ENVIRONMENTAL DESK STUDY
AND
PRELIMINARY
RISK ASSESSMENT

214 Catherington Lane
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Hampshire
PO8 0TA

apple environmental

November 2023

Contents

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1 Introduction and objectives

1.1 Introduction

Apple Environmental Limited has been appointed to provide a Phase I environmental desk study report in support of the proposal to convert a single-storey agricultural barn to residential use with garden areas, and the conversion of a two-storey barn to commercial use as a health and wellbeing spa. This assessment has been carried out in accordance with the requirements of LCRM April 2021.

1.2 Aim

The principal aim of a Phase I environmental report is to gather the information needed in order to be in a position to assess the presence and/or significance of any land contamination on this site. The resultant information then enables a preliminary risk assessment to be carried out to conclusions in which an acceptable degree of confidence can be placed. These conclusions form the basis of the conceptual site model (CSM). The CSM therefore highlights any potential pollutant linkages at the site based on current and historical use of the land and its immediate surroundings, and if appropriate, proposes further investigation. Any such further investigation will focus on areas currently and previously used for purposes that may give rise to contamination and will take account of land use in the proposed future development, one of the principal goals being the reduction of any uncertainty in the CSM (BSI 10175:2011+A2:2017).

1.3 Objectives

The broad objectives of this report are to obtain information in order to:

- provide information from which likely contaminant-pathway-receptor relationships can be identified;
- evaluate the environmental setting of the site and to identify sensitive receptors;
- assess the likelihood of finding contamination on site, its nature and extent; and
- determine the need or requirements for further investigation, by means of generic or detailed risk assessment.

2 Site history

2.1 Introduction

The site is located in the village of Catherington, Hampshire.

2.2 Historical maps

Historical mapping and other archive material has been consulted to ascertain the past use of the site.

1867 - 1868

The site lies to the immediate east of an unnamed road and is occupied by a number of structures labelled Rendalls. A pond appears to be present to the immediate south. Parsonage Farm comprising around four large structures and a pond is located 120m to the northwest, and an old chalk pit is present 200m to the southwest.

1897

Several smaller structures have been constructed upon the site, whilst another is present to the immediate east. A pump is also now located upon the site.

1908 - 1909

Another small structure has been constructed in the middle of the site.

1932 - 1933

There are no significant changes to the site or surrounding area.

1962

Four structures, presumed to be dwellings have now been constructed to the western side of the unnamed road.

1968

Some of the buildings on-site have been demolished, whilst others have been added. The additions include a swimming pool.

More dwellings have been constructed along the western side of the unnamed road, and poultry houses are now present around 100m to the west. The aforementioned Parsonage Farm to the northwest no longer appears to be present.

1974 - 1980

Dwellings have now been constructed upon the former Parsonage Farm site.

1990 - 1993

The road to the immediate west of the site is now labelled Catherington Lane.

2001 - 2003

There are no significant changes to the site or surrounding area.

2010 - 2023

A business park is now present to the western side of Catherington Lane.

2.3 Historical and archaeological records

Agriculture has long been the main activity of the village and its surrounding area, with three working farms listed in the village in 1838. Other trades within the village around this time included a smithy and a public inn.

2.4 Identified historical commercial/industrial sites

Through reference to historical data, the only feature identified within 200m of the subject site with a potentially contaminative past land-use is an old chalk pit, located 175m to the southwest. There are no recorded historical petrol/fuel sites or historical garages having operated within 250m of the site; however there have been three recorded historical energy features within this distance. These are all electricity substations, the closest of which was located 109m to the north.

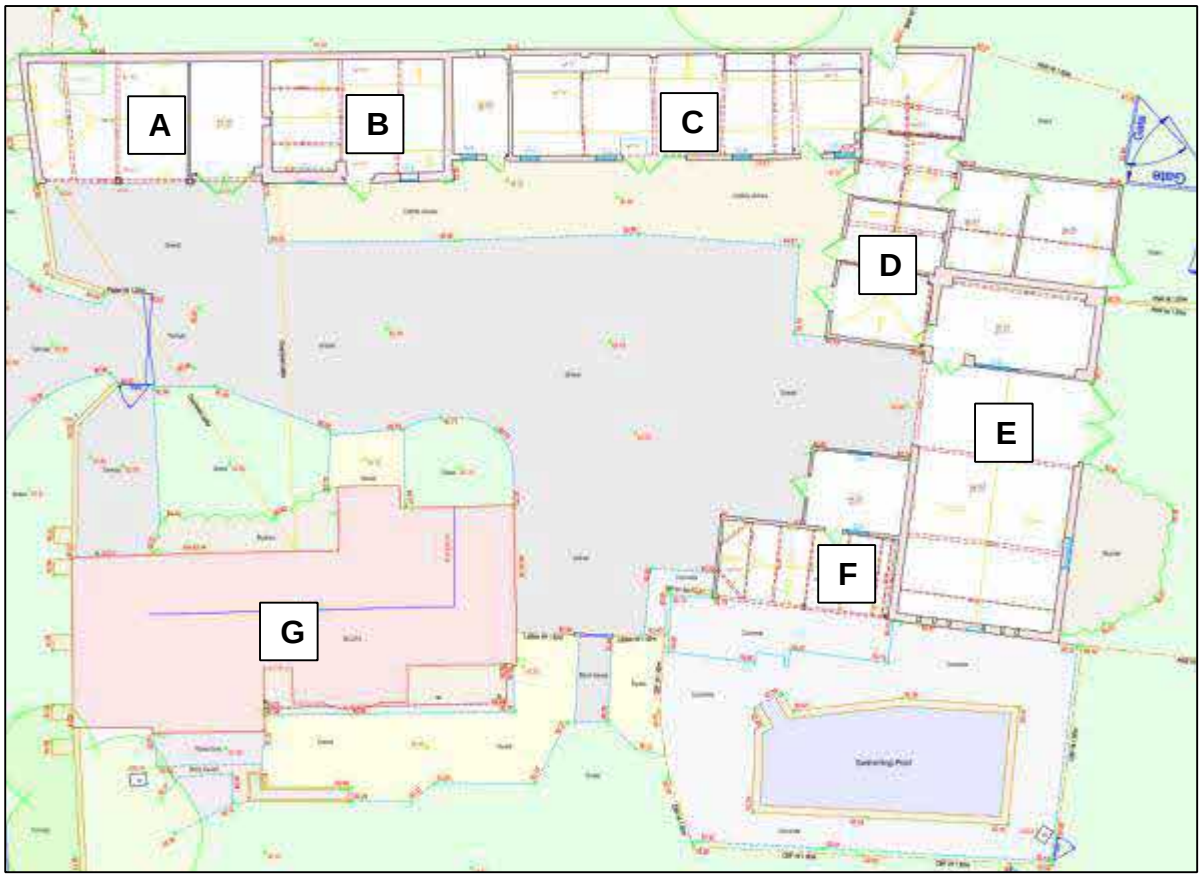
3 Current setting

3.1 General

The site comprises several agricultural barns and stables with a gravel yard area, and is accessed from Catherington Lane to the west. The site walkover was undertaken on the 25th October 2023.

The buildings are mostly of brick and flint/stone construction. Figure 1 shows the layout of these buildings, and some of the features of each have been described in greater detail below.

Figure 1 Site layout



The site exists as a former farmyard, comprising a number of associated buildings formerly used for livestock and stabling. The ground slopes gently to the south.

Building A is a timber-framed car port constructed from brick and flint walls with a timber roof and part concrete, part compressed soil flooring.

A steel oil tank is present upon the compressed soil flooring, located upon block plinths. There is no sign of any hydrocarbon staining.

Building B is a single-storey timber-framed barn with internal raised timber flooring and pitched tiled roofing.

Building C is a single-storey brick constructed barn with pitched tiled roofing split into two sections. Both sections have internal concrete flooring.

Building D exists as a timber-framed stable block with concrete flooring and pitched tiled roofing.

Building E is a timber-framed large brick and flint constructed barn with concrete flooring and pitched tiles roofing.

Building F is brick constructed with pitched tiled roofing. To the immediate south of this barn there is a swimming pool.

Building G exists as a two-store brick constructed dwelling.

The yard area exists as gravel with some cobbled stone areas to the front of Buildings B and C.

Photographs 1 to 14 below show some of these features.

Photograph 1 Showing the entrance onto the site

Photograph 2 Showing Building A

Photograph 3 Showing the oil tank within Building A

Photograph 4 Showing Building B

Photograph 5 Showing Building C

Photograph 6 Showing insid e Building C

Photograph 7 Showing Building D

Photograph 8 Showing inside Building D

Photograph 9 Showing Building E

Photograph 10 Showing inside Building E

Photograph 11 Showing Building F

Photograph 12 Showing Building G

Photograph 13 Showing the swimming pool

Photograph 14 Showing the yard area

3.2 Development surrounding the site

Through reference to environmental datasheets, commercial or industrial activities or other potentially significant features which currently exist within 200m of the site are as follows;

- a business park - 95m to the west of the site;
- sports and leisure equipment repair - 102m to the west;
- an electricity substation - 120m to the north; and
- electricity pylons - 156m and 187m to the southwest.

There are no active petrol or fuel stations located within 200m of the site.

There are also no underground high pressure oil or gas pipes recorded within 500m of the site, nor are there any underground electricity transmission cables within this same distance.

4 Environmental setting

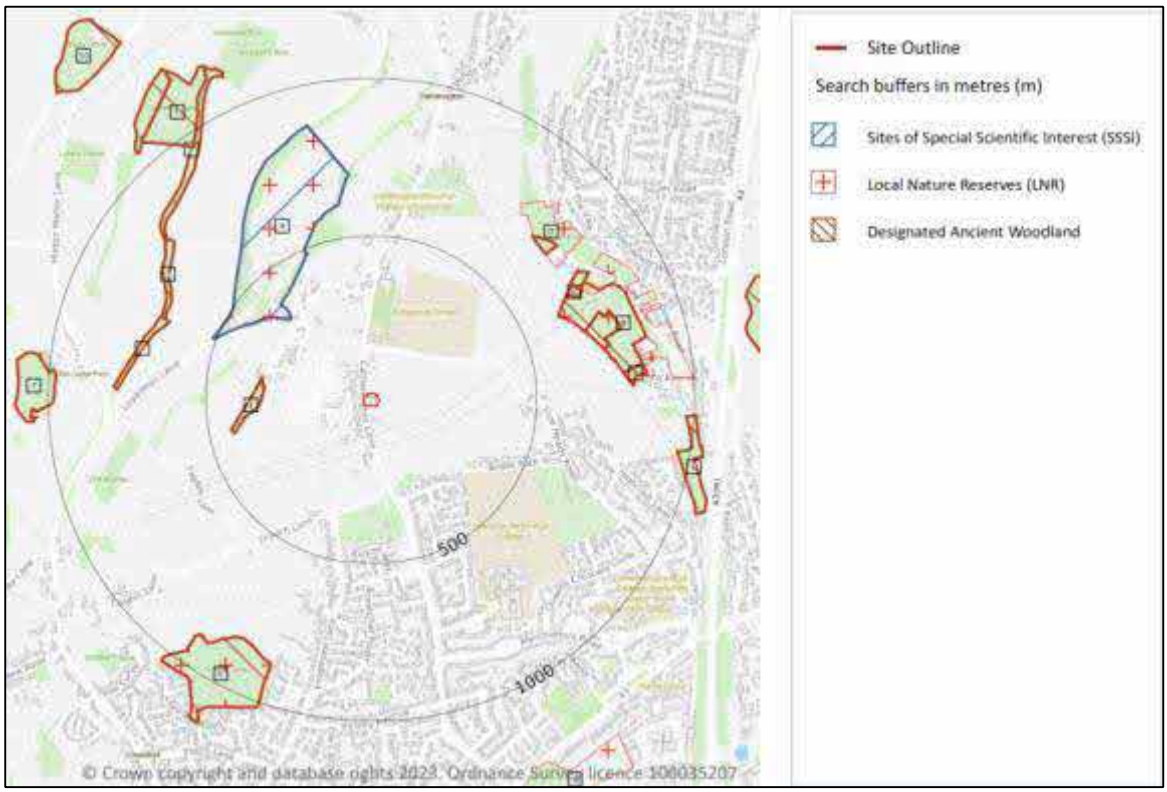
Ordnance Survey maps were used in conjunction with the MAGIC website (formerly English Nature's Nature on the Map) in order to ascertain the location of sensitive habitat areas and other places of special or scientific interest within the vicinity of the site.

The site itself does not lie within a designated environmentally sensitive area; the nearest of which is Catherington Down, 337m to the northwest. This has been designated as a Site of Special Scientific Interest (SSSI) and a Local Nature Reserve (LNR). Despite not falling within a designated area, the ecological importance of the site and its surroundings should still be taken into consideration.

A number of ancient woodland areas are also present within this area; the closest of which is 316m to the west.

Figure 1 below shows the proximity of these highlighted features.

Figure 1 Location of nearest environmentally sensitive areas



5 Geology

5.1 Bedrock

Geological data states that the underlying geology of the specific area upon which the subject site lies consists of the Tarrant Chalk Member.

This sedimentary bedrock was formed approximately 93 to 100 million years ago during the Cretaceous Period. The thickness of the bedrock at the subject site has not been confirmed.

5.2 Superficial deposits

BGS data suggests that there are superficial deposits of the Clay-with-Flints Formation overlaying the bedrock at the location of the site. These deposits were formed during the Paleogene Period.

The thickness of the superficial deposits at the subject site has also not been confirmed.

5.3 Artificial deposits

BGS mapping does not record any artificial deposits overlying the geological deposits at this site location; however considering the characteristics of the site it is quite possible for there to be made-ground present, at least across parts of the site, or beneath the existing buildings.

Similarly the aforementioned pond to the immediate south of the site disappears from mapping in the 1960s suggesting that it may have been infilled. This is currently characterised by an area of established trees behind a brick wall.

5.4 Borehole data

British Geological Survey (BGS) borehole data has been consulted for this study. In doing so, there are no borehole logs which are expected to share similar geological strata to that which is present beneath the site within 250m of the site.

5.5 Soil chemistry

Through reference to available data, the soil in the local area is expected to have a natural arsenic concentration of 15mg/kg, a cadmium concentration of 1.8mg/kg, a chromium concentration of 90 - 120mg/kg, a nickel concentration of 15 - 30mg/kg, and a lead concentration of between 100 - 200mg/kg.

5.6 Radon affected areas

According to the Health Protection Agency (HPA) mapping, the site is located within a radon affected area, where between 1% and 3% of properties are potentially above the 'Action Level'.

However, through reference to BR211; 2015 basic radon protective measures are not considered necessary for new buildings in this area.

5.7 Coal and non-coal mining

Through reference to historical mapping, the closest of such to the site appears to have been chalk quarrying 175m to the southwest of the site. This is indicated on mapping from 1867 onwards as being an 'old chalk pit'.

6 Hydrology

6.1 Groundwater

The expected geology for the specific area of the site is bedrock of the Tarrant Chalk Member Formation which has been classified as a ‘principal aquifer'. This is designated when there are permeable layers providing a high level of water storage and may support water supply or river base flow on a strategic scale.

Conversely the superficial deposits have been classified as an ‘unproductive aquifer’ with low permeability. These deposits are therefore both confining the chalk aquifer and protecting it.

The groundwater is of high vulnerability, and has an intermediate leaching classification.

Due to the absence of BGS borehole data, the presence and/or depth of groundwater beneath the site is not known; although as it lies on a principal aquifer and within a Source Protection Zone (inner catchment) it is quite possible that groundwater could be present at an accessible or vulnerable depth. The nearest active licensed abstraction point is believed to be 1km to the southwest.

6.2 Surface water

There are no current surface water features recorded within 250m.

With regards to any surface water accumulation in the immediate vicinity of the site, it is expected that where there is soft landscaping/ gravel coverings, rainwater will readily percolate down directly through into the permeable bedrock below.

6.3 Discharge consents

According to environmental datasheets there are no active licensed discharge consents within 100m of the site.

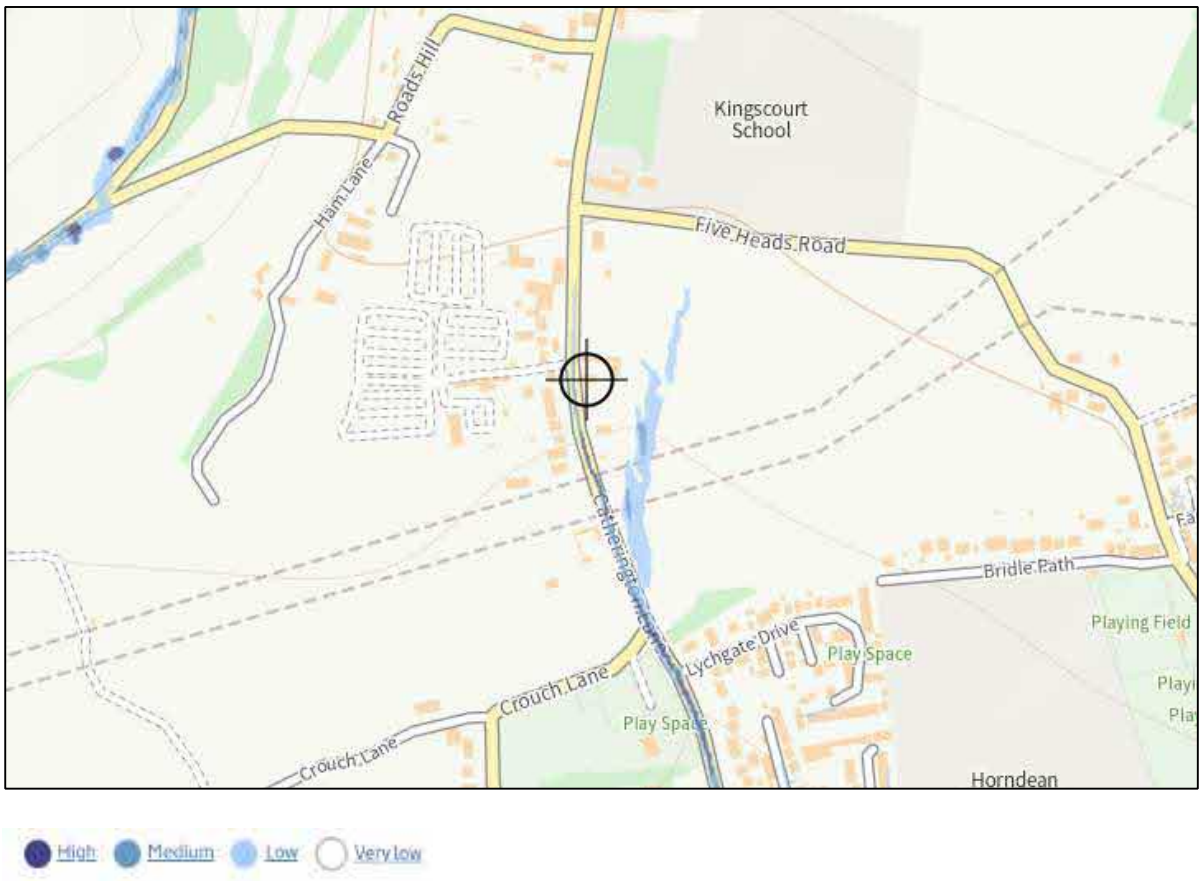
6.4 Flooding

6.4.1 Surface water flooding

Through reference to Environment Agency pluvial flood data, the subject site is expected to be at low risk from surface water flooding; as shown below in Figure 2.

The nearest areas of moderate and high risk lie around 100m to the south following the line of the road.

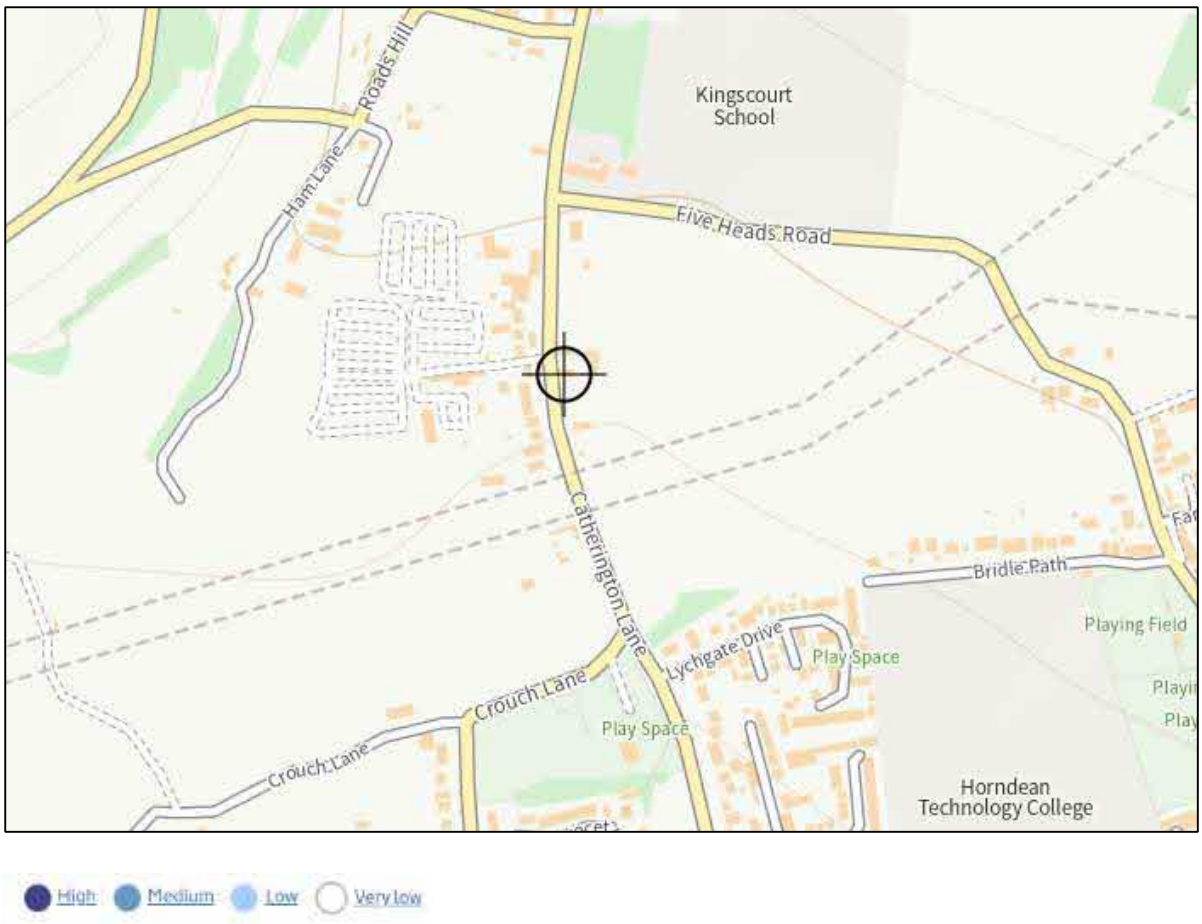
Figure 2 Showing the nearest surface flood risk areas to the site



6.4.2 Fluvial flooding

Through reference to Environment Agency fluvial flood data the site falls within designated Flood Zone 1; hence the risk from river flooding on the site is similarly deemed to be very low.

Figure 3 Showing the Flood Zone 1 at the site



7 Waste and other infilled land

7.1 Landfill

Environment Agency data, Local Authority data, environmental datasheets and historical maps referenced during the compiling of the report indicate that there has been one historic landfill site within 500m of the subject site.

This was located 306m to the southeast where they accepted inert waste. There were no other operational details available.

There are no other landfill sites currently operating within this same distance.

7.2 Infill

There do not appear to be any records relating to infilling of land in the vicinity of the site. Despite this, it is considered quite possible that there may be made-ground deposits in places or at least hardcore present beneath the buildings on this site; where either may have been introduced for ground strengthening purposes.

With regards to the aforementioned former pond to the immediate south of the site, this currently exists as a slight ground depression with established vegetation. The presence of apparently healthy trees may be an indication that this small feature was not infilled with waste material.

With regards to the aforementioned old chalk pit 175m to the southwest, this also appears to have remained as a ground depression on mapping, and therefore having not been infilled.

7.3 Other waste facilities

There are no recorded Environment Agency permitted waste facilities within 250m of the subject site.

There are three permit exempted activities within 200m of the site; the closest of which relates to the subject site itself for the burning of waste in the open.

8 Available contaminated land information

8.1 Statutory contaminated land

Environmental datasheets state that there are no sites determined as Contaminated Land under Part 2A of the EPA 1990 within 500m of the site.

8.2 Planning search

Recent planning records have been referred to for this area of Catherington in order to determine whether or not land contamination had been a material consideration in any corresponding decision notice, and if so, to consider any impact that these could have had on the subject site.

