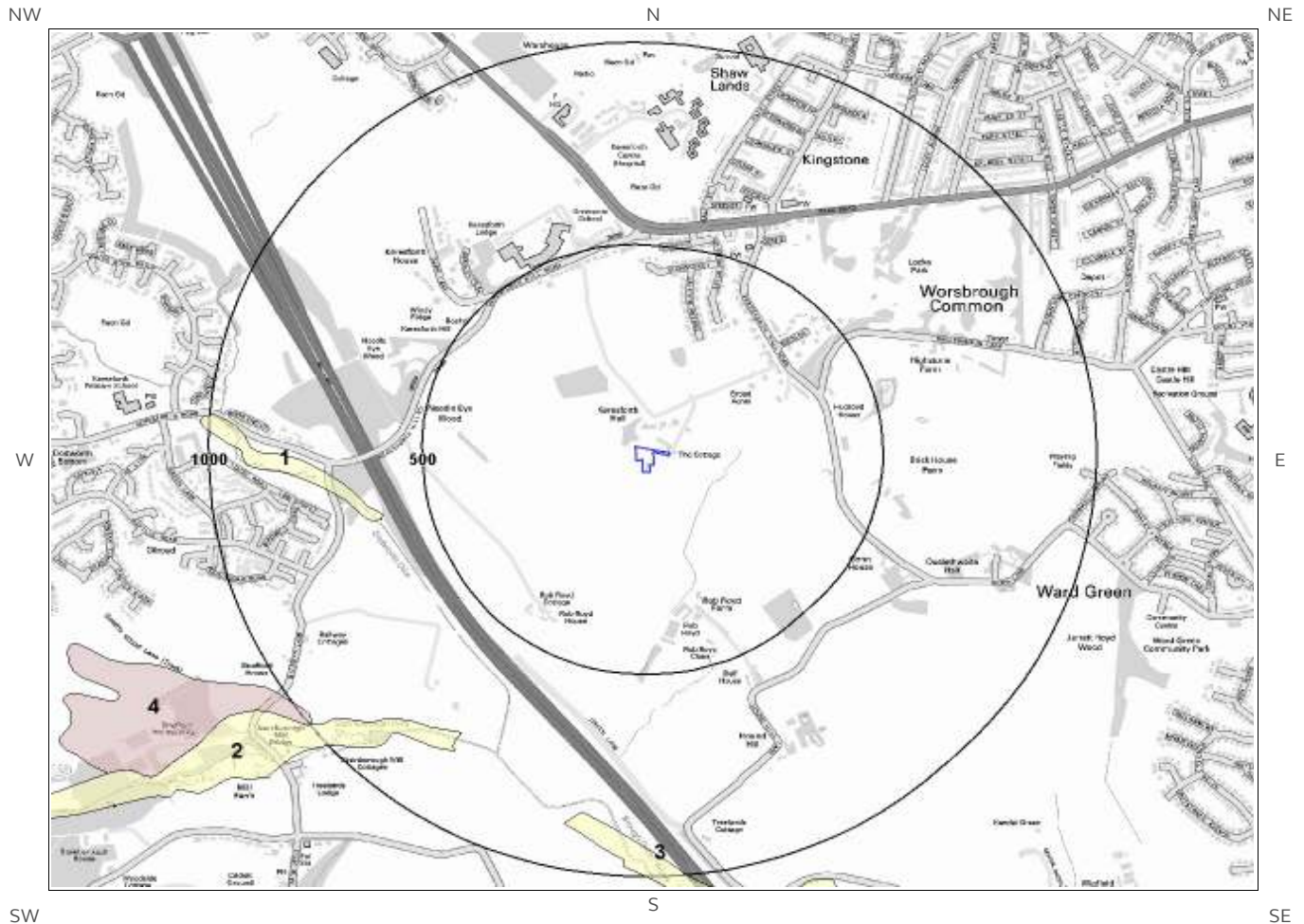
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	127.0	SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	260.0	E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.

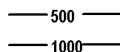
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? No

Database searched and no data found.

2.2.2 Permeability of Superficial Ground

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

Database searched and no data found.

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

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

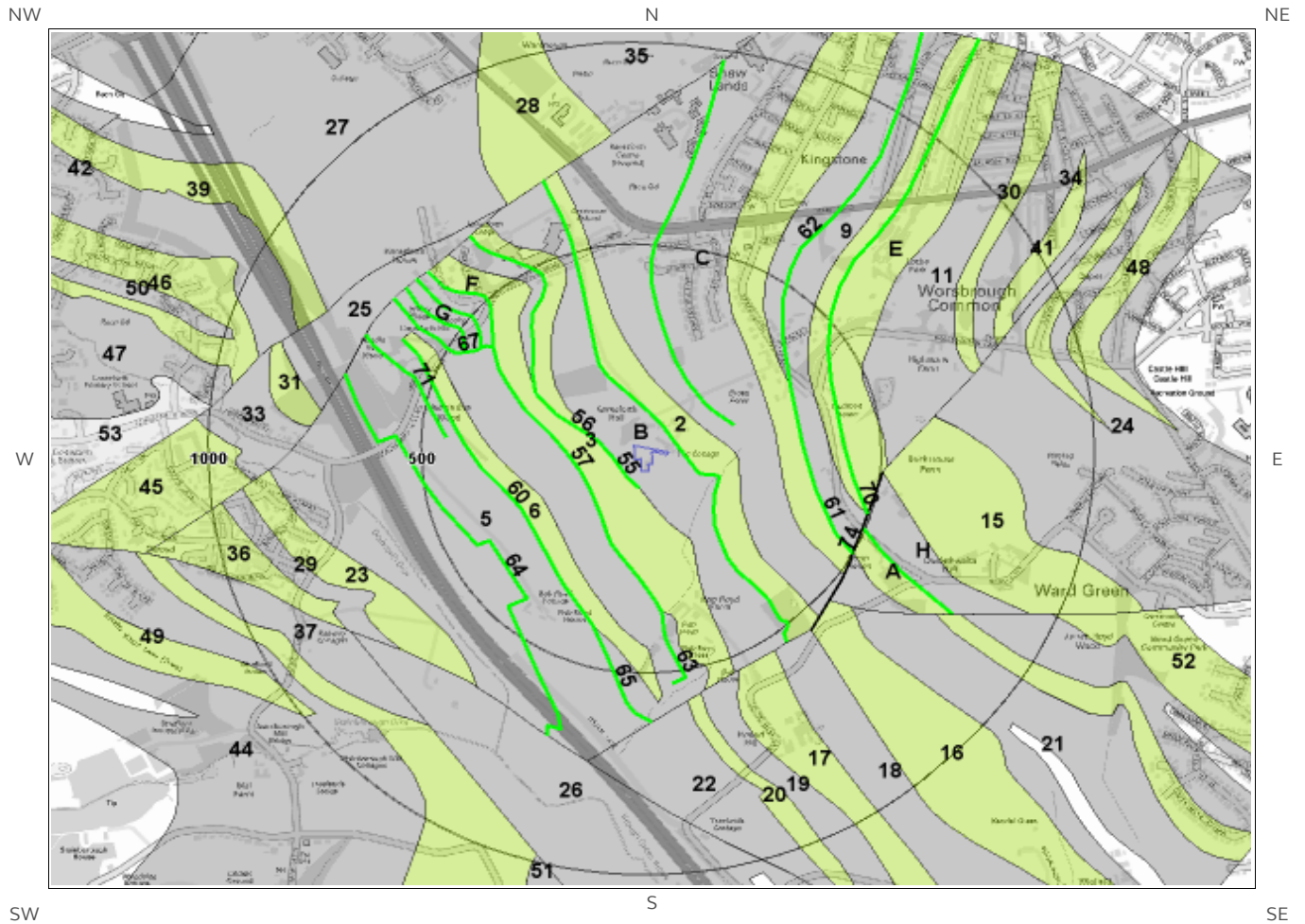
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

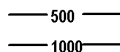
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



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: 087

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
1B	0.0	On Site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	28.0	NE	BNR-SDST	BARNSELY ROCK - SANDSTONE	WESTPHALIAN
3	35.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
4C	100.0	NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	127.0	SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	237.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	254.0	E	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
8D	267.0	NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	314.0	E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10E	368.0	E	KNR-SDST	KENT'S ROCK - SANDSTONE	WESTPHALIAN
11	490.0	E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12H	491.0	E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13A	492.0	E	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
14A	500.0	SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

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	Moderate	Low

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
28.0	NE	Fracture	High	Moderate
35.0	SW	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
54B	28.0	NE	ROCK	Coal seam, inferred
55	35.0	SW	ROCK	Coal seam, inferred
56	85.0	W	ROCK	Coal seam, inferred
57	127.0	SW	ROCK	Coal seam, inferred
58C	148.0	NE	ROCK	Coal seam, inferred
59D	267.0	NW	ROCK	Coal seam, inferred
60	292.0	SW	ROCK	Coal seam, inferred
61	314.0	E	ROCK	Coal seam, inferred
62	330.0	NE	ROCK	Coal seam, inferred
63	353.0	S	ROCK	Coal seam, inferred
64	396.0	SW	ROCK	Coal seam, inferred
65	399.0	S	ROCK	Coal seam, inferred
66E	409.0	E	ROCK	Coal seam, inferred
67	411.0	NW	ROCK	Coal seam, inferred
68F	411.0	NW	ROCK	Coal seam, inferred
69F	433.0	NW	ROCK	Coal seam, inferred
70	439.0	E	ROCK	Coal seam, inferred
71	441.0	W	ROCK	Coal seam, inferred
72G	459.0	NW	ROCK	Coal seam, inferred
73G	478.0	NW	ROCK	Coal seam, inferred
74	492.0	E	FAULT	Fault, inferred
75H	492.0	E	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

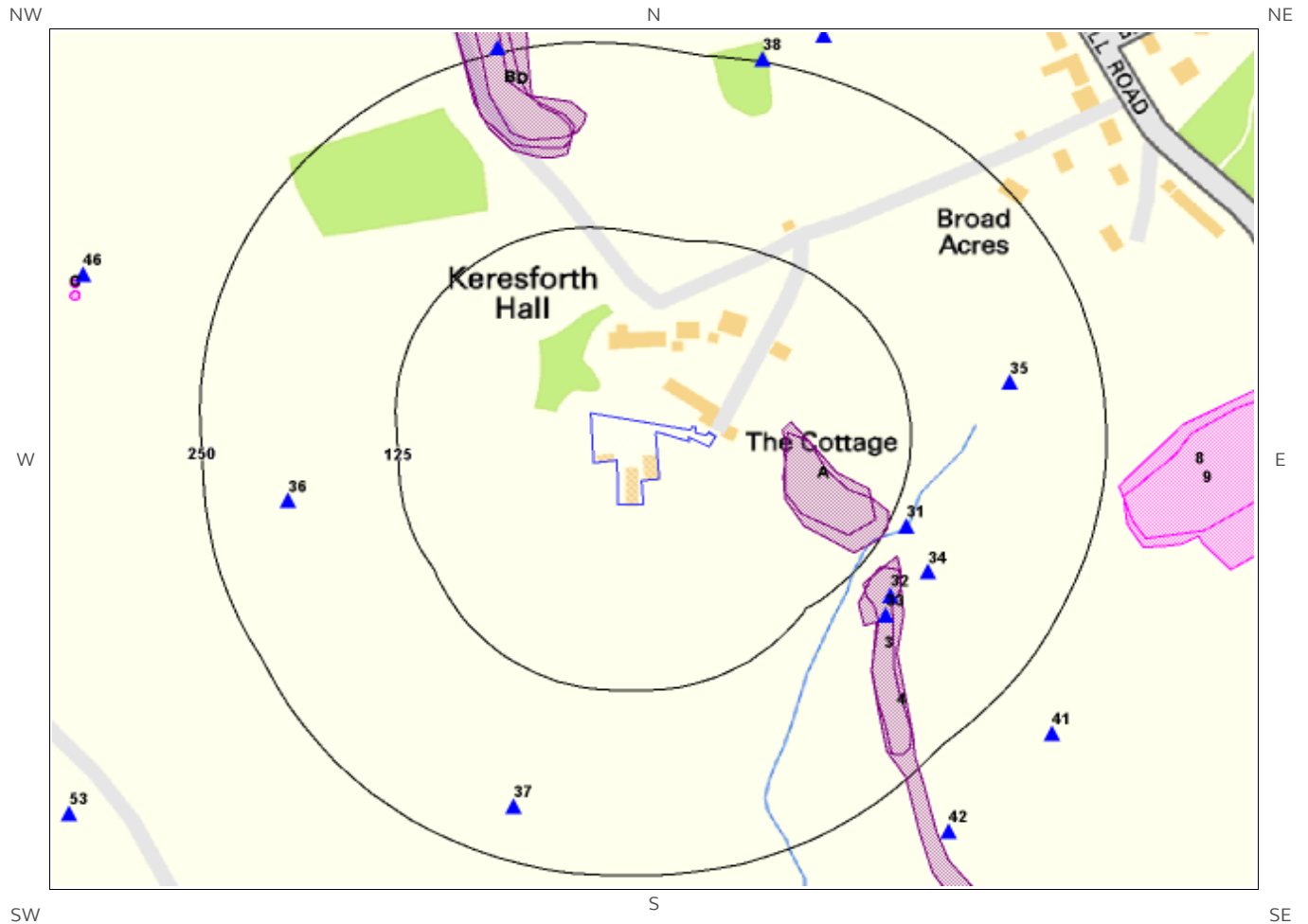
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

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

3.2 Radon Protection

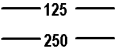
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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

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
1A	43.0	E	433518 404776	Unspecified Ground Workings	1951
2A	45.0	E	433523 404767	Unspecified Pit	1938
3	135.0	SE	433555 404657	Unspecified Pits	1951
4	135.0	SE	433586 404524	Unspecified Ground Workings	1938
5B	174.0	N	433280 405148	Unspecified Pits	1938
6B	180.0	N	433282 405146	Unspecified Pits	1951
7D	187.0	N	433304 405073	Unspecified Pit	1966

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
8	260.0	E	433765 404792	Disused Colliery	1951
9	264.0	E	433769 404777	Disused Colliery	1938
10C	336.0	W	433036 404900	Unspecified Old Shaft	1938
11C	338.0	W	433036 404908	Unspecified Old Shaft	1951
Not shown	426.0	N	433431 405244	Air Shaft	1938

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	428.0	N	433431 405247	Air Shaft	1951
Not shown	447.0	SW	433002 404187	Disused Colliery	1977
Not shown	448.0	SW	433047 404260	Colliery	1951
Not shown	461.0	SW	433039 404356	Colliery	1938
Not shown	461.0	SW	433039 404356	Colliery	1904
Not shown	487.0	SW	433077 404334	Unspecified Mine	1965
Not shown	494.0	W	432794 404732	Colliery	1938
Not shown	539.0	W	432796 404725	Drift	1938
Not shown	677.0	SE	434023 404442	Unspecified Old Shafts	1951
Not shown	679.0	SE	434017 404431	Unspecified Old Shafts	1938
Not shown	679.0	SE	434017 404431	Unspecified Old Shafts	1904
Not shown	683.0	SE	434025 404434	Disused Air Shafts	1977
Not shown	687.0	SE	434030 404437	Unspecified Old Shafts	1951
Not shown	687.0	SE	434025 404428	Unspecified Old Shafts	1938
Not shown	687.0	SE	434025 404428	Unspecified Old Shafts	1904
Not shown	692.0	SE	434032 404428	Disused Air Shafts	1977
Not shown	712.0	SE	433942 404288	Unspecified Old Shaft	1938
Not shown	712.0	SE	433942 404288	Unspecified Old Shaft	1904

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
31	136.0	SE	433567 404744	Coal, Deep	Hound Hill Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
32	153.0	SE	433557 404697	Coal, Deep	Hound Hill Colliery Drift	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
33	160.0	SE	433554 404684	Coal, Deep	Hound Hill Colliery Drift	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
34	163.0	SE	433581 404713	Coal, Deep	Hound Hill Colliery Shaft	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
35	191.0	E	433633 404841	Coal, Deep	Hound Hill Colliery Drift	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
36	197.0	W	433172 404761	Coal, Surface Mined	Keresforth 1 & 2 OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
37	214.0	S	433316 404555	Coal, Surface Mined	Keresforth 1 & 2 OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
38	251.0	N	433475 405059	Coal, Deep	Keresforth Hill Shaft	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
39D	254.0	N	433306 405067	Coal, Deep	Keresforth Hill Shaft	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
40	276.0	N	433514 405075	Coal, Deep	Kingston Main Colliery	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
41	292.0	SE	433660 404604	Coal, Deep	Hound Hill Colliery Shaft	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
42	294.0	SE	433594 404538	Coal, Deep	Rob Royd Coal Workings	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	302.0	N	433265 405105	Coal, Deep	Keresforth Hill Drift	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	315.0	N	433260 405117	Coal, Surface Mined	Keresforth Hill Coal Workings	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	329.0	N	433257 405131	Coal, Deep	Keresforth Hill Drift	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
46	338.0	W	433041 404914	Coal, Deep	Needlewood Colliery Shaft	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	349.0	N	433251 405150	Coal, Deep	Keresforth Hill Drift	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	363.0	N	433300 405178	Coal, Deep	Keresforth Hill Shaft	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	376.0	SE	433650 404478	Coal, Deep	Rob Royd Day Hole	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	379.0	N	433279 405190	Coal, Deep	Keresforth Hill Shaft	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	392.0	W	432978 404876	Coal, Deep	Needlewood Colliery No. 1 Drift	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	402.0	N	433280 405213	Coal, Deep	Hound Hill Colliery Drift	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
53	408.0	SW	433032 404550	Coal, Surface Mined	Keresforth 1 & 2 OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	409.0	W	432965 404903	Coal, Deep	Needlewood Colliery No. 1 Drift	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	428.0	N	433428 405244	Coal, Deep	Hound Hill Colliery Air Shaft	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	441.0	SE	433693 404429	Coal, Deep	Hound Hill Colliery Shaft	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	444.0	SE	433751 404479	Coal, Deep	Hound Hill Colliery Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

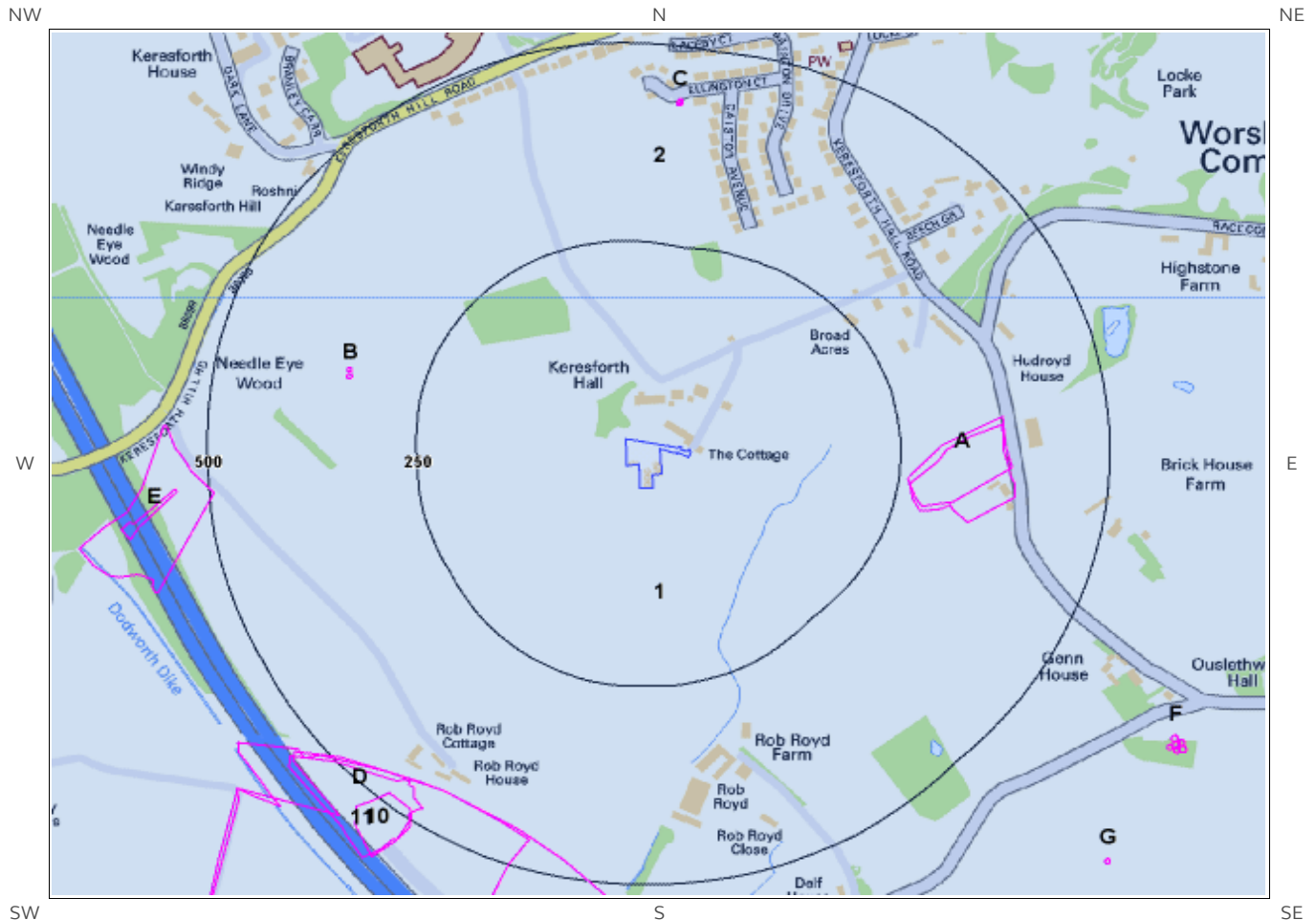
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	445.0	E	433869 404941	Coal, Deep	Victoria Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	450.0	E	433877 404931	Coal, Deep	Victoria Colliery	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	453.0	SE	433700 404420	Coal, Deep	Hound Hill Colliery Drift	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	478.0	SE	433735 404418	Coal, Deep	Hound Hill Bell Pits	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	481.0	N	433246 405286	Coal, Deep	Keresforth Hill Drift	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	490.0	S	433456 404272	Coal, Surface Mined	Keresforth 1 & 2 OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	494.0	W	432878 404724	Coal, Deep	Needlewood Colliery No. 2 Drift	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	503.0	SW	433083 404355	Coal, Deep	Rob Royd Colliery	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	510.0	SE	433897 404568	Coal, Deep	Genn House Shaft	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	514.0	N	433252 405322	Coal, Deep	Hound Hill Colliery Drift	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	518.0	SE	433778 404403	Coal, Deep	Ouselthwaite Drift Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	520.0	SE	433904 404559	Coal, Deep	Genn House Shaft	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	528.0	W	432840 404771	Coal, Deep	Needlewood Colliery No. 2 Drift	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	534.0	E	433967 404919	Coal, Deep	Victoria Colliery	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	541.0	SE	433798 404390	Coal, Deep	Ouselthwaite Drift Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	547.0	W	432820 404794	Coal, Deep	Needlewood Colliery No. 2 Drift	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	549.0	N	433235 405354	Coal, Deep	Keresford Hill 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	561.0	SE	433856 404420	Coal, Deep	Ouselthwaite Drift Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	577.0	E	434005 404664	Coal, Deep	Genn House Shaft	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	584.0	SE	433814 404347	Coal, Deep	Ouselthwaite Drift Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	596.0	SE	433856 404369	Coal, Deep	Ouselthwaite Drift Mine Shaft	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	616.0	SE	433840 404327	Coal, Deep	Ouselthwaite Drift Mine Shaft	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	627.0	SE	433821 404294	Coal, Surface Mined	Calf Croft Green Road Coal Workings	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	627.0	SE	433656 404186	Sandstone	Round Hill	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	630.0	N	433524 405435	Clay & Shale	Kingston Place Brick Field	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	634.0	SE	433842 404304	Coal, Deep	Ouselthwaite Drift Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	656.0	N	433209 405458	Coal, Deep	Keresford Hill 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	661.0	N	433185 405456	Coal, Deep	Keresford Hill 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	682.0	SE	433850 404247	Coal, Deep	Calf Croft Green Road Drift	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	685.0	SE	434022 404433	Coal, Deep	Ouslethwaite Air Shafts	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	694.0	SE	434029 404428	Coal, Deep	Ouslethwaite Air Shafts	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	708.0	SE	433921 404277	Coal, Deep	Ouselthwaite Hall Shaft	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	710.0	N	433339 405530	Coal, Deep	Keresford Hill 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	713.0	SE	433901 404252	Coal, Deep	Ouselthwaite Hall Shaft	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	725.0	SE	433952 404282	Coal, Deep	Ouselthwaite Hall Shaft	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	737.0	SE	433876 404196	Coal, Deep	Calf Croft Green Road Drift	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	759.0	NE	433983 405340	Sandstone	Kingstone Place	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	761.0	NE	433878 405431	Coal, Deep	Park Road 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	772.0	N	433616 405561	Coal, Deep	Kingston 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

