

PHASE I DESK STUDY &
SUPPLEMENTARY CONTAMINATION
ASSESSMENT

LAND OFF SUTTON LANE, CADEBY

STATUE HOMES LTD

JANUARY 2021



SUMMARY TABLE: PHASE I DESK STUDY & SUPPLEMENTARY CONTAMINATION ASSESSMENT	
SITE:	Land off Sutton Lane, Cadeby
CLIENT:	Statue Homes Ltd
DATE:	January 2021
REFERENCE	IV.02.21
DEVELOPMENT PROPOSAL:	Conversion of outbuilding and stables to residential bungalow.
HUMAN HEALTH:	Contamination has been identified within the menage area with removal and disposal as non hazardous waste required.
CONTROLLED WATERS:	Negligible Risk
FLOOD RISK:	No Risk
GAS RISK:	No protection measures required.
RADON GAS:	Radon gas protection measures are not required.
COMMENTS:	The Made Ground outside of the menage area should be replaced with topsoil to provide a suitable growing media for the garden end use.

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Date:	January 2021	
Version:	1.0	



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1.0 INTRODUCTION

1.1 PREAMBLE

This Phase I Desk Study & Supplementary Contamination Assessment has been produced for Statue Homes Limited to provide a pre-development contamination assessment of the site known as Land off Sutton Lane, Cadeby. The site has planning permission (Ref 20/00899/FUL) for the conversion of an outbuilding and stables to a residential bungalow with associated private gardens and parking

1.2 SITE LOCATION

The site is located in the Village of Cadeby approximately 8km North of Hinckley town centre. The National Grid Reference (NGR) for the approximate centre of the site is SK 427 021. The site, the development proposal and site layout are illustrated in **Appendix A**.

1.3 PROJECT BRIEF

The brief for the Phase I & Contamination Assessment incorporates:

- a review and assessment of the site history, with reference to potentially contaminative uses;
- a review of regulatory authority and environmental data relating to the site and its environs;
- a site inspection;
- an appraisal of potential environmental risks;
- the development of a Phase I Conceptual Model;
- the provision of a strategy for, and the implementation of a subsequent contamination assessment;
- the development of the Phase II Conceptual Model;
- the provision of recommendations to mitigate against environmental risks.

1.4 DATA REFERENCES

- Environmental Search Data (Supplied by Emapsite Ltd);
- Historical Ordnance Survey (OS) Mapping (Supplied by Emapsite Ltd);
- British Geological Survey Online Geological Mapping;
- BSI (2015), BS 5930:2015 Code of practice for ground investigations.

1.5 LIMITATIONS

This report has been produced in accordance with industry best practice at the time of writing.

Ivy House Environmental Ltd has, in the production of this report, relied upon information provided by third parties. Ivy House Environmental Ltd does not warrant the accuracy of this information and will not be responsible for any opinions which Ivy House Environmental has expressed, or conclusions which it has drawn, in reliance upon information, which is subsequently proven to be inaccurate.

All statements and opinions provided in this report have been reported in good faith and are based on the information gained during, and restrictions imposed by, site investigation techniques used at the time. Ivy House Environmental cannot be held responsible for conditions not revealed by the investigation.

This report has been prepared for the sole use of the client and shall not be relied upon or transferred to third parties without the express written consent of Ivy House Environmental. Unauthorised third parties rely upon the information contained within this report at their own risk.

2.0 DESK STUDY AND SITE OBSERVATIONS

2.1 HISTORICAL REVIEW: SITE DEVELOPMENT

Ordnance Survey maps have been reviewed for the years 1885 - 2014. The historical development of the site and the locality are detailed below; the OS maps are shown in **Appendix B**.

1885 – The site is illustrated as open land. In the surrounding area, the village of Cadeby is illustrated approximately 150m to the north.

1976-80 – The site remains open land with the field adjacent to the west illustrating poultry houses. Works and a sand pit are illustrated 700-800m to the north east.

1999- 2002 – Old House Farm (farmhouse) is illustrated approximately 40m to the west of the site.

2011-16 – The outbuilding and menage on site, and outbuilding approximately 20m to the east, are now illustrated. The remainder of the site remains open land. The works and sand pit are no longer illustrated.

2018 -present – The adjacent field to the west has been converted to residential use with no other changes noted.

2.1.1 SUMMARY

The site has remained open land since the earliest mapping with the building of the outbuildings and menage by the 2010s.

2.2 DEVELOPMENT PROPOSAL

The site is to be developed by the conversion of the existing outbuilding and stables into a residential bungalow with associated gardens and parking.

2.3 SITE DESCRIPTION

The site currently comprises an outbuilding and historic stables with menage within a larger field. Mature conifers are present at the western boundary. Photos of the site can be found in **Appendix A**.