Through reference to East Hampshire District Council planning records there appears to have been no requests for a contaminated land investigation within the general vicinity of the subject site in the last ten years.

8.3 Other environmental incidents

Through reference to environmental datasheets, there have been no recorded environmental incidents within 250m of the site.

9 Conceptual site model

9.1 Sources

Through reference to mapping it appears that the subject site has been occupied by barns and other agricultural buildings since at least the 1970s, with several alterations occurring in the 1890s, 1900s and 1960s, involving the demolition of old structures and ultimately the construction of some new structures.

The nature of the ground surface at the site is variable. This includes compressed soil, gravel and tarmacadam cover, along with some soft landscaping areas to the rear of Barn E, and concrete within the pool area.

It is expected that agricultural vehicles and/or machinery would have been kept, used or even serviced on the site, thereby potentially resulting in small-scale oil or fuel leaks.

Furthermore an oil tank was seen to be present located upon compressed soil flooring. Despite no evidence of staining, it is possible that small scale leaks could have occurred throughout the years.

In addition to this it has to be considered possible that other items - including liquids - could have been stored at times within any of the buildings, or even outside of the buildings.

Off-site features include a business Park 95m to the west and an old chalk pit located 175m to the southwest. These appear to be too far away from the subject site to have had any adverse effect on the ground.

In considering these highlighted features, potential contaminants would appear to include the following:

- heavy metals and other inorganics from general activities or on-site storage, or possible made-ground deposits;
- hydrocarbon residue from the use or storage/use/servicing of agricultural vehicles and/or machinery, or possible small-scale oil and/or fuel storage;
- possible asbestos residue originating from previous buildings; and
- ground gases from degrading organic material.

9.2 Receptors

The receptors that would need to be considered in this instance are:

- construction workers;
- future site occupiers and users;
- buildings, structures and associated services; and
- groundwater.

9.3 Pathways

On the presumption that the site will be redeveloped for both residential and leisure use with areas of recreational soft landscaping, the potential contamination pathways to receptors would appear to include the following:

- direct and indirect ingestion of soil and soil-dust;
- direct dermal contact with soil and soil-dust;
- direct inhalation of soil-dust and/or gases;
- consumption of home-grown vegetables;
- inhalation or ignition of gases and/or vapours;
- direct contact with main services and building fabric below ground; and
- dispersion via groundwater.

9.4 Possible pathway linkages

9.4.1 Heavy metals and other inorganics

- Direct and indirect ingestion of soil and dust - contaminated soil may be ingested by construction workers and future occupiers/users;

- dermal contact with soil and dust - inorganic contaminants may be absorbed through direct contact with contaminated soils by construction workers and future occupiers/users;

- inhalation of dust - airborne contaminated soil particles could be inhaled by construction workers or future occupiers/users;

- contact with building materials and services - some inorganic contaminants within the soil may affect the properties of either through direct contact; and

- entry into groundwater - mobile inorganic contaminants within the soil may impact water directly and disperse with the flow to potentially impact sensitive off-site receptors.

9.4.2 Hydrocarbons (petroleum and poly-aromatic)

- Direct and indirect ingestion of soil and dust - hydrocarbon contaminated soil may be ingested by construction workers and future occupiers/users;

- dermal contact with soil and dust - hydrocarbon contaminants may be absorbed through direct contact with contaminated soils by construction workers and future occupier/users;

- inhalation of dust (indoors and outdoors) - airborne hydrocarbon contaminated soil particles could be inhaled by construction workers or future occupiers/users;

- inhalation of vapours (indoors and outdoors) - hydrocarbon vapours may be inhaled by construction workers or future occupiers/users;

- contact with building materials and services - hydrocarbons within soil may affect the properties of either through direct contact; and

- entry into groundwater - organic contaminants within the soil may impact water directly and disperse with the flow to potentially impact sensitive off-site receptors.

9.4.3 Asbestos

- Inhalation of dust - airborne fibres may be inhaled by construction workers and future occupiers/users.

9.4. Ground gases

- Inhalation - ground gases may be present such that these could be inhaled by construction workers and future occupiers/users of the buildings (indoors and outdoors); and

- ignition - explosive and/or flammable ground gases may be present.

9.5 Assumptions and uncertainties

9.5.1 Site history

It has been assumed that all relevant potentially contaminating activities and processes at the site have been identified. Where there is any uncertainty a precautionary approach will generally have been made.

9.5.2 Geology and groundwater

It has been assumed that the geological map is representative of the site location; however any unexpected variation could affect the risk to groundwater. In addition to this, the current nature and presence of groundwater beneath the site are similarly not yet confirmed; including the possible rest level and flow direction.

9.5.3 Contaminants

Although the presence of several contaminants is possible, their nature, location, concentration and mobility are not known.

9.5.4 Pathways

The absence of preferential flow paths such as pipe work, drains and service runs has not been confirmed.

9.5.5 Future site use

The likelihood or details of any future alteration or redevelopment of the site is not known; hence risk can only be ascertained with regard to the proposed development.

9.6 Assessment of risk

The perceived risk associated with identified linkages has been assessed below in Table 1. The risk algorithm used has been shown below in Figure 4.

Risk has been assessed on the understanding that the site will be developed for both residential and leisure use with a recreational garden and other soft landscaped features.

Figure 4 Risk assessment algorithm

Potential severity	Risk rating						Severity of hazard	Probability of hazard	Overall risk
	5	5	10	15	20	25	5 = Fatality	1 = Improbable	1 - 6 Low
	4	4	8	12	16	20	4 = Major	2 = Remote	8 - 12 Moderate
	3	3	6	9	12	15	3 = Minor	3 = Possible	15 - 25 High
	2	2	4	6	8	10	2 = Negligible	4 = Probable	
	1	1	2	3	4	5	1 = None	5 = Certainty	
		1	2	3	4	5			
	Probability						Severity of hazard x probability = risk rating		

Table 1 Perceived risk to receptors

Source(s) identified	Identified pathways	Overall risk	Comments
Possible heavy metals and other inorganics, hydrocarbons (including PAHs), asbestos and ground gases	Dermal contact with soil or soil-dust	12	The potential for touching soil during construction work, gardening and recreation etc. is high. It is possible that some of the identified contaminants could exert a biological effect from absorption through the epidermis, or alternatively be transferred to the mouth. In either instance the extent of uptake is expected to be low, although as the possibility exists for harmful contaminants to be present, the corresponding risk must at least be deemed to be moderate.
	Direct ingestion of soil or soil-dust	12	The likelihood of ingesting soil during construction work, gardening and recreation etc. is low. Ingestion is most likely to be limited to trace quantities through unwashed hands or ingesting airborne dusts etc. However the possibility exists for harmful contaminants to be present, therefore the corresponding risk must be deemed to be moderate at least.
	Inhalation of soil or soil-dust	15	The potential for inhaling soil or airborne soil-derived dust during construction work, gardening and recreation etc. is generally low. However the possibility exists that amongst other possible contaminants the soil could contain asbestos fibres. In consideration of this the corresponding risk must at least be deemed to be potentially moderate-high.
	Uptake via home-grown produce	8	The likelihood of ingesting any significant concentration of soil contamination through home-grown vegetables or fruit is low. However as the possibility exists for harmful contaminants to be present, the corresponding risk must at least be deemed to be low-moderate.

Table 1 (Cont.) Perceived risk to receptors

Source(s) identified	Identified pathways	Overall risk	Comments
Possible heavy metals and other inorganics, hydrocarbons (including PAHs), asbestos and ground gases	Inhalation, ignition and exposure to gases and vapours	12	There is a possibility that made-ground deposits or other organic material could be present beneath the surface, such that these could be generating methane and carbon dioxide. It is also possible that hydrocarbon residue could be present, such that this could become a hazard through inhalation or ignition also. There is however little evidence to suggest that significant quantities of either will be present, but for precautionary reasons the risk must at least be deemed moderate due to uncertainties.
	Direct contact with buildings and main services	8	Some substances can potentially present a significant risk to building fabric or underground services. As there is a concern that chemically aggressive soil or water contamination could be present, the risk to both must at least be considered potentially moderate.
	Contact with groundwater, and other off-site environmental receptors	12	Some substances highlighted can potentially present a significant risk to groundwater. The extent of any such risk would depend upon a number of factors which are as yet unknown. Until such time that the presence of both mobile ground contamination and vulnerable groundwater can be ascertained, the risk must at least be considered to be moderate for precautionary reasons.

10 Summary and recommendations

10.1 Summary

This report has highlighted the fact that the subject buildings on this site have been used for agricultural purposes since at least the 1970s. The precise nature of this is not fully known, although they have most recently been associated for livestock and stabling. Prior to this, the use of buildings on this site is not known, although they are presumed to have had some agricultural and/or residential use since at least the mid-1800s.

As former agricultural buildings it must be considered possible that activities could have occurred in such a way that they may have had some degree of adverse effect on the underlying ground. It is recognised that a large amount of the site land area has hard cover; however some of this cover still has semi-permeable characteristics, in addition to which there are several areas of soft landscaping.

The report has therefore identified a potential contamination concern due to on-site features, namely the storage and use of farm vehicles and machinery and other items, the possible storage and use of fuels or oils, the possible presence of asbestos materials and the possible deposition of demolition material (hardcore) and made-ground. The latter has the potential to generate ground gases.

The report has not highlighted any potentially significant off-site sources of contamination. Those that have been identified have been dismissed and justified.

In addition to the possibility of residual soil contamination, the conceptual model has also identified pathway linkages, suggesting that there could be some degree of unacceptable risk to receptors; namely construction workers and future site occupiers/users, along with the proposed buildings and associated underground services. Consideration has also been given to groundwater, which may well be at a vulnerable depth in this location.

10.2 Recommendations

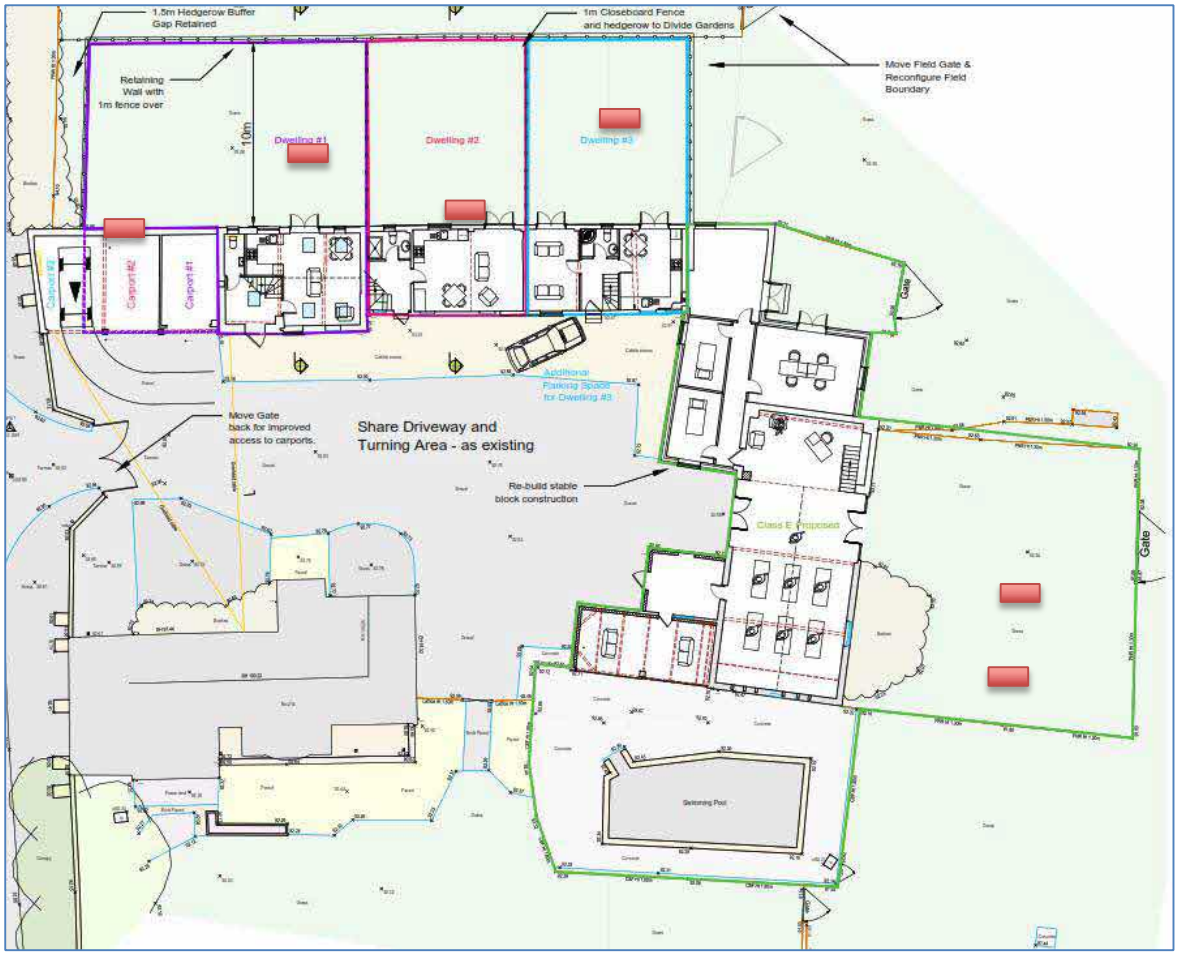
In view of the above conclusion further assessment of risk will need to be undertaken, in the form of an intrusive site investigation.

This should concentrate on areas where there could be some degree of unacceptable risk; such as proposed garden/soft landscaped areas, or where hazardous materials may have once been stored or used.

In doing so, it is recommended that the sub-surface is physically characterised to a depth of at least 1000mm below the surface in a minimum of 6 locations, at the approximate locations indicated below in Figure 5, in order to determine the nature of the sub-surface material and presence of made-ground.

Representative soil samples should (at least) be obtained from each of these locations at depths of 100 - 200mm and 500 - 600mm below the surface; thereby assessing both the direct and indirect soil contact zones. Samples should be analysed for the determinands highlighted in the conceptual model.

Figure 5 Proposed soil sampling strategy



Proposed sampling locations (full chemical suite)

In characterising the nature of the ground beneath the surface; more specifically the presence and depth of any made-ground deposits, the conceptual site model (CSM) and perceived risk should be reviewed, in order to determine whether or not additional soil or groundwater sampling is required, or whether ground gas monitoring should be considered.

If the nature of any made-ground present is such that methane or carbon dioxide generation is likely - as dictated by the organic carbon content - then a representative number of gas wells may need to be introduced, and appropriate monitoring undertaken.

If the analysis of soil in this way highlights any potential contamination concerns then further investigation will be required; possibly in the form of delineation sampling.

Finally it is recommended that an informal observation strategy should be put in place during all ground-works that may take place as part of this redevelopment. Care should be taken during the working of the site to investigate any soils, which are suspected by sight, odour or suspicion, to be contaminated.

In the event of any discovery of potentially contaminated soils or materials, the location, type and quantity should be recorded, and the contaminated land officer at East Hampshire District Council notified immediately. Approval should be sought prior to continuing groundworks or implementing any mitigation.

The findings from such an investigation should allow any uncertainties or presumptions within the conceptual site model to be readdressed, and the risk reassessed accordingly.

11 Limitations

The results, comments and recommendations within this report are based upon the information made available at the time of undertaking this work, and relate to this specific work only. They must not be used to assess similar concerns at any other time, or at any other location.

Furthermore it should be pointed out that Apple Environmental Limited has been contracted to provide an objective preliminary risk assessment only, and as such has made every effort to achieve this aim.

Apple Environmental Limited will not be held responsible for the accuracy of information quoted from third party sources, and furthermore will not be held responsible for any subsequent outcomes arising from the implementation of recommendations herein based on this information.

It is further stated that this report details the environmental conditions of the site and its locality as at October 2023, and therefore can not take account of any changes that may have subsequently occurred since this report has been completed.

12 References and other sources of information

1. Investigation of potentially contaminated sites - code of practice (BSI 10175:2011+A2:2017)

2. Land Contamination Risk Management (LCRM) - Environment Agency (April 2021)

3. Groundsure EnviroInsight - historical mapping and environmental data report.

4. Natural England Nature on the map: http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx.

5. British Geological Survey website: http://www.bgs.ac.uk.

6. Environment Agency website: http://apps.environment-agency.gov.uk/wiyby/default.aspx.

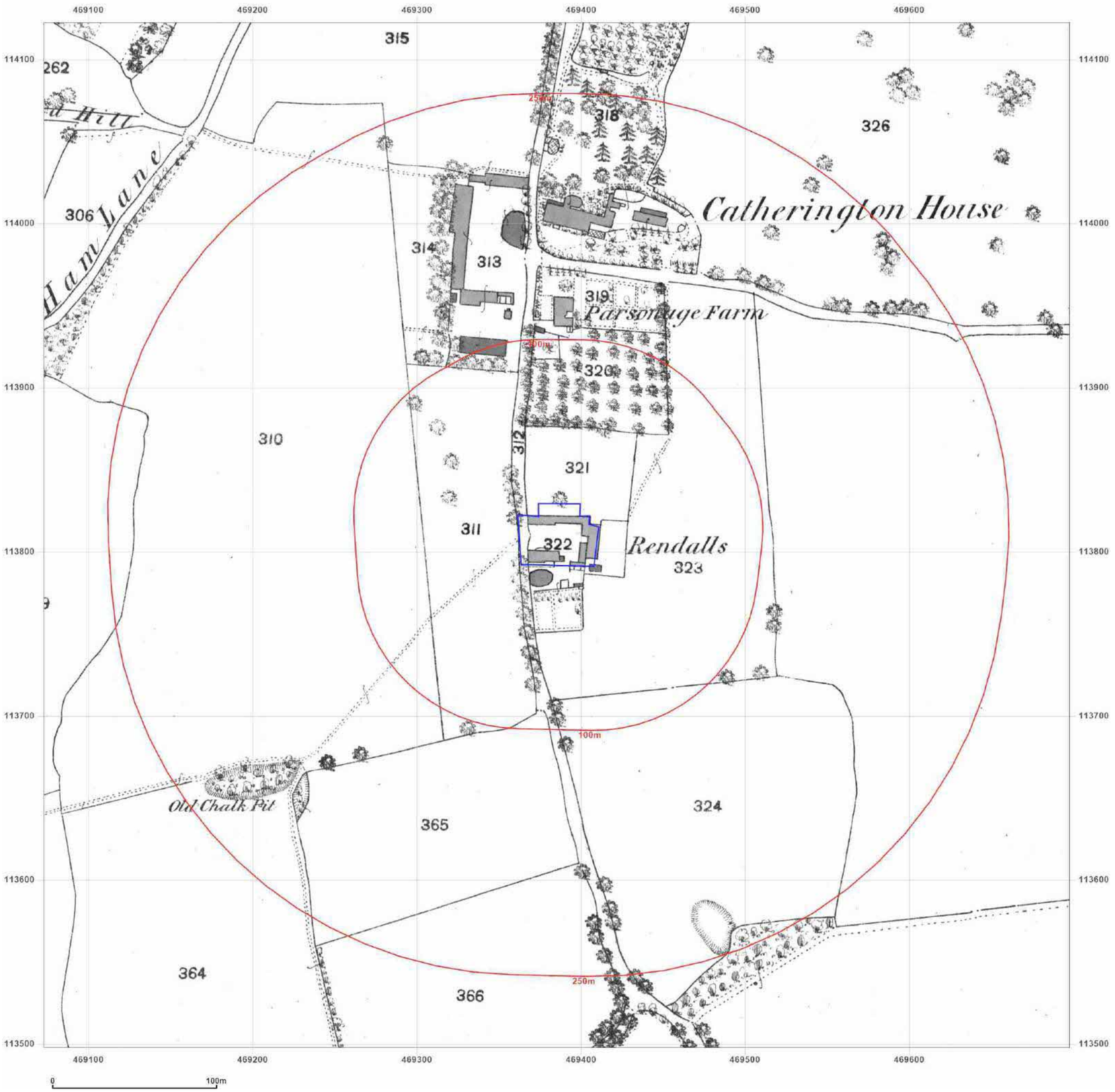
7. Parishes: Catherington | British History Online (british-history.ac.uk)

8. Catherington - Wikipedia

9. The Workhouse in Catherington, Hampshire (workhouses.org.uk)

APPENDICES

Historical maps
Environmental and geological datasheets



Groundsure INSIGHTS

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HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: County Series
Map date: **1868**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1868
Revised 1868
Edition N/A
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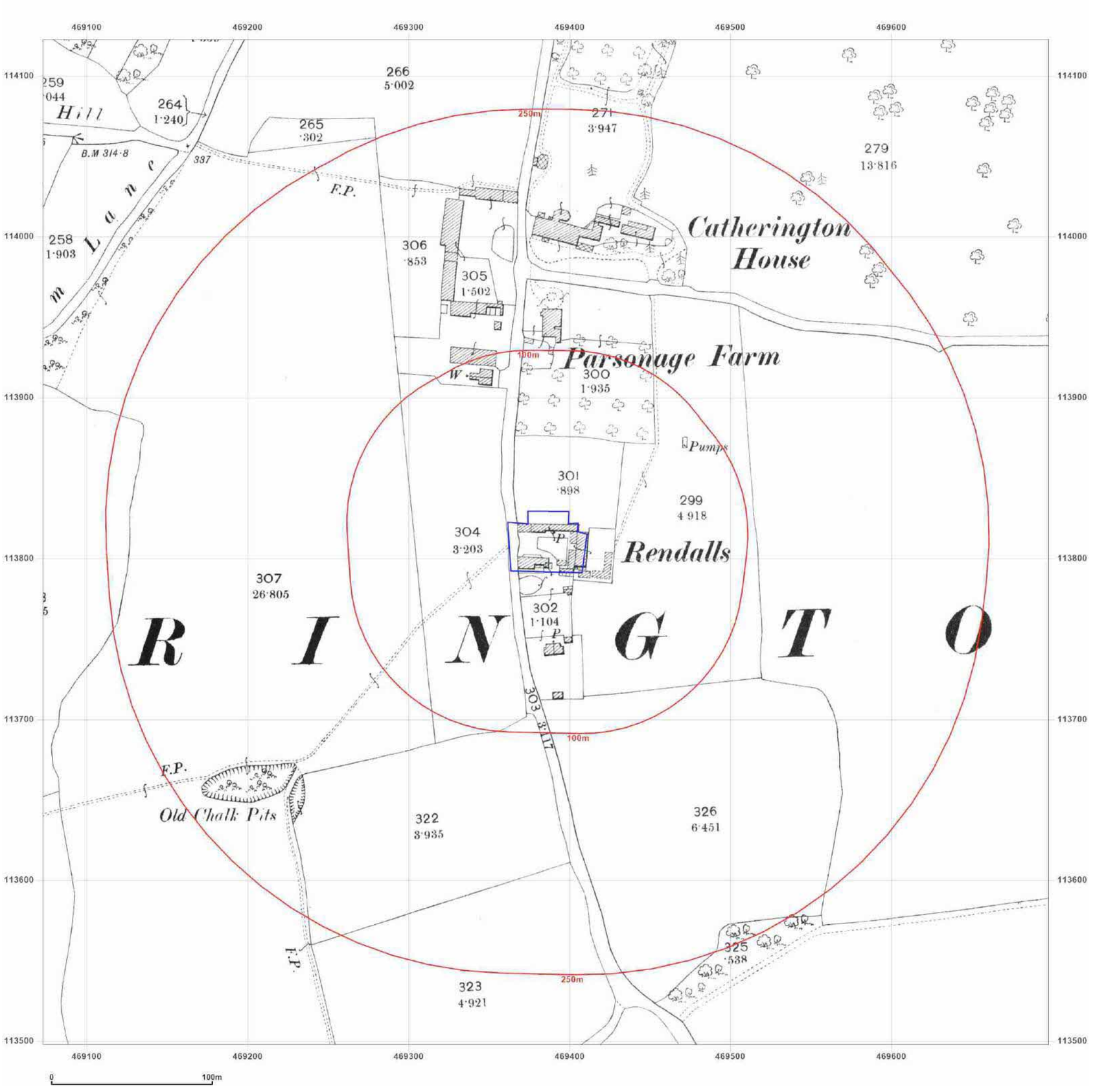