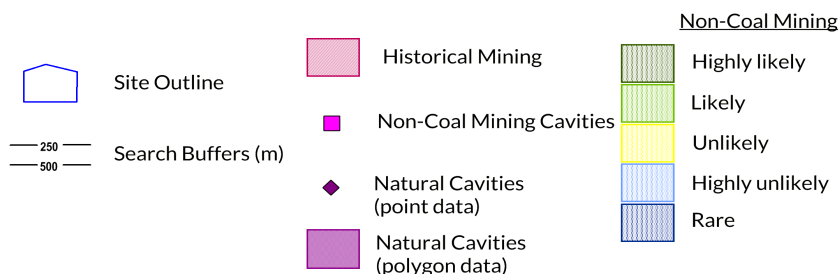
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	773.0	N	433567 405572	Coal, Deep	Kingston Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	776.0	N	433095 405548	Sandstone	Keresford House	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	810.0	S	433085 404005	Coal, Surface Mined	Round Green OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	811.0	W	432555 404850	Sandstone	Dodworth Bottom	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	819.0	SE	434169 404422	Coal, Deep	Ouslethwaite Shafts	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	843.0	SE	434044 404208	Coal, Deep	Prince Albert Colliery Shaft	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	898.0	SE	433966 404062	Coal, Surface Mined	Calf Croft Green Road Coal Workings	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



**Mining, Extraction and
Natural Cavities Legend**

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
4A	260.0	E	433765 404792	Disused Colliery	1951
5A	264.0	E	433769 404777	Disused Colliery	1938
6B	336.0	W	433036 404900	Unspecified Old Shaft	1938
7B	338.0	W	433036 404908	Unspecified Old Shaft	1951
8C	426.0	N	433431 405244	Air Shaft	1938
9C	428.0	N	433431 405247	Air Shaft	1951
10	447.0	SW	433002 404187	Disused Colliery	1977
11	448.0	SW	433047 404260	Colliery	1951
12D	461.0	SW	433039 404356	Colliery	1904
13D	461.0	SW	433039 404356	Colliery	1938
14D	487.0	SW	433077 404334	Unspecified Mine	1965
15E	494.0	W	432794 404732	Colliery	1938
16E	539.0	W	432796 404725	Drift	1938
17F	677.0	SE	434023 404442	Unspecified Old Shafts	1951
18F	679.0	SE	434017 404431	Unspecified Old Shafts	1904
19F	679.0	SE	434017 404431	Unspecified Old Shafts	1938
20F	683.0	SE	434025 404434	Disused Air Shafts	1977
21F	687.0	SE	434030 404437	Unspecified Old Shafts	1951
22F	687.0	SE	434025 404428	Unspecified Old Shafts	1904
23F	687.0	SE	434025 404428	Unspecified Old Shafts	1938

ID	Distance (m)	Direction	NGR	Details	Date
24F	692.0	SE	434032 404428	Disused Air Shafts	1977
25G	712.0	SE	433942 404288	Unspecified Old Shaft	1938
26G	712.0	SE	433942 404288	Unspecified Old Shaft	1904

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 study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

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

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Iron Ore (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
2	179.0	N	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
Not shown	985.0	E	Sheffield Area	Vein Mineral/Iron ore	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? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Tin Mining

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

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

No

Database searched and no data found.

5.10 Clay Mining

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

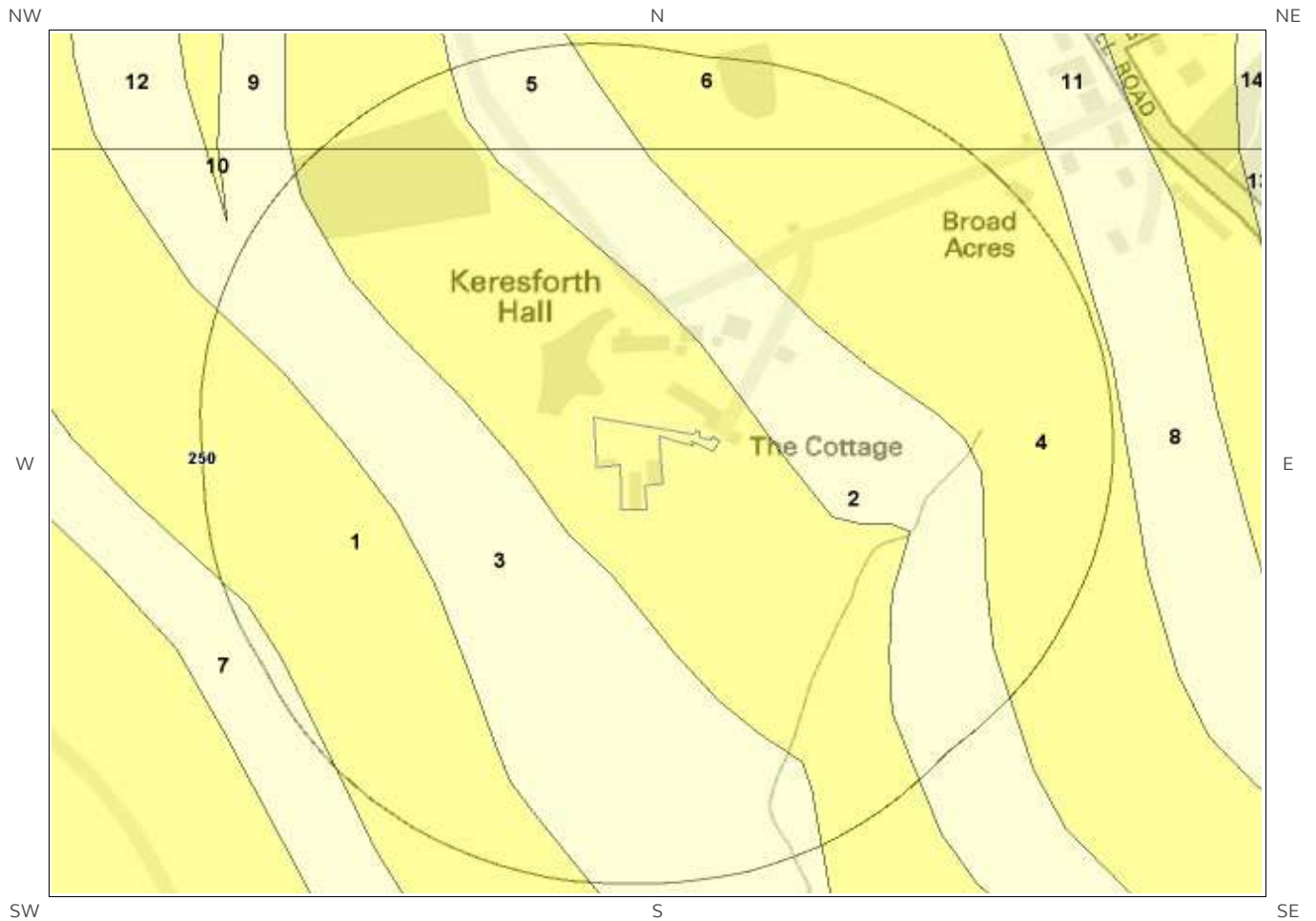
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

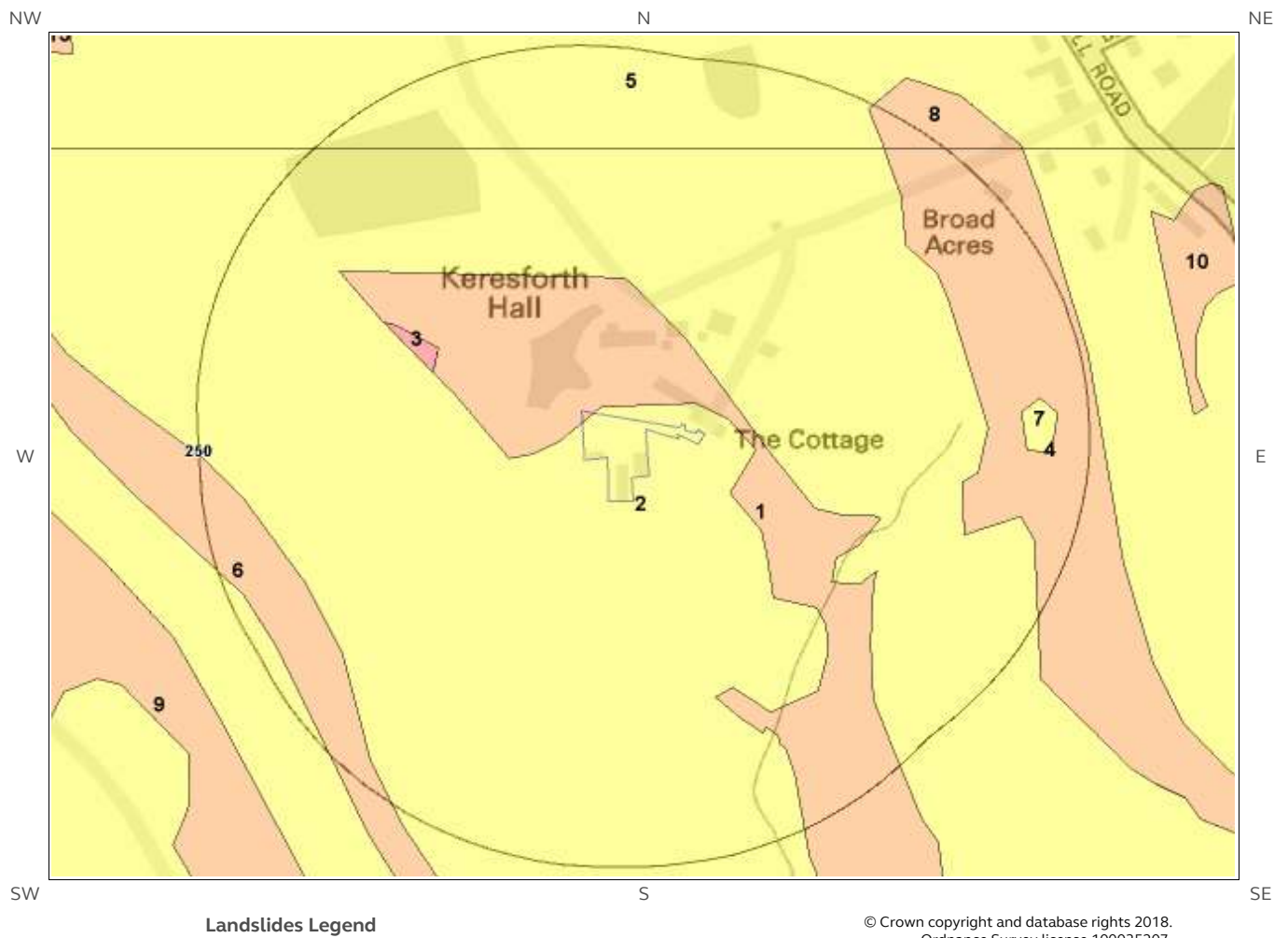


Shrink Swell Clay Legend

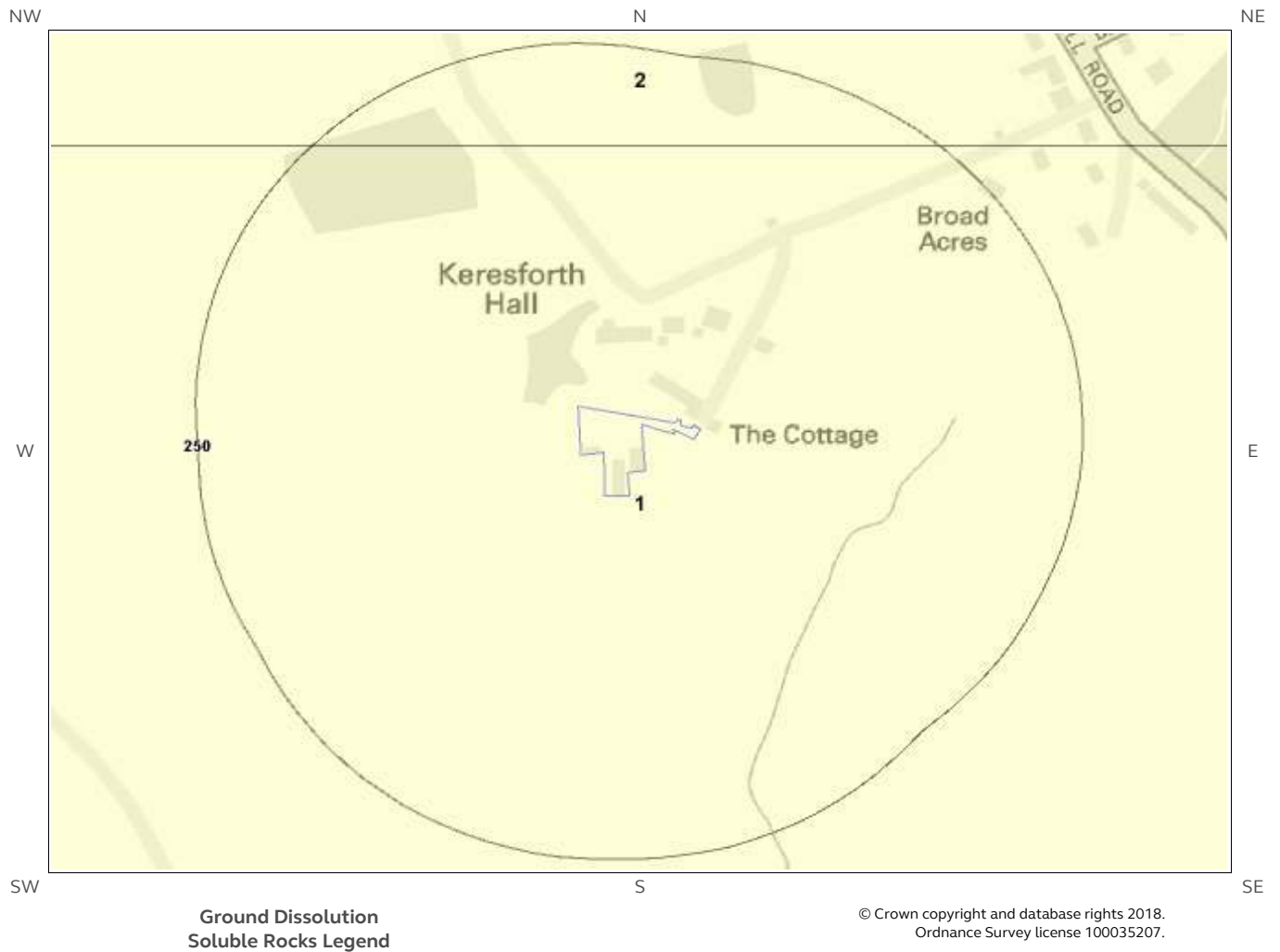
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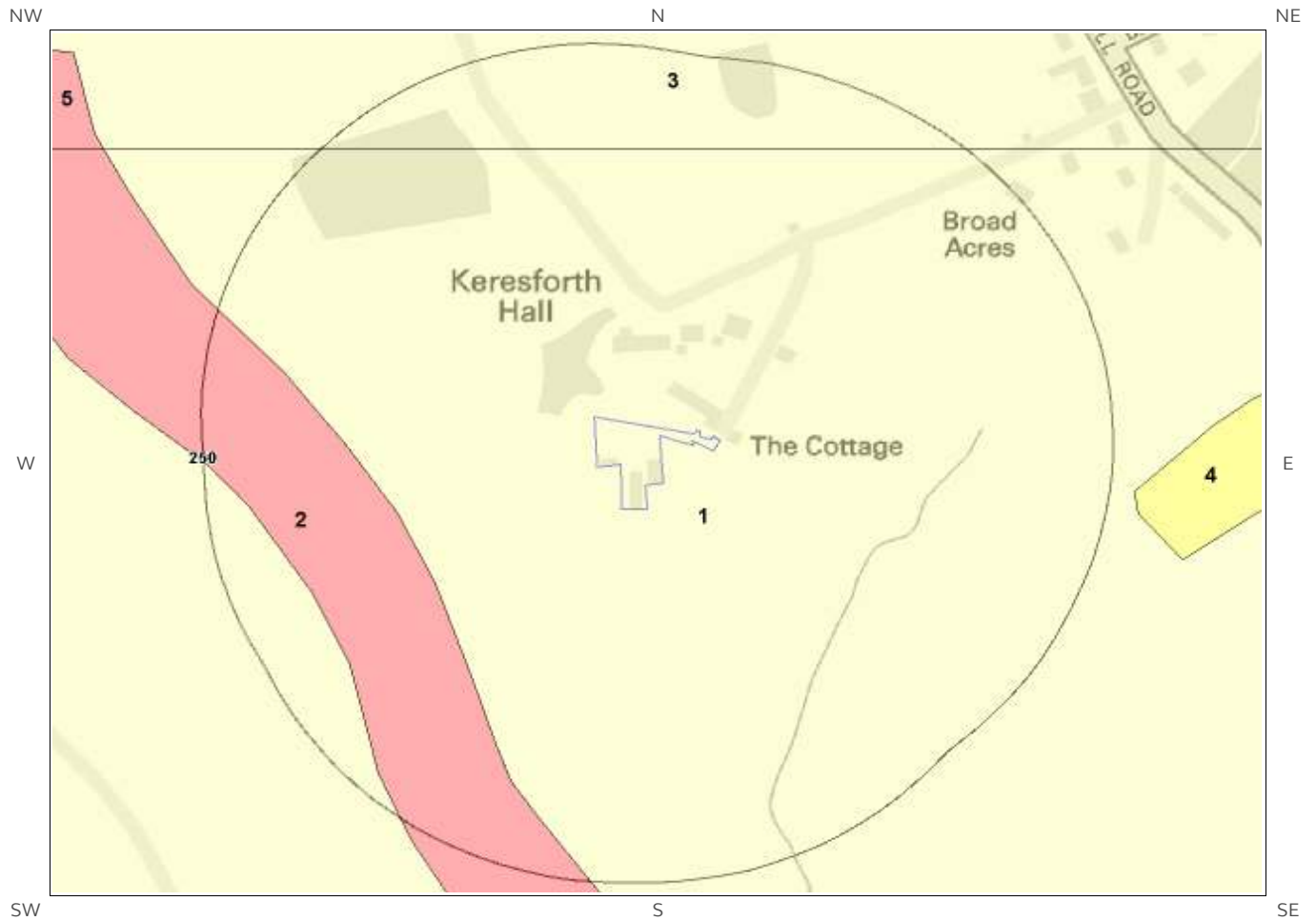
6.2 Landslides map



6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map



Compressible Deposits Legend

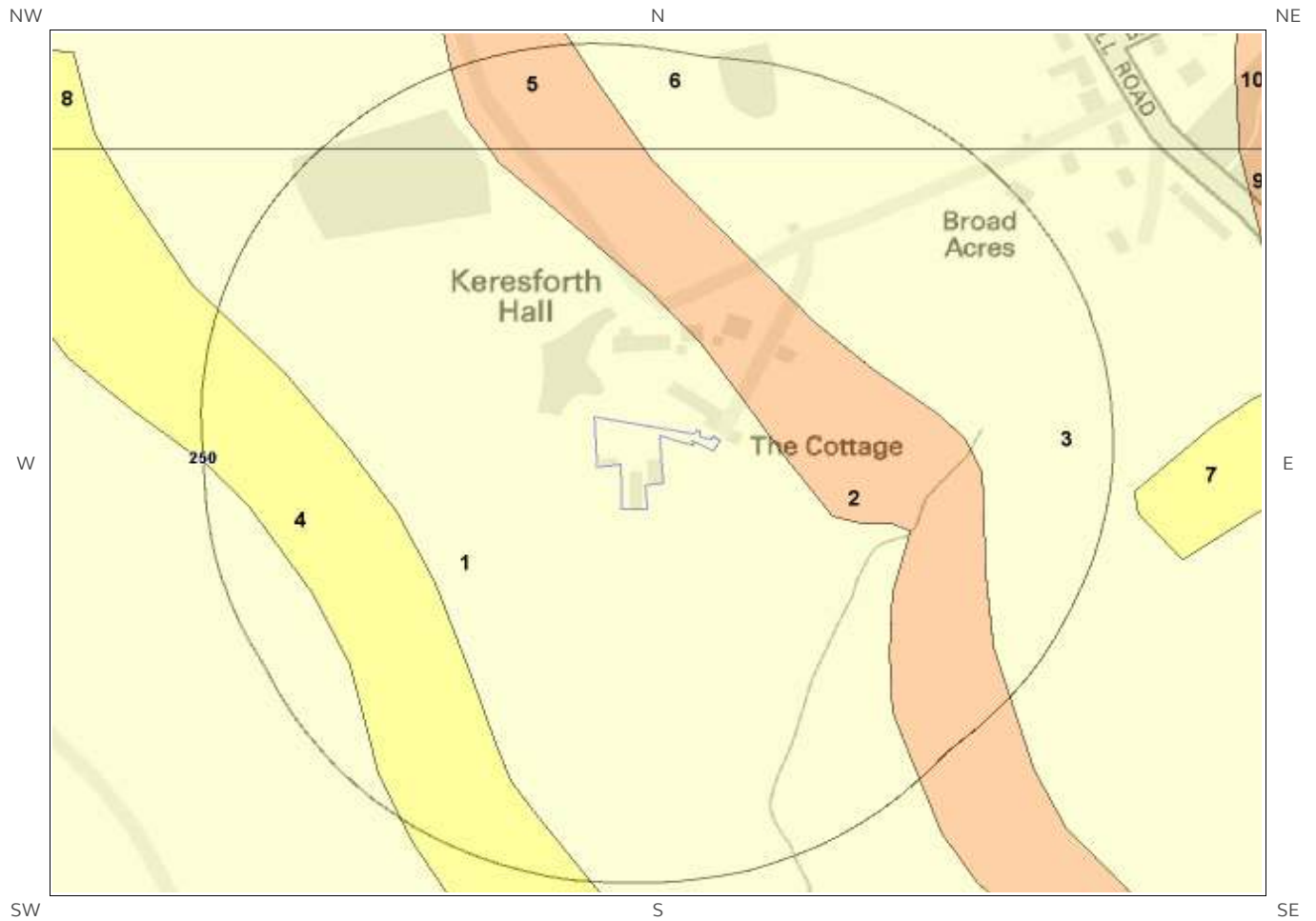
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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	28.0	NE	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.
3	35.0	SW	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.