2.4 ANTICIPATED GEOLOGY

The BGS geological map for this area (Sheet 155 Coalville) shows solid strata of the Gunthorpe Member, consisting of beds of mudstone, which is Triassic in age and superficial glacio-fluvial deposits consisting of sand and gravel which are of quaternary age.

2.5 HYDROGEOLOGY & HYDROLOGY

2.5.1 Hydrogeology

The Gunthorpe Member and Glaciofluvial deposits are classified by the Environment Agency as a Secondary B and Secondary A Aquifers of variable to low permeability.

There are no licensed groundwater abstractions within 400m of the site; the site is not located within 500m of a groundwater Source Protection Zone (SPZ) and no information on groundwater levels is available for the site.

2.5.2 Hydrology

The nearest surface water body (tertiary river) is located approximately 120m north west of the site.

Environment Agency data suggest that the site does not lie within an indicative fluvial floodplain.

2.6 COAL FIELDS

The site is not found to be within 0.5km of a coal mining area.

2.7 MINERAL RESOURCES

No evidence of mineral exploitation has been identified within 500m of the site on review of historic mapping.

2.8 POTENTIALLY CONTAMINATIVE LAND USES

Environmental search data supplied by Emapsite (**Appendix C**) states that:

- There are no landfills within 250m of the site;
- there are no waste treatment facilities located within 500m of the site;
- there are no active discharge consents within 250m of the site;
- there are no hazardous substance or IPC consents located within 500m of the site;
- there are no fuel sites located within 500m of the site.

2.9 ASBESTOS

No evidence of asbestos containing materials (ACMs) was observed on site during the site walkover. The creation of the menage is likely to have utilised Made Ground material which may contain asbestos containing materials.

2.10 RADON GAS ASSESSMENT

The site is not within an area recorded to require basic or full radon precautions as it is in an area where less than 1% of properties are above the Action Level.

3.0 PHASE I CONCEPTUAL MODEL

3.1 SOURCE-PATHWAY-RECEPTOR

The conceptual model for the site considers the development proposal for residential use and the preceding information.

The site's former and current use as an open land is considered in respect to potential contaminative sources.

Potential contaminants of concern for the end user include heavy metals, polycyclic aromatic hydrocarbons (PAHs) and asbestos.

Pathways for the end user of the site include direct contact (dermal) with potentially contaminated soil dust; ingestion and inhalation of potentially contaminated soil dust; ingestion of vegetables grown in potentially contaminated soil and potentially contaminated soil attached to vegetables and inhalation of potential ground gas and asbestos fibres.

The primary receptors for the site are construction workers and end users of the site (residents).

For the controlled waters environment, the primary receptor are the Aquifers (Glaciofluvial deposits and Gunthorpe Member) underlying the site.

Potential contaminants of concern for the environment include heavy metals and PAHs.

The primary pathway for controlled waters is the leaching and vertical migration of potential contaminants through the vadose zone to the saturated zone.

The tertiary river is considered to be at sufficient distance from the site to not be considered at risk.

The development of the conceptual model is illustrated on Figure 3.1.

Figure 3.1: Conceptual Site Model

HUMAN HEALTH			
SOURCE	PATHWAY	RECEPTOR	SOLUTION
Potential contaminants of concern include heavy metals and PAHs. Potential asbestos containing materials in made ground.	Dermal contact with potentially contaminated soil dust; ingestion and inhalation of potentially contaminated soil dust; ingestion of vegetables grown in potentially contaminated soil and potentially contaminated soil attached to vegetables.	Construction workers	Basic PPE for all workers (overalls, gloves, dust mask if required) and wash facilities/personal hygiene.
	Inhalation of potential ground gas.	End users (e.g. residents)	
	Inhalation of asbestos fibres.		
	Leaching into water supply pipes	Water supply/End users	Standard pipes potentially suitable.
CONTROLLED WATERS			
Potential contaminants of concern include heavy metals and PAHs.	Leaching and vertical migration through the vadose zone to the saturated zone	Aquifers underlying the site (Glaciofluvial deposits and Gunthorpe Member).	Phase II recommended to assess presence of Made Ground

4.0 PHASE II FIELDWORK

4.1 INTRODUCTION

A supplementary contamination investigation was undertaken on 05/01/21 under the supervision of a suitably qualified engineer and in general accordance with the Code of Practice for Site Investigations BS5930:2015.

The supplementary investigation incorporated the following:

- the excavation of 4No. shallow dug pits to a maximum depth of 1.20mbgl;
- the analysis of 6No. samples for a standard screening suite of organic and inorganic contaminants, plus selected site specific determinands.

An exploratory hole location plan is contained in **Appendix A**.