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Site Details

214, CATHERINGTON LANE,
HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: County Series
Map date: **1897**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1897
Revised 1897
Edition N/A
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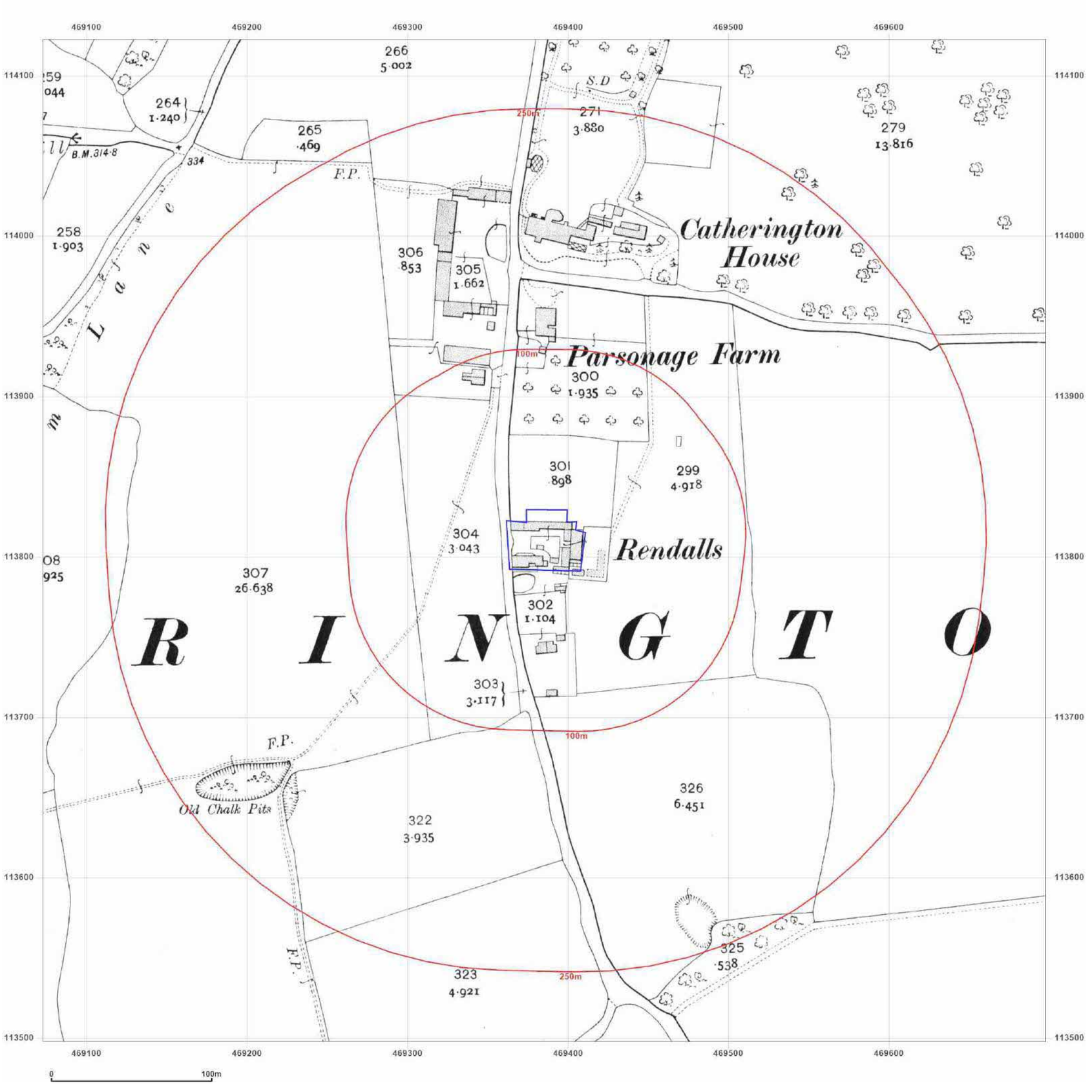

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Site Details

214, CATHERINGTON LANE,
HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: County Series
Map date: **1909**
Scale: 1:2,500
Printed at: 1:2,500

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Revised 1909
Edition N/A
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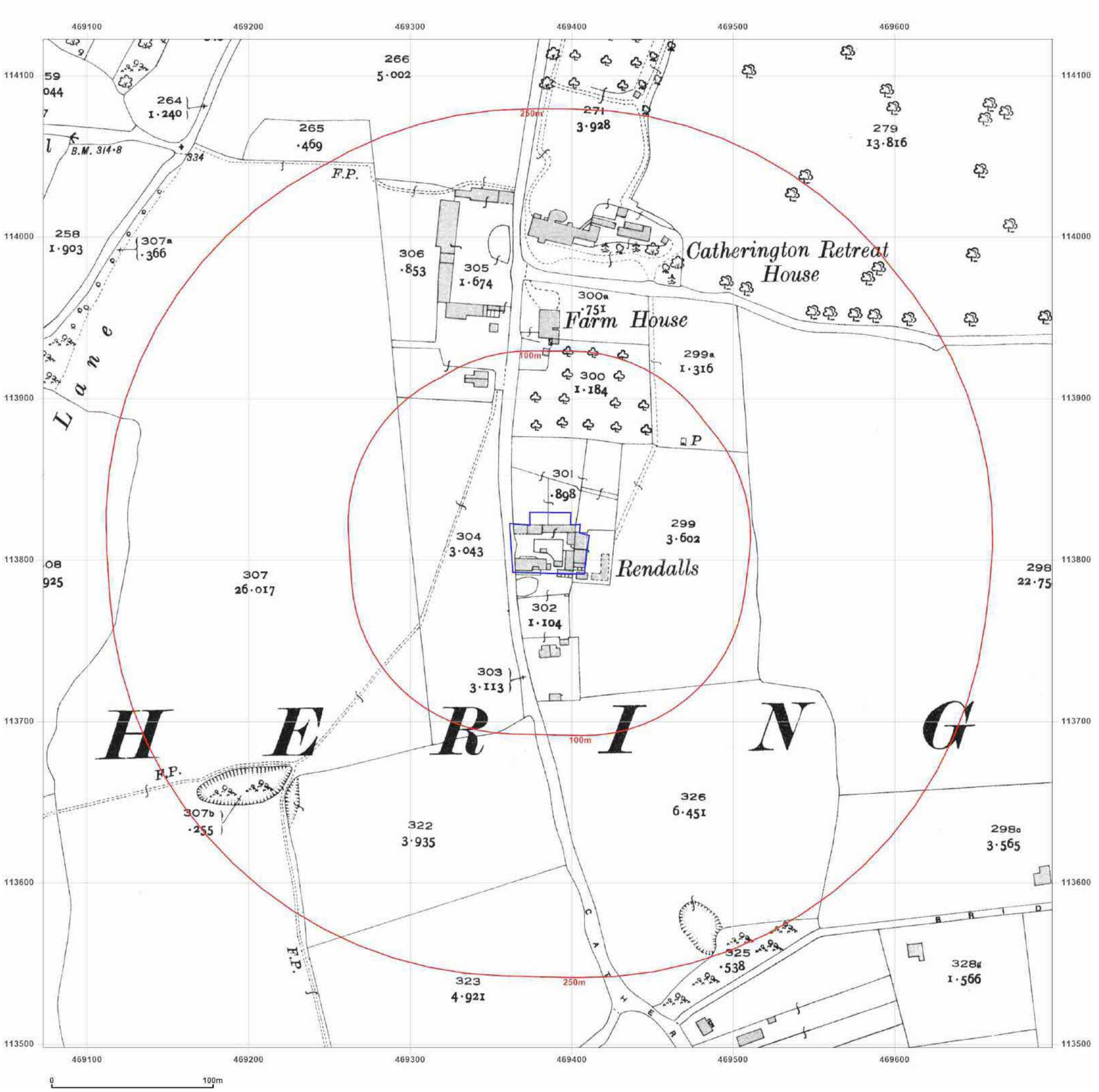

Groundsure INSIGHTS

Site Details

214, CATHERINGTON LANE,
HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: County Series
Map date: **1932**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1932
Revised 1932
Edition N/A
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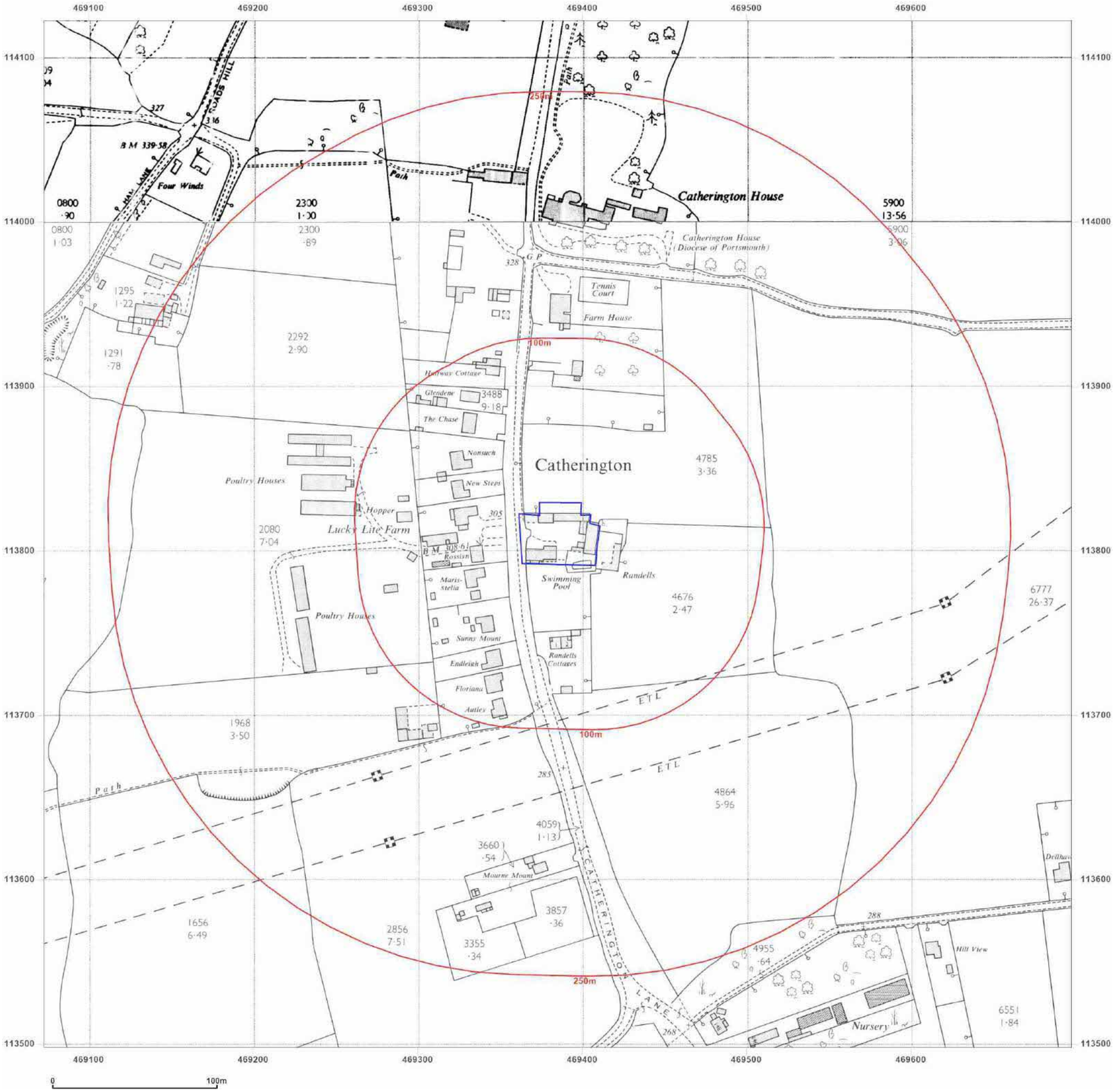

Groundsure INSIGHTS

Site Details

214, CATHERINGTON LANE,
HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1967-1968**

Scale: 1:2,500

Printed at: 1:2,500

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

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
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PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1969**

Scale: 1:2,500

Printed at: 1:2,500

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Revised N/A
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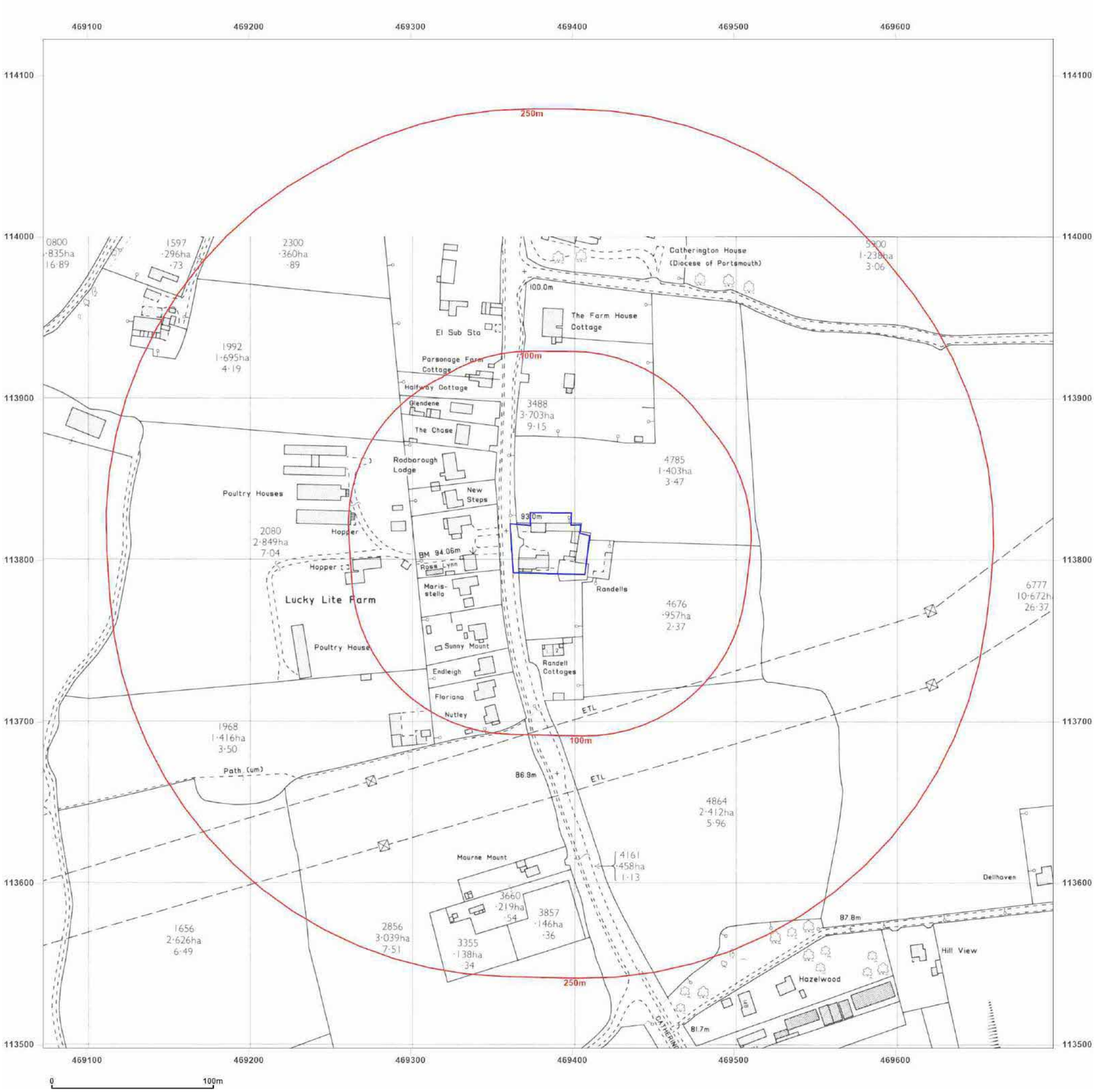

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HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1974**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1972
Revised 1974
Edition N/A
Copyright 1976
Levelled 1957

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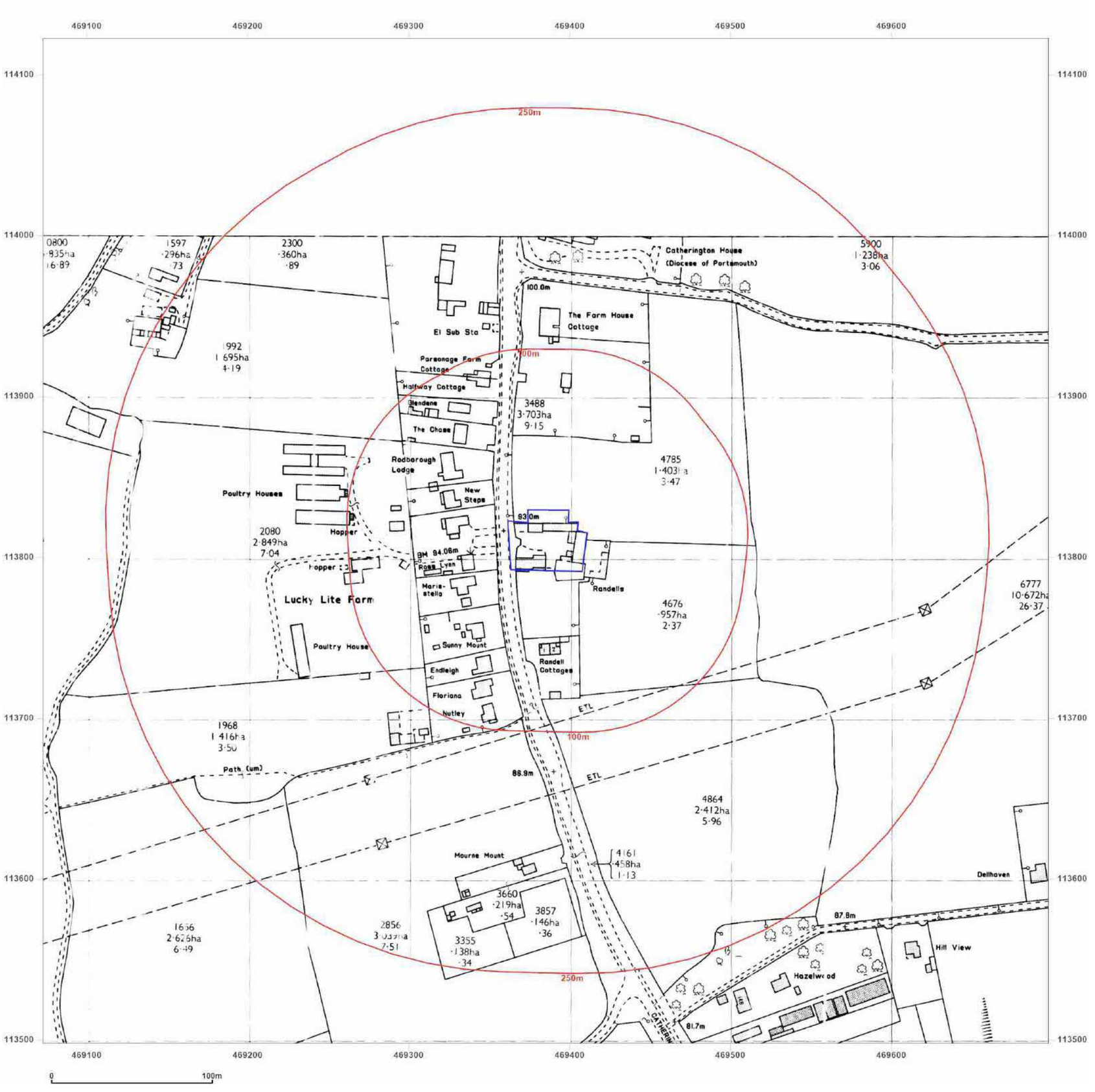

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Site Details

214, CATHERINGTON LANE,
HORNDEAN, WATERLOOVILLE,
PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1976**

Scale: 1:2,500

Printed at: 1:2,500

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Revised N/A
Edition N/A
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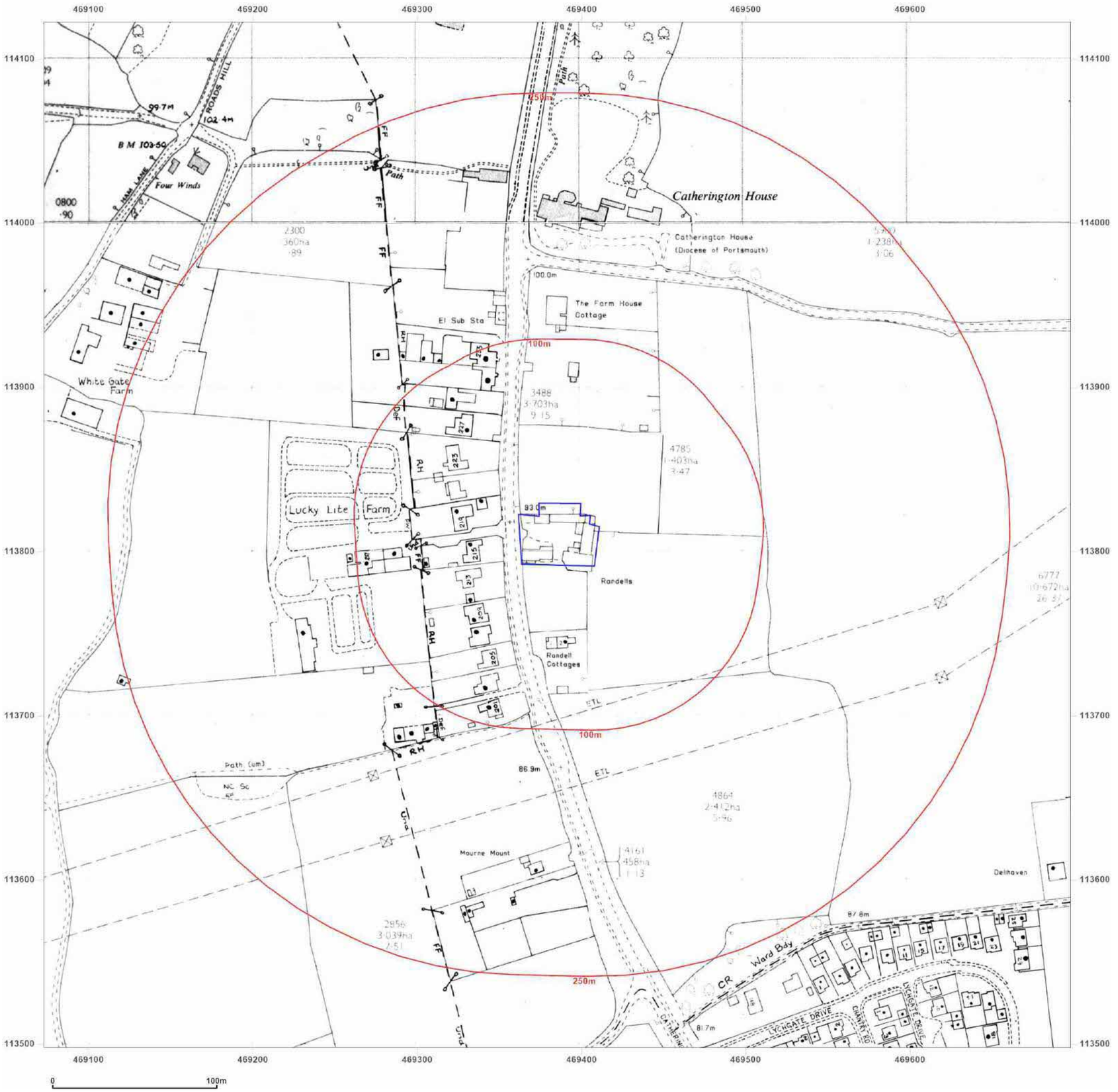