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	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

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

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

6.3 Ground Dissolution of Soluble Rocks

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

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

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

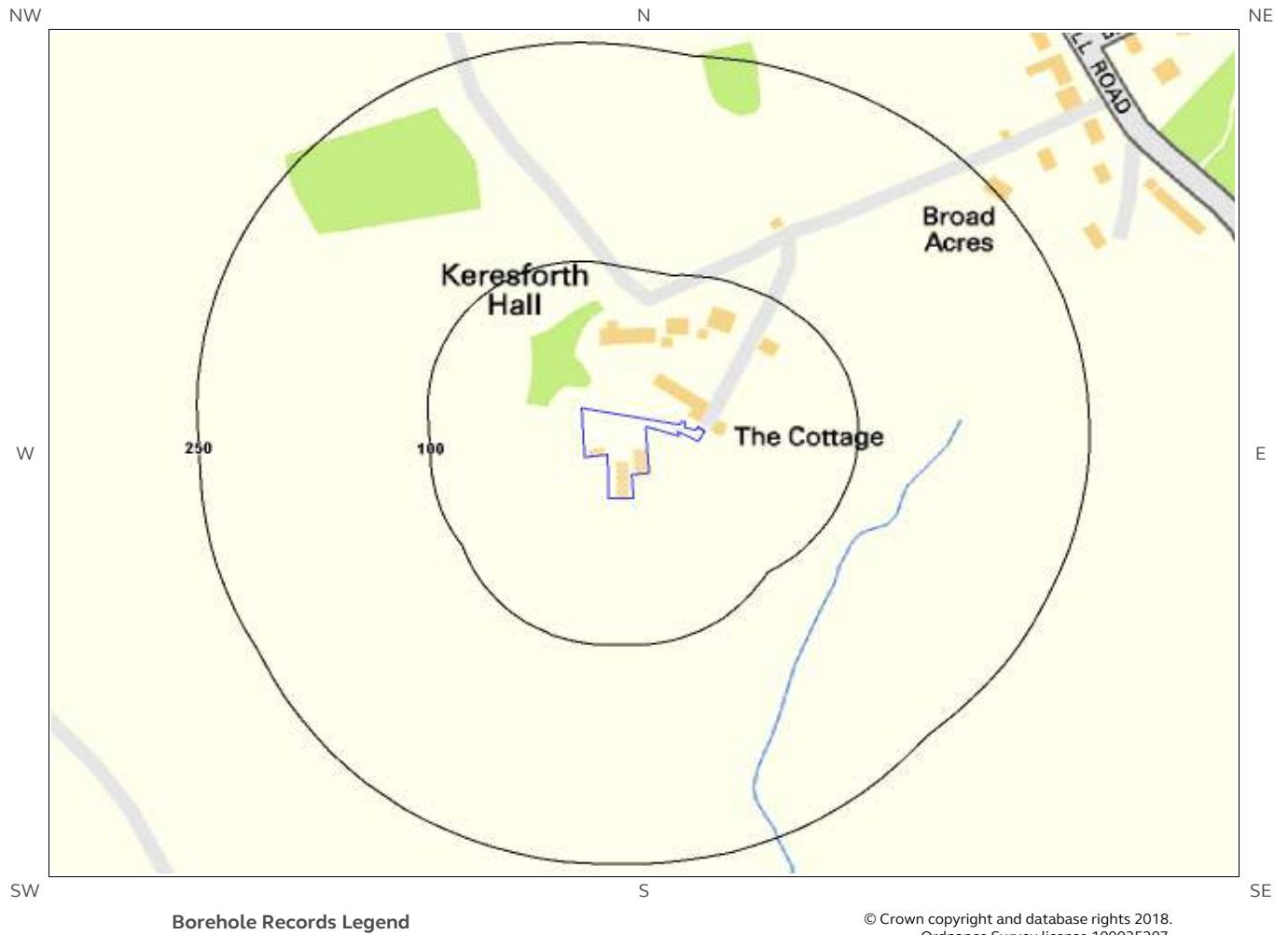
The following Collapsible Rocks information provided by the British Geological Survey:

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.

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	28.0	NE	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records map



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:

0

Database searched and no data found.

8 Estimated Background Soil Chemistry

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

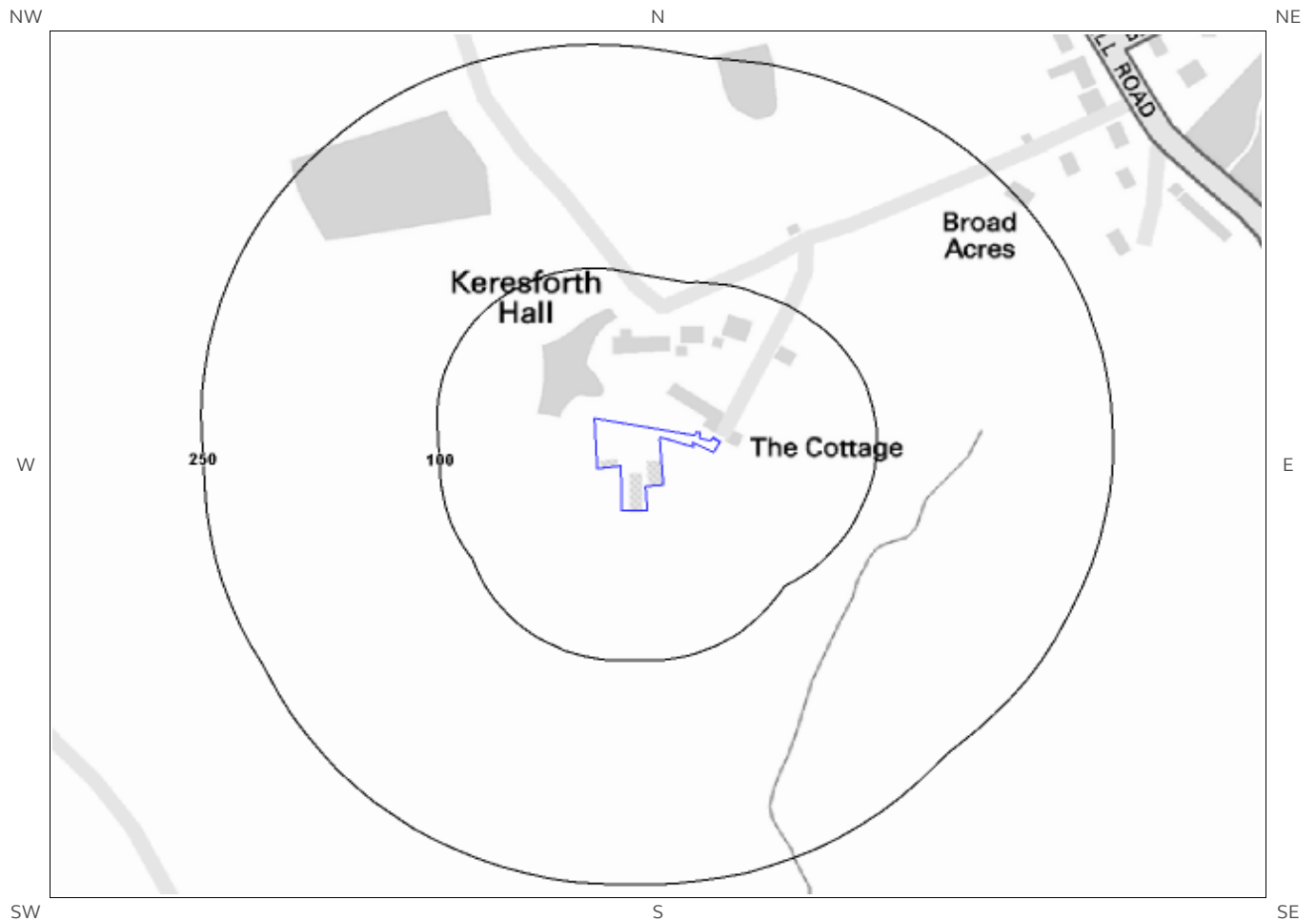
1

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	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	300 - 600 mg/kg

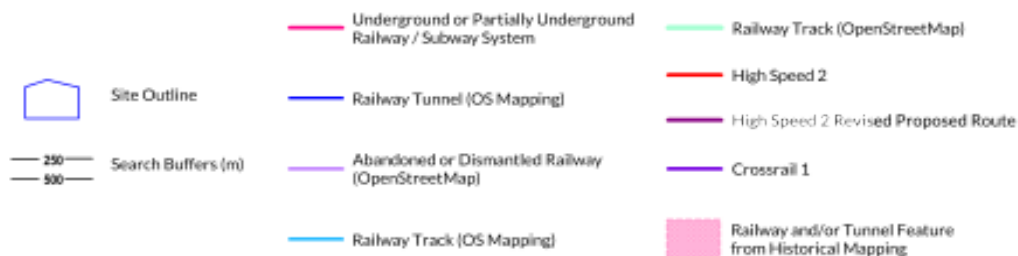
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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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? 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.

9.4 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? Yes

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

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

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

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

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ENVIROINSIGHT REPORT

Address: Agricultural Barn, Keresforth Hall Drive, Kingstone, S70 6NH

Date: 27 Mar 2018

Reference: CMAPS-CM-700844-4199-270318EDR

Client: CENTREMAPS



Aerial Photograph Capture date: 07-Jun-2013

Grid Reference: 433406,404790

Site Size: 0.20ha

Report Reference: CMAPS-CM-700844-4199-270318EDR

Client Reference: 4199

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Overview of Findings

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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	4	9	41
1.2 Additional Information – Historical Tank Database	0	0	0	0
1.3 Additional Information – Historical Energy Features Database	0	0	0	0
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	0	4	9	36
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	0
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	1	7
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	7
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	0	3
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	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	0	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
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	None 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	None 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	6
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	4
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	1	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	No	Yes	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	1	4	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

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

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	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	0	3
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
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	1	0	0	0	0	0
8.14 Records of Green Belt land	1	0	0	0	0	1

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	Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Low
9.2 Radon	
9.2.1 Radon Affected Area rating	The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Radon protection measures requirements	No 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	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 licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

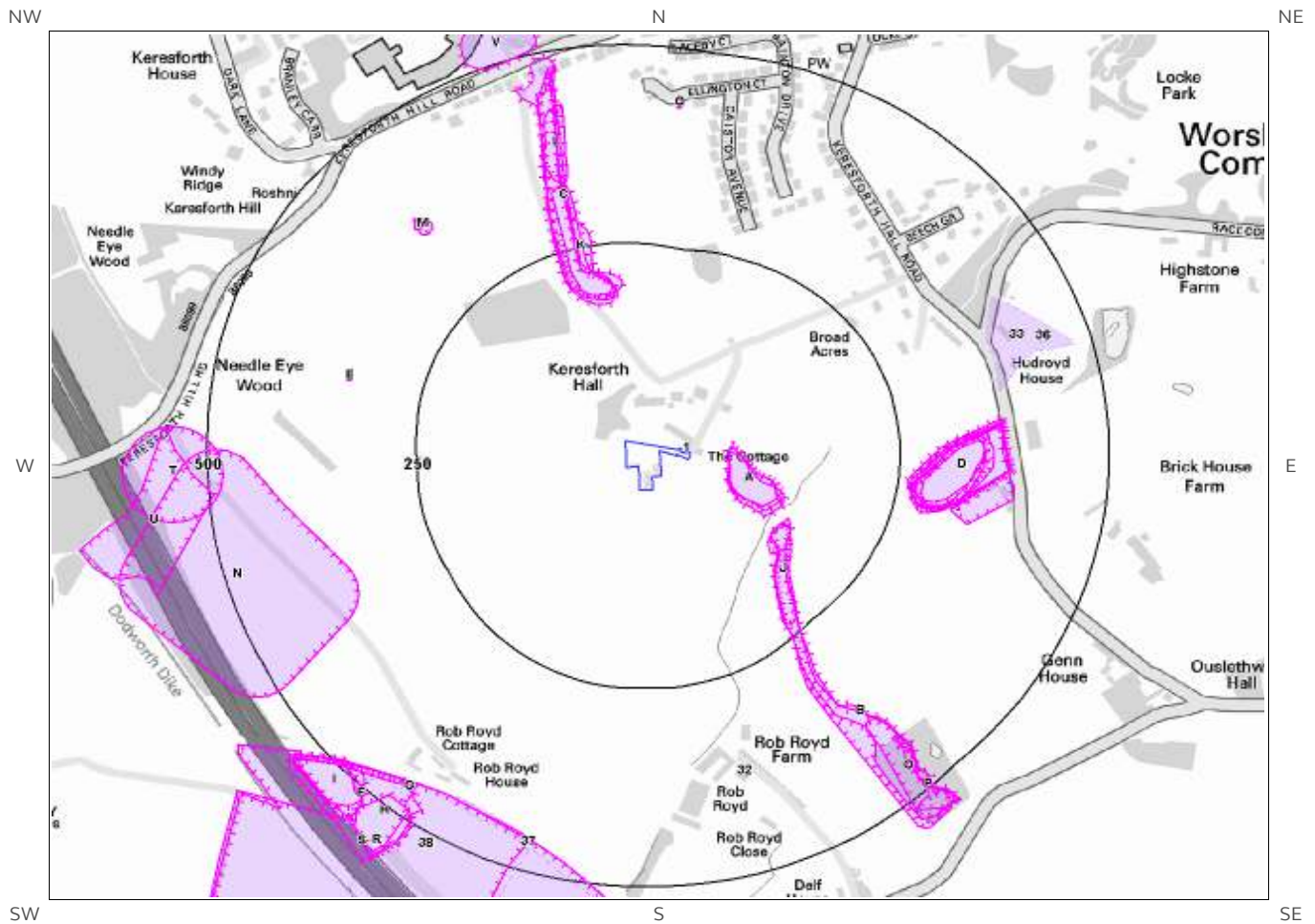
Note: Maps

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

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

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

1. Historical Land Use



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Historical 1:10,000 and 1:10,560 scale mapping



Site Outline

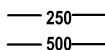


Industrial Land Use



Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping



Search Buffers (m)



Energy Features



Petrol Stations



Tanks



Garages

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: 55

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Unspecified Pump	1850
2A	43	E	Unspecified Ground Workings	1951
3A	45	E	Unspecified Ground Workings	1948
4A	45	E	Unspecified Ground Workings	1948
5A	45	E	Unspecified Pit	1938
6J	135	SE	Unspecified Pits	1951
7B	135	SE	Unspecified Ground Workings	1938
8B	137	SE	Unspecified Ground Workings	1948
9B	137	SE	Unspecified Ground Workings	1948
10C	174	N	Unspecified Pits	1938
11C	180	N	Unspecified Pits	1951
12C	180	N	Unspecified Pits	1948
13C	180	N	Unspecified Pits	1948
14K	187	N	Unspecified Pit	1966
15D	260	E	Disused Colliery	1951
16D	264	E	Disused Colliery	1938
17D	265	E	Refuse Heap	1948
18D	265	E	Disused Colliery	1948
19D	265	E	Disused Colliery	1948
20D	265	E	Refuse Heap	1948
21D	266	E	Unspecified Disused Tip	1977
22D	270	E	Refuse Heap	1965
23D	271	E	Refuse Heap	1951
24D	280	E	Refuse Heap	1938
25L	334	N	Unspecified Pit	1966
26E	336	W	Unspecified Old Shaft	1938
27E	338	W	Unspecified Old Shaft	1951
28E	339	W	Unspecified Old Shaft	1948
29E	339	W	Unspecified Old Shaft	1948
30M	351	NW	Unspecified Quarry	1904

31N	353	SW	Disused Colliery	1951
32	372	S	Unspecified Pump	1850
33	377	E	Colliery	1850
34O	389	SE	Unspecified Pit	1965
35P	424	SE	Unspecified Ground Workings	1951
36	440	E	Unspecified Shaft	1850
37	443	SW	Cuttings	1850
38	447	SW	Bleach Works	1890
39R	447	SW	Disused Colliery	1977
40S	448	SW	Colliery	1951
41F	456	SW	Colliery	1948
42F	456	SW	Colliery	1948
43G	458	SW	Unspecified Tank	1890
44F	461	SW	Colliery	1904
45F	461	SW	Colliery	1938
46G	465	SW	Unspecified Tank	1904
47H	466	SW	Bleach Works	1850
48T	482	W	Drift	1951
49H	487	SW	Unspecified Mine	1965
50I	487	SW	Refuse Heap	1951
51I	493	SW	Refuse Heap	1948
52I	493	SW	Refuse Heap	1948
53U	494	W	Colliery	1938
54I	495	SW	Refuse Heap	1965
55V	497	N	Refuse Heap	1938

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:

0

Database searched and no data found.

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:

0

Database searched and no data found.

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: 0

Database searched and no data found.

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 49

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

ID	Distance(m)	Direction	Use	Date
56A	43	E	Unspecified Ground Workings	1951
57A	45	E	Unspecified Ground Workings	1948
58A	45	E	Unspecified Ground Workings	1948
59A	45	E	Unspecified Pit	1938
60J	135	SE	Unspecified Pits	1951
61B	135	SE	Unspecified Ground Workings	1938
62B	137	SE	Unspecified Ground Workings	1948
63B	137	SE	Unspecified Ground Workings	1948
64C	174	N	Unspecified Pits	1938
65C	180	N	Unspecified Pits	1951
66C	180	N	Unspecified Pits	1948
67C	180	N	Unspecified Pits	1948
68K	187	N	Unspecified Pit	1966
69D	260	E	Disused Colliery	1951

70D	264	E	Disused Colliery	1938
71D	265	E	Refuse Heap	1948
72D	265	E	Disused Colliery	1948
73D	265	E	Disused Colliery	1948
74D	265	E	Refuse Heap	1948
75D	266	E	Unspecified Disused Tip	1977
76D	270	E	Refuse Heap	1965
77D	271	E	Refuse Heap	1951
78D	280	E	Refuse Heap	1938
79L	334	N	Unspecified Pit	1966
80E	336	W	Unspecified Old Shaft	1938
81E	338	W	Unspecified Old Shaft	1951
82E	339	W	Unspecified Old Shaft	1948
83E	339	W	Unspecified Old Shaft	1948
84M	351	NW	Unspecified Quarry	1904
85N	353	SW	Disused Colliery	1951
86O	389	SE	Unspecified Pit	1965
87P	424	SE	Unspecified Ground Workings	1951
88Q	426	N	Air Shaft	1938
89Q	428	N	Air Shaft	1951
90Q	430	N	Air Shaft	1948
91R	447	SW	Disused Colliery	1977
92S	448	SW	Colliery	1951
93F	456	SW	Colliery	1948
94F	456	SW	Colliery	1948
95F	461	SW	Colliery	1938
96F	461	SW	Colliery	1904
97T	482	W	Drift	1951
98H	487	SW	Unspecified Mine	1965
99I	487	SW	Refuse Heap	1951
100I	493	SW	Refuse Heap	1948
101I	493	SW	Refuse Heap	1948
102U	494	W	Colliery	1938
103I	495	SW	Refuse Heap	1965
104V	497	N	Refuse Heap	1938

2. Environmental Permits, Incidents and Registers Map



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

0

Database searched and no data found.

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:

8

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

ID	Distance (m)	Direction	NGR	Details
1	234	NE	433647 404924	Address: LAND AT REAR OF KERESFORTH DRIVE, KERESFORTH, BARNSELY, SOUTH YORKSHIRE, -, S70 6NH Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: EPRCP3622GG Permit Version: 1 Receiving Water: GROUND WATER Status: NEW ISSUED UNDER EPR 2010 Issue date: 21/07/2010 Effective Date: 21-Jul-2010 Revocation Date: -
2A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 1 Receiving Water: TRIB OF DODWORTH DYKE Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 29/06/1982 Effective Date: 29-Jun-1982 Revocation Date: 25/04/1983
3A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 2 Receiving Water: TRIB OF DODWORTH DYKE Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 26/04/1983 Effective Date: 26-Apr-1983 Revocation Date: 09/10/1997
4A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 3 Receiving Water: TRIB OF DODWORTH DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/10/1997 Effective Date: 10-Oct-1997 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
5A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 1	Receiving Water: TRIB OF DODWORTH DYKE Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 29/06/1982 Effective Date: 29-Jun-1982 Revocation Date: 25/04/1983
6A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 2	Receiving Water: TRIB OF DODWORTH DYKE Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 26/04/1983 Effective Date: 26-Apr-1983 Revocation Date: 09/10/1997
7A	460	NW	433000 405100	Address: DARK LANE DEVELOPMENT, OFF KERESFORTH HILL ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 3630 Permit Version: 3	Receiving Water: TRIB OF DODWORTH DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/10/1997 Effective Date: 10-Oct-1997 Revocation Date: -
8	499	SE	433900 404600	Address: KERESFORTH HALL SEWAGE PUMPING STN, KERESFORTH HALL ROAD, BARNSELY Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - NOT WATER COMPANY Permit Number: 3572 Permit Version: 1	Receiving Water: TRIB OF DODWORTH DYKE Status: REVOKED UNDER EPR 2010 Issue date: 16/10/1981 Effective Date: 16-Oct-1981 Revocation Date: 29/09/2010

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:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

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

Database searched and no data found.