4.2 RATIONALE

The supplementary investigation has been designed to facilitate an assessment of the general ground conditions across the site, including contaminant sources, pathways and receptors. The investigation has also been designed in consideration of the current site layout and the development proposal and health and safety issues.

4.3 LABORATORY ANALYSIS & TESTING

Selected soil samples were analysed at specialist environmental laboratories as detailed in the following sections.

4.3.1 Chemical Analysis

A total of 2No. samples of the natural soils and 4No. Made Ground samples were sent for analysis at a UKAS/MCERTS accredited laboratory. The samples were scheduled for heavy metals, PAHs, asbestos and EPH.

The soil analysis results are contained in **Appendix E**.

5.0 GROUND CONDITIONS

The intrusive investigation has revealed that across the site a layer of Made Ground hardcore consisting of whole and crushed brick has been previously laid as hardstanding down to 0.60mbgl outside of the menage and 0.70mbgl within the boundary of the menage. The menage is also topped with a “flexi” material consisting of shredded carpet.

Underlying the Made Ground within the menage relic topsoil was observed, showing the area to have simply been built up. Outside of the menage boundary natural sand and gravel was observed below the brick hardcore.

Trial Pit logs can be found in **Appendix D**

5.1 TOPSOIL

Relic topsoil was encountered within the menage boundary below the Made Ground observed at a depth of 0.60-0.90mbgl.

5.2 SOLID STRATA

Sand and Gravel deposits were encountered directly beneath the brick hardcore outside of the menage boundary to a depth of 1.20mbgl. The base of these deposits was not encountered in any of the exploratory holes.

6.0 CONTAMINATION ASSESSMENT

The guidance detailed in Section 1.4 has been followed to ensure that the risk posed to identified receptors, as detailed in the conceptual site model, is reported according to accepted compliance criteria.

The Contaminated Land Exposure Assessment (CLEA) guidance and published Soil Guideline Values (SGV) have been incorporated with Generic Assessment Criteria (GAC), for determinands that do not have a published SGV, to provide a competent Tier 1 Assessment.

The GAC and methodology references are contained in **Appendix F**.

6.1 HUMAN HEALTH

An assessment of the analysis results for metals and inorganics contained in **Appendix E** concludes that asbestos is found to be within the Made Ground material within the menage boundary, however, it is noted to be absent in natural soils beneath this and within the hardcore material outside the boundary. With the exception of TP1, none of the remaining contaminants of concern exceed their respective GAC for a residential with private garden end use.

6.1.1 Hydrocarbon Contamination

No visual or olfactory evidence of hydrocarbon contamination was noted during the ground investigation works, minor EPH values (429mg/kg to 696mg/kg) have been observed within the Made Ground material across the site but found to be absent within the natural soils beneath. Analysis for PAH's was undertaken with solely TP1 at 0.60mbgl returning values in exceedance of the respective GAC for a residential with private garden end use listed below.

Determinand	Value	GAC
Benzo(a)pyrene	5.28	3.00
Benzo(b)fluoranthene	6.36	3.70
Dibenzo(a,h)anthracene	0.60	0.30

6.1.2 Asbestos Contamination

No visual evidence of potential asbestos containing materials (ACMs) was noted during the ground investigation works. The soil samples screened however showed the presence of asbestos in quantities up to 0.002% within the menage. The remainder of the site was screened for the potential presence of asbestos as a precautionary measure, with none returning a positive result.

6.2 CONTROLLED WATERS

Although the underlying geology is primarily granular strata, no contamination that poses a risk to controlled waters has been identified except within the menage, which itself is underlain by a clay topsoil. Therefore, the risk posed to controlled waters is considered to be negligible.

6.3 GROUND GAS

No potential source of ground gas has been identified within 250m of the site, in addition, Made Ground on site is found to be above ground level or of clean brick hardcore material. Therefore it is considered that the gas risk to the proposed conversion is low.

7.0 PHASE II CONCEPTUAL SITE MODEL

The conceptual model for the site considers the development proposal for residential end use with private gardens and the information gathered during the Phase I and Supplementary Contamination Assessment.

The site's former and current use as open land is considered in respect to potential contaminative sources.

A hotspot of PAH contamination (TP1) and elevated EPH concentrations have been reported in trial pits TP1, TP3 and TP4 in shallow made ground. Chrysotile asbestos fibres (0.002%) have been reported in trial pit TP2 in shallow made ground.

Pathways for the end user of the site include direct contact (dermal) with potentially contaminated made ground dust; inhalation of potentially contaminated made ground dust and ingestion of contaminated produce and contaminated soil attached to produce grown in contaminated made ground; inhalation of asbestos fibres. However, laboratory analysis has not revealed any elevated contamination within the natural soils. In addition, analysis of the historic mapping, and site setting has not revealed a significant risk of ground gas.