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Site Details

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PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1989-1990**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1957
Revised 1989
Edition N/A
Copyright 1989
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Surveyed 1957
Revised 1990
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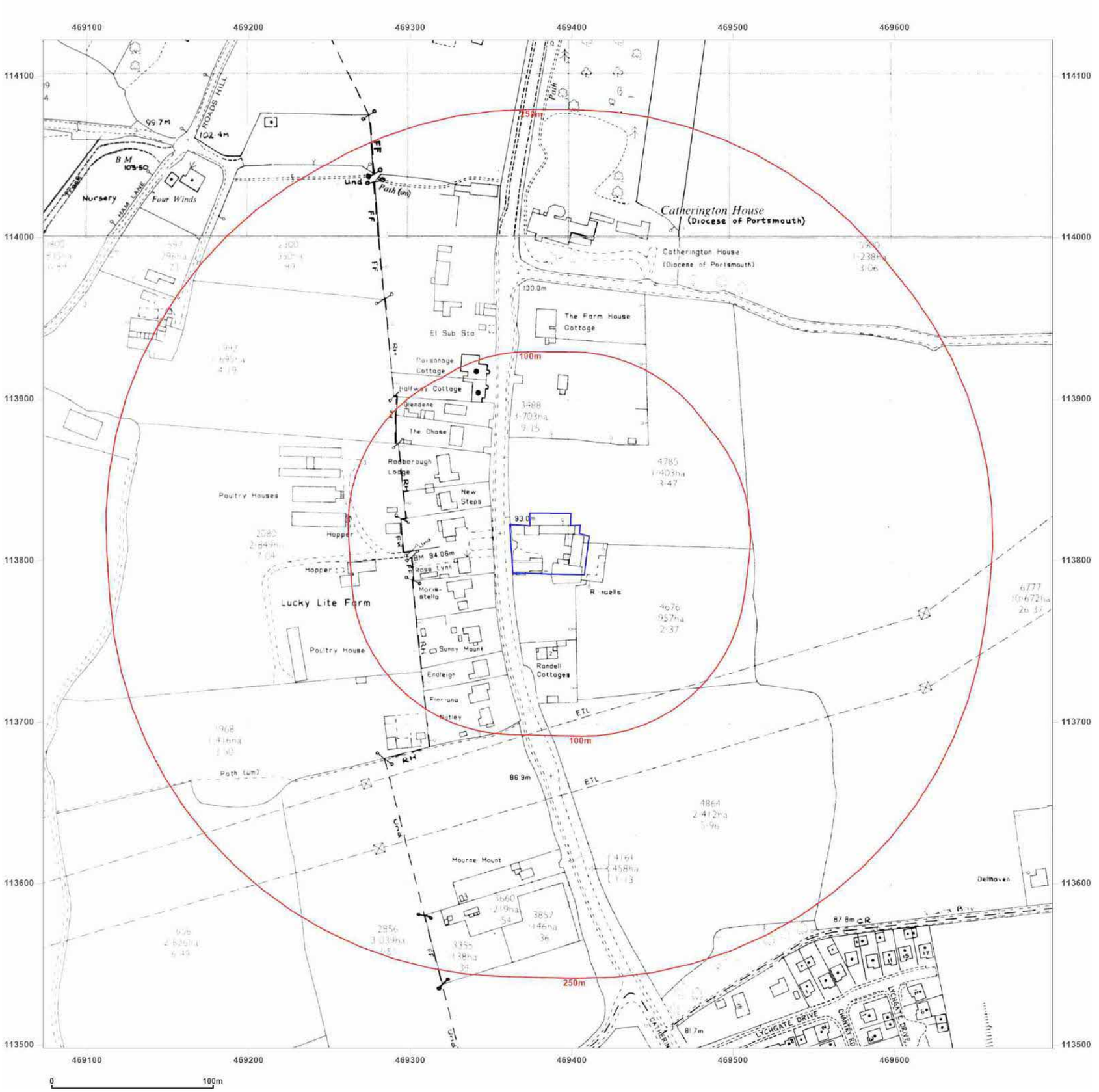

Groundsure INSIGHTS

Site Details

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Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1987-1990**

Scale: 1:2,500

Printed at: 1:2,500

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Edition N/A
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1987
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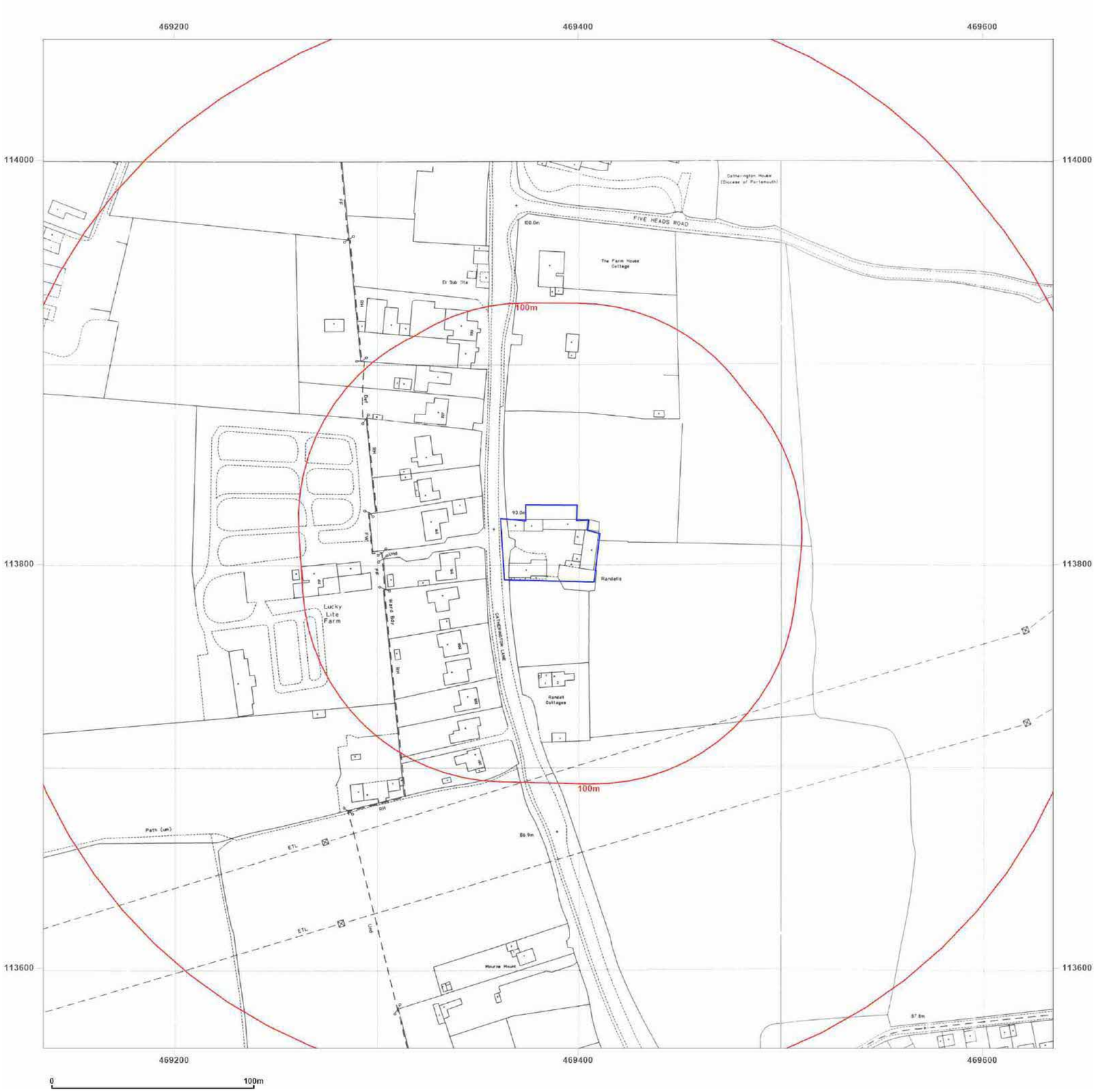

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PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

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PO8 0TA

Client Ref: CL-3508-CAAD
Report Ref: GS-P8B-WXJ-LW7-PMA
Grid Ref: 469385, 113810

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

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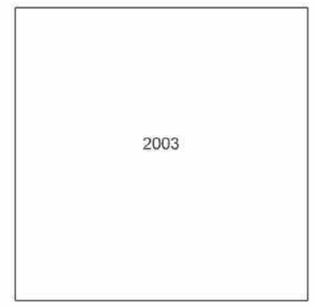

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LOCATION INTELLIGENCE

Enviro+Geo Insight

214, CATHERINGTON LANE, HORNDEAN, WATERLOOVILLE, PO8 0TA

Order Details

Date: 22/09/2023

Your ref: CL-3508-CAAD

Our Ref: GS-I3R-UYZ-FG6-TKM

Site Details

Location: 469388 113816

Area: 0.16 ha

Authority: East Hampshire District Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	8	35	-
17	1.2	Historical tanks	0	0	0	0	-
17 >	1.3 >	Historical energy features >	0	0	3	0	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	10	40	-
21	2.2	Historical tanks	0	0	0	0	-
22 >	2.3 >	Historical energy features >	0	0	4	0	-
22	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
25 >	3.7 >	Waste exemptions >	1	5	0	12	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	4.1 >	Recent industrial land uses >	0	0	8	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
29	4.5	Sites determined as Contaminated Land	0	0	0	0	-

29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	0	-
29	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
30	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.12	Radioactive Substance Authorisations	0	0	0	0	-
30	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
30	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
31	4.15	Pollutant release to public sewer	0	0	0	0	-
31	4.16	List 1 Dangerous Substances	0	0	0	0	-
31	4.17	List 2 Dangerous Substances	0	0	0	0	-
31	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
31	4.19	Pollution inventory substances	0	0	0	0	-
32	4.20	Pollution inventory waste transfers	0	0	0	0	-
32	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
33 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
34 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
35 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
36 >	5.4 >	Groundwater vulnerability- soluble rock risk >	Identified (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	5.6 >	Groundwater abstractions >	0	0	0	0	5
39	5.7	Surface water abstractions	0	0	0	0	0
39 >	5.8 >	Potable abstractions >	0	0	0	0	3
40 >	5.9 >	Source Protection Zones >	1	0	0	0	-
40	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
41	6.1	Water Network (OS MasterMap)	0	0	0	-	-

41	6.2	Surface water features	0	0	0	-	-
42 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
42 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
42 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
44	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
44	7.2	Historical Flood Events	0	0	0	-	-
44	7.3	Flood Defences	0	0	0	-	-
45	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
45	7.5	Flood Storage Areas	0	0	0	-	-
46	7.6	Flood Zone 2	None (within 50m)				
46	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
47 >	8.1 >	Surface water flooding >	1 in 1000 year, 0.1m - 0.3m (within 50m)				
Page	Section	Groundwater flooding >					
49 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
50 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	1	0
51	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
51	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
51	10.4	Special Protection Areas (SPA)	0	0	0	0	0
51	10.5	National Nature Reserves (NNR)	0	0	0	0	0
52 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	1	5
52 >	10.7 >	Designated Ancient Woodland >	0	0	0	1	26
53	10.8	Biosphere Reserves	0	0	0	0	0
54	10.9	Forest Parks	0	0	0	0	0
54	10.10	Marine Conservation Zones	0	0	0	0	0
54	10.11	Green Belt	0	0	0	0	0
54	10.12	Proposed Ramsar sites	0	0	0	0	0

54	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
55	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
55	10.15	Nitrate Sensitive Areas	0	0	0	0	0
55 >	10.16 >	Nitrate Vulnerable Zones >	2	0	0	0	0
56 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
57 >	10.18 >	SSSI Units >	0	0	0	1	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
59	11.1	World Heritage Sites	0	0	0	-	-
60	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
60	11.3	National Parks	0	0	0	-	-
60 >	11.4 >	Listed Buildings >	0	0	3	-	-
61 >	11.5 >	Conservation Areas >	1	0	0	-	-
61	11.6	Scheduled Ancient Monuments	0	0	0	-	-
61	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
62 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
63	12.2	Open Access Land	0	0	0	-	-
63	12.3	Tree Felling Licences	0	0	0	-	-
63 >	12.4 >	Environmental Stewardship Schemes >	0	0	1	-	-
63	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
64 >	13.1 >	Priority Habitat Inventory >	0	0	4	-	-
65 >	13.2 >	Habitat Networks >	0	0	1	-	-
65	13.3	Open Mosaic Habitat	0	0	0	-	-
65	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
66 >	14.1 >	10k Availability >	Identified (within 500m)				
67	14.2	Artificial and made ground (10k)	0	0	0	0	-
68 >	14.3 >	Superficial geology (10k) >	1	0	0	1	-

69	14.4	Landslip (10k)	0	0	0	0	-
70 >	14.5 >	Bedrock geology (10k) >	1	0	0	1	-
71	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
72 >	15.1 >	50k Availability >	Identified (within 500m)				
73	15.2	Artificial and made ground (50k)	0	0	0	0	-
73	15.3	Artificial ground permeability (50k)	0	0	-	-	-
74 >	15.4 >	Superficial geology (50k) >	1	0	0	1	-
75 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
75	15.6	Landslip (50k)	0	0	0	0	-
75	15.7	Landslip permeability (50k)	None (within 50m)				
76 >	15.8 >	Bedrock geology (50k) >	1	0	0	1	-
77 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
77	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
78	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
79 >	17.1 >	Shrink swell clays >	Low (within 50m)				
80 >	17.2 >	Running sands >	Negligible (within 50m)				
81 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
82 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
83 >	17.5 >	Landslides >	Very low (within 50m)				
85 >	17.6 >	Ground dissolution of soluble rocks >	Moderate (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
87 >	18.1 >	BritPits >	0	0	2	6	-
89 >	18.2 >	Surface ground workings >	0	2	11	-	-
90	18.3	Underground workings	0	0	0	0	0
90	18.4	Underground mining extents	0	0	0	0	-
90	18.5	Historical Mineral Planning Areas	0	0	0	0	-

90 >	18.6 >	Non-coal mining >	1	0	0	0	1
91	18.7	JPB mining areas	None (within 0m)				
91	18.8	The Coal Authority non-coal mining	0	0	0	0	-
91	18.9	Researched mining	0	0	0	0	-
92	18.10	Mining record office plans	0	0	0	0	-
92	18.11	BGS mine plans	0	0	0	0	-
92	18.12	Coal mining	None (within 0m)				
92	18.13	Brine areas	None (within 0m)				
92	18.14	Gypsum areas	None (within 0m)				
93	18.15	Tin mining	None (within 0m)				
93	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
94	19.1	Natural cavities	0	0	0	0	-
94	19.2	Mining cavities	0	0	0	0	0
94	19.3	Reported recent incidents	0	0	0	0	-
94	19.4	Historical incidents	0	0	0	0	-
95	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
96 >	20.1 >	Radon >	Between 1% and 3% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
98 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
98	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
98	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
99	22.1	Underground railways (London)	0	0	0	-	-
99	22.2	Underground railways (Non-London)	0	0	0	-	-
99	22.3	Railway tunnels	0	0	0	-	-
99	22.4	Historical railway and tunnel features	0	0	0	-	-
99	22.5	Royal Mail tunnels	0	0	0	-	-

100	22.6	Historical railways	0	0	0	-	-
100	22.7	Railways	0	0	0	-	-
100	22.8	Crossrail 1	0	0	0	0	-
100	22.9	Crossrail 2	0	0	0	0	-
100	22.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 05/04/2020

Site Area: 0.16ha

Recent site history - 2017 aerial photograph

Capture Date: 21/06/2017

Site Area: 0.16ha

Recent site history - 2005 aerial photograph

Capture Date: 26/05/2005

Site Area: 0.16ha

Recent site history - 2004 aerial photograph

Capture Date: 24/09/2004

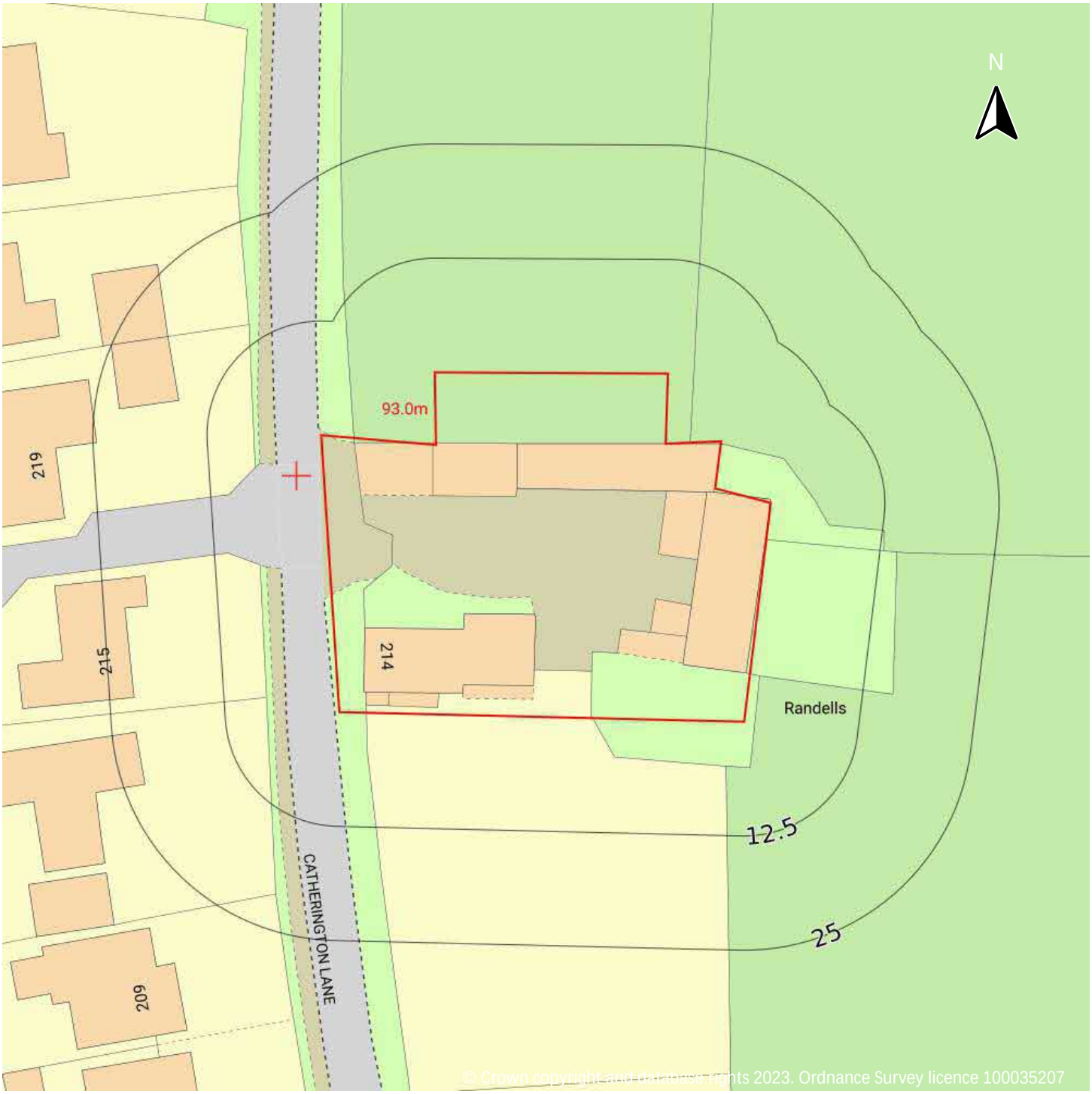
Site Area: 0.16ha

Recent site history - 1999 aerial photograph

Capture Date: 04/09/1999

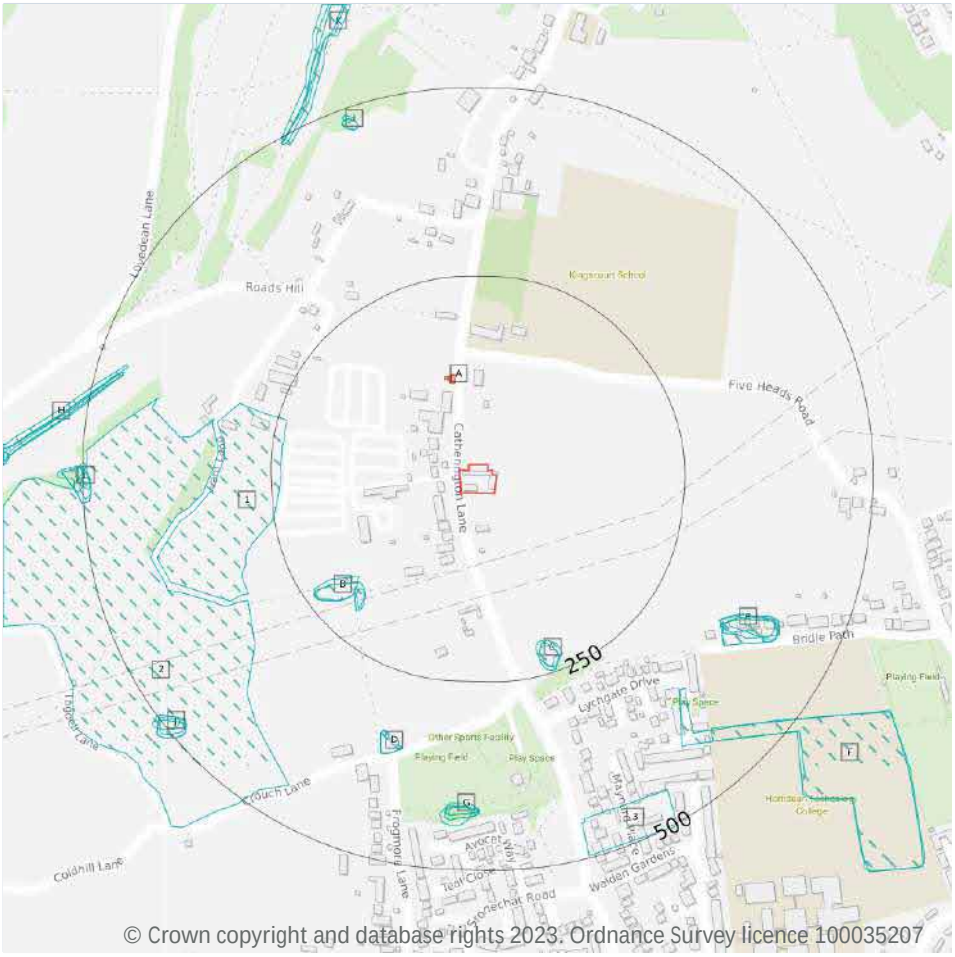
Site Area: 0.16ha

OS MasterMap site plan



Site Area: 0.16ha

1 Past land use



1.1 Historical industrial land uses

Records within 500m	43

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

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
B	175m SW	Unspecified Pit	1933 - 1959	1927055

ID	Location	Land use	Dates present	Group ID
B	179m SW	Old Chalk Pits	1895	1933595
B	181m SW	Old Chalk Pits	1908	1889155
B	182m SW	Old Chalk Pits	1908	1917540
C	204m S	Unspecified Pit	1867	1896671
C	206m SE	Unspecified Pit	1959	1940833
C	212m S	Unspecified Pit	1908 - 1933	1923653
1	236m W	Nursery	1992	1867654
2	317m SW	Nursery	1992	1892924
D	331m S	Unspecified Pit	1933 - 1959	1915852
D	332m S	Old Chalk Pit	1908	1856798
E	342m SE	Unspecified Pit	1867	1922383
E	346m SE	Unspecified Pit	1959	1929732
E	347m SE	Unspecified Pit	1933	1892118
E	347m SE	Old Chalk Pit	1908	1957066
E	353m SE	Old Chalk Pit	1895	1891975
F	358m SE	Unspecified Ground Workings	1977	1944069
G	411m S	Unspecified Quarry	1959	1868515
G	415m S	Unspecified Pit	1867	1944792
G	416m S	Old Chalk Pit	1895	1937244
G	417m S	Unspecified Pit	1933	1906514
G	417m S	Old Chalk Pit	1908	1918319
F	424m SE	Unspecified Ground Workings	1992	1957457
3	447m S	Nursery	1933 - 1959	1968153
H	460m W	Unspecified Ground Workings	1959	1963171
H	463m W	Unspecified Ground Workings	1895	1949066
H	463m W	Unspecified Pit	1933	1881152
H	463m W	Unspecified Ground Workings	1908	1911302
I	469m N	Old Chalk Pits	1908	1865054

ID	Location	Land use	Dates present	Group ID
I	469m N	Unspecified Pit	1933	1931402
J	473m SW	Unspecified Pit	1933 - 1959	1903482
J	475m SW	Old Chalk Pit	1895	1901816
J	477m SW	Old Chalk Pit	1908	1907432
J	480m SW	Unspecified Pit	1867	1960255
I	481m N	Unspecified Pit	1867	1954718
K	486m NW	Unspecified Ground Workings	1895	1930223
L	489m W	Old Chalk Pits	1908	1865046
L	489m W	Unspecified Pit	1933	1924654
L	489m W	Unspecified Pit	1959	1906686
L	490m W	Old Chalk Pit	1895	1856804
K	490m NW	Unspecified Ground Workings	1908 - 1933	1919390
K	494m NW	Unspecified Ground Workings	1959	1924608
L	498m W	Unspecified Pit	1867	1928461

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	3

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

grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 15 >

ID	Location	Land use	Dates present	Group ID
A	109m N	Electricity Substation	1993	204624
A	116m N	Electricity Substation	1974	207414
A	116m N	Electricity Substation	1987 - 1990	196441