3. Landfill and Other Waste Sites

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:

7

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
Not shown	1111	E	434500 404300	Site Address: Land to rear of Ward Green, Communtiy Centre, Genn Lane, Ward Green, Barnsley Waste Licence: Yes Site Reference: WD20 B327, 4400/B327, CS/WG, 20B327(11) Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 28-Jul-1981 Licence Surrendered: 22-Apr-1993 Licence Holder Address: - Operator: Barnsley Metropolitan Borough Council Licence Holder: Public Services Dept, Barnsley Metropolitan Borough Council First Recorded: 31-Jul-1981 Last Recorded: 31-Dec-1989
Not shown	1119	SW	432400 404000	Site Address: Gilroyd Lane, Stainsborough, Barnsley Waste Licence: Yes Site Reference: 20B326(46), WD20 B326, 4400/B326 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 11-Dec-1981 Licence Surrendered: 23-Mar-1992 Licence Holder Address: Manor House, Lowe Lane, Stainsborough, Barnsley Operator: W B Jones Licence Holder: W B Jones First Recorded: 31-Dec-1987 Last Recorded: 30-Jun-1988
Not shown	1289	SW	432200 404000	Site Address: Land Adjacent to the former Strafford Colliery, Gilroyd Lane, Dodworth, Barnsley Waste Licence: Yes Site Reference: WD20 B537, 4400/B537, 200, 20B537(47) Waste Type: Inert, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 04-Aug-1987 Licence Surrendered: Licence Holder Address: High Cross Bank Farm, Moor Lane, Addingham Operator: J W Boylin and Company Limited Licence Holder: J W Boylin and Company Limited First Recorded: 31-Dec-1988 Last Recorded: 31-Dec-1990

ID	Distance (m)	Direction	NGR	Details	
Not shown	1293	N	432900 406000	Site Address: Disused Quarry, Dodworth Road, Barnsley, Yorkshire Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Barnsley County Borough Council Licence Holder: - First Recorded: 31-Dec-1968 Last Recorded: -
Not shown	1323	SW	432400 403800	Site Address: Stainborough Cricket Club, Park Drive, Stainborough, Barnsley, Yorkshire Waste Licence: Yes Site Reference: 20B830(116), 4400/B830, WD20 B830 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 30-Aug-1991 Licence Surrendered: Licence Holder Address: Park Drive, Stainborough, Barnsley Operator: Stainborough Cricket Club Licence Holder: Stainborough Cricket Club First Recorded: 01-Jul-1992 Last Recorded: 31-Dec-1992
Not shown	1345	N	432900 406100	Site Address: S.R. Gents, Dodworth Road, Barnsley Waste Licence: - Site Reference: 4400/(131) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Barnsley Metropolitan Borough Council First Recorded: - Last Recorded: -
Not shown	1364	NE	434300 405800	Site Address: Spring Street, Barnsley Waste Licence: - Site Reference: 4400/(159), (159)B, WD24 B343, WD34.16.16 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Mr A J Shaw Licence Holder: Mr A J Shaw First Recorded: 31-Dec-1993 Last Recorded: 31-Dec-1993

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	1331	N	433000.0 406100.0	Address: Disused Quarry, Dodworth Rd, Barnsley, Yorks BGS Number: 1892.0	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:

3

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	1119	E	434568 405008	Refuse Tip	1969 mapping	Polygon
Not shown	1280	NE	434273 405813	Spring Street	Barnsley Metropolitan Borough Council	Point
Not shown	1389	N	432908 406186	Refuse Tip	1969 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:

0

Database searched and no data found.

 Site Outline
  Current Industrial Sites
  Electricity Transmission Cables

 Search Buffers (m)
  Petrol & Fuel Sites
  Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 0

Database searched and no data found.

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

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

Database searched and no data found.

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

5.3 Bedrock and Solid Geology

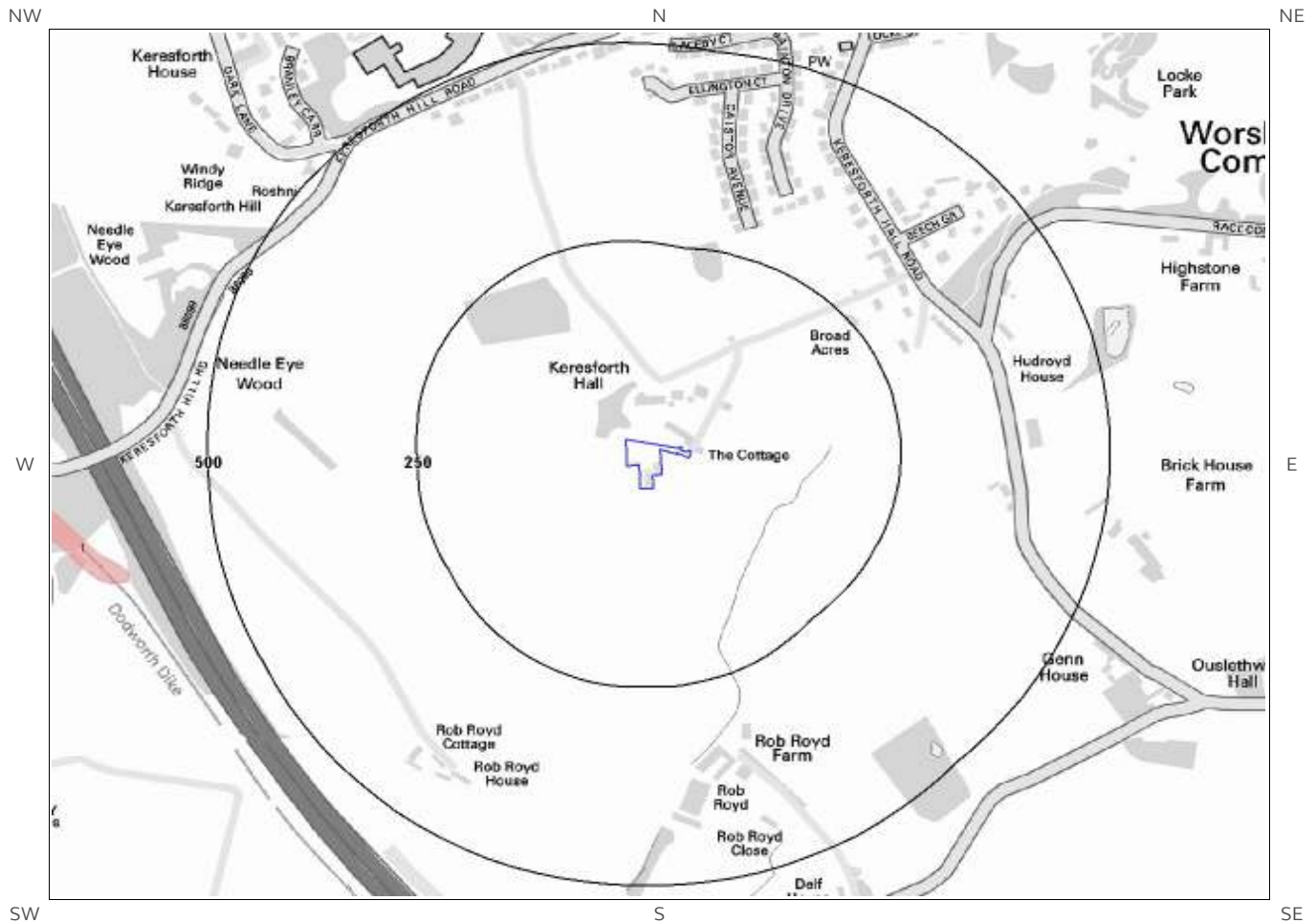
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
BNR-SDST	BARNSELY ROCK	SANDSTONE
PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION	SANDSTONE

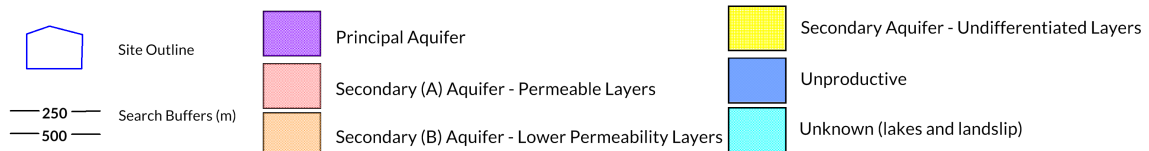
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



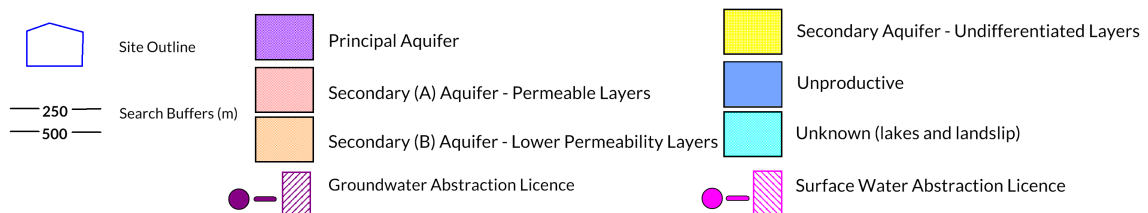
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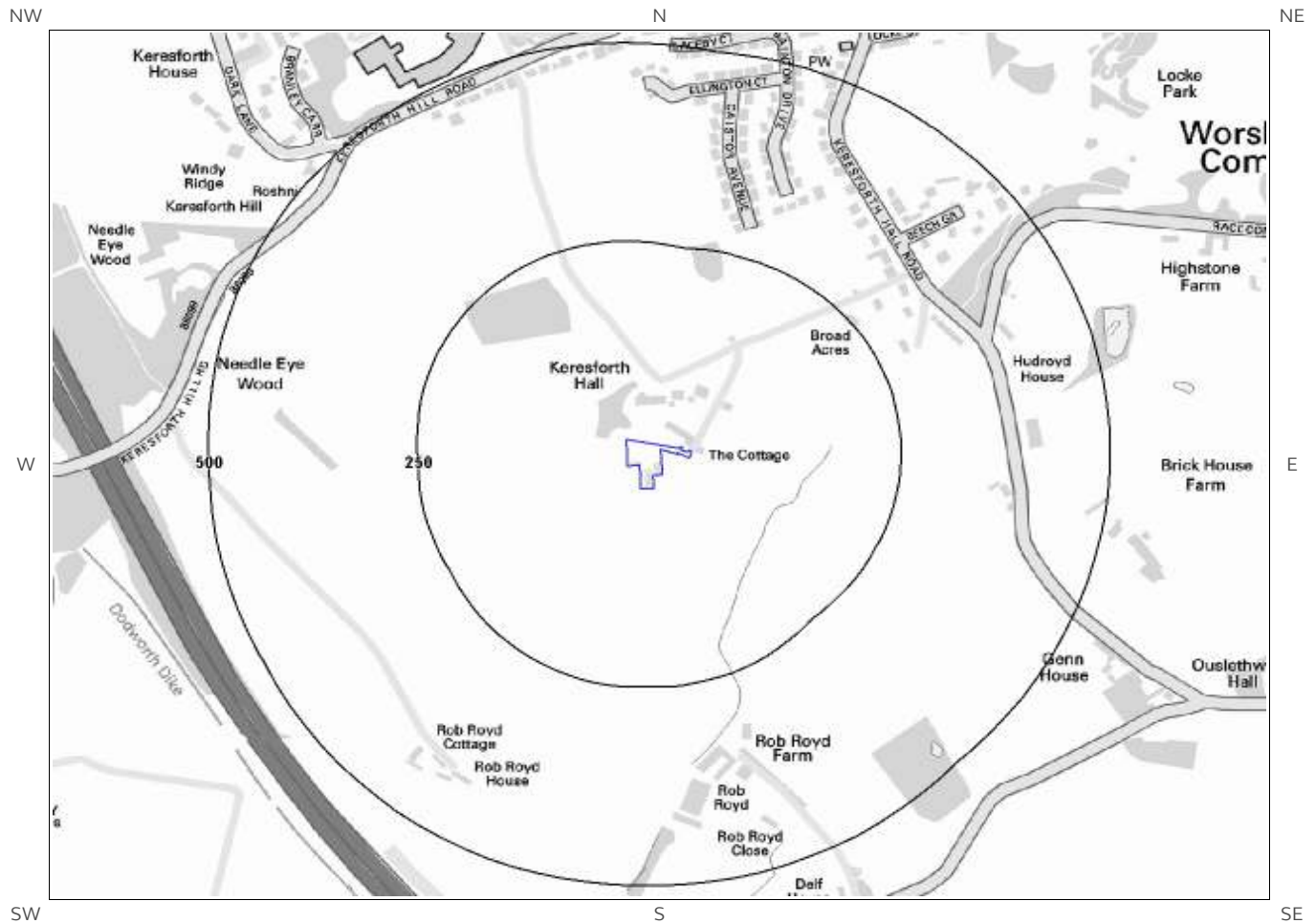
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



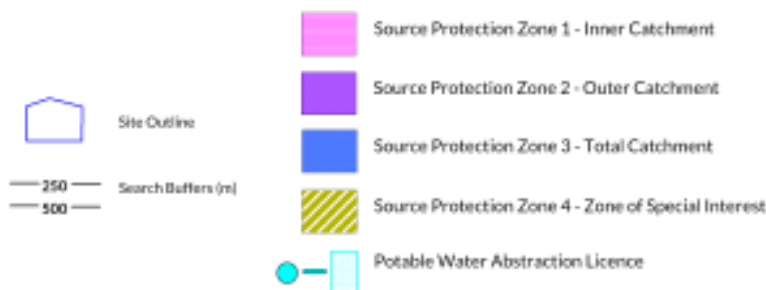
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6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



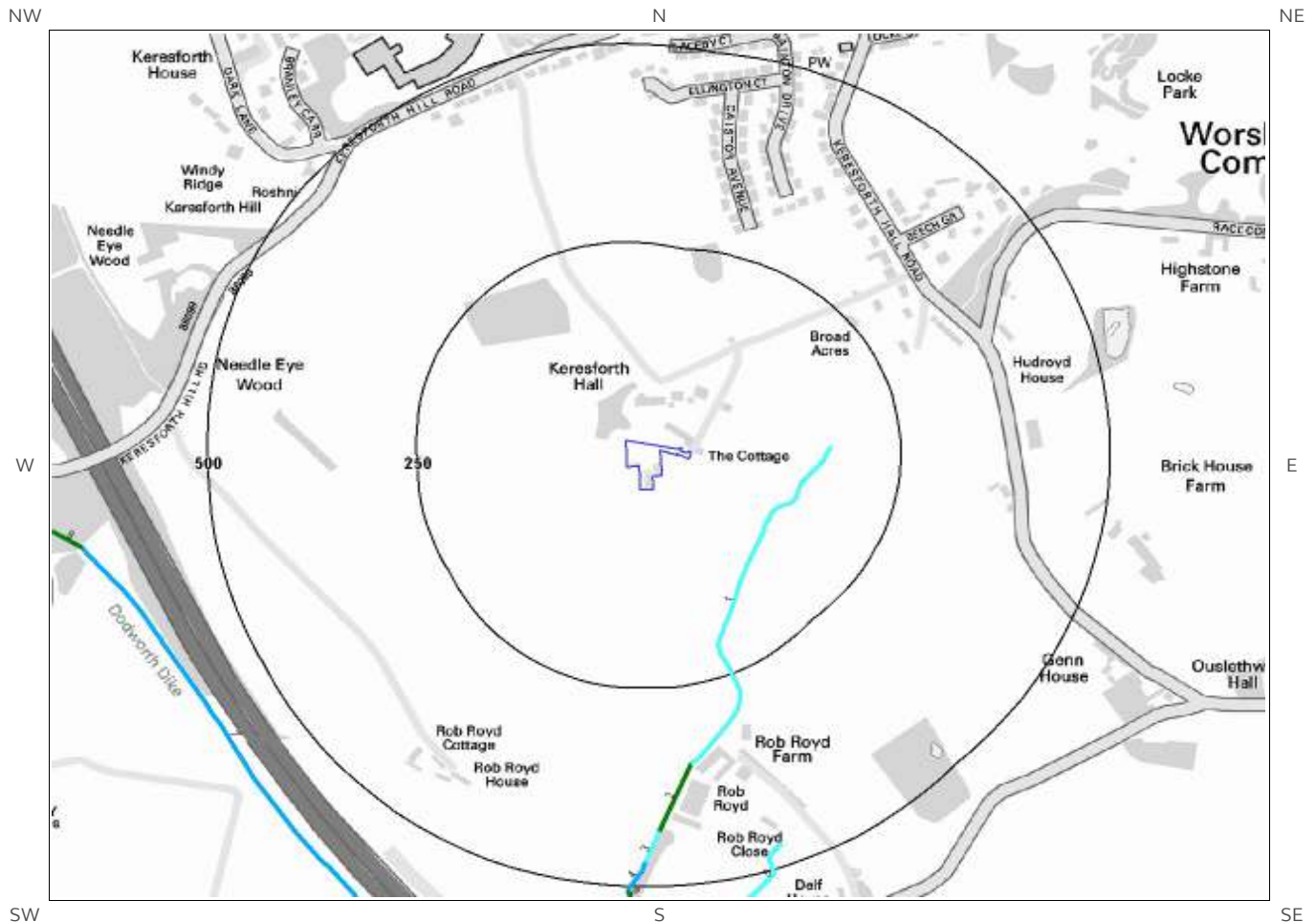
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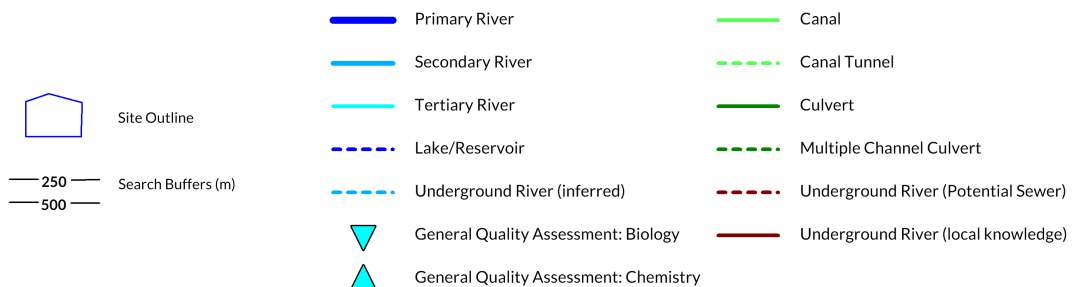
Legend:

- Site Outline
- Search Buffers (m)
 - 250
 - 500
- Source Protection Zone 1 - Inner Catchment
- Source Protection Zone 2C - Outer Catchment within Confined Aquifer
- Source Protection Zone 3C - Total Catchment within Confined Aquifer
- Potable Water Abstraction Licence

6e. Hydrology – Detailed River Network and River Quality



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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 No

Database searched and no data found.

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.

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
2	179	N	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	1219	N	433700 406000	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Well/spring - Sandstone/middle Coal Measures - Shaw Lane Data Type: Point Name: SHELDAL WATER LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 100 Version Start Date: 1/12/1999 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1219	N	433700 406000	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: 8/4/2003 Version End Date:
Not shown	1277	N	433700 406060	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 08082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2004 Version End Date:
Not shown	1277	N	433700 406060	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring - Sandstone&middle Coal Measures - Barnsley Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD	Annual Volume (m³): 350000 Max Daily Volume (m³): 1400 Original Application No: 8082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2004 Version End Date:
Not shown	1328	SW	432200 404154	Status: Active Licence No: 2/27/08/145/R01 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Groundwaters Point: Silkstone Mineshaft-coal Measures-straftfordcolliery-barnsley Data Type: Point Name: THE COAL AUTHORITY	Annual Volume (m³): 0 Max Daily Volume (m³): 0 Original Application No: NPS/WR/021563 Original Start Date: 1/4/2017 Expiry Date: 31/3/2029 Issue No: 1 Version Start Date: 1/4/2017 Version End Date:
Not shown	1330	SW	432200 404150	Status: Historical Licence No: 2/27/08/145 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Groundwaters Point: Silkstone Mineshaft-coal Measures-straftfordcolliery-barnsley Data Type: Point Name: THE COAL AUTHORITY	Annual Volume (m³): 0 Max Daily Volume (m³): 0 Original Application No: 8333 Original Start Date: 17/12/2008 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 17/12/2008 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1219	N	433700 406000	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: Version End Date:
Not shown	1219	N	433700 406000	Status: Historical Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Well/spring - Sandstone/middle Coal Measures - Shaw Lane Data Type: Point Name: SHELDALDE WATER LIMITED Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 100 Version Start Date: Version End Date:
Not shown	1277	N	433700 406060	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring - Sandstone&middle Coal Measures - Barnsley Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD Annual Volume (m³): 350000 Max Daily Volume (m³): 1400 Original Application No: 8082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: Version End Date:
Not shown	1277	N	433700 406060	Status: Historical Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point Name: SHELDALDE DEVELOPMENTS LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 08082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: Version End Date:

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	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
65	SW	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.
287	NE	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.