The presence of asbestos and PAHs within the Made Ground within the menage boundary is considered to pose a risk to human health and will require remediation.

The primary receptors for the site are construction workers and residents of the completed development. The risk posed to human health receptors, with regard to natural soils, is considered negligible; the risk posed by the made ground material within the menage is considered to be moderate, therefore, remediation will be required. The risk posed to human health with regard to ground gas, is considered to be negligible.

For the environment (controlled waters) the primary receptor are the Aquifers underlying the site.

The primary pathway for the underlying Aquifers is the leaching and vertical migration of contaminants through the vadose zone to the saturated zone. However, laboratory analysis has not revealed any elevated contamination within the natural soil; hotspots of contamination (asbestos fibres & PAH) and low level EPH are not considered to pose a significant risk to controlled waters.

The development of the conceptual model is illustrated on Figure 7.1.

Figure 7.1: Phase II Conceptual Site Model

HUMAN HEALTH			
SOURCE	PATHWAY	RECEPTOR	SOLUTION
Contaminants of concern include hotspots of asbestos fibres and PAHs in made ground. No significant source of ground gas identified.	Direct contact (dermal) with contaminated soil dust; ingestion and inhalation of contaminated soil dust; Ingestion of vegetables grown in contaminated made ground and contaminated soil attached to vegetables.	Construction Workers	Basic PPE for all workers to include dust mask and wash facilities. Remediation will be required to protect end users. Standard water supply pipes should be suitable.
	Leaching into water supply pipes	End Users/Residents Water Supply	
	Inhalation of fibres		
	Pathway inhibited due to site setting and presence of soils containing cohesive content.		
CONTROLLED WATERS			
Contaminants of concern include hotspots of asbestos fibres and PAHs in made ground.	Leaching and vertical migration through the vadose zone to the saturated zone	Underlying Aquifers	No remediation required

8.0 RISK MANAGEMENT & REMEDIATION

Previous sections have quantified the risk posed to identified receptors, which in some instances, require remediation to protect or reduce levels of risk. The following section details measures and recommendations for dealing with risks associated with soil, gas and groundwater contamination in respect to the development proposal of residential house with private gardens.

8.1 REMEDIATION TO PROTECT END USERS

The Made Ground within the boundary of the menage should be removed and disposed of at a suitably licenced facility for acceptance of waste containing asbestos.

Validation of the removal process should be completed.

A Remediation method Statement (RMS) may be required by the local authority.

8.2 REMEDIATION TO PROTECT CONTROLLED WATERS

No remediation is required to protect this receptor.

8.3 REMEDIATION TO PROTECT CONSTRUCTION WORKERS

Masks are to be worn as part of basic PPE when removing the Made Ground within the menage area.

8.4 WASTE MANAGEMENT

Generally Made Ground and natural soils should be classified as non-hazardous for disposal.

However, the Made Ground within the menage should be removed from site as non-hazardous waste.

9.0 RECOMMENDATIONS

Recommendations for further assessment of the site include:

- Production of a remediation method statement.
- Removal of the Made Ground within the menage should be disposed of at a suitably licenced facility and validated as complete.
- The Made Ground within the garden area of the proposed conversion should be replaced with topsoil, Made Ground is found to 0.60mbgl, therefore removal and replacement would provide a suitably protective cap layer and growing media.
- Should any signs of contamination be evident during construction activities, a qualified environmental specialist should be consulted to assess the risk posed to end users and the environment.

10.0 CONCLUSIONS

The site has always been open land until the 2010s when the outbuildings were first illustrated on historic mapping. At a later stage hardcore was utilised to provide hardstanding in the area.

The site is to be developed by the conversion of the existing outbuilding and stables into a residential bungalow with associated gardens and parking.

The site is underlain by the Gunthorpe Member and glacio-fluvial deposits which are classified as secondary B and A aquifers of low to variable permeability.

The site is not within an indicative fluvial floodplain and there are no surface watercourses within 100m of the site.

The site is not within a coal or other mining area with no evidence of such found within 500m of the site.

Asbestos and PAHs have been found within the Made Ground material within the area of the menage and this requires removal, as detailed in previous sections.

The Made Ground outside of the menage area should be replaced with topsoil for capping and as a suitable growing media for garden end use.

The Phase I and Supplementary Contamination Assessment has illustrated that the proposed development of the site for residential with private gardens use, if the recommendations above are carried out, will not pose a risk to end users of the site or the controlled waters environment.

APPENDIX A





KEY:

● Approximate Site Location

DO NOT SCALE



TITLE:

Site Location Plan

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 1



KEY:

- Approximate Site Location

DO NOT SCALE



TITLE:

Site Layout

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE :