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

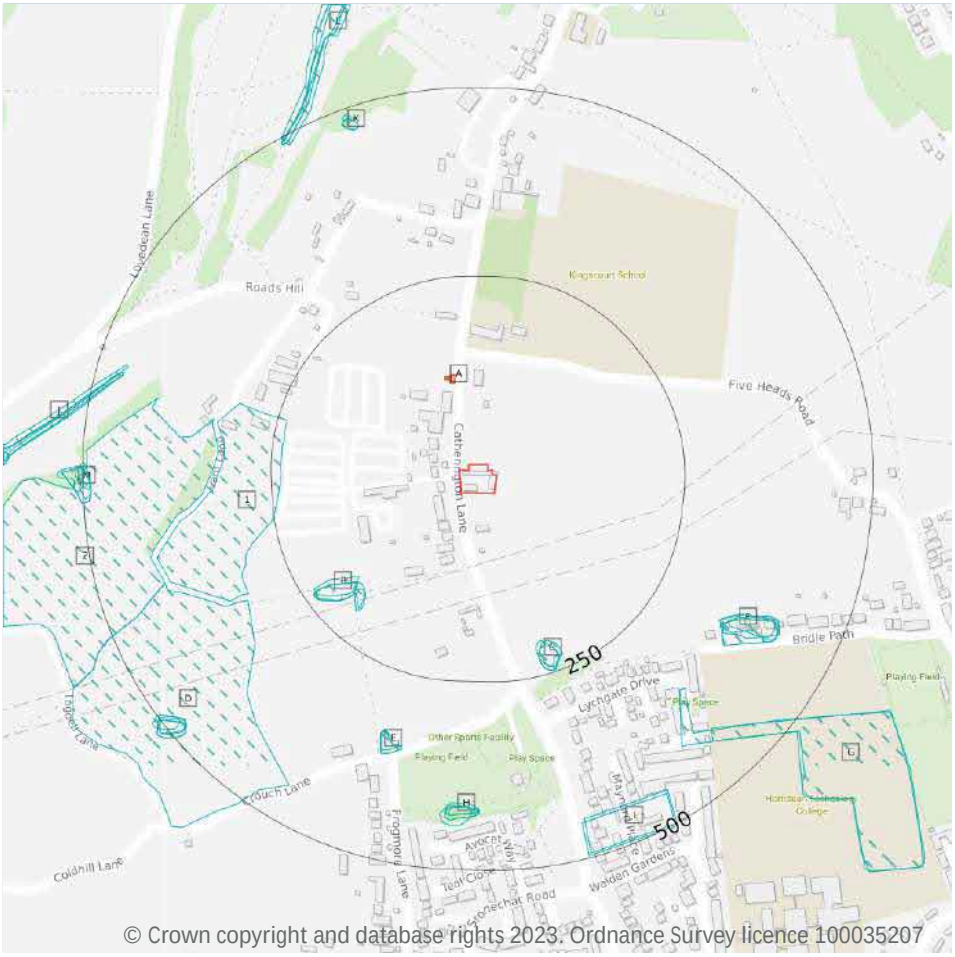
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



2.1 Historical industrial land uses

Records within 500m	50

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

Features are displayed on the Past land use - un-grouped map on page 19 >

ID	Location	Land Use	Date	Group ID
B	175m SW	Unspecified Pit	1959	1927055
B	179m SW	Old Chalk Pits	1895	1933595
B	181m SW	Old Chalk Pits	1908	1889155

ID	Location	Land Use	Date	Group ID
B	182m SW	Unspecified Pit	1933	1927055
B	182m SW	Old Chalk Pits	1908	1917540
C	204m S	Unspecified Pit	1867	1896671
C	206m SE	Unspecified Pit	1959	1940833
C	212m S	Unspecified Pit	1933	1923653
C	212m S	Unspecified Pit	1908	1923653
1	236m W	Nursery	1992	1867654
D	317m SW	Nursery	1992	1892924
2	320m W	Nursery	1992	1892924
E	331m S	Unspecified Pit	1959	1915852
E	332m S	Unspecified Pit	1933	1915852
E	332m S	Old Chalk Pit	1908	1856798
F	342m SE	Unspecified Pit	1867	1922383
F	346m SE	Unspecified Pit	1959	1929732
F	347m SE	Unspecified Pit	1933	1892118
F	347m SE	Old Chalk Pit	1908	1957066
F	353m SE	Old Chalk Pit	1895	1891975
G	358m SE	Unspecified Ground Workings	1977	1944069
H	411m S	Unspecified Quarry	1959	1868515
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H	417m S	Unspecified Pit	1933	1906514
H	417m S	Old Chalk Pit	1908	1918319
G	424m SE	Unspecified Ground Workings	1992	1957457
I	447m S	Nursery	1959	1968153
I	451m S	Nursery	1933	1968153
J	460m W	Unspecified Ground Workings	1959	1963171
J	463m W	Unspecified Ground Workings	1895	1949066

ID	Location	Land Use	Date	Group ID
J	463m W	Unspecified Pit	1933	1881152
J	463m W	Unspecified Ground Workings	1908	1911302
K	469m N	Unspecified Pit	1933	1931402
K	469m N	Old Chalk Pits	1908	1865054
D	473m SW	Unspecified Pit	1959	1903482
D	475m SW	Old Chalk Pit	1895	1901816
D	477m SW	Unspecified Pit	1933	1903482
D	477m SW	Old Chalk Pit	1908	1907432
D	480m SW	Unspecified Pit	1867	1960255
K	481m N	Unspecified Pit	1867	1954718
L	486m NW	Unspecified Ground Workings	1895	1930223
M	489m W	Unspecified Pit	1933	1924654
M	489m W	Old Chalk Pits	1908	1865046
M	489m W	Unspecified Pit	1959	1906686
M	490m W	Old Chalk Pit	1895	1856804
L	490m NW	Unspecified Ground Workings	1933	1919390
L	490m NW	Unspecified Ground Workings	1908	1919390
L	494m NW	Unspecified Ground Workings	1959	1924608
M	498m W	Unspecified Pit	1867	1928461

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	4

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

Features are displayed on the Past land use - un-grouped map on page 19 >

ID	Location	Land Use	Date	Group ID
A	109m N	Electricity Substation	1993	204624
A	116m N	Electricity Substation	1974	207414
A	116m N	Electricity Substation	1987	196441
A	116m N	Electricity Substation	1990	196441

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

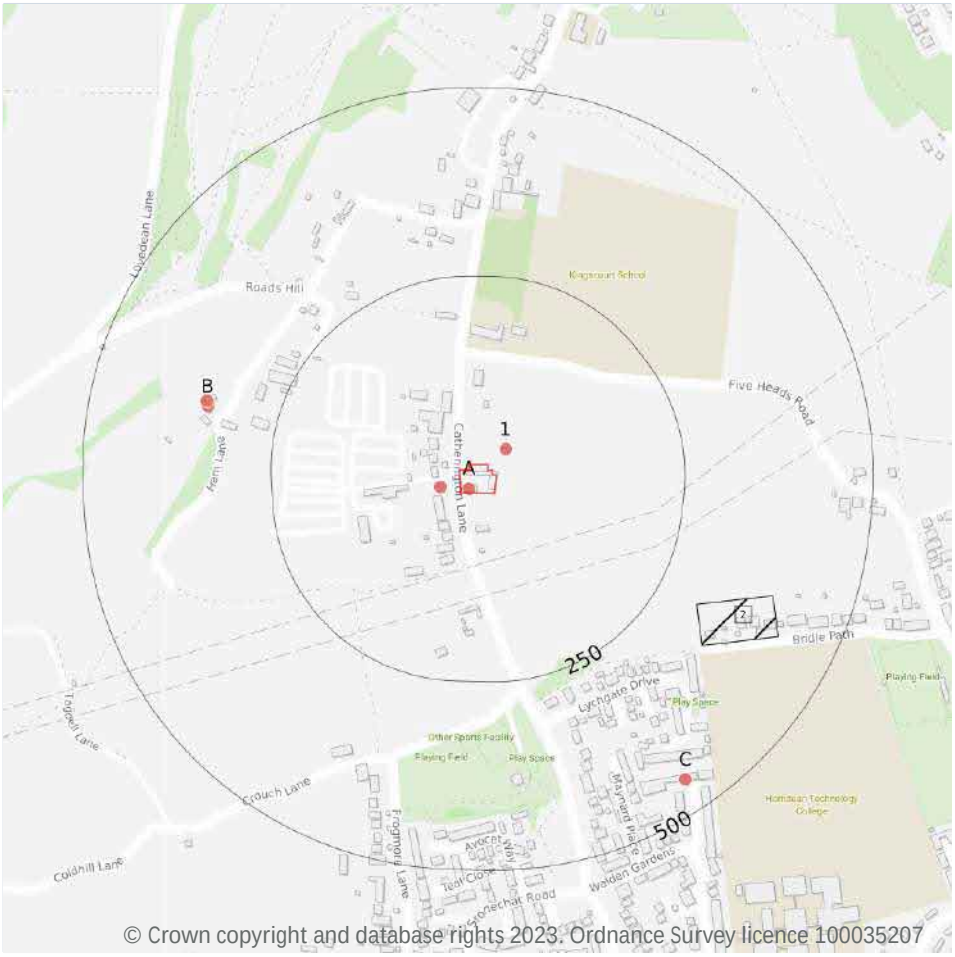
2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

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

Features are displayed on the Waste and landfill map on page 23 >

ID	Location	Details		
2	306m SE	Site Address: Bridlepath, Dellhaven, Five Heads Road, Horndean Licence Holder Address: -	Waste Licence: - Site Reference: 6/13, FEH11 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -

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

3.5 Historical waste sites

Records within 500m	0

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

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	18

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

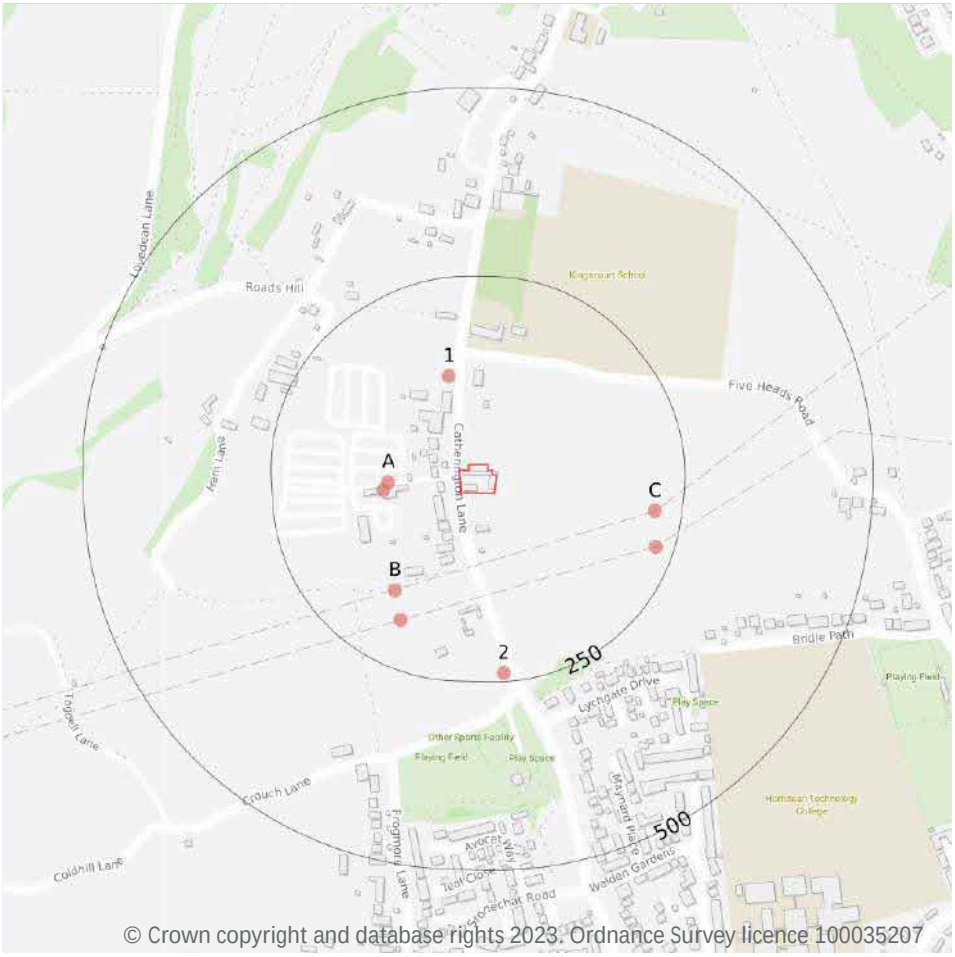
Features are displayed on the Waste and landfill map on page 23 >

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	Randells Farm, 214 Catherington Lane, Catherington, Waterlooville, PO8 0TA	WEX014377	Disposing of waste exemption	On a farm	Burning waste in the open
A	28m W	215, CATHERINGTON LANE, WATERLOOVILLE, PO8 0TB	WEX173347	Disposing of waste exemption	On a farm	Burning waste in the open
A	28m W	215, CATHERINGTON LANE, WATERLOOVILLE, PO8 0TB	WEX173347	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
A	28m W	215, CATHERINGTON LANE, WATERLOOVILLE, PO8 0TB	WEX305528	Disposing of waste exemption	On a farm	Burning waste in the open
A	28m W	215, CATHERINGTON LANE, WATERLOOVILLE, PO8 0TB	WEX305528	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
1	30m NE	214 Catherington Lane WATERLOOVILLE Hampshire PO8 0TA	EPR/GH0973GU/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
B	345m W	The Swallows Ham Lane WATERLOOVILLE Hampshire PO8 0XJ	EPR/UF0638JA/A001	Treating waste exemption	Non-Agricultural Waste Only	Treatment of waste at a water treatment works
B	346m W	THE SWALLOWS, HAM LANE, CATHERINGTON, WATERLOOVILLE, PO8 0XJ	WEX100771	Storing waste exemption	Not on a farm	Storage of sludge
B	346m W	THE SWALLOWS, HAM LANE, CATHERINGTON, WATERLOOVILLE, PO8 0XJ	WEX242861	Storing waste exemption	Not on a farm	Storage of sludge
B	348m W	The Swallows Ham Lane WATERLOOVILLE Hampshire PO8 0XJ	EPR/ZF0737LB/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open

ID	Location	Site	Reference	Category	Sub-Category	Description
B	348m W	The Swallows Ham Lane WATERLOOVILLE Hampshire PO8 0XJ	EPR/ZF0737LB/A001	Storing waste exemption	Agricultural Waste Only	Storage of waste in secure containers
B	348m W	The Swallows Ham Lane WATERLOOVILLE Hampshire PO8 0XJ	EPR/ZF0737LB/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Using waste exemption	Agricultural Waste Only	Spreading of plant matter to confer benefit
C	457m SE	Thurley Farm Pump Lane Berkshire RG7 1LL	EPR/PF0401EF/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose

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

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m	8

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 27 >

ID	Location	Company	Address	Activity	Category
A	95m W	Catherington Business Park	Hampshire, PO8	Business Parks and Industrial Estates	Industrial Features
A	102m W	A & G Caravans	4 Catherington Business Park 217, Catherington Lane, Horndean, Waterlooville, Hampshire, PO8 0AQ	Sports and Leisure Equipment Repair	Repair and Servicing

ID	Location	Company	Address	Activity	Category
1	120m N	Electricity Sub Station	Hampshire, PO8	Electrical Features	Infrastructure and Facilities
B	156m SW	Pylon	Hampshire, PO8	Electrical Features	Infrastructure and Facilities
B	187m SW	Pylon	Hampshire, PO8	Electrical Features	Infrastructure and Facilities
C	215m E	Pylon	Hampshire, PO8	Electrical Features	Infrastructure and Facilities
C	226m E	Pylon	Hampshire, PO8	Electrical Features	Infrastructure and Facilities
2	239m S	Gas Governor Station	Hampshire, PO8	Gas Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	0

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

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

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

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

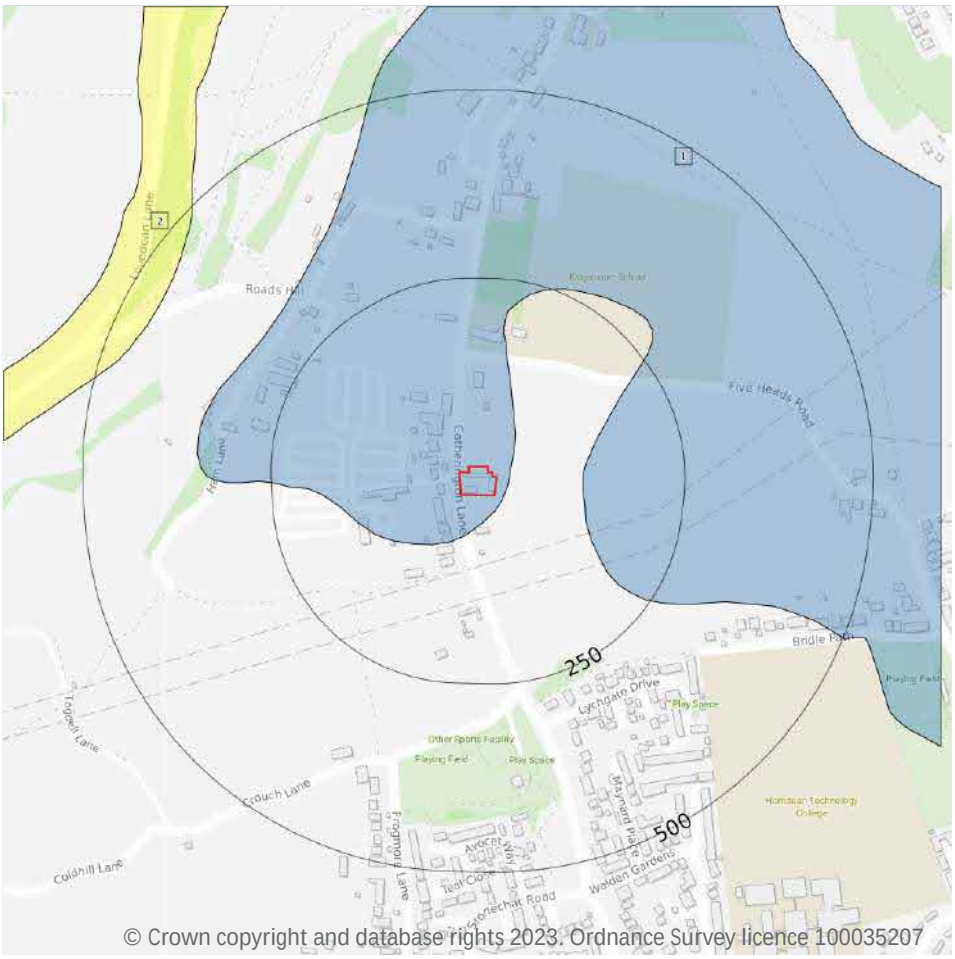
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m	2

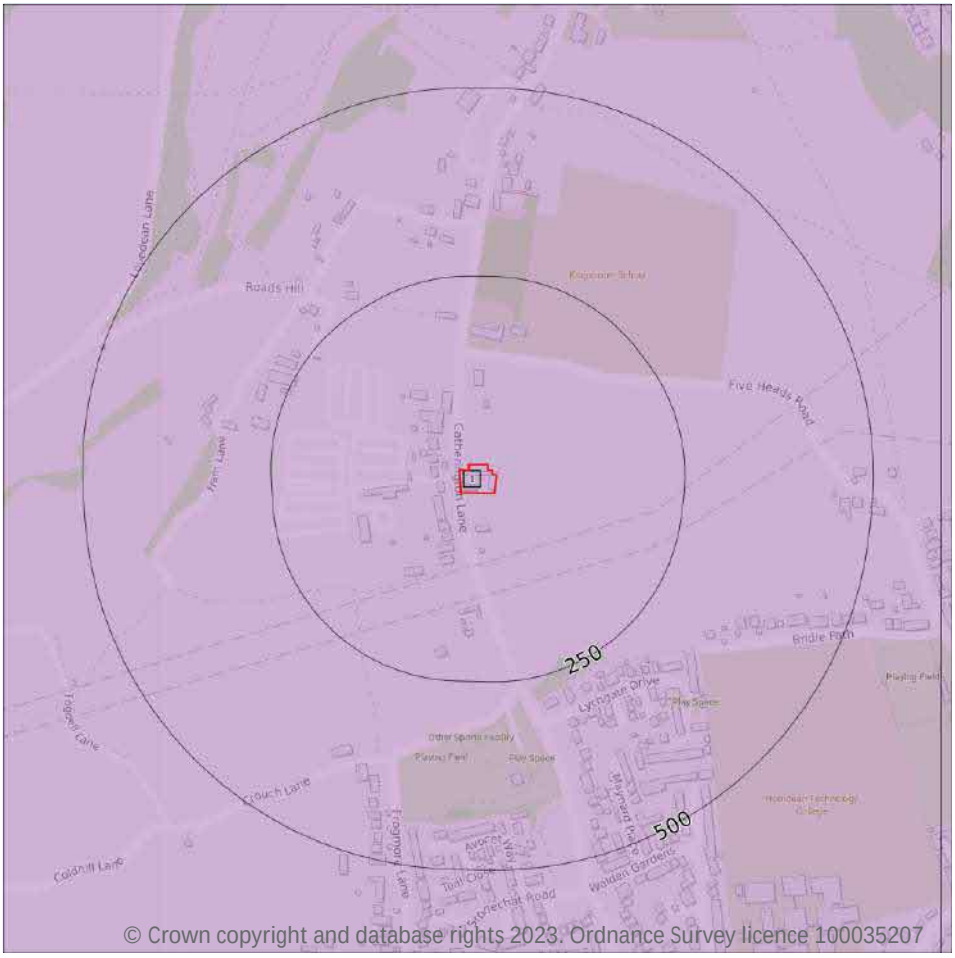
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on page 33 >

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	455m NW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	1

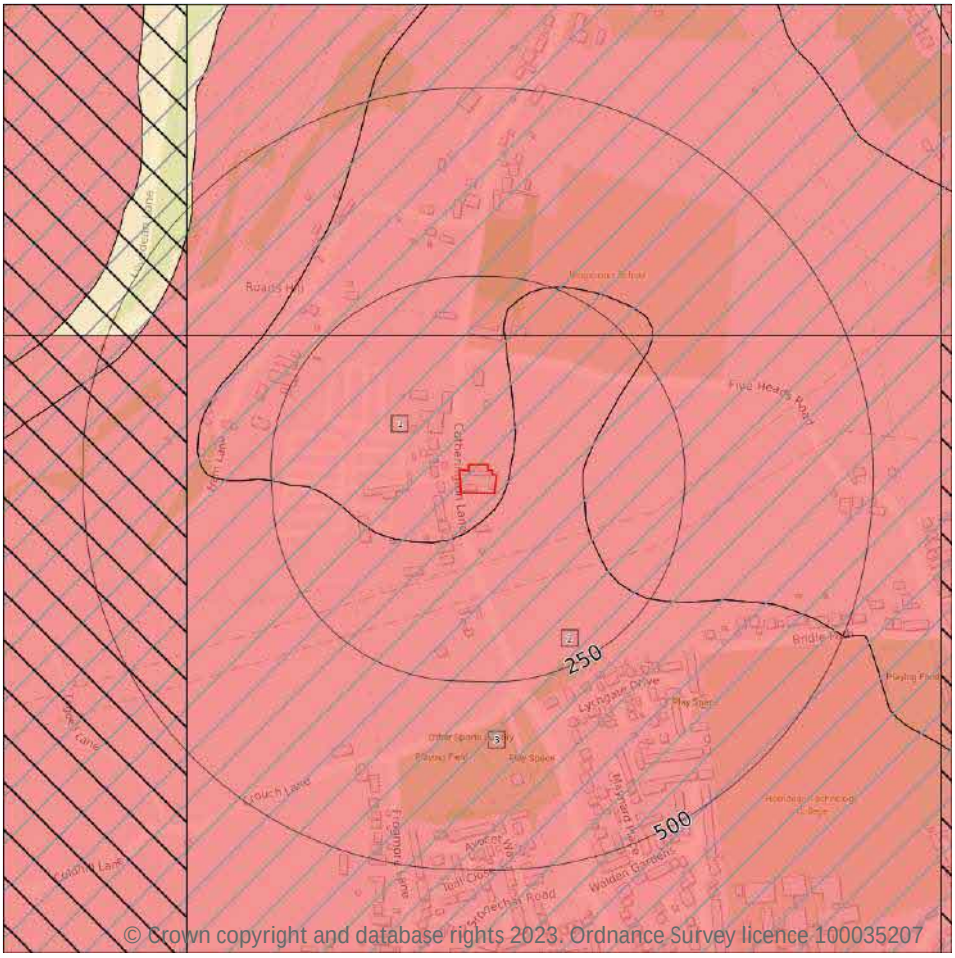
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 34 >

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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

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

Features are displayed on the Groundwater vulnerability map on page 35 >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
3	11m SE	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	1

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
2	Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.	27.0%