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:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	825	SW	433049 404004	River Name: Dodworth Dike Reach: House Carr Dyke Worsbrough Reservoir End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
Not shown	1413	SE	434066 403513	River Name: Dodworth Dike Reach: House Carr Dyke Worsbrough Reservoir End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
Not shown	1413	SE	434066 403513	River Name: Dove Reach: Worsbrough Reservoirblackier Dyke End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Detailed River Network entries within 500m of the study site

Identified

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	120	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	348	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3	431	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	469	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5	470	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

6.11 Surface Water Features

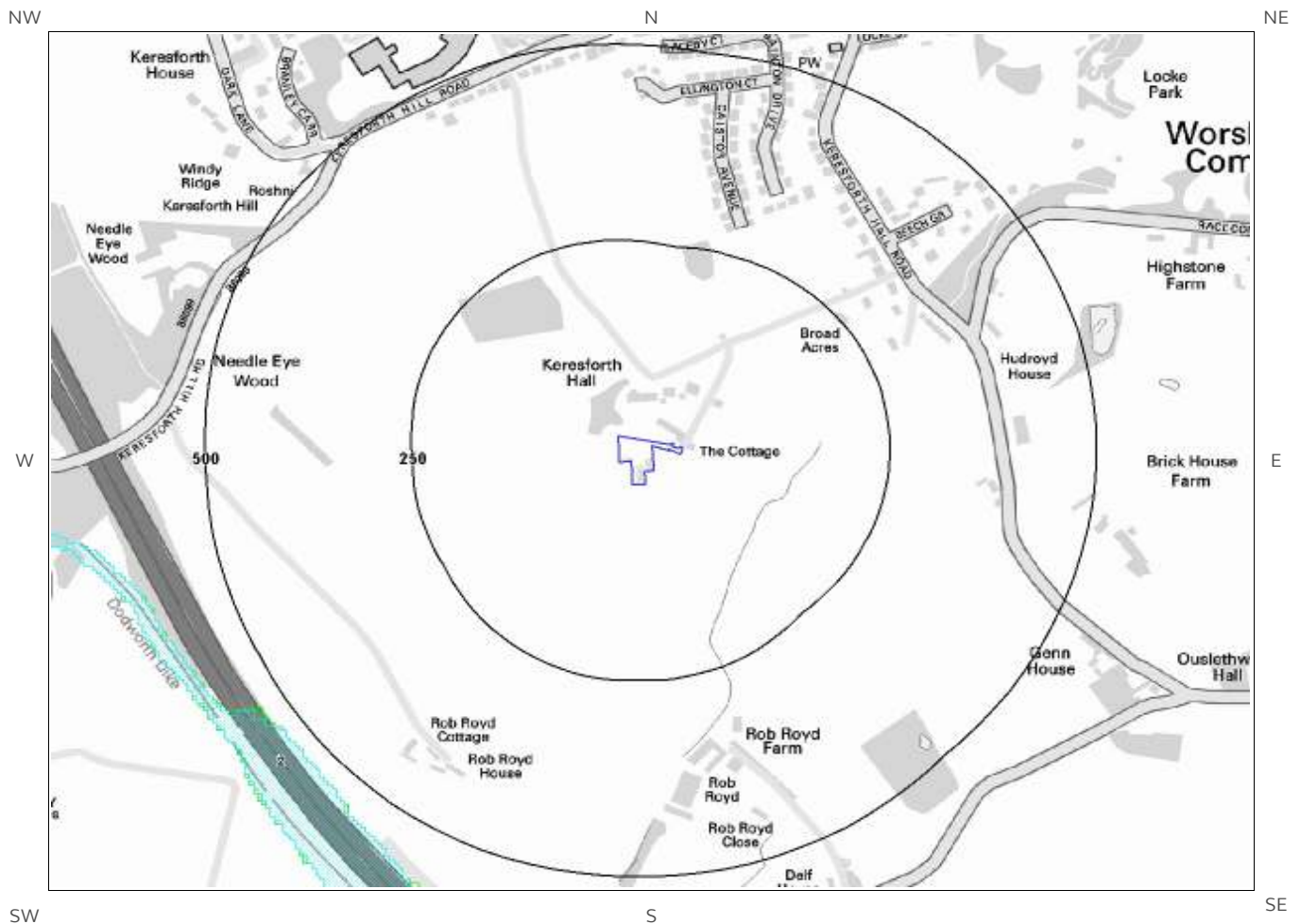
Surface water features within 250m of the study site

Identified

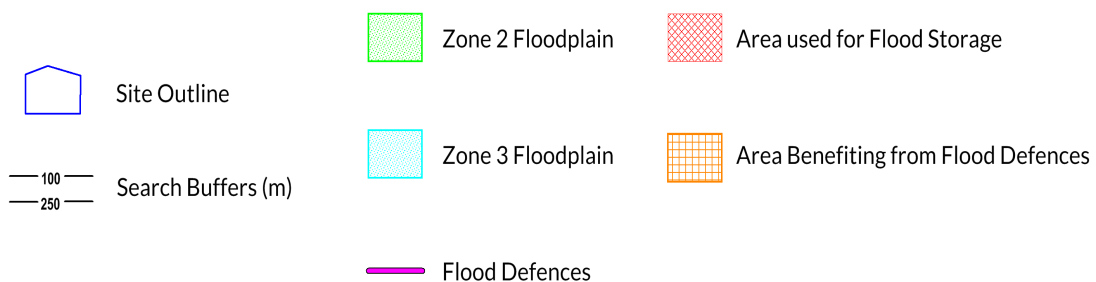
The following surface water records are not represented on mapping:

Distance (m)	Direction
121	SE

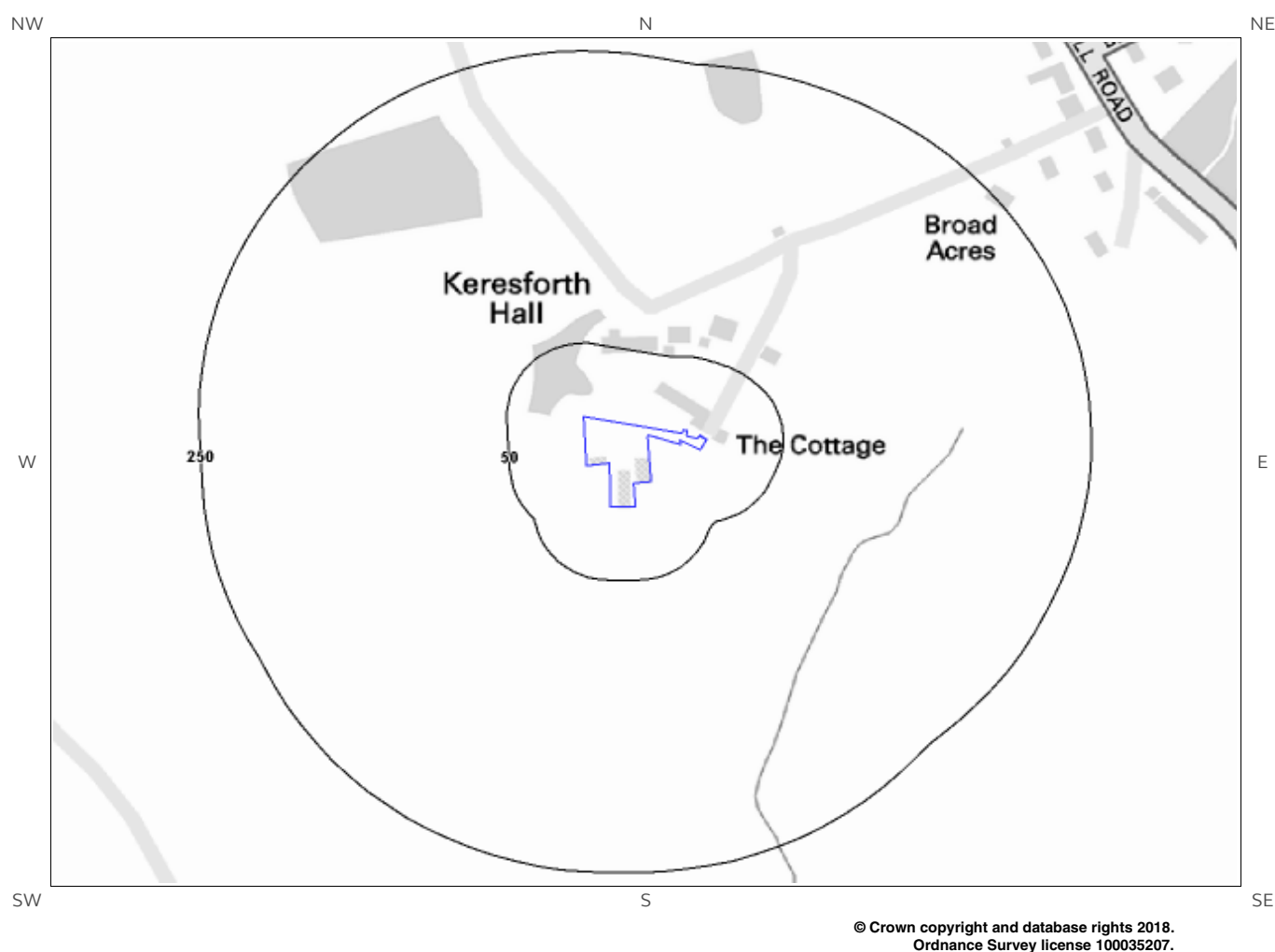
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



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



 Site Outline

 100 Search Buffers (m)

 250

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 None identified

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

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

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

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

Database searched and no data found.

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

Highest risk of flooding onsite Very Low

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

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

7.4 Flood Defences

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

7.5 Areas benefiting from Flood Defences

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

7.6 Areas benefiting from Flood Storage

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

None identified

7.7 Groundwater Flooding Susceptibility Areas

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

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

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

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

Limited potential

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

7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result

Low

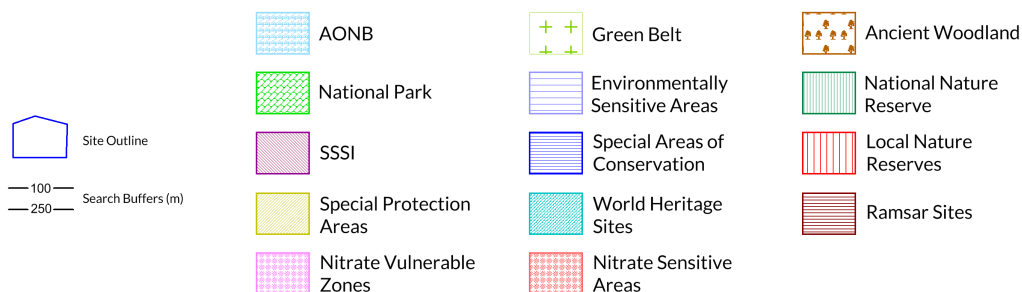
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of 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
3	1552	SW	UNKNOWN	Ancient Replanted Woodland
4	1629	SW	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1971	S	UNKNOWN	Ancient and Semi-Natural Woodland

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

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1241	SE	Worsborough Country Park	Natural England

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:

1

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

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Existing	DEFRA

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

2

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
6	0	On Site	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1449	E	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)

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 Low

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

Hazard
Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property no significant increase in insurance risk due to natural slope instability problems.

9.1.3 Soluble Rocks

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

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

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

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

9.1.6 Running Sand

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

Low

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

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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

9.2 Radon

9.2.1 Radon Affected Areas

Radon Affected Area assessment: The site is in a Radon Affected Area, as between 1 and 3% 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

Radon protection measures requirements for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment: No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

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

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

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

Identified

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

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

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site
Guidance: No Guidance Required.

None identified

Contact Details

CENTREMAPS

Telephone: 01886 832972
Groundsure@centremaps.co.uk
Open Space, Upper Interfields, Malvern, Worcester, WR14 1UT



British Geological Survey Enquiries

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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



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

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: Barnsley Metropolitan Borough Council
Phone: 01226 770770
Web: <http://www.barnsley.gov.uk/>
Address: PO Box 634, Barnsley, South Yorkshir, S70 9GG

Gemapping PLC

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



SMALL SCALE SURVEY PLANS



Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1850

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised N/A
Edition 1850
Copyright N/A
Levelled N/A



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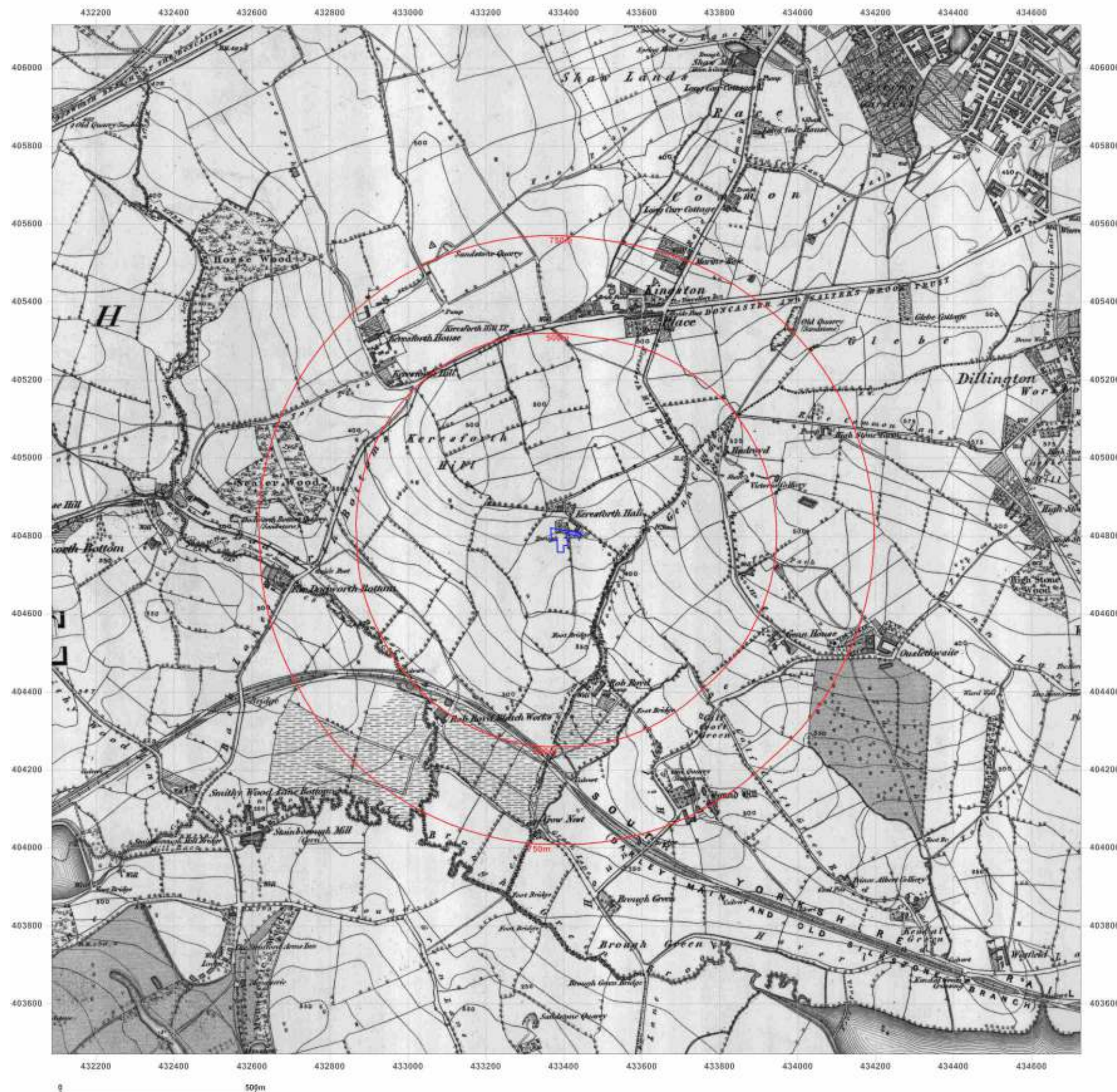


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Production date: 27 March 2018

Map legend available at:
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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1890-1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A



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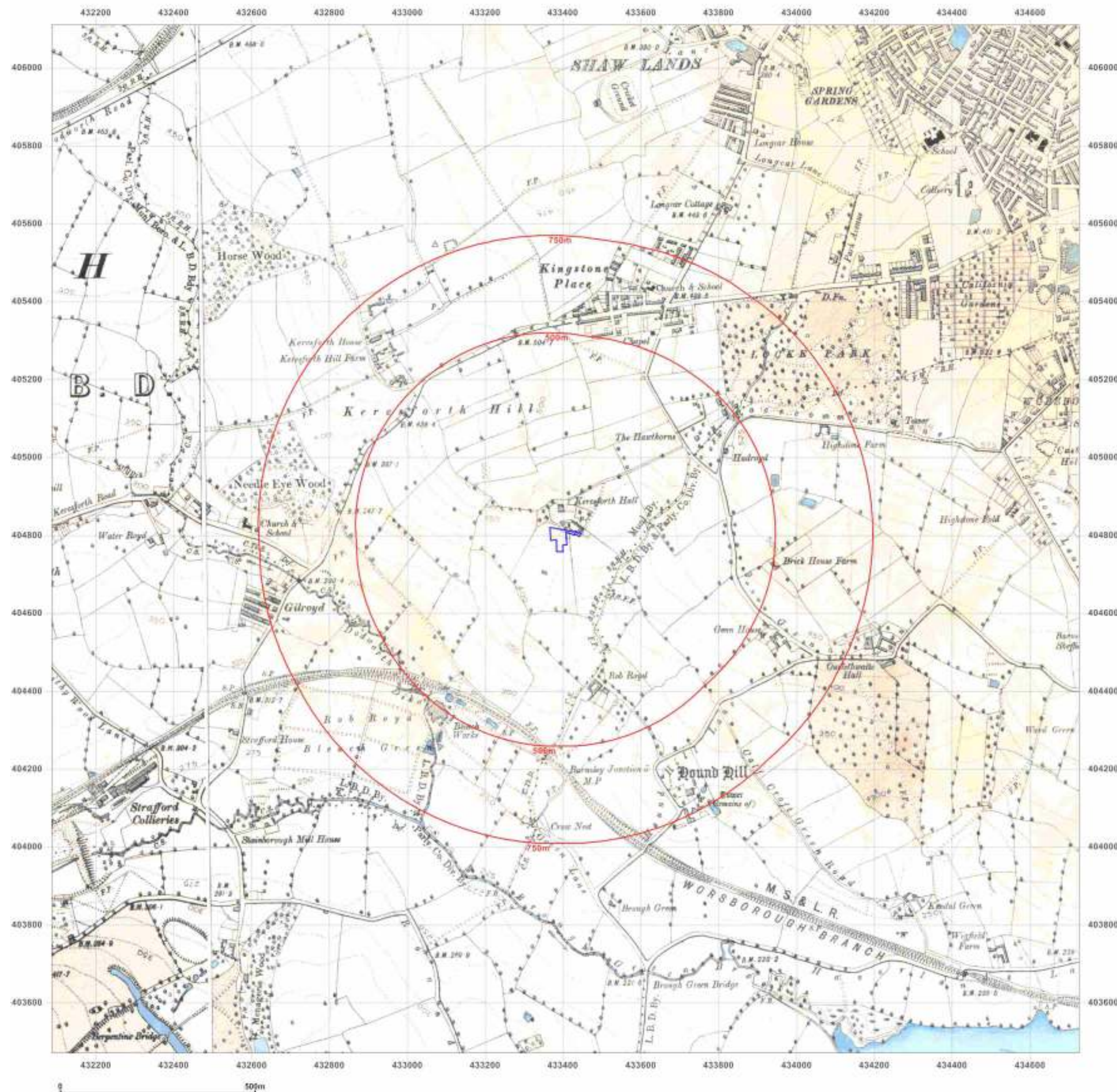


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1904

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1904
Edition N/A
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Surveyed 1890
Revised 1904
Edition 1904
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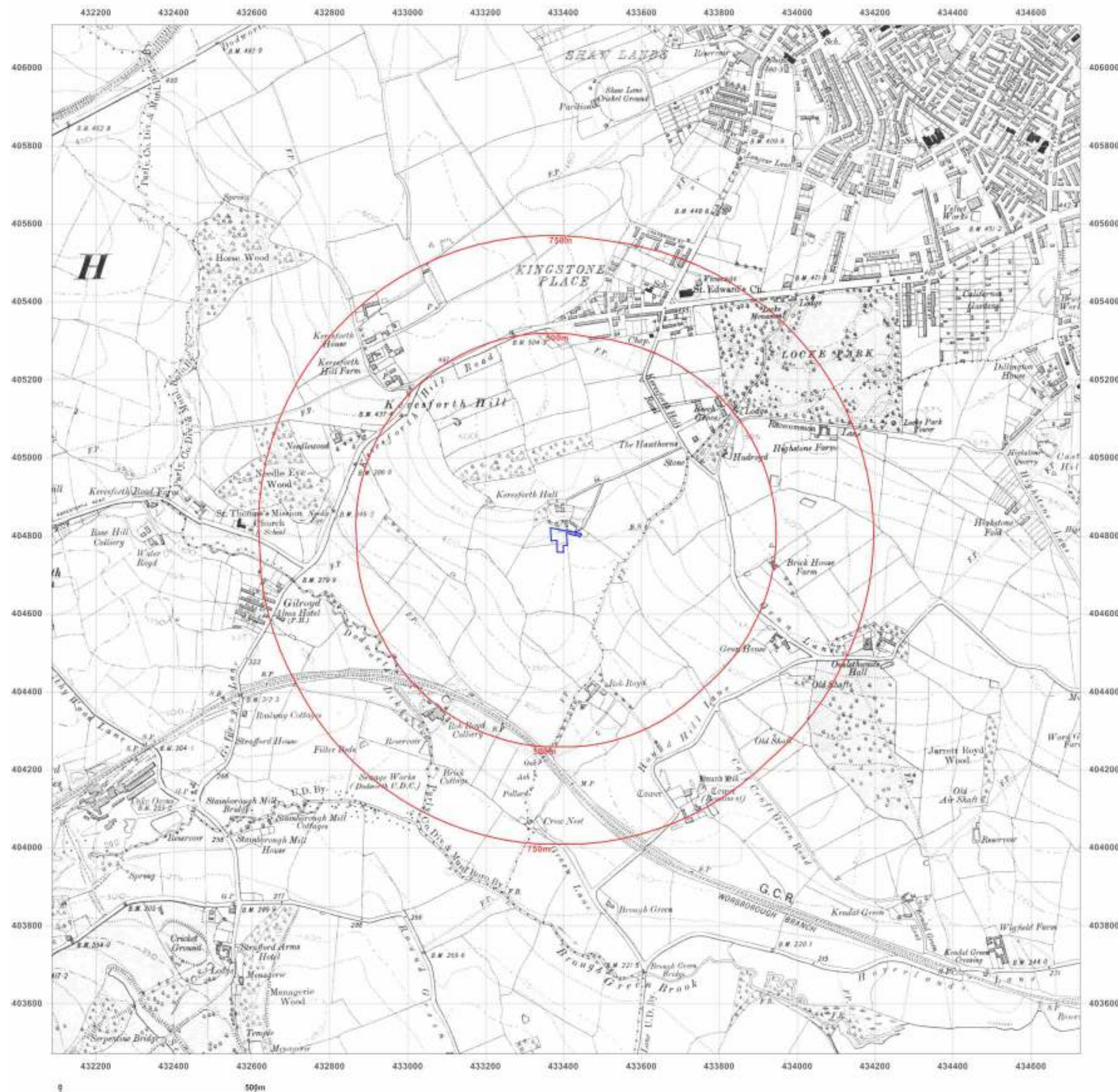


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Site Details:

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Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1929

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised 1929
Edition N/A
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Surveyed 1851
Revised 1929
Edition 1929
Copyright N/A
Levelled 1915