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

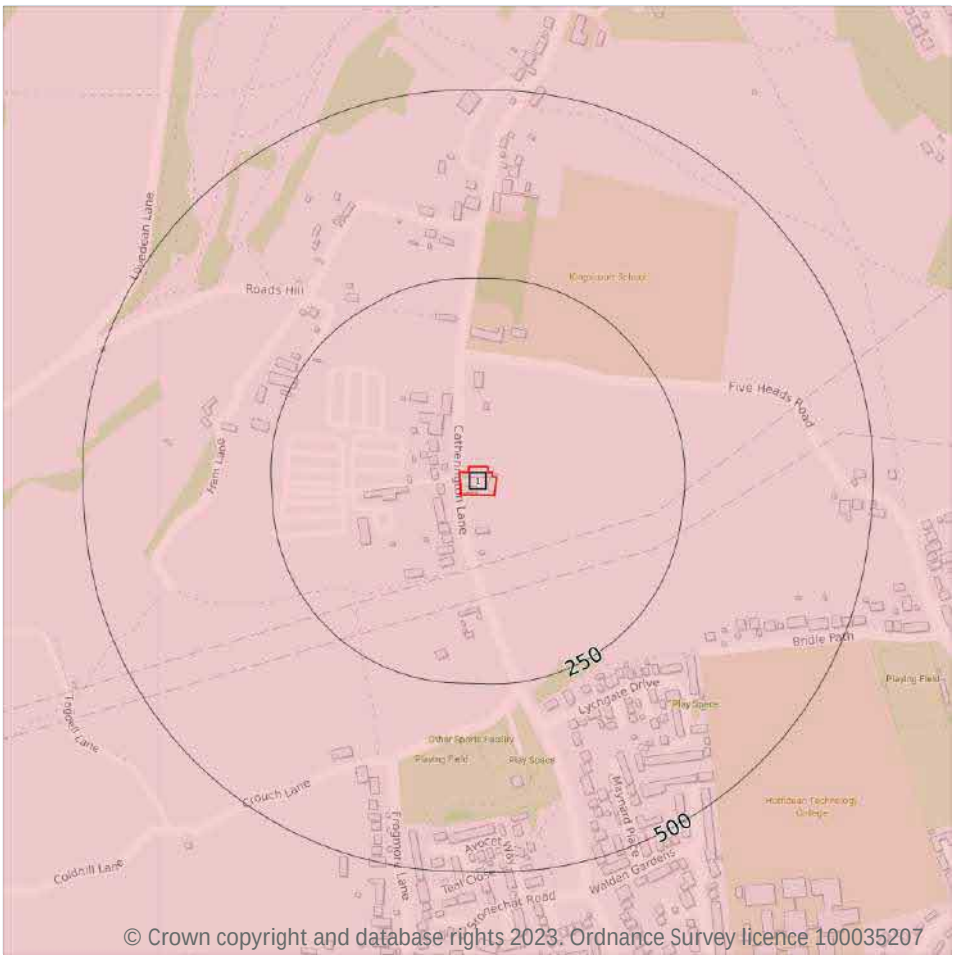
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



- Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	5

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

Features are displayed on the Abstractions and Source Protection Zones map on page 37 >

ID	Location	Details	
-	1068m SW	Status: Historical Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468400 Northing: 113330	Annual Volume (m^3): 4148225 Max Daily Volume (m^3): 13638 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 11/06/2009 Version End Date: -
-	1076m SW	Status: Active Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468396 Northing: 113321	Annual Volume (m^3): 4148307 Max Daily Volume (m^3): 13638 Original Application No: NPS/WR/022603 Original Start Date: 23/12/1965 Expiry Date: - Issue No: 102 Version Start Date: 29/07/2016 Version End Date: -
-	1076m SW	Status: Active Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468395 Northing: 113323	Annual Volume (m^3): 4148307 Max Daily Volume (m^3): 13638 Original Application No: NPS/WR/022603 Original Start Date: 23/12/1965 Expiry Date: - Issue No: 102 Version Start Date: 29/07/2016 Version End Date: -
-	1377m SE	Status: Historical Licence No: 11/42/37/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: HORNDEAN BREWERY WELL A Data Type: Point Name: Fuller Smith & Turner Plc Easting: 470670 Northing: 113240	Annual Volume (m^3): 45460 Max Daily Volume (m^3): 122.7 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/01/2006 Version End Date: -
-	1453m SE	Status: Historical Licence No: 11/42/37/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: HORNDEAN BREWERY BOREHOLE B Data Type: Point Name: Fuller Smith & Turner Plc Easting: 470740 Northing: 113210	Annual Volume (m^3): 45460 Max Daily Volume (m^3): 122.7 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 01/01/2006 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	0

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

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

5.8 Potable abstractions

Records within 2000m	3

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

Features are displayed on the Abstractions and Source Protection Zones map on page 37 >

ID	Location	Details	
-	1068m SW	Status: Historical Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468400 Northing: 113330	Annual Volume (m^3): 4148225 Max Daily Volume (m^3): 13638 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 11/06/2009 Version End Date: -
-	1076m SW	Status: Active Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT A AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468396 Northing: 113321	Annual Volume (m^3): 4148307 Max Daily Volume (m^3): 13638 Original Application No: NPS/WR/022603 Original Start Date: 23/12/1965 Expiry Date: - Issue No: 102 Version Start Date: 29/07/2016 Version End Date: -

ID	Location	Details	
-	1076m SW	Status: Active Licence No: 11/42/33.1/1 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: POINT B AT LOVEDEAN PUMPING STATION. Data Type: Point Name: Portsmouth Water Ltd Easting: 468395 Northing: 113323	Annual Volume (m^3): 4148307 Max Daily Volume (m^3): 13638 Original Application No: NPS/WR/022603 Original Start Date: 23/12/1965 Expiry Date: - Issue No: 102 Version Start Date: 29/07/2016 Version End Date: -

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

5.9 Source Protection Zones

Records within 500m	1

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

Features are displayed on the Abstractions and Source Protection Zones map on page 37 >

ID	Location	Type	Description
1	On site	1	Inner catchment

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

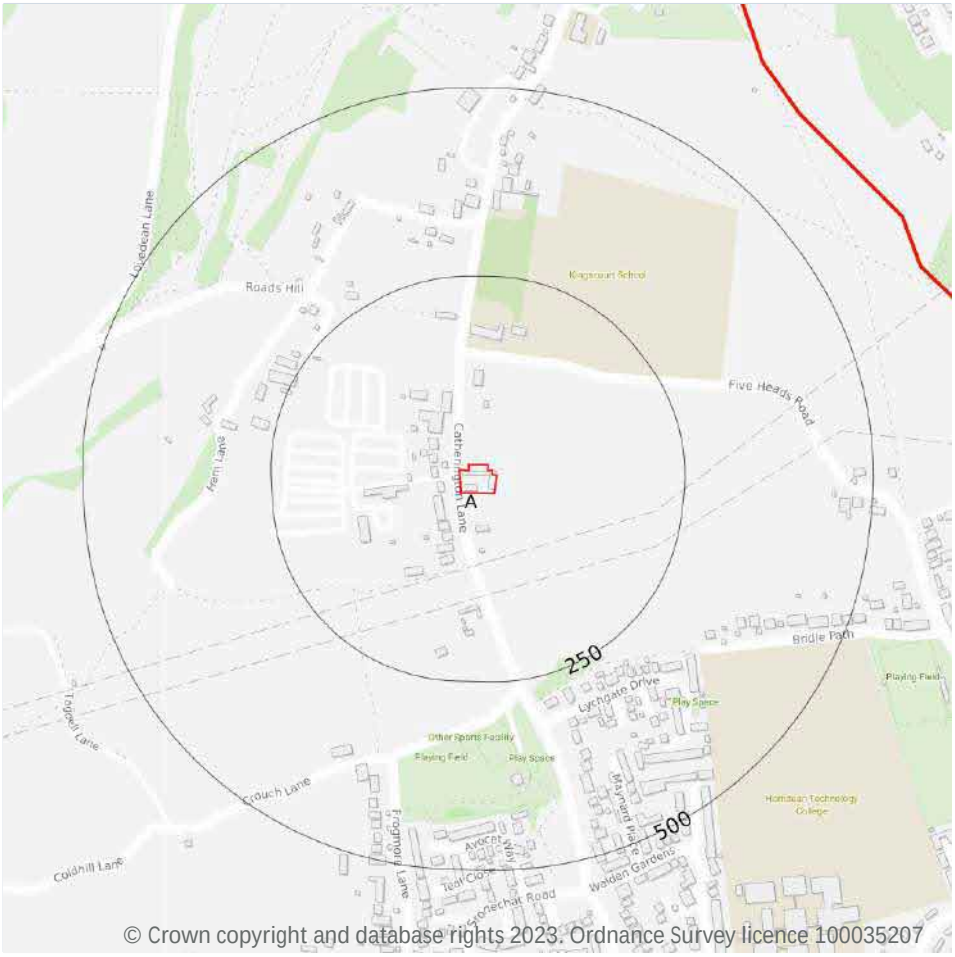
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	0

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

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

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

Features are displayed on the Hydrology map on page 41 >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Potwell Trib	GB107042016400	East Hampshire Rivers	East Hampshire

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on page 41 >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	3914m SW	River	Potwell Trib	GB107042016400 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on page 41 >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	East Hants Chalk	GB40701G502700 ↗	Poor	Poor	Poor	2019

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

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

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

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

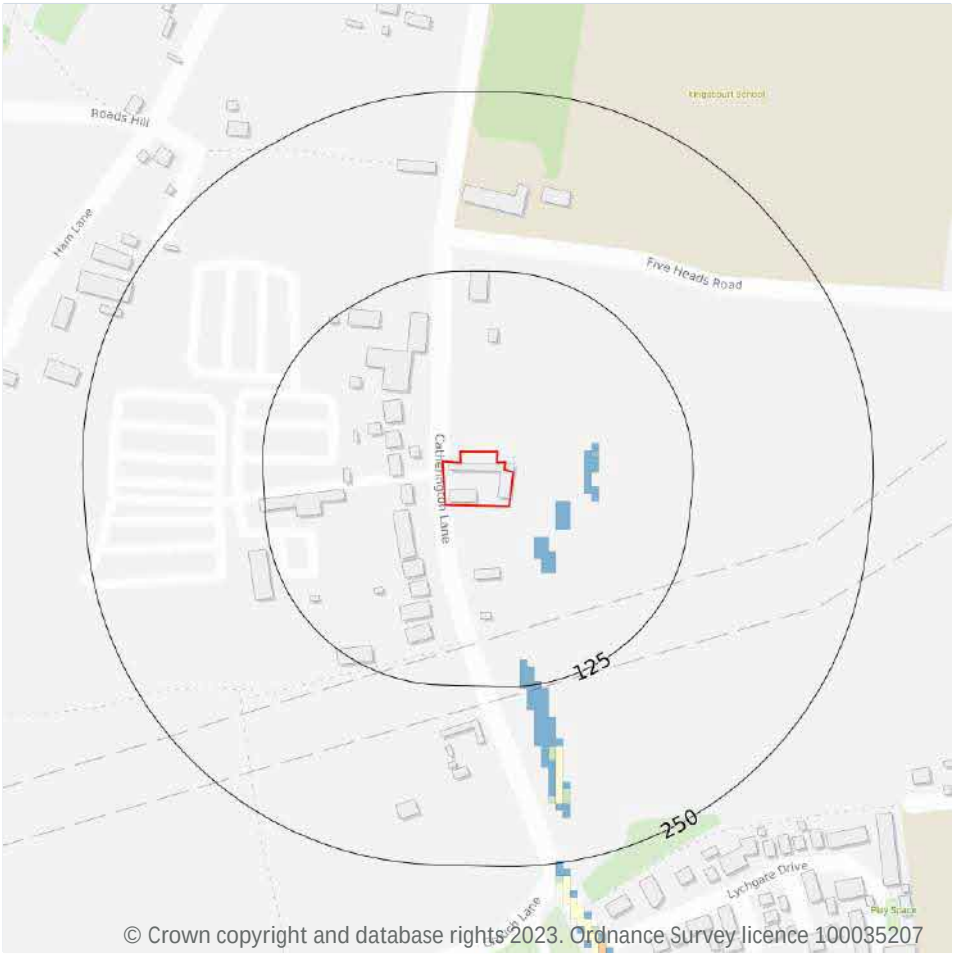
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline
Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	Negligible
Highest risk within 50m	1 in 1000 year, 0.1m - 0.3m

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

Features are displayed on the Surface water flooding map on page 47 >

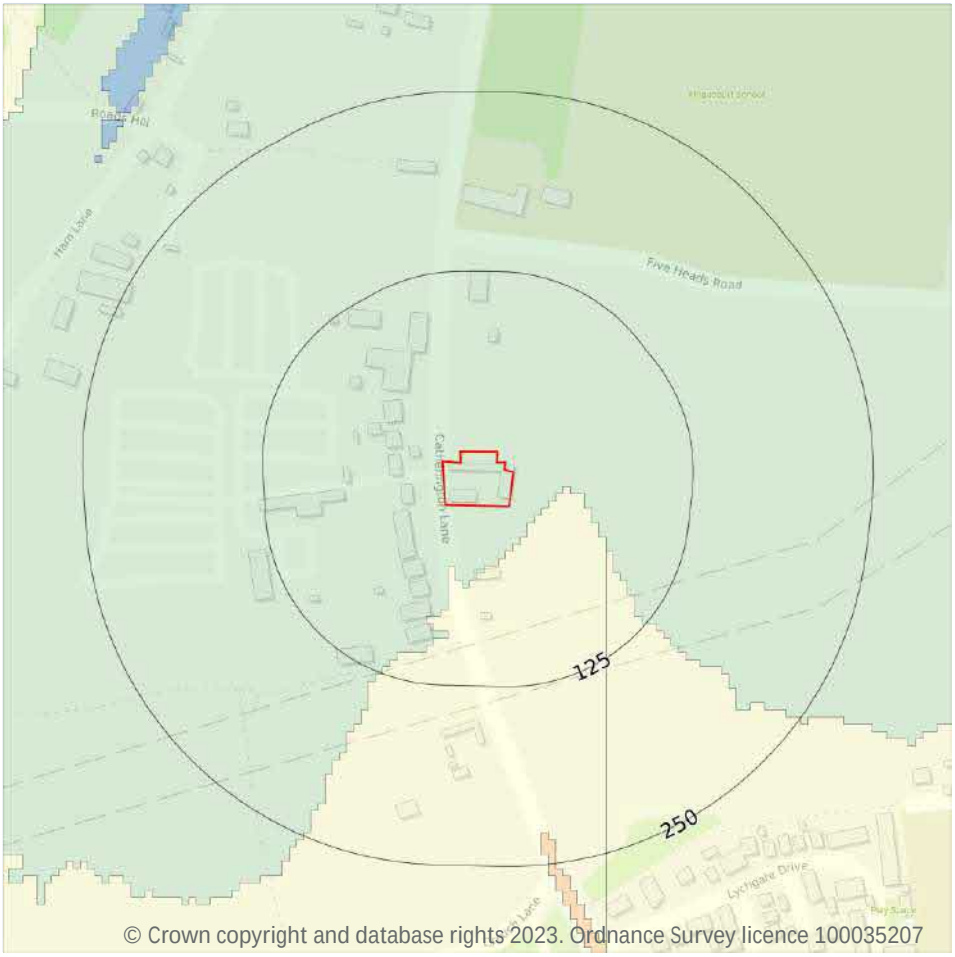
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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

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

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

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

9.1 Groundwater flooding

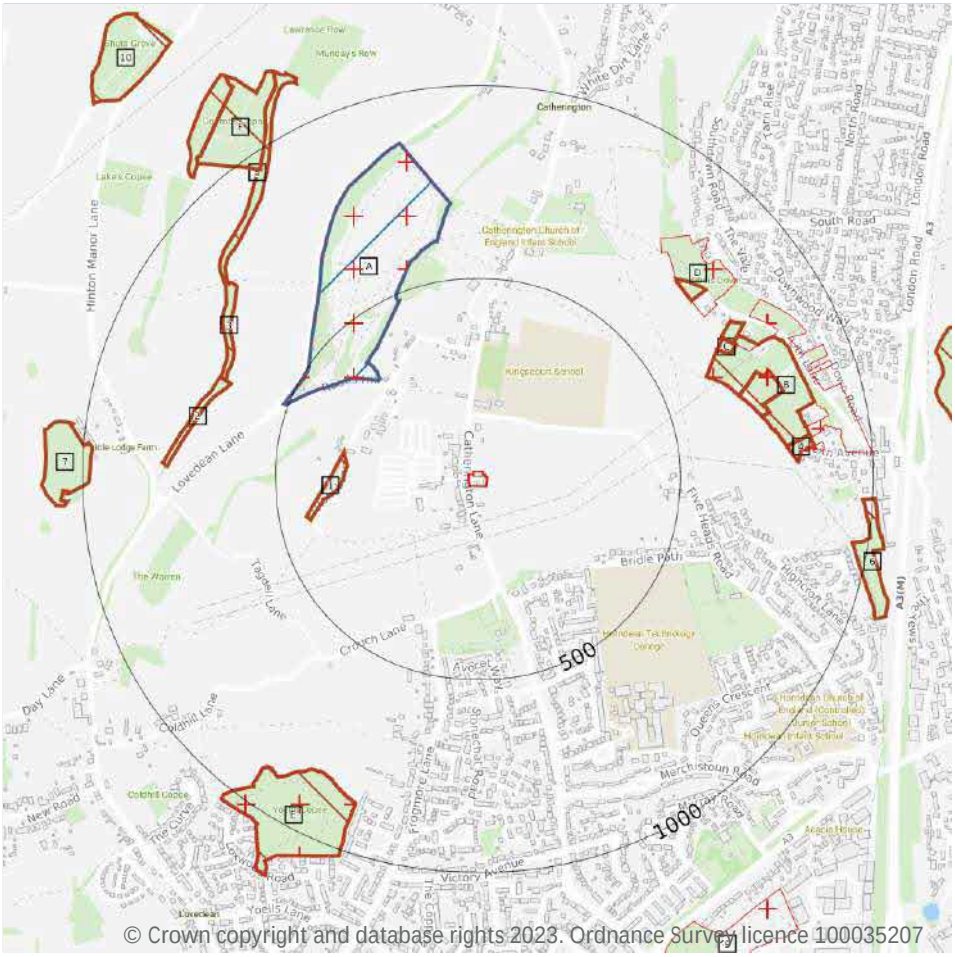
Highest risk on site	Low
Highest risk within 50m	Moderate

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

Features are displayed on the Groundwater flooding map on page 49 >

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Local Nature Reserves (LNR)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on page 50 >

ID	Location	Name	Data source
A	337m NW	Catherington Down	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	6

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

Features are displayed on the Environmental designations map on page 50 >

ID	Location	Name	Data source
A	337m NW	Catherington Down	Natural England
B	625m NE	Catherington Lith	Natural England
D	698m NE	Catherington Lith	Natural England
E	836m SW	Yeoll's Copse	Natural England
9	1249m SE	Dell Piece West	Natural England
-	1478m SE	Hazleton Common LNR	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	27

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

Features are displayed on the Environmental designations map on page 50 >

ID	Location	Name	Woodland Type
1	316m W	Unknown	Ancient & Semi-Natural Woodland
B	625m NE	Catherington Lith	Ancient & Semi-Natural Woodland
2	659m W	Unknown	Ancient & Semi-Natural Woodland
3	675m W	Unknown	Ancient & Semi-Natural Woodland
C	680m NE	Catherington Lith	Ancient & Semi-Natural Woodland
B	685m E	Catherington Lith	Ancient & Semi-Natural Woodland
D	698m NE	Unknown	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
C	708m NE	Catherington Lith	Ancient & Semi-Natural Woodland
4	780m E	Catherington Lith	Ancient & Semi-Natural Woodland
5	800m NW	Unknown	Ancient & Semi-Natural Woodland
E	833m SW	Yoells Copse	Ancient & Semi-Natural Woodland
F	956m NW	Coombs Copse	Ancient & Semi-Natural Woodland
6	960m E	Unknown	Ancient & Semi-Natural Woodland
7	978m W	Rabbit Copse	Ancient & Semi-Natural Woodland
F	1048m NW	Coombs Copse	Ancient & Semi-Natural Woodland
8	1184m E	Blendworth Lith	Ancient & Semi-Natural Woodland
10	1325m NW	Unknown	Ancient & Semi-Natural Woodland
-	1510m W	Crabdens Row	Ancient & Semi-Natural Woodland
-	1561m SW	James's Copse	Ancient Replanted Woodland
-	1624m W	Crabdens Row	Ancient & Semi-Natural Woodland
-	1641m NW	Prew's Hanger	Ancient & Semi-Natural Woodland
-	1705m SE	Unknown	Ancient & Semi-Natural Woodland
-	1769m S	Unknown	Ancient & Semi-Natural Woodland
-	1797m NW	Prew's Hanger	Ancient & Semi-Natural Woodland
-	1874m SE	Unknown	Ancient & Semi-Natural Woodland
-	1888m W	Crabdens Copse	Ancient & Semi-Natural Woodland
-	1945m NW	Ludmore Hanger	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

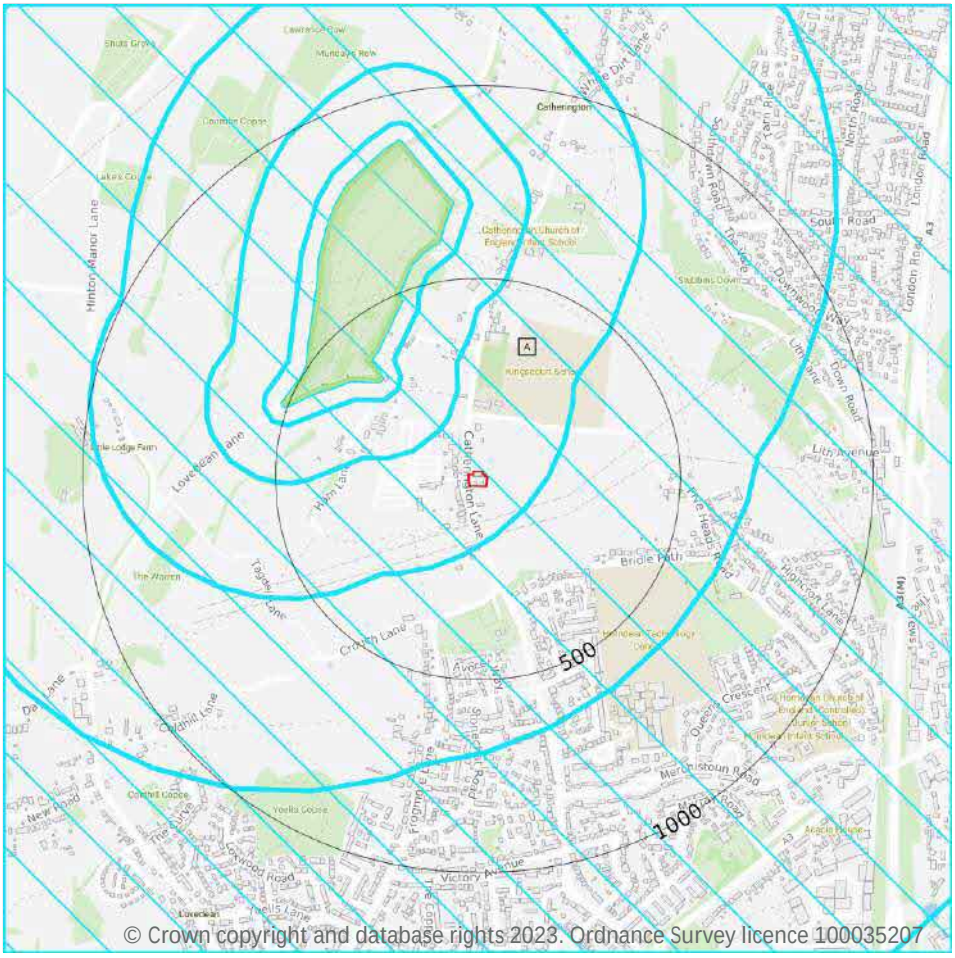
Records within 2000m	2

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

Location	Name	Type	NVZ ID	Status
On site	Hampshire Chalk	Groundwater	143	Existing
On site	Chichester,Langstone and Portsmouth Harbours Eutrophic NVZ (TraC)	Eutrophic Water	2	Existing

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

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

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on page 56 >

ID	Location	Type of developments requiring consultation
A	On site	Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Oil & gas exploration/extraction. Residential - Residential development of 100 units or more. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores). Combustion - All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management Composting - Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream Notes: NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	1