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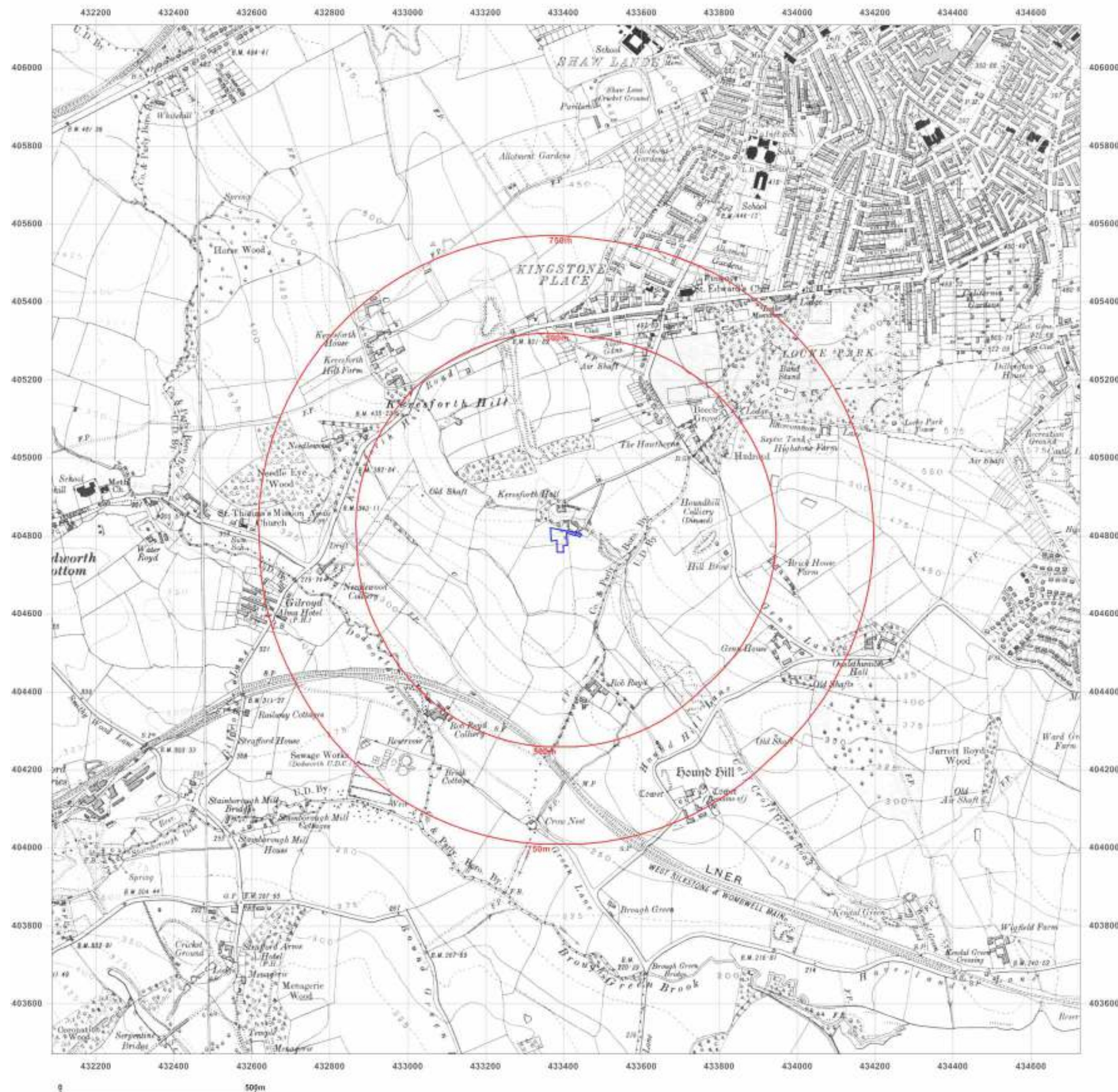


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised 1938
Edition N/A
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Surveyed 1851
Revised 1938
Edition 1938
Copyright N/A
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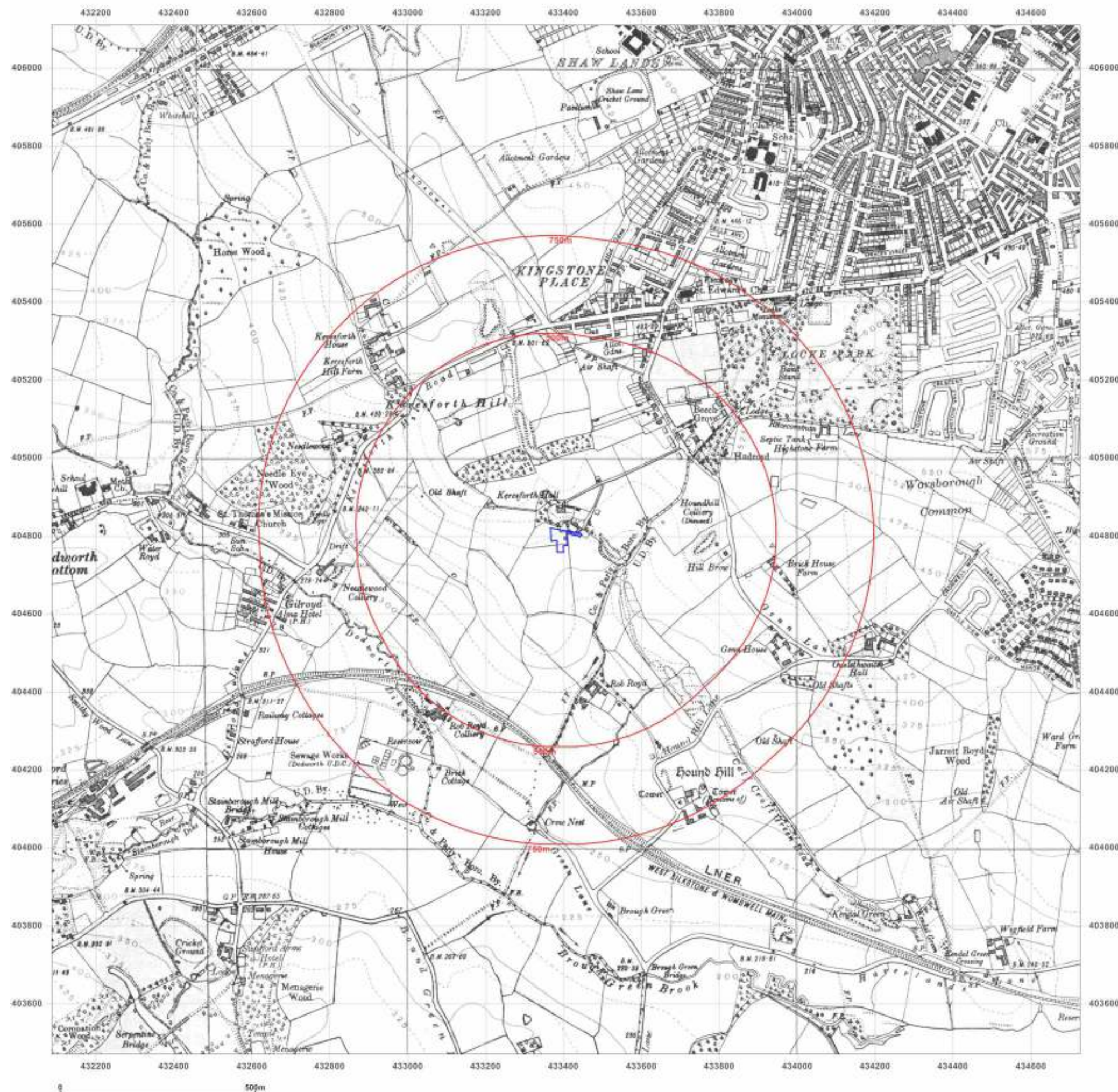


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Production date: 27 March 2018

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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
Revised 1948
Edition 1948
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Surveyed 1851
Revised 1948
Edition 1948
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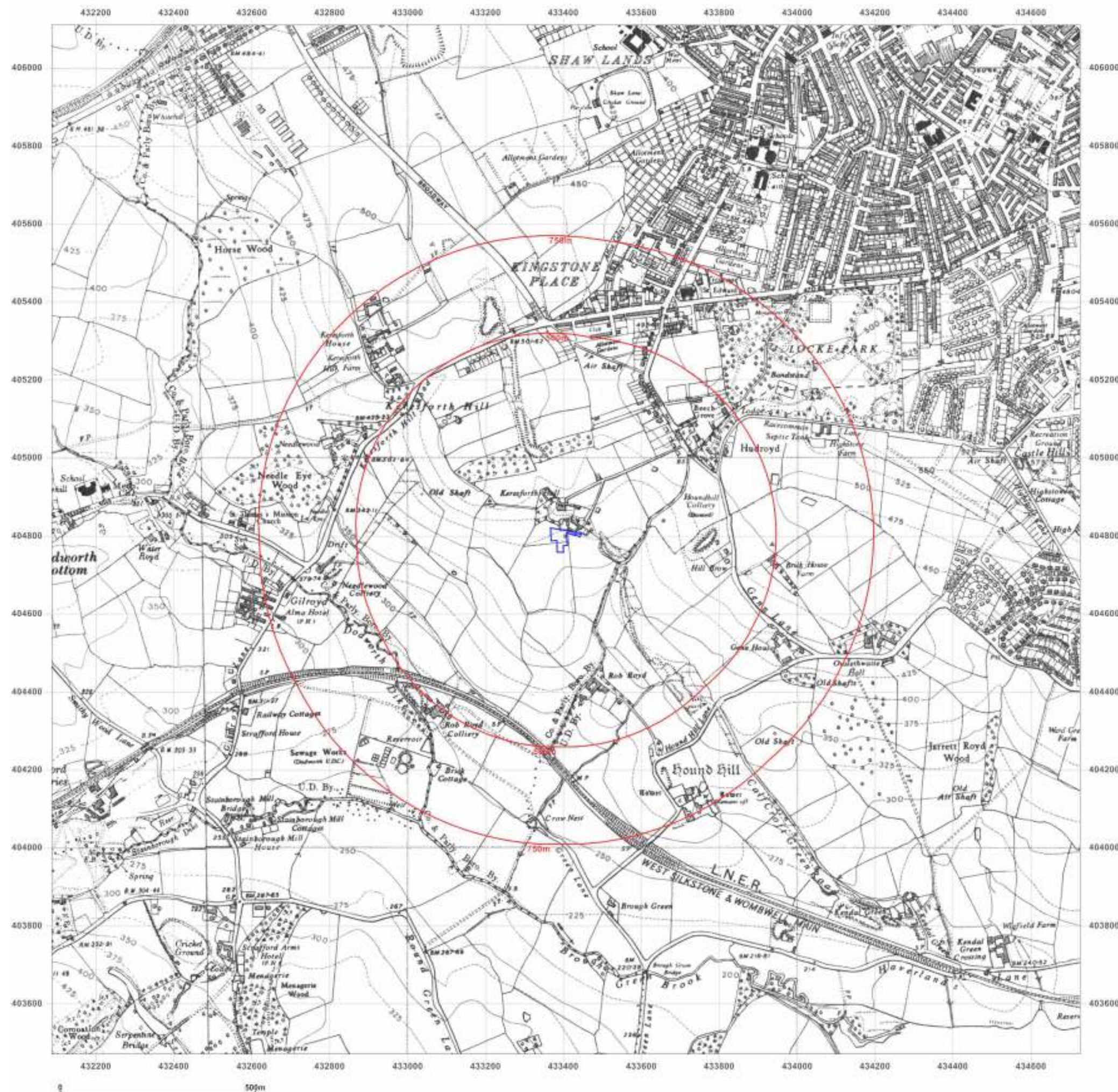


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1955
Edition N/A
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Surveyed N/A
Revised 1955
Edition N/A
Copyright 1956
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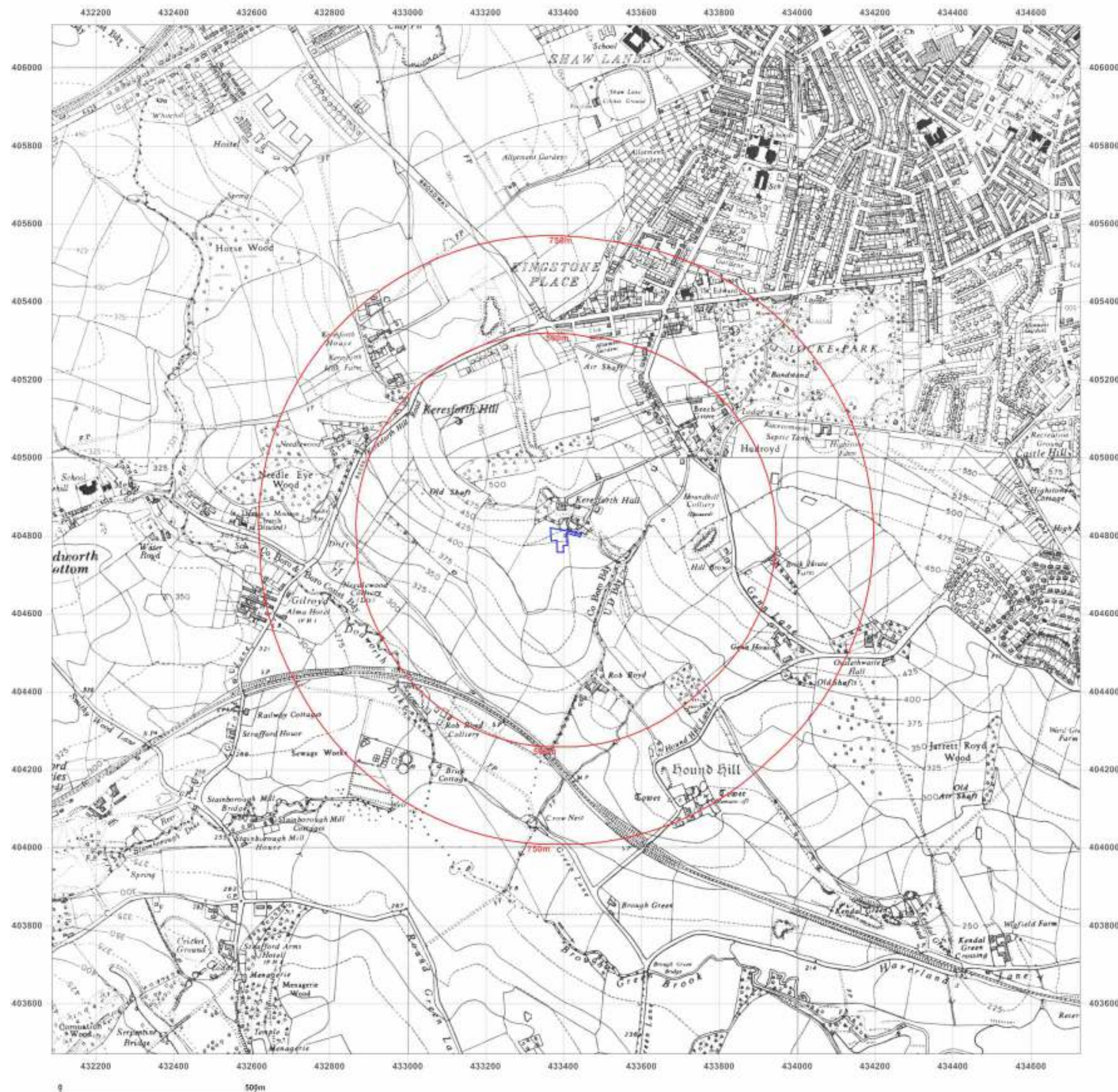


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: Provisional

Map date: 1965-1966

Scale: 1:10,560

Printed at: 1:10,560



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



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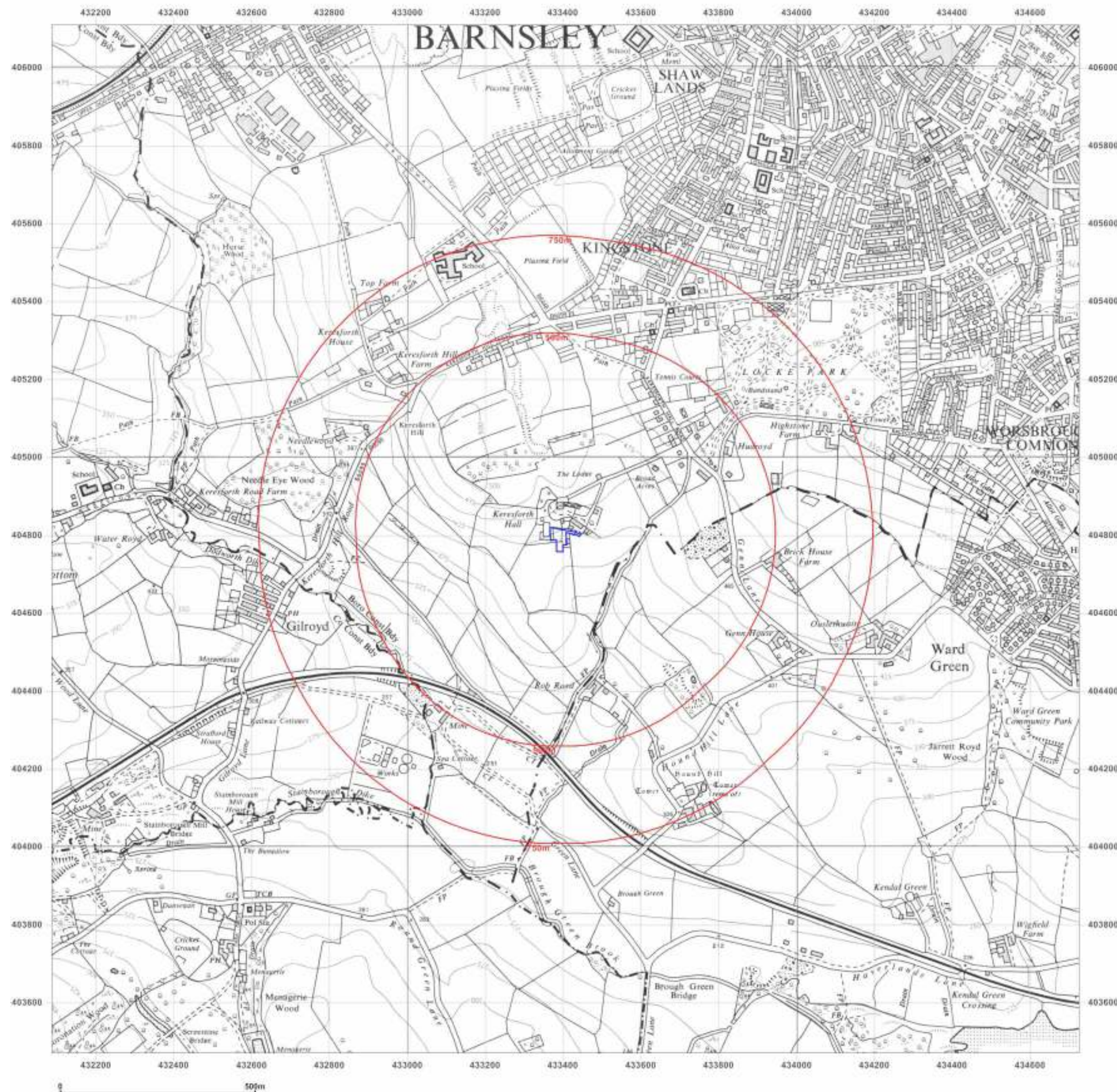


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

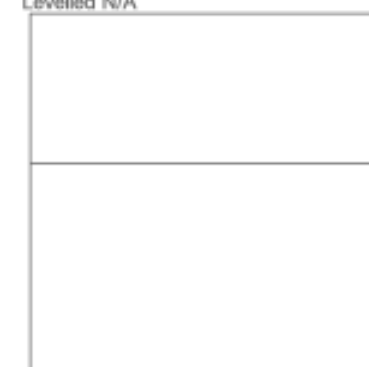
Map date: 1982

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1982
Revised 1982
Edition N/A
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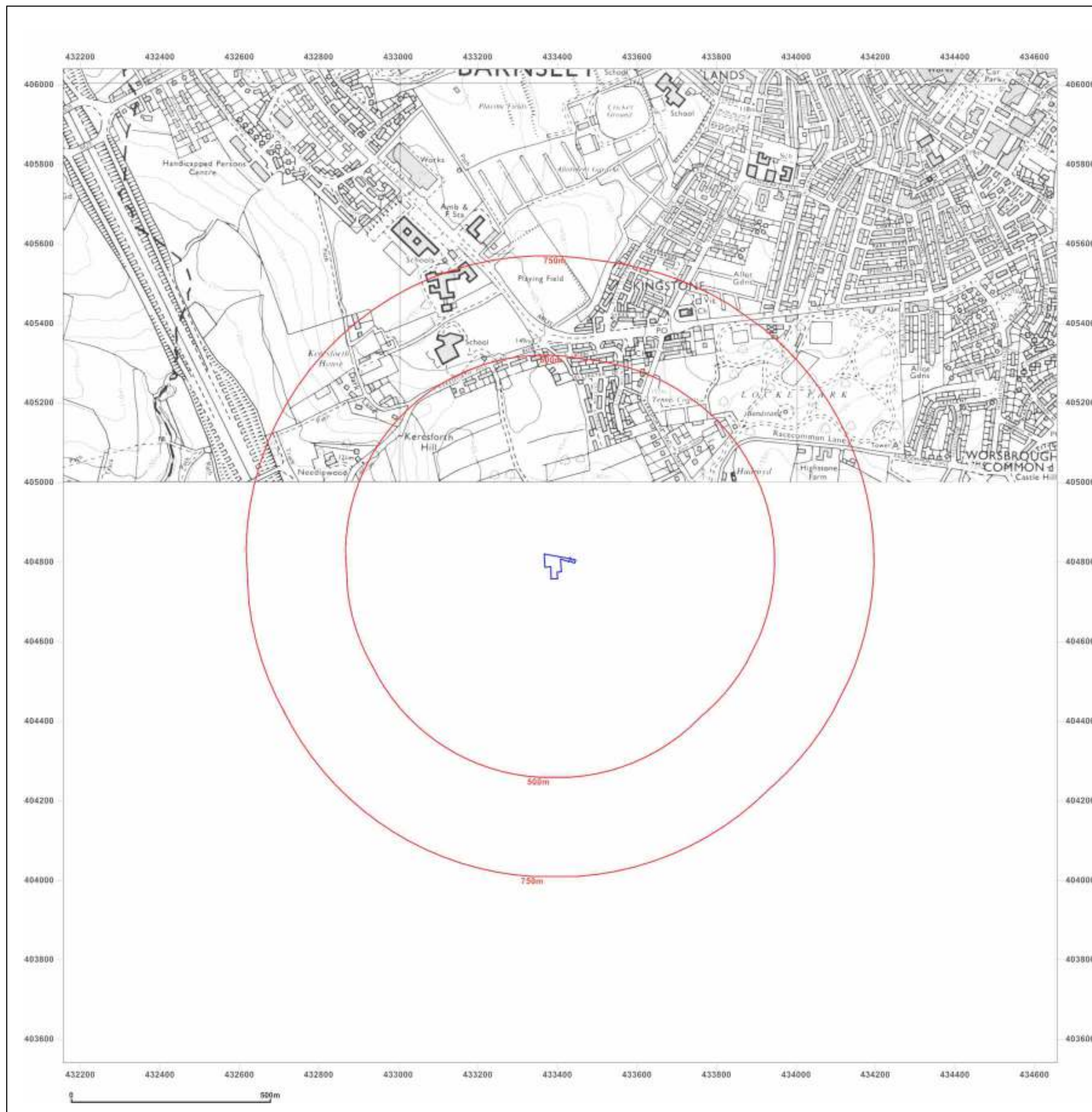