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

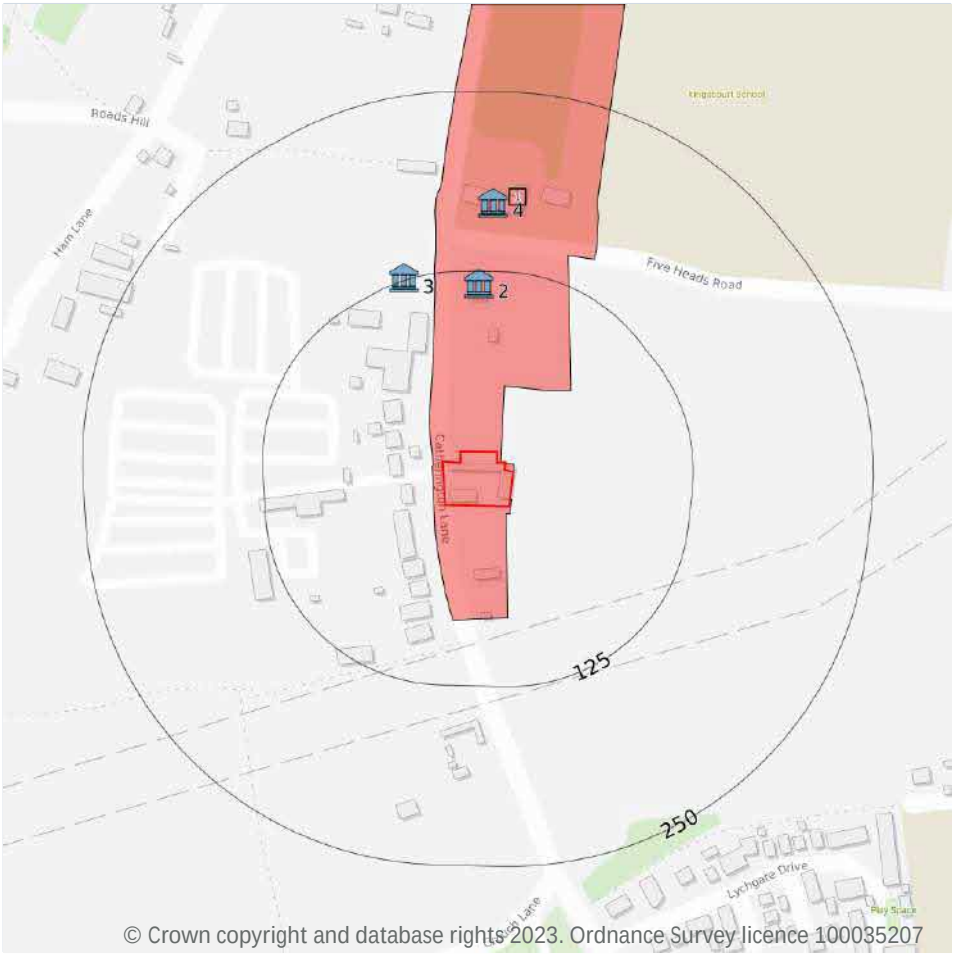
Features are displayed on the SSSI Impact Zones and Units map on page 56 >

ID: A
Location: 337m NW
SSSI name: Catherington Down
Unit name: Catherington Down
Broad habitat: Calcareous Grassland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Lowland calcareous grassland (CG2)	Favourable	30/03/2015
Lowland calcareous grassland (CG3-5)	Favourable	30/03/2015
Lowland mixed deciduous woodland	Favourable	30/03/2015

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	3

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

Features are displayed on the Visual and cultural designations map on page 59 >

ID	Location	Name	Grade	Reference Number	Listed date
2	117m N	The Farmhouse	II	1179073	12/03/1986
3	127m N	Granary 30 Metres West Of The Farmhouse	II	1351109	12/03/1986
4	173m N	Catherington House	II	1179074	16/03/1954

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

11.5 Conservation Areas

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on page 59 >

ID	Location	Name	District	Date of designation
1	On site	Catherington, East Hampshire	East Hampshire	11/02/2003

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

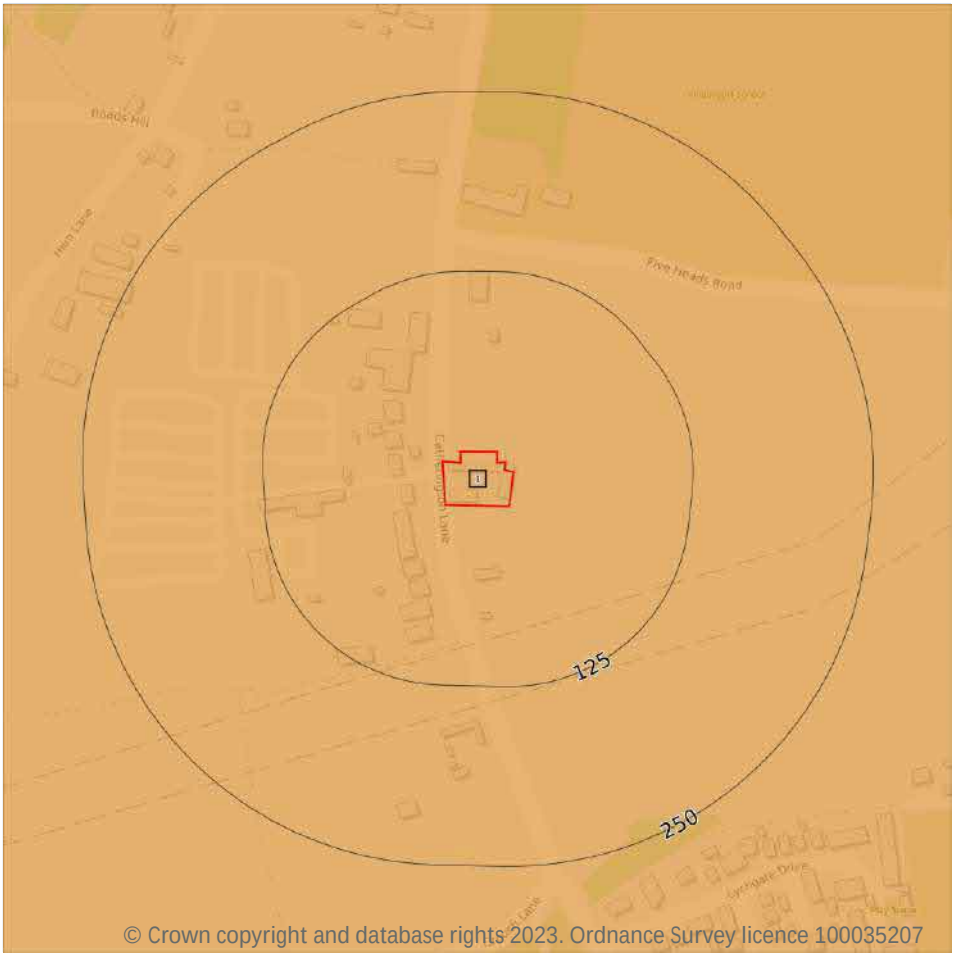
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	1

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

Features are displayed on the Agricultural designations map on page 62 >

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

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	1

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
102m E	AG00475911	Entry Level Stewardship	01/11/2013	31/10/2018

This data is sourced from Natural England.

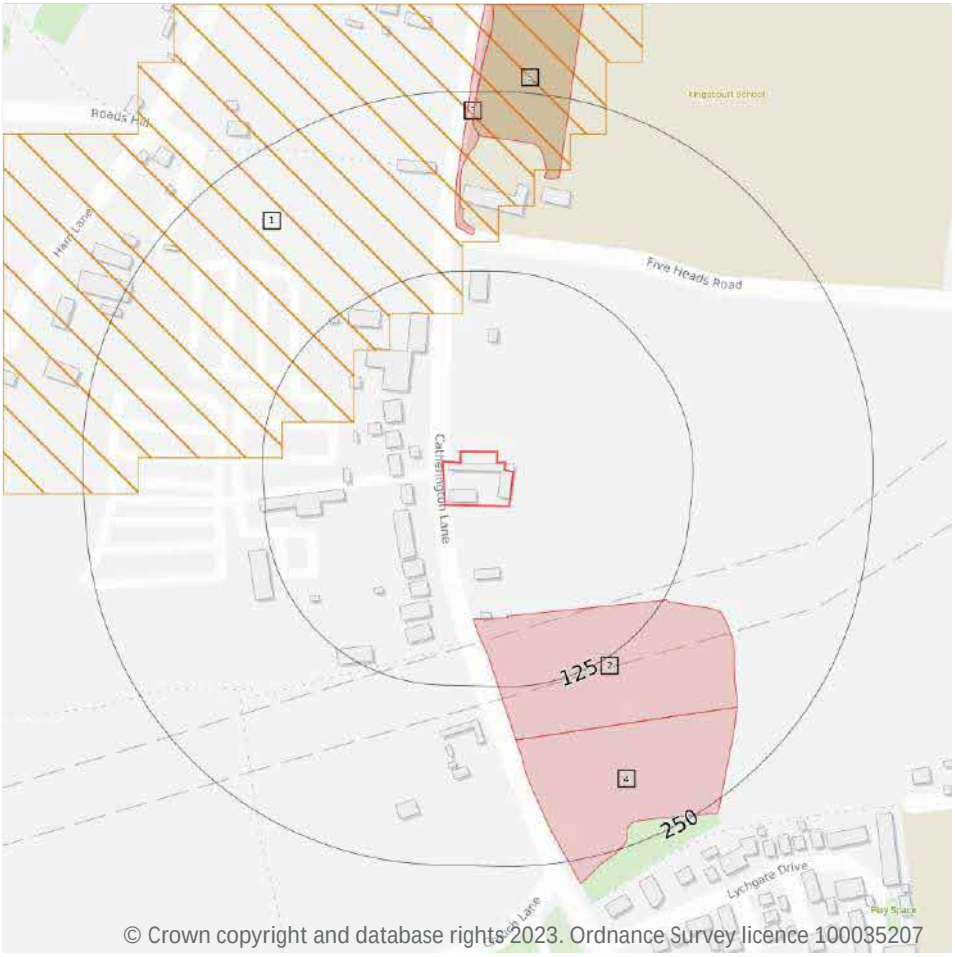
12.5 Countryside Stewardship Schemes

Records within 250m	0

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

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders

Habitat Networks

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

13.1 Priority Habitat Inventory

Records within 250m	4

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

Features are displayed on the Habitat designations map on page 64 >

ID	Location	Main Habitat	Other habitats
2	76m S	Good quality semi-improved grassland	Main habitat: LMEAD (INV > 50%)
3	151m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	161m S	Good quality semi-improved grassland	Main habitat: LMEAD (INV > 50%)
5	193m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	1

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

Features are displayed on the Habitat designations map on page 64 >

ID	Location	Type	Habitat
1	67m NW	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

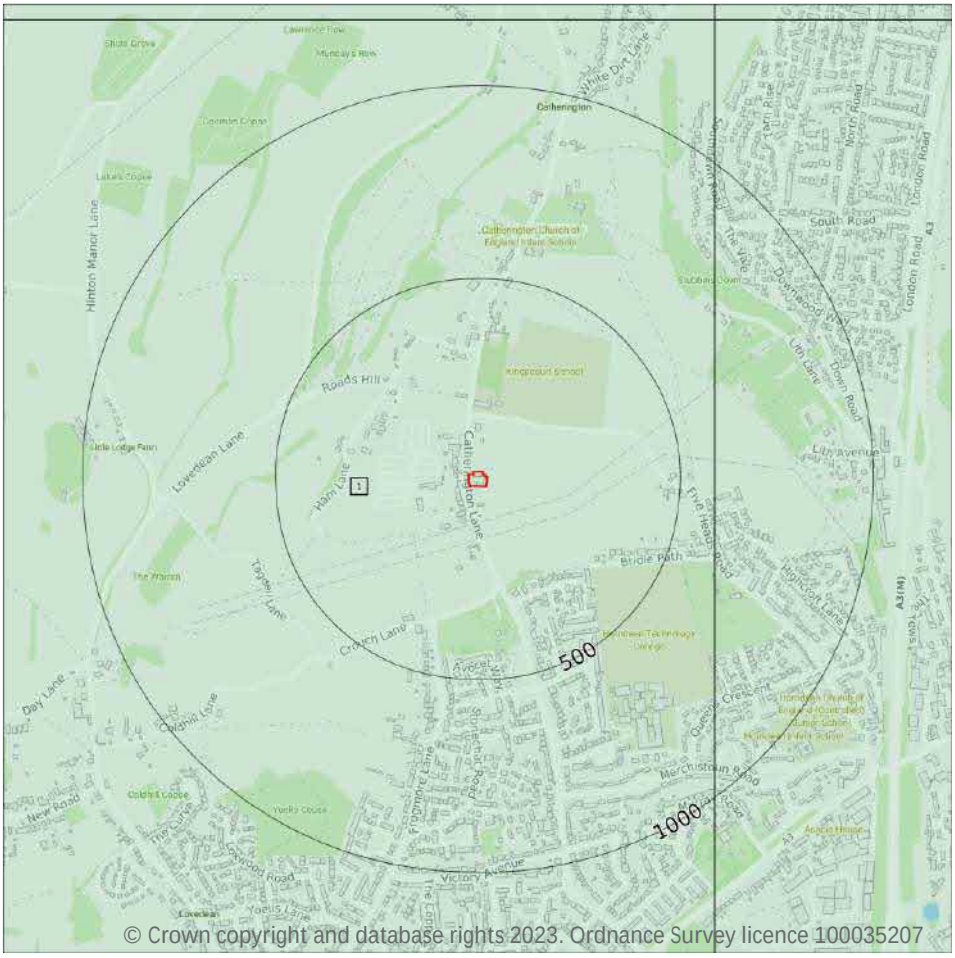
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on page 66 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU61SE

This data is sourced from the British Geological Survey.

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

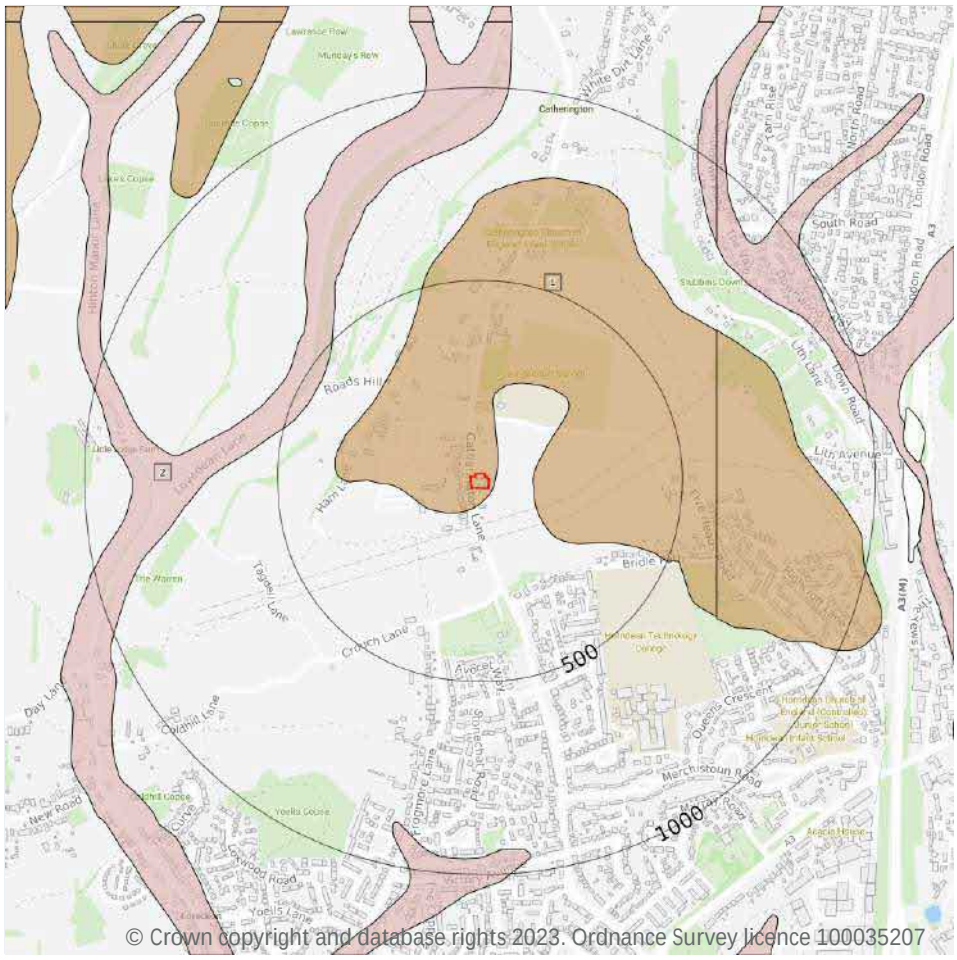
14.2 Artificial and made ground (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on page 68 >

ID	Location	LEX Code	Description	Rock description
1	On site	CWF-XCZSV	Clay-with-flints Formation - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
2	458m NW	HEAD-DMTN	Head - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

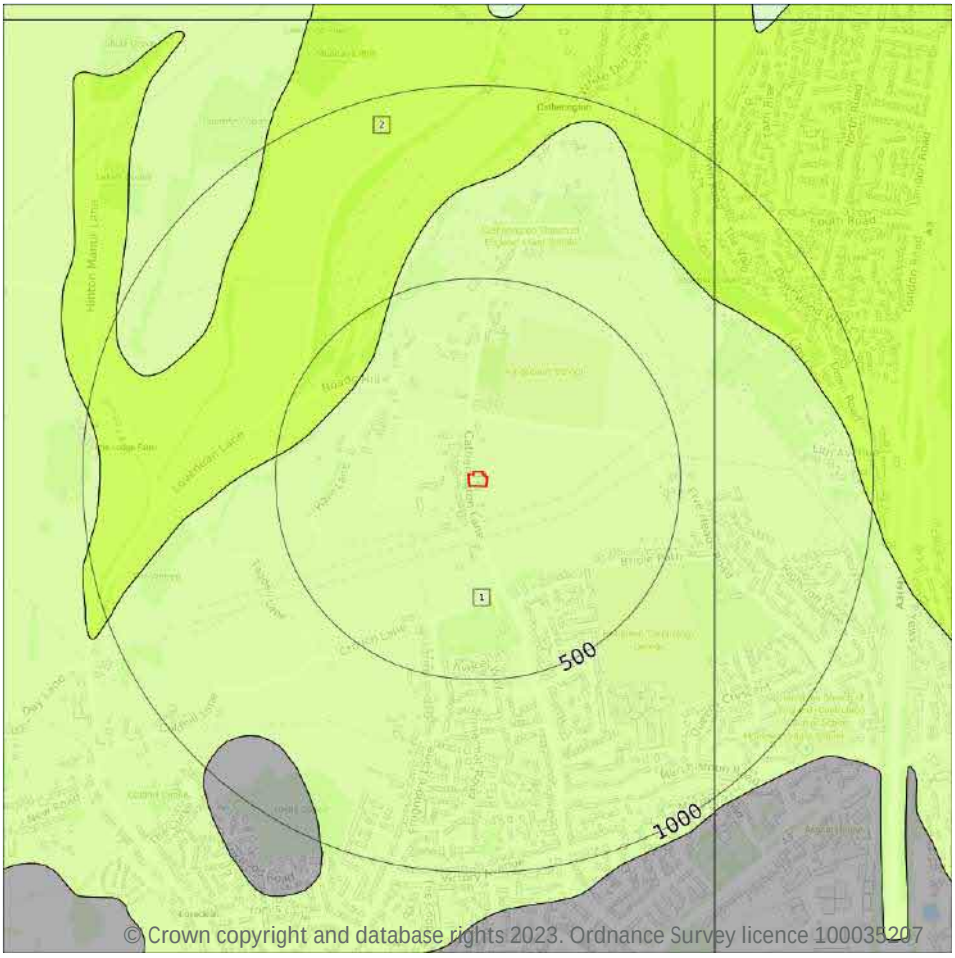
14.4 Landslip (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	2

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on page 70 >

ID	Location	LEX Code	Description	Rock age
1	On site	TACH-CHLK	Tarrant Chalk Member - Chalk	Campanian Age
2	373m NW	NCK-CHLK	Newhaven Chalk Formation - Chalk	Campanian Age - Santonian Age

This data is sourced from the British Geological Survey.

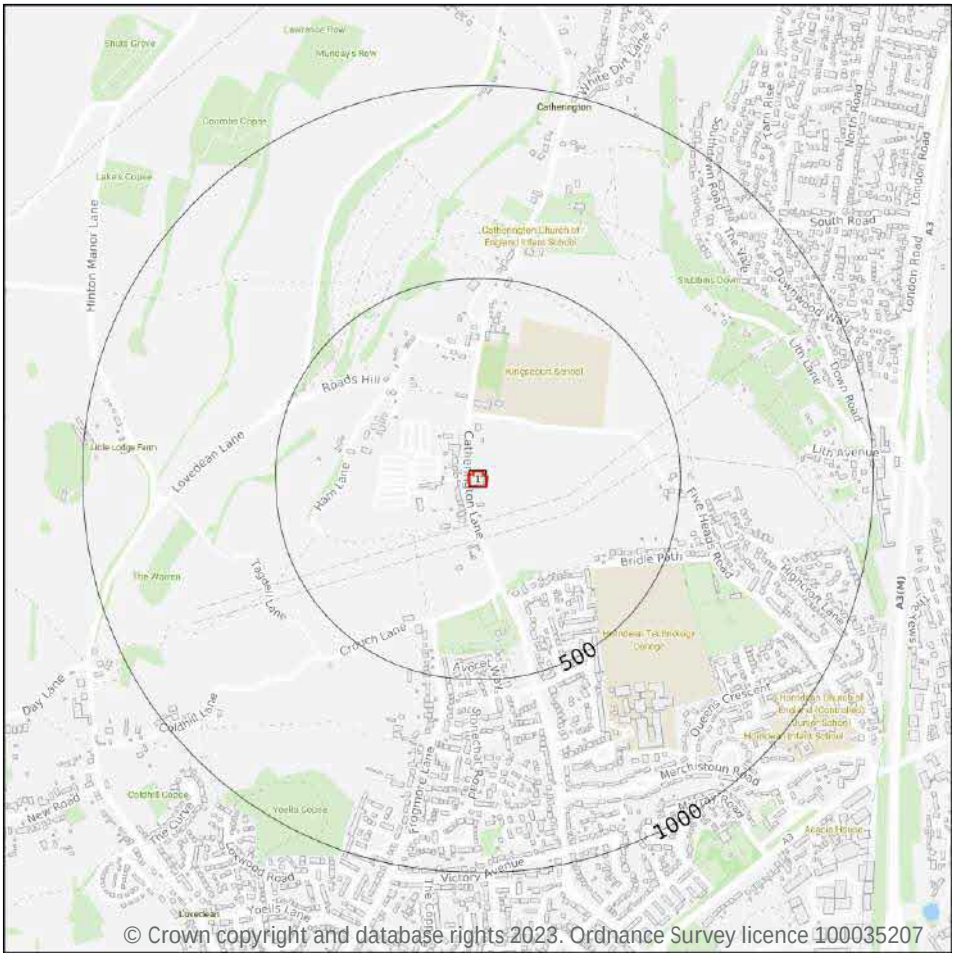
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on page 72 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW316_fareham_v4

This data is sourced from the British Geological Survey.