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Site Details:

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Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

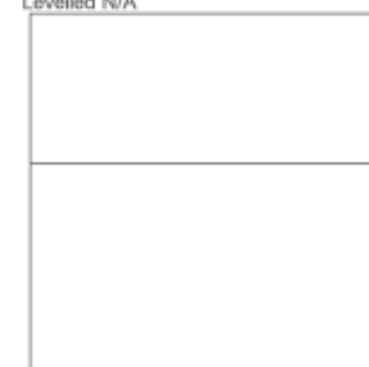
Map date: 1993

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1992
Revised 1993
Edition N/A
Copyright N/A
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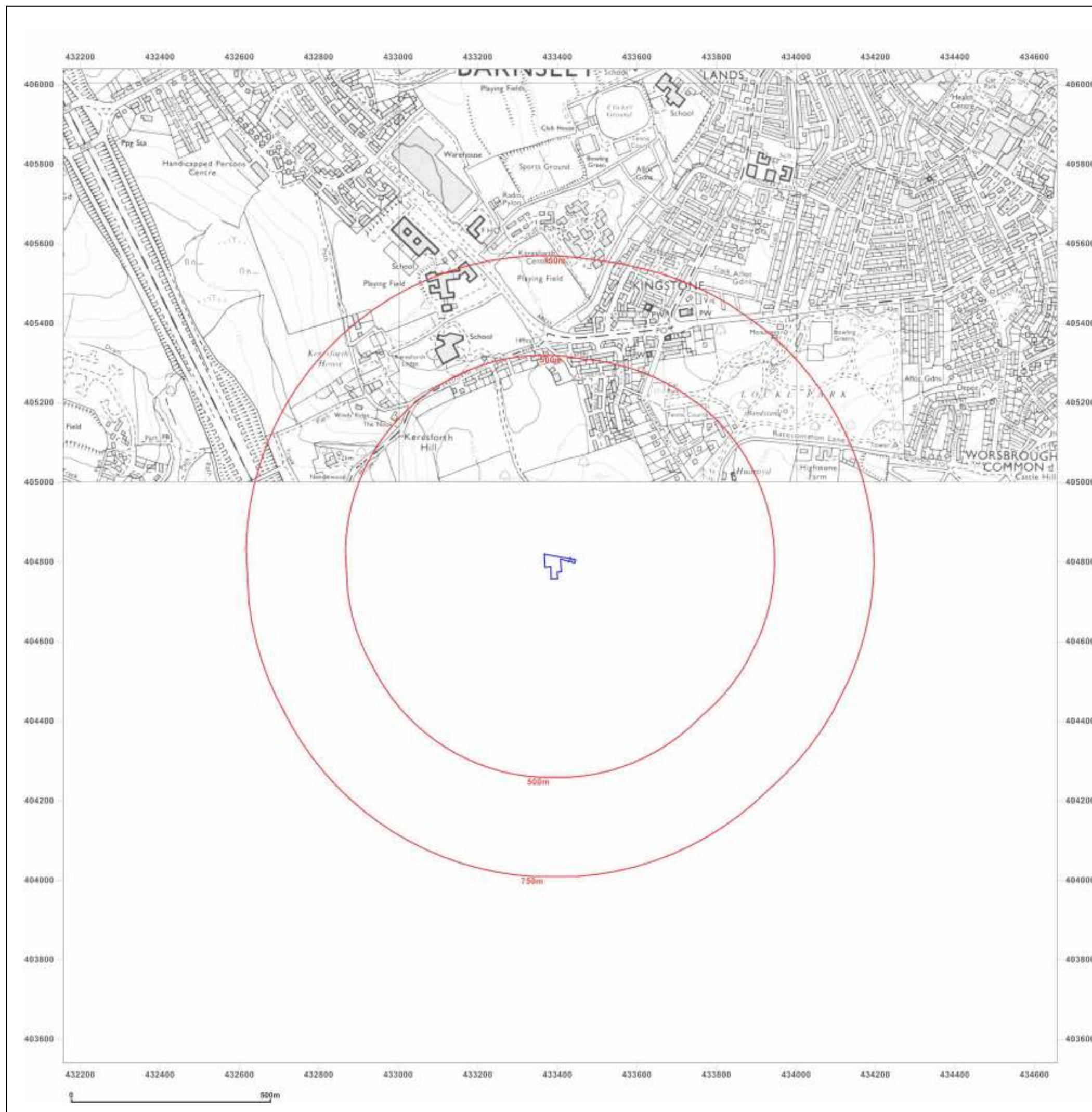


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Site Details:

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Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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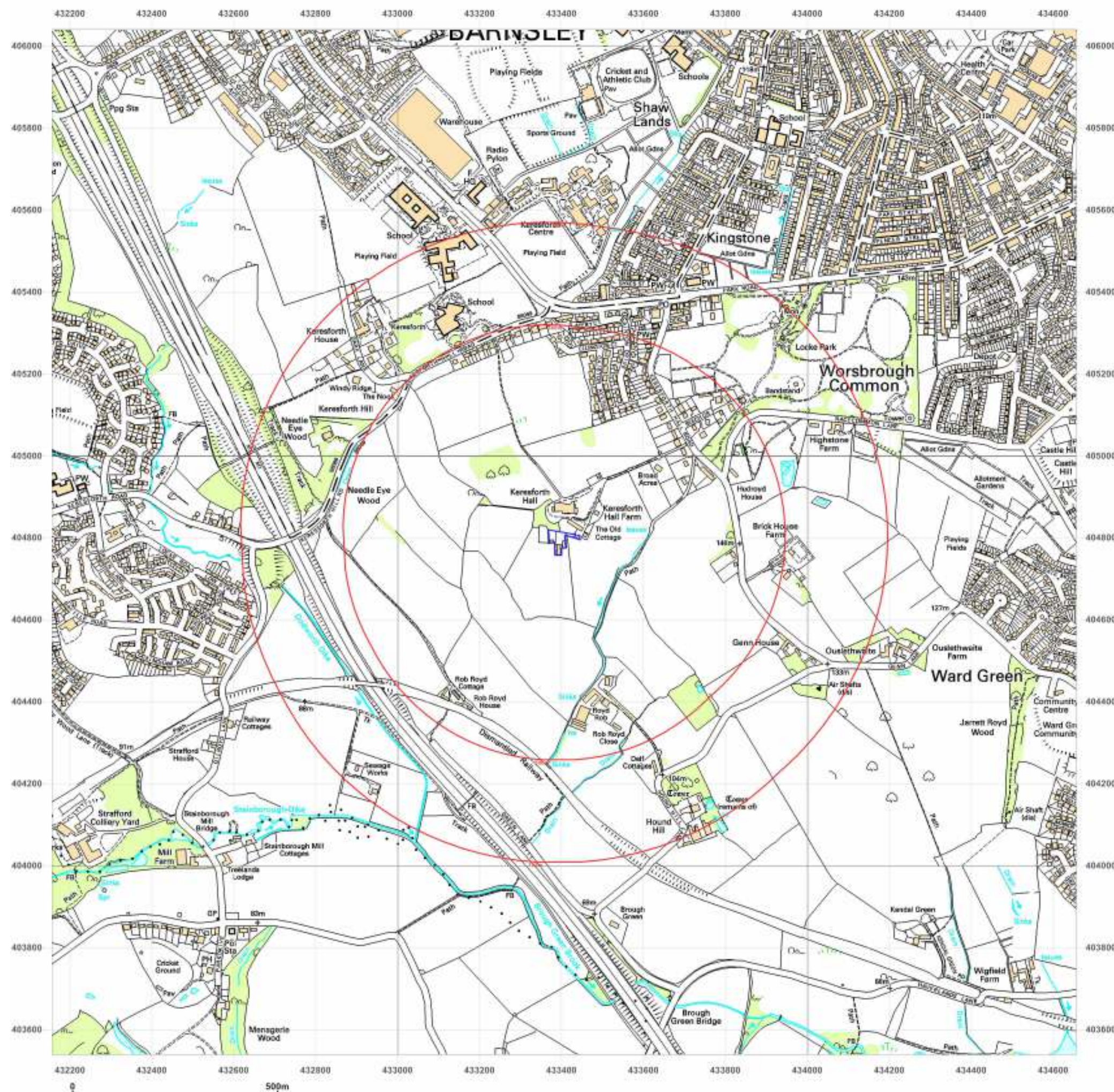


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Site Details:

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Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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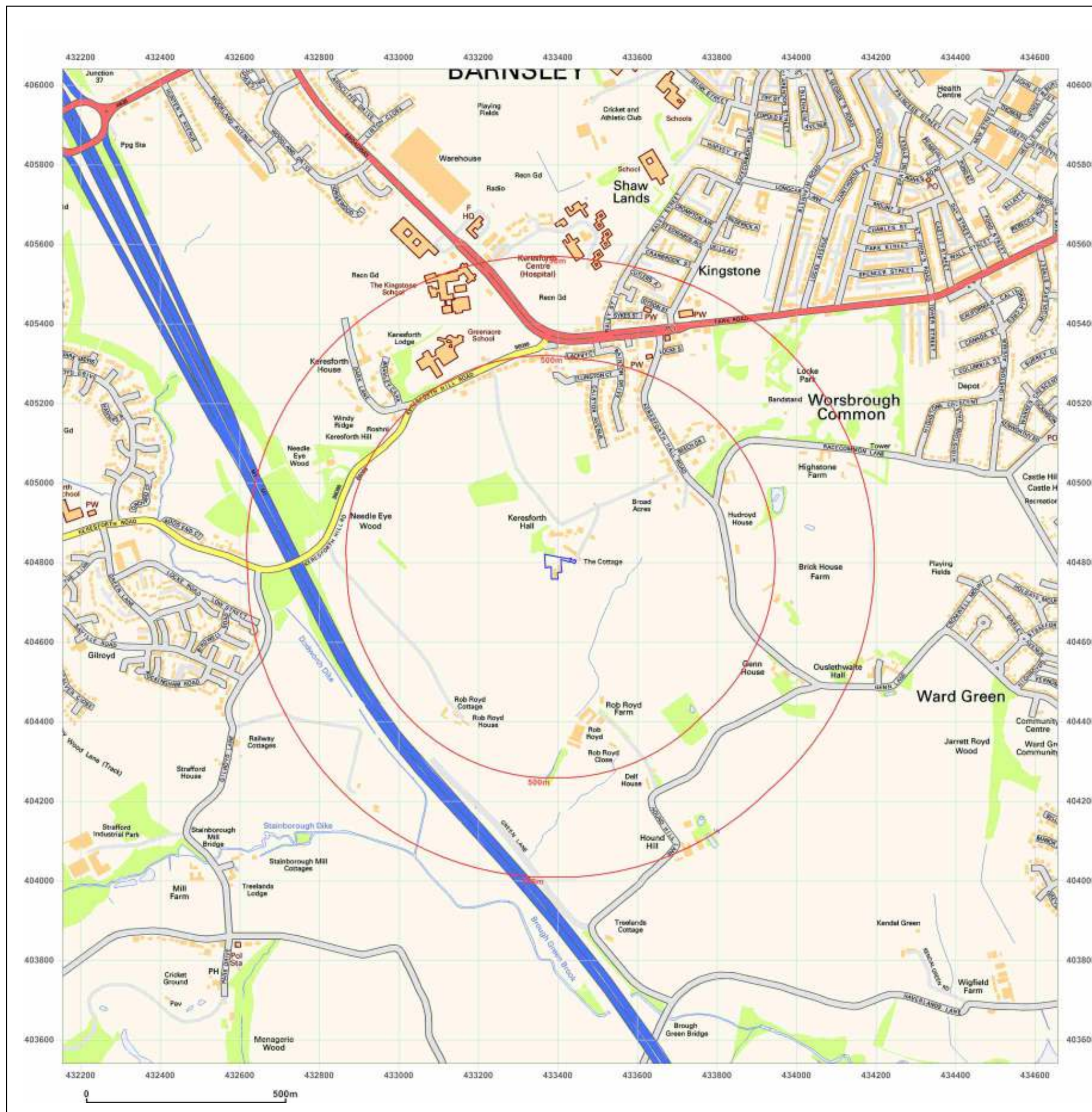


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Site Details:

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Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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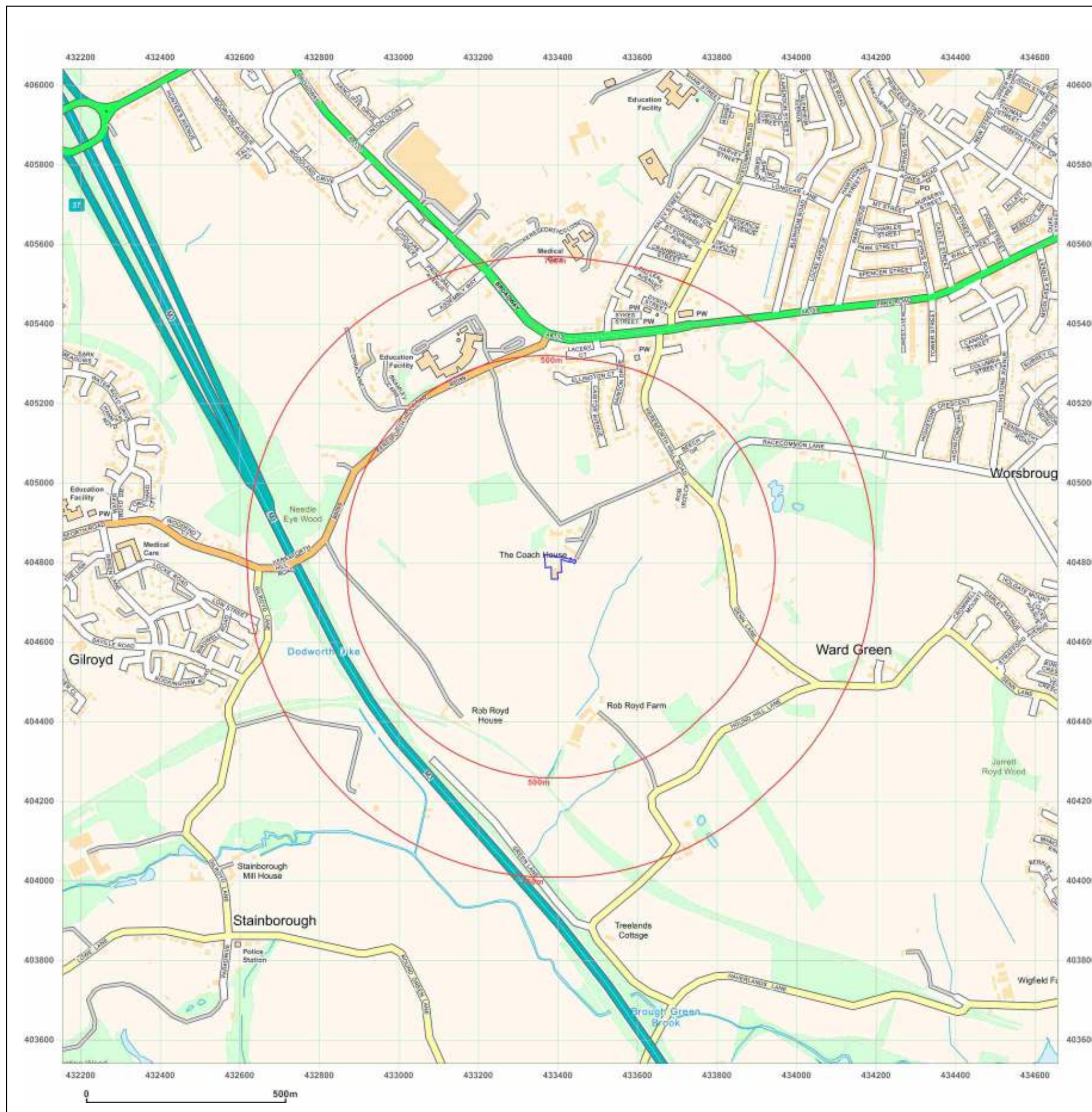


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LARGE SCALE SURVEY PLANS



Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

Map date: 1892-1893

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1893
Revised 1893
Edition N/A
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Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A



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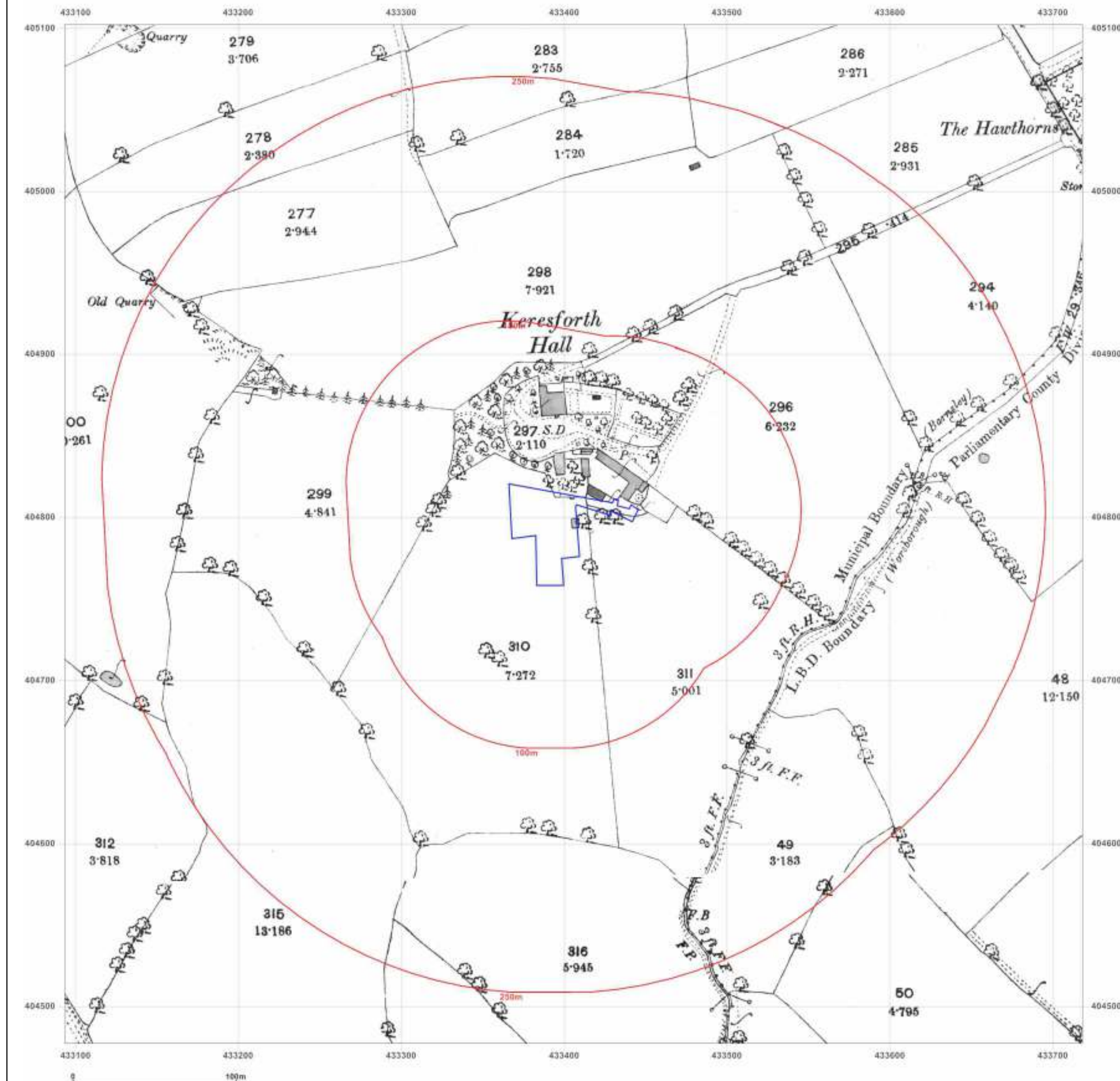


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: County Series

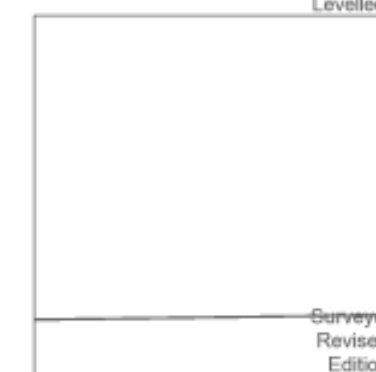
Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
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Surveyed 1906
Revised 1906
Edition N/A
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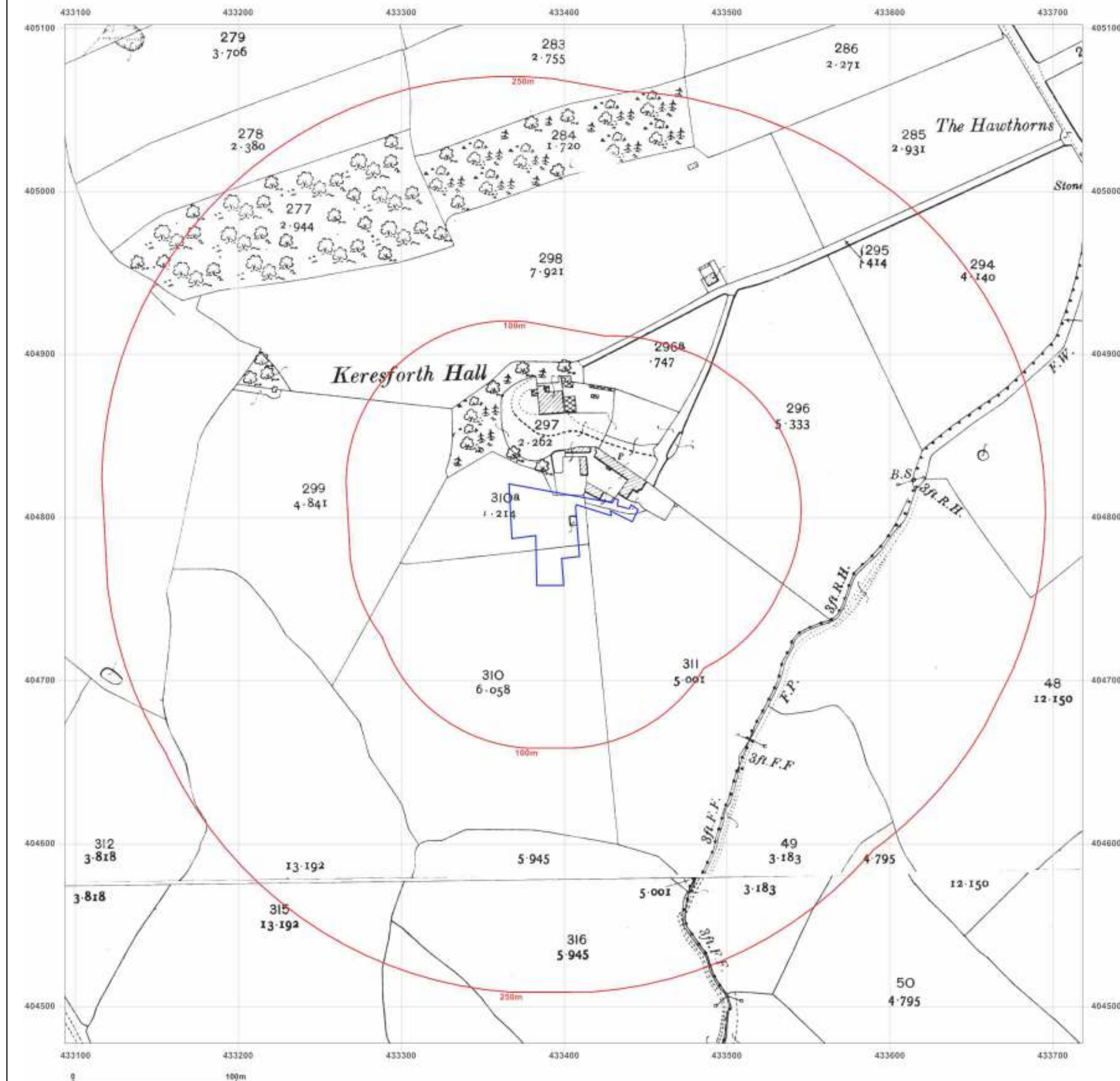


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Site Details:

Agricultural Barn, Keresforth
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Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 1959-1960

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1959
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Edition 1961
Copyright 1961
Levelled 1930

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
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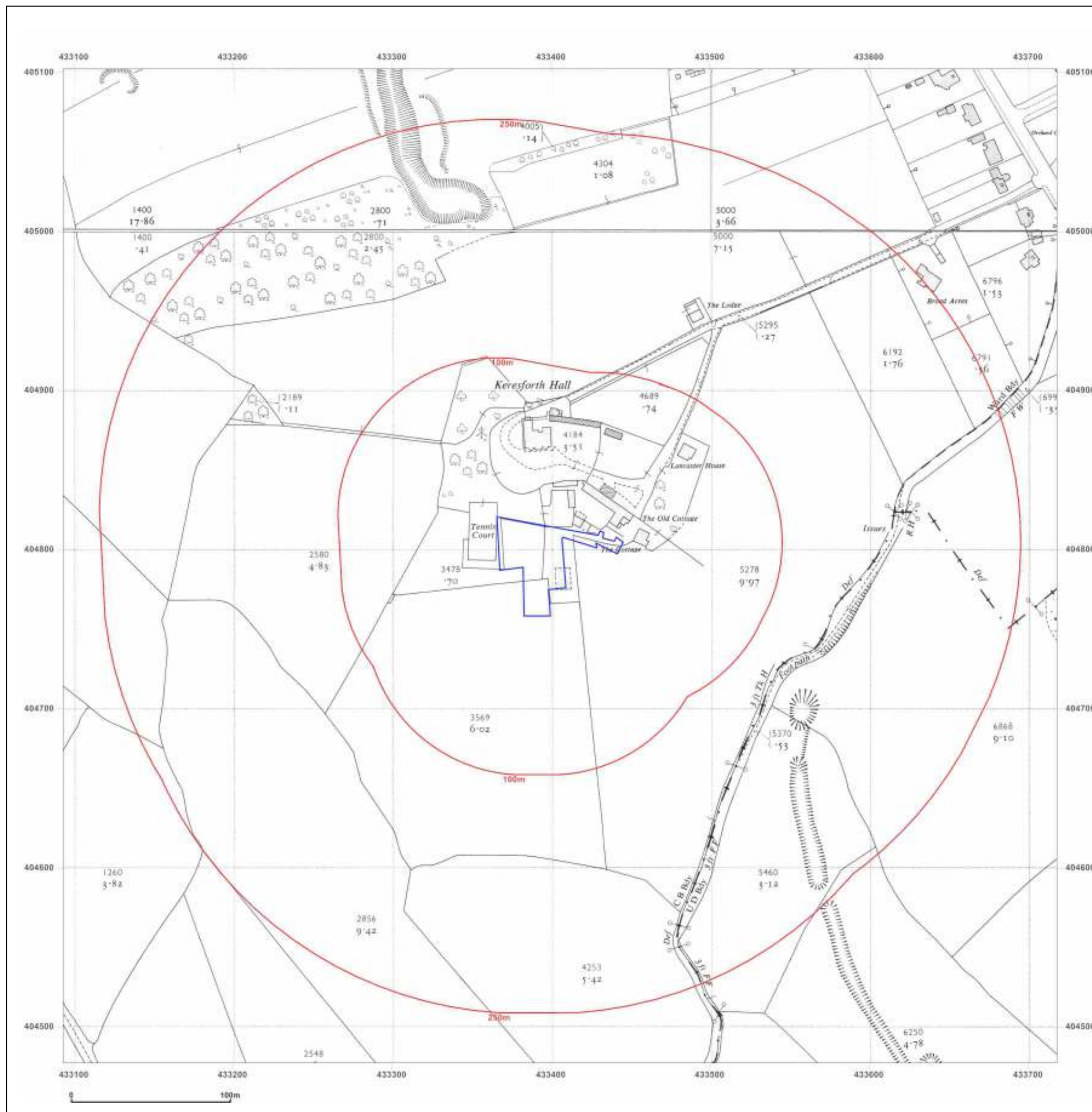


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Site Details:

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Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 1969

Scale: 1:2,500

Printed at: 1:2,500



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Levelled 1963

Surveyed 1969
Revised 1969
Edition N/A
Copyright 1970
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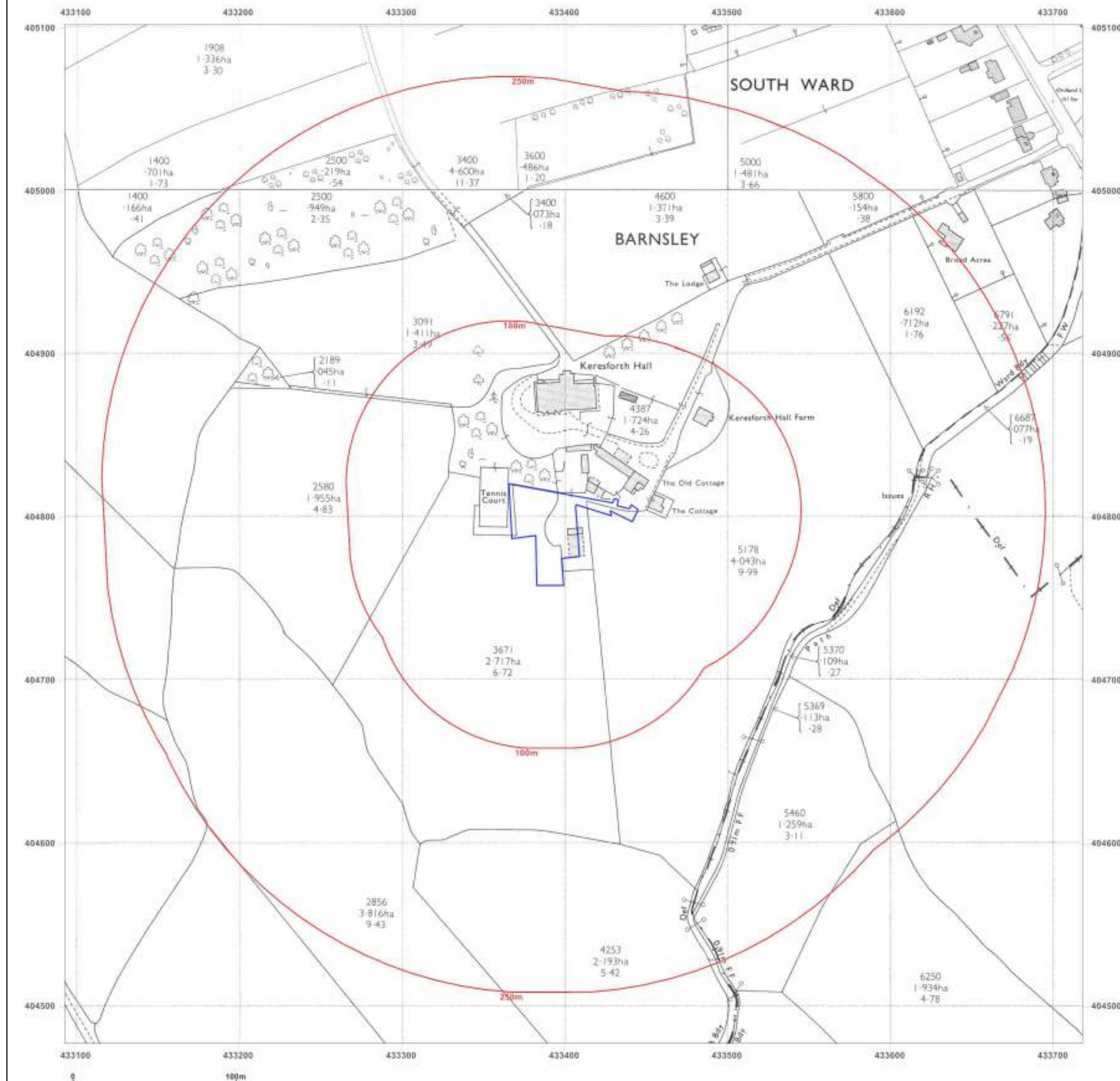


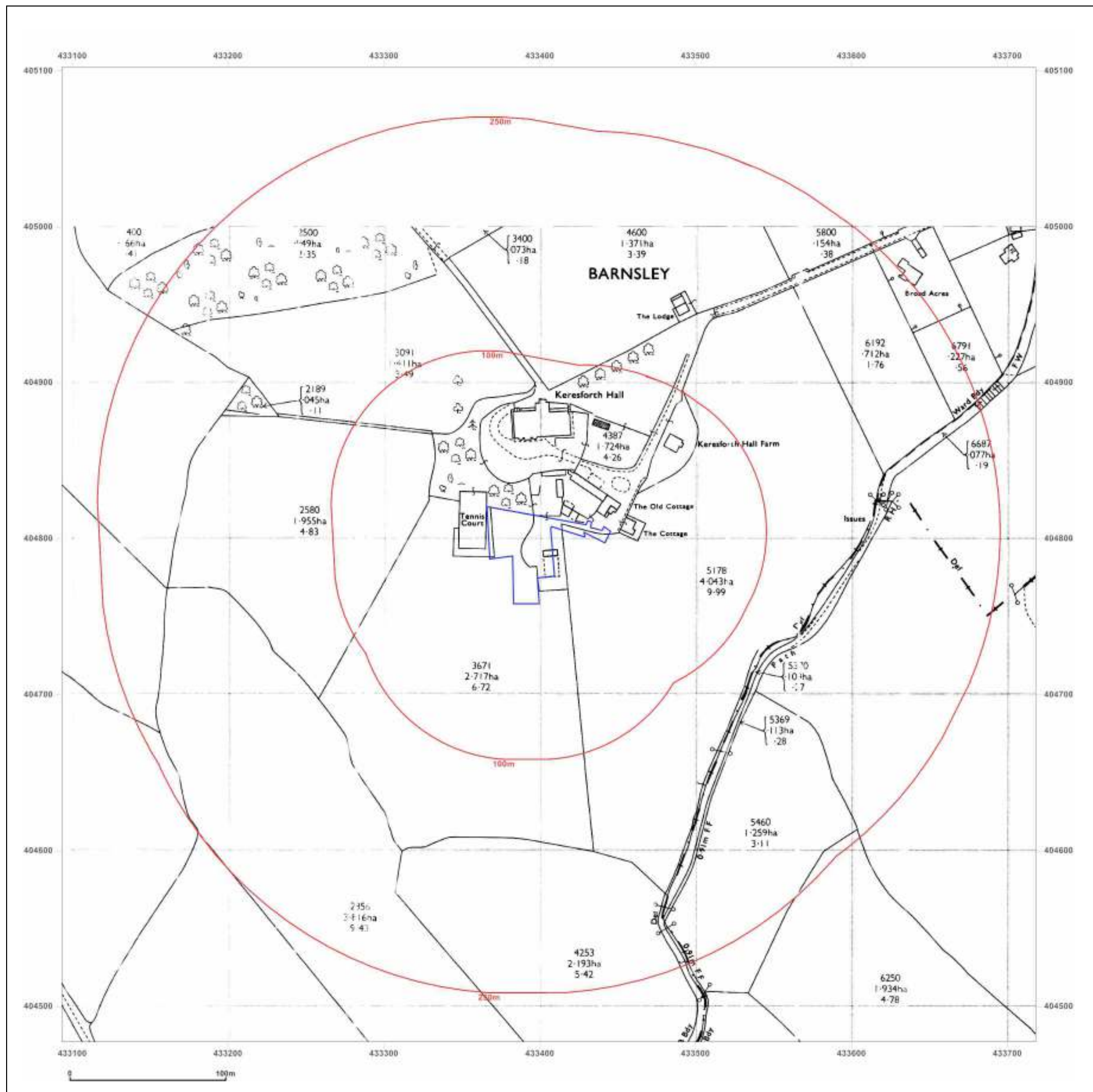
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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

Printed at: 1:2,500



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



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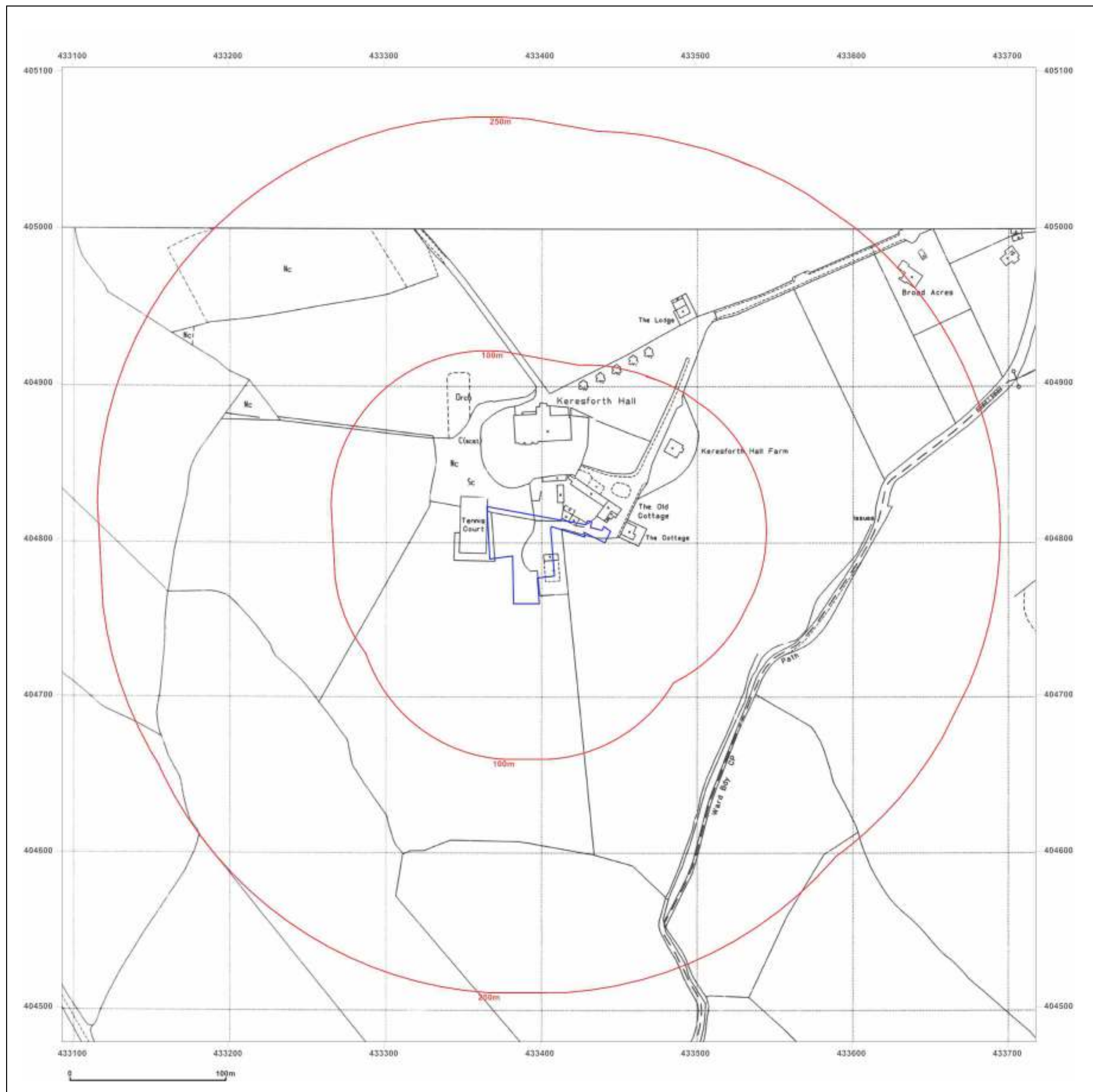


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Site Details:

Agricultural Barn, Keresforth
Hall Drive, Kingstone, S70 6NH

Client Ref: 4199
Report Ref: CMAPS-CM-700844-4199-270318HIS
Grid Ref: 433406, 404790

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1993
Revised N/A
Edition N/A
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FIGURES



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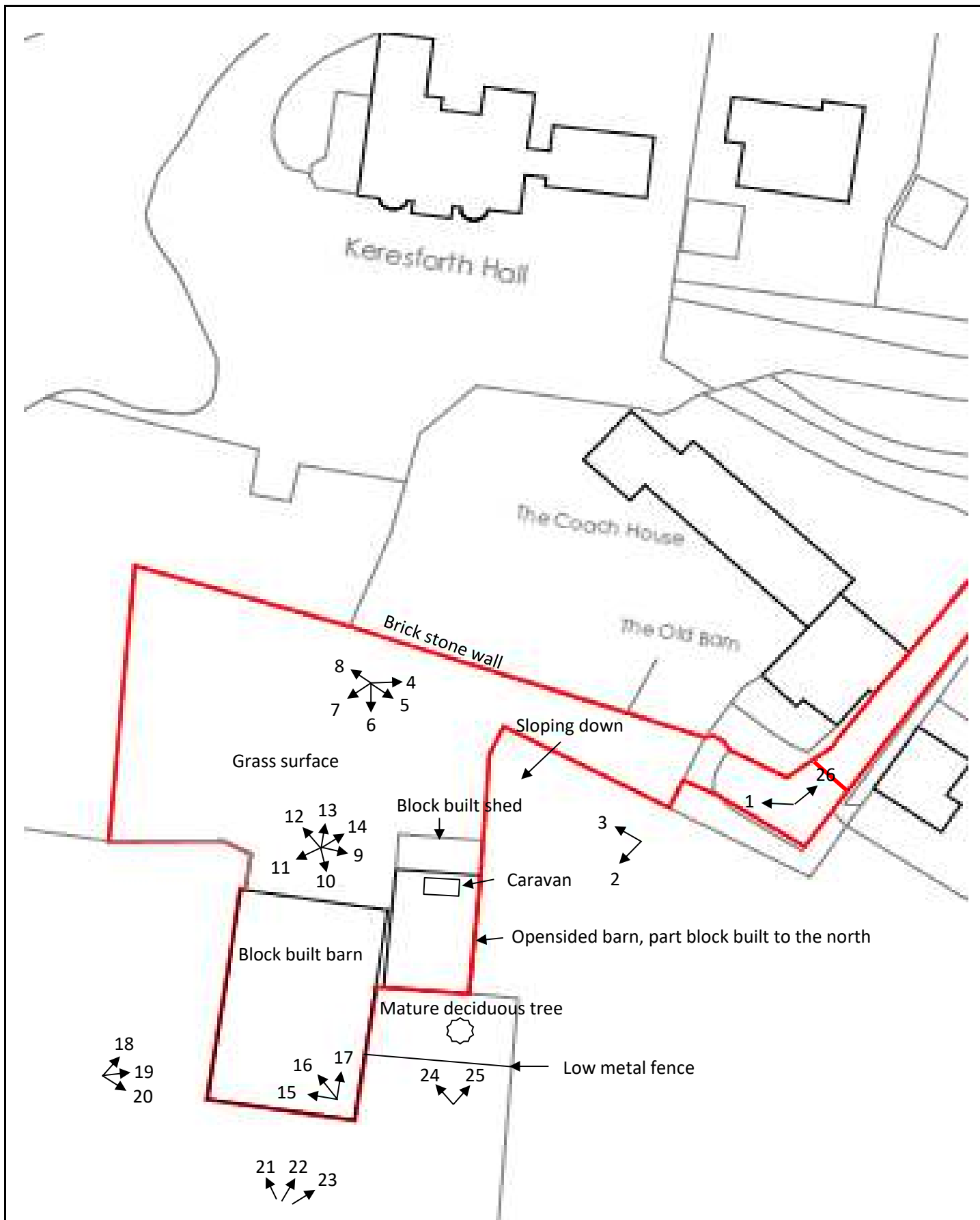


SUB SURFACE

SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS
3 Peel Street, Preston, PR2 2QS. Tel. (01772) 561035 Fax (01772) 204907

General Site Location

Site KERESFORTH HALL FARM, BARSNLEY, SOUTH YORKSHIRE	Date Drawn 02-May-18	Date Checked	Orientation 	Job No. NE3698
Client MS RACHEL WILSHAW	Drawn By DF	Checked By	Scale —	Figure No. 1



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 SUB SURFACE SITE INVESTIGATION AND SPECIALIST GEOTECHNICAL CONSULTANTS 3 Peel Street, Preston, PR2 2QS. Tel. (01772) 561035 Fax (01772) 204907		Site Layout Plan			
Site KERESFORTH HALL FARM, BARNSLEY, SOUTH YORKSHIRE		Date Drawn 02-May-18	Date Checked	Orientation 	Job No. NE3698
Client MS RACHEL WILSHAW		Drawn By DF	Checked By	Scale —	Figure No. 2