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

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

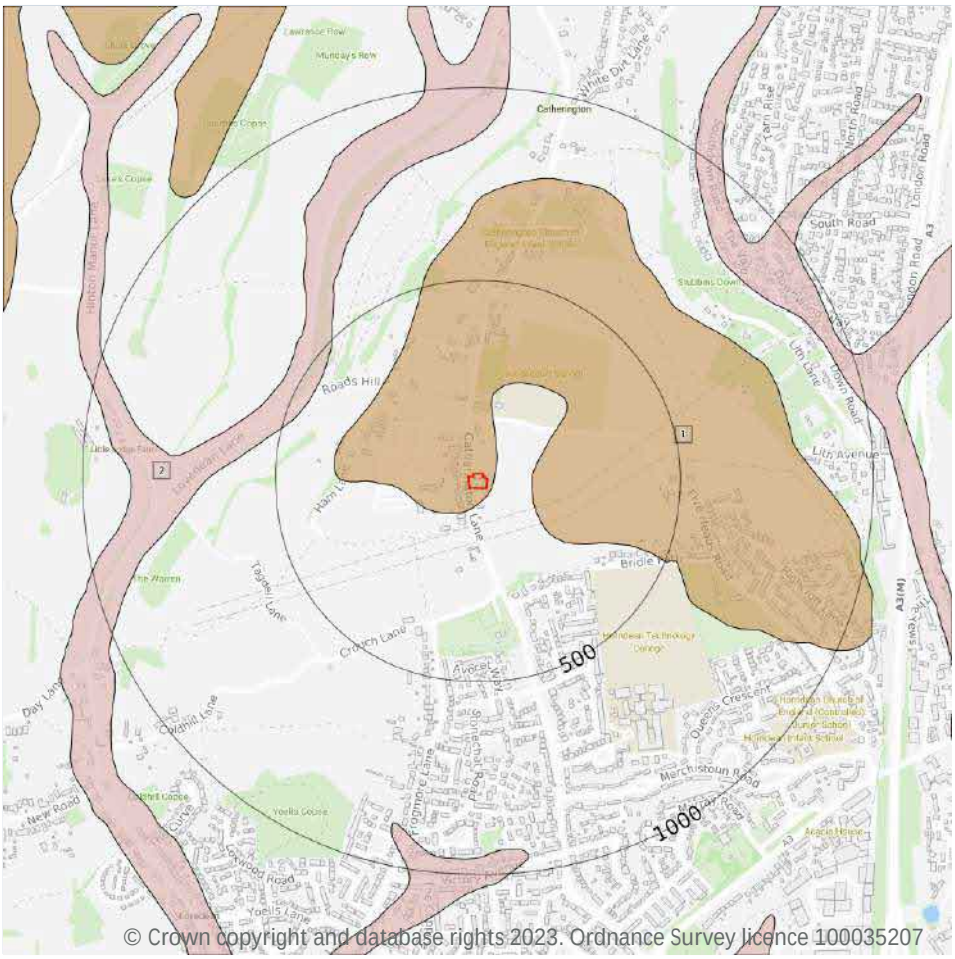
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m	2

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 74 >

ID	Location	LEX Code	Description	Rock description
1	On site	CWF-XCZSV	CLAY-WITH-FLINTS FORMATION	CLAY, SILT, SAND AND GRAVEL
2	455m NW	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

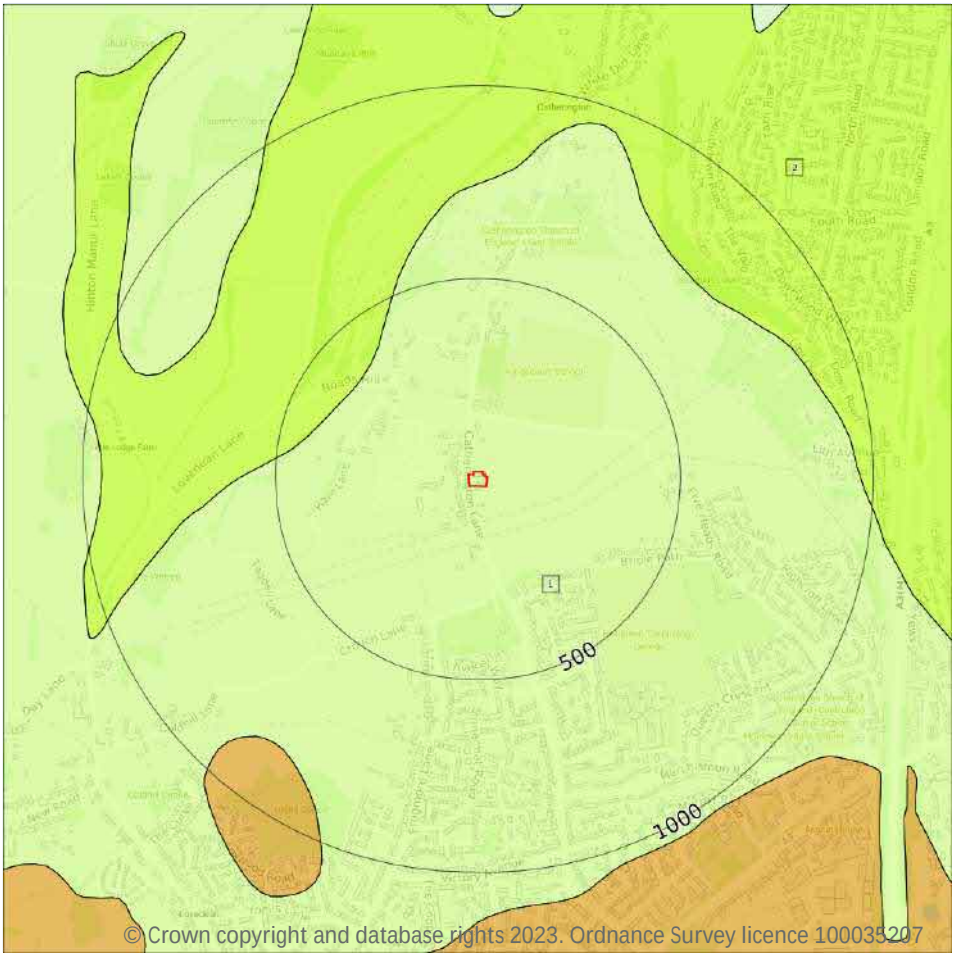
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m	2

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 76 >

ID	Location	LEX Code	Description	Rock age
1	On site	TACH-CHLK	TARRANT CHALK MEMBER - CHALK	CAMPANIAN
2	371m NW	NCK-CHLK	NEWHAVEN CHALK FORMATION - CHALK	SANTONIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Very High	Very High

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

16 Boreholes

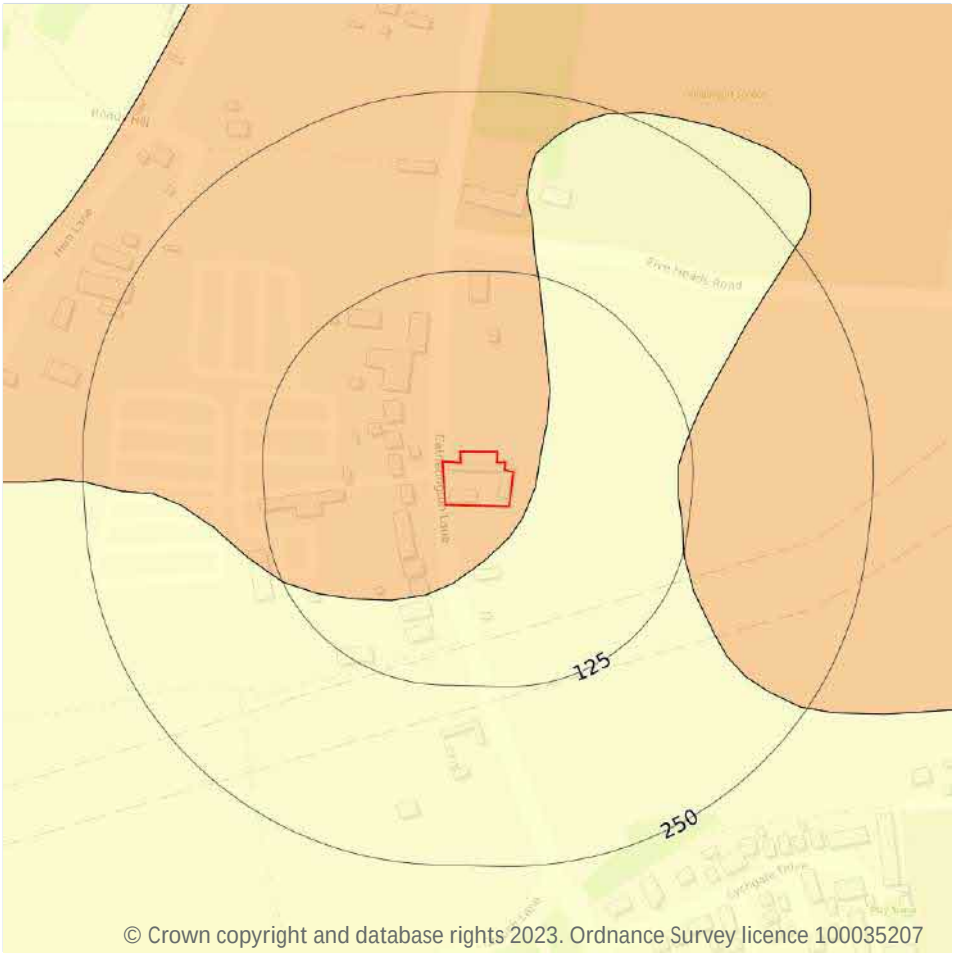
16.1 BGS Boreholes

Records within 250m	0

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

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 79 >

Location	Hazard rating	Details
On site	Low	Ground conditions predominantly medium plasticity.
12m SE	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands

Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

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

Features are displayed on the Natural ground subsidence - Running sands map on page 80 >

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits

Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

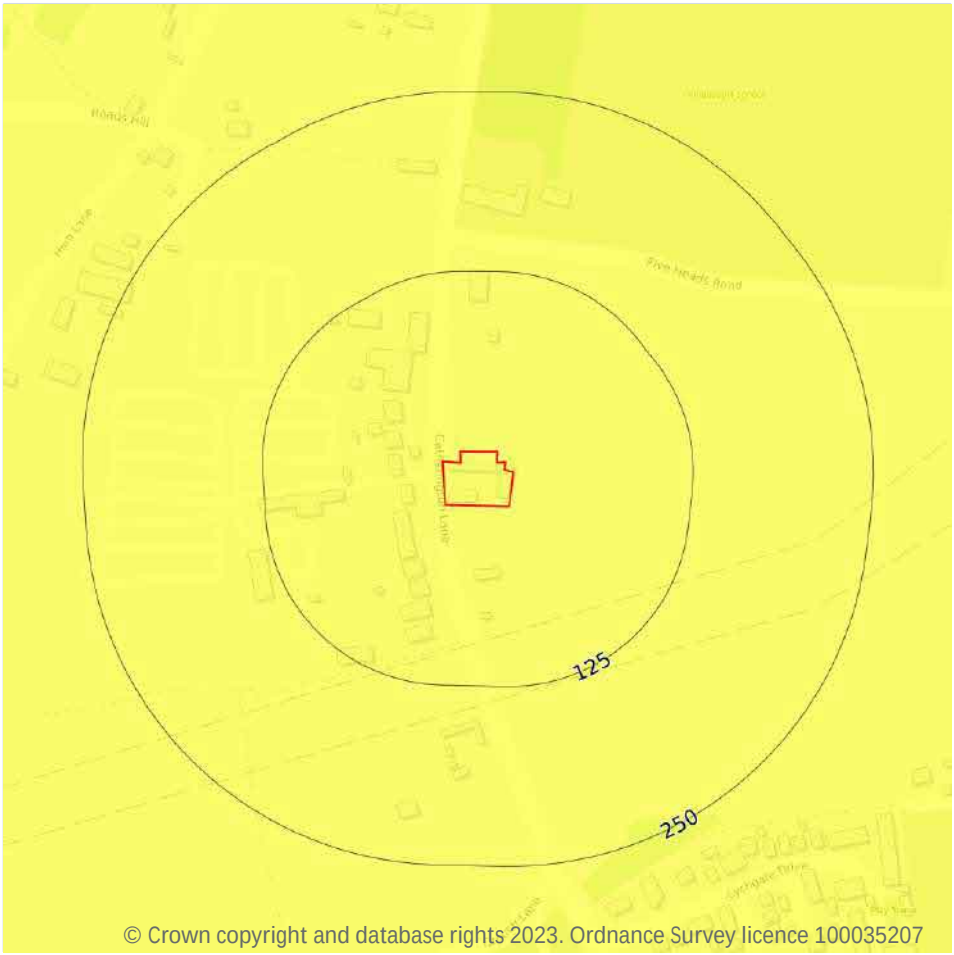
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 81 >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

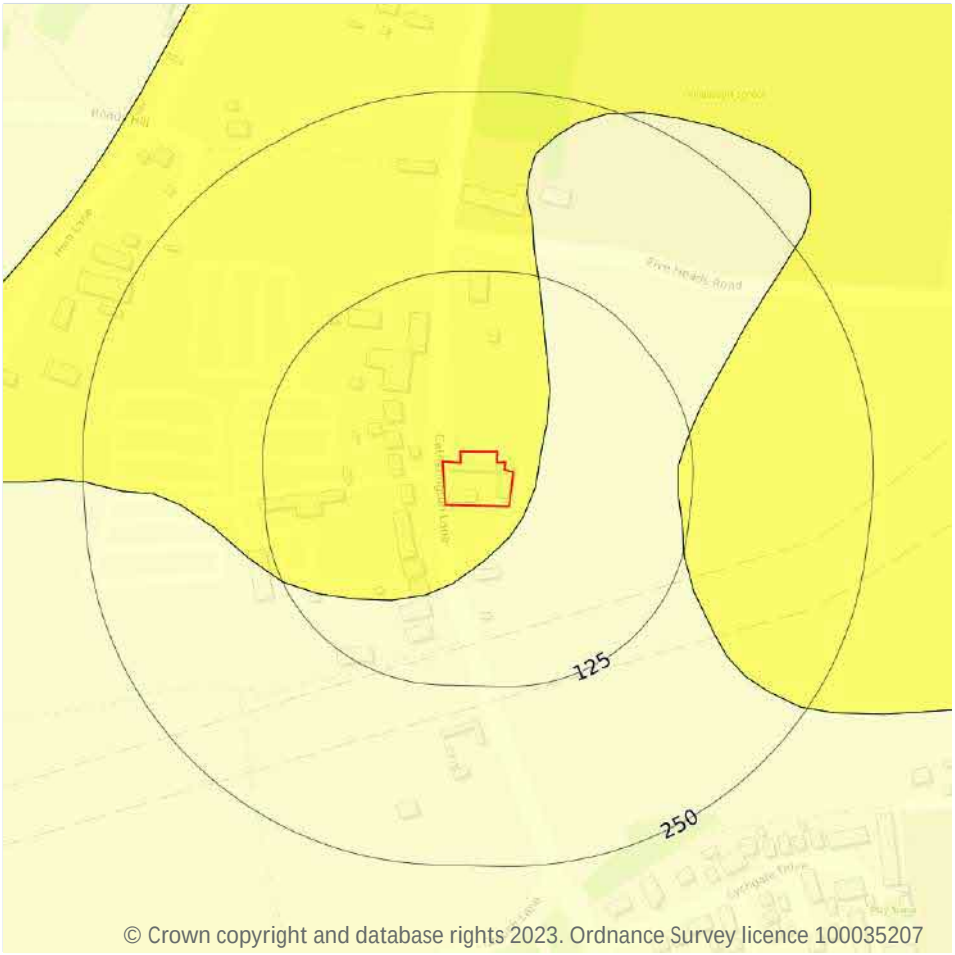
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 82 >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	2

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

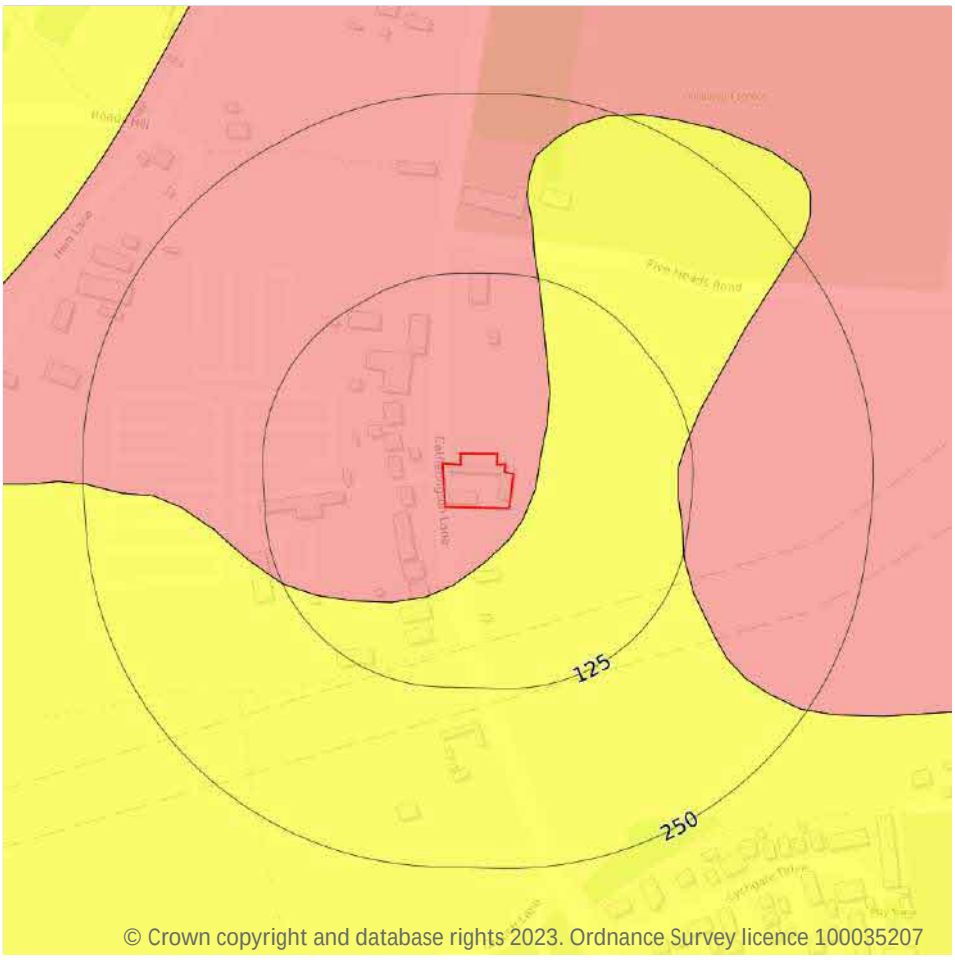
Features are displayed on the Natural ground subsidence - Landslides map on page 83 >

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

Location	Hazard rating	Details
12m SE	Negligible	Slope instability problems are not thought to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	2

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

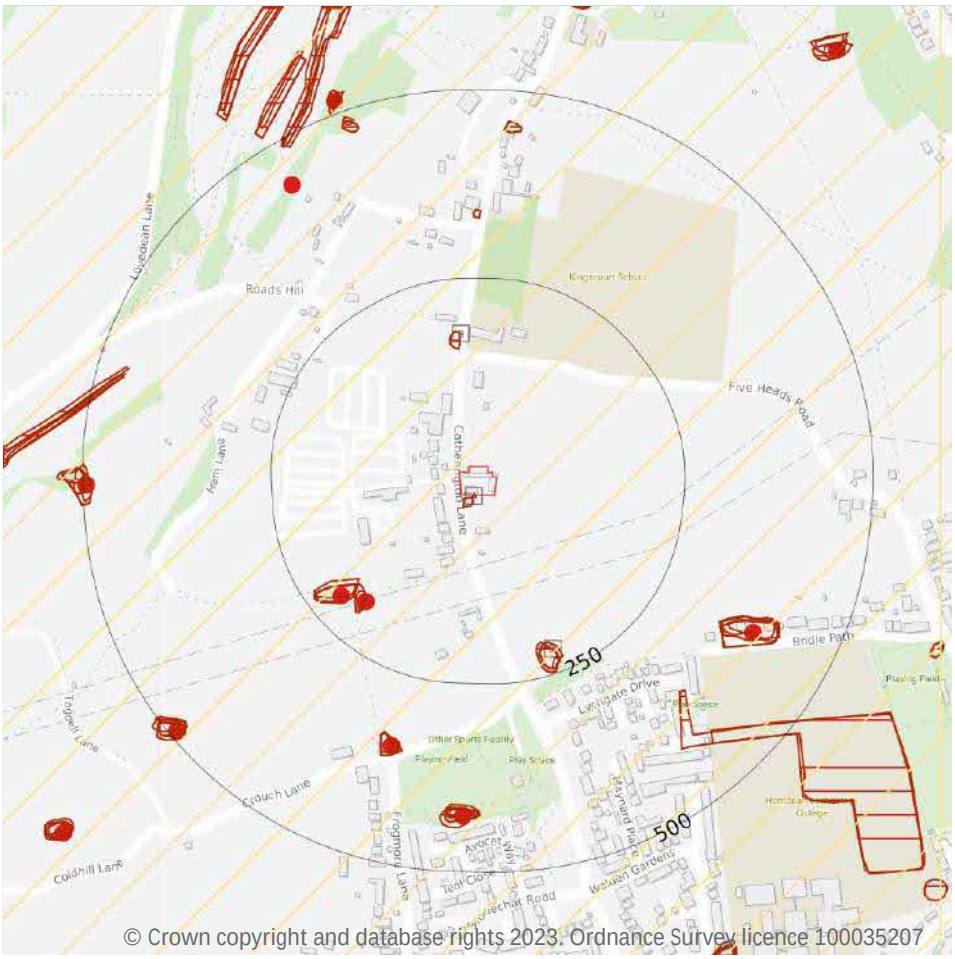
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on page 85 >

Location	Hazard rating	Details
On site	Moderate	Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.

Location	Hazard rating	Details
12m SE	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	8

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

Features are displayed on the Mining and ground workings map on page 87 >

ID	Location	Details	Description
C	190m SW	Name: Tagdell Lane Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	207m SW	Name: Coldhill Lane Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
F	345m S	Name: Crouch Lane Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
G	388m SE	Name: Five Heads Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
I	426m S	Name: Catherington Lane Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
2	440m NW	Name: Catherington Chalk Pit Address: Catherington, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

ID	Location	Details	Description
M	489m SW	Name: Tagdell Lane Chalk Pit Address: Horndean, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
N	495m W	Name: Catherington Chalk Pit Address: Catherington, WATERLOOVILLE, Hampshire Commodity: Chalk Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	13

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

Features are displayed on the Mining and ground workings map on page 87 >

ID	Location	Land Use	Year of mapping	Mapping scale
A	3m S	Pond	1933	1:10560
A	3m S	Pond	1908	1:10560
B	156m N	Pond	1933	1:10560
B	156m N	Pond	1908	1:10560
C	175m SW	Unspecified Pit	1959	1:10560
C	179m SW	Old Chalk Pits	1895	1:10560
C	181m SW	Old Chalk Pits	1908	1:10560
C	182m SW	Unspecified Pit	1933	1:10560
C	182m SW	Old Chalk Pits	1908	1:10560
D	204m S	Unspecified Pit	1867	1:10560
D	206m SE	Unspecified Pit	1959	1:10560
D	212m S	Unspecified Pit	1933	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
D	212m S	Unspecified Pit	1908	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	2

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

Features are displayed on the Mining and ground workings map on page 87 >

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
3	589m E	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

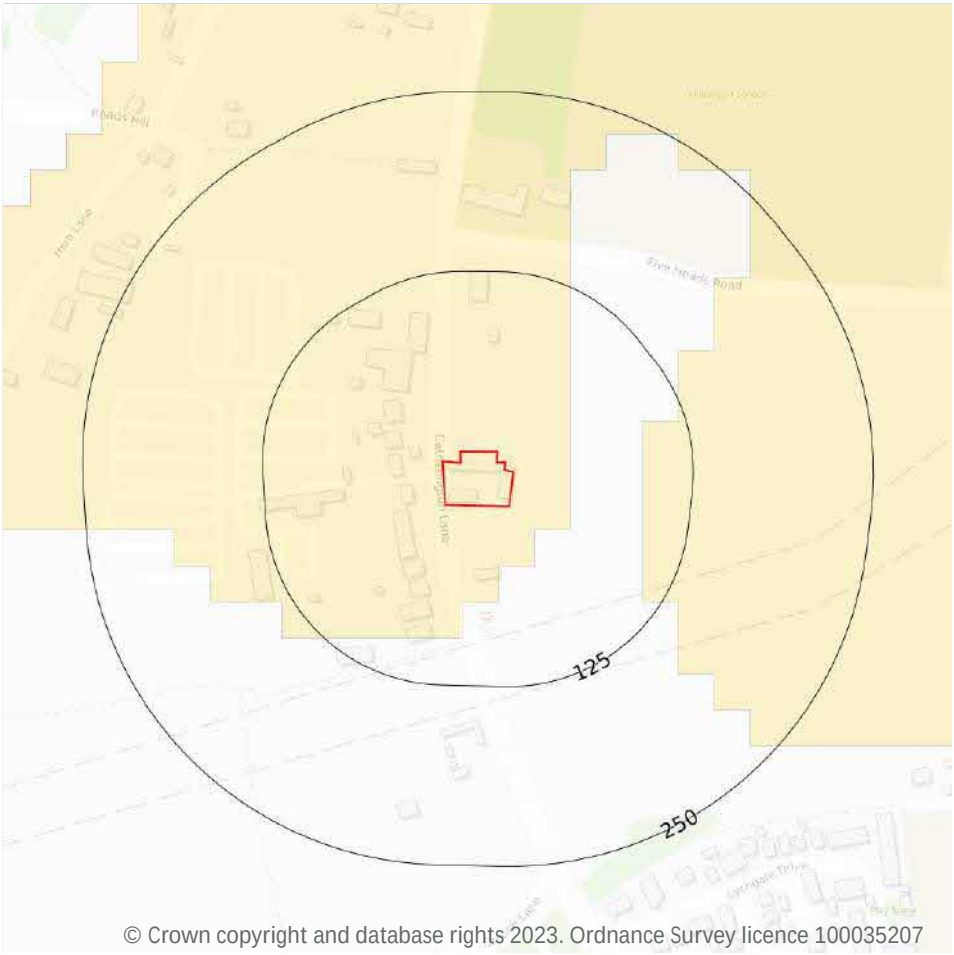
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

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

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on page 96 >

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg
12m SE	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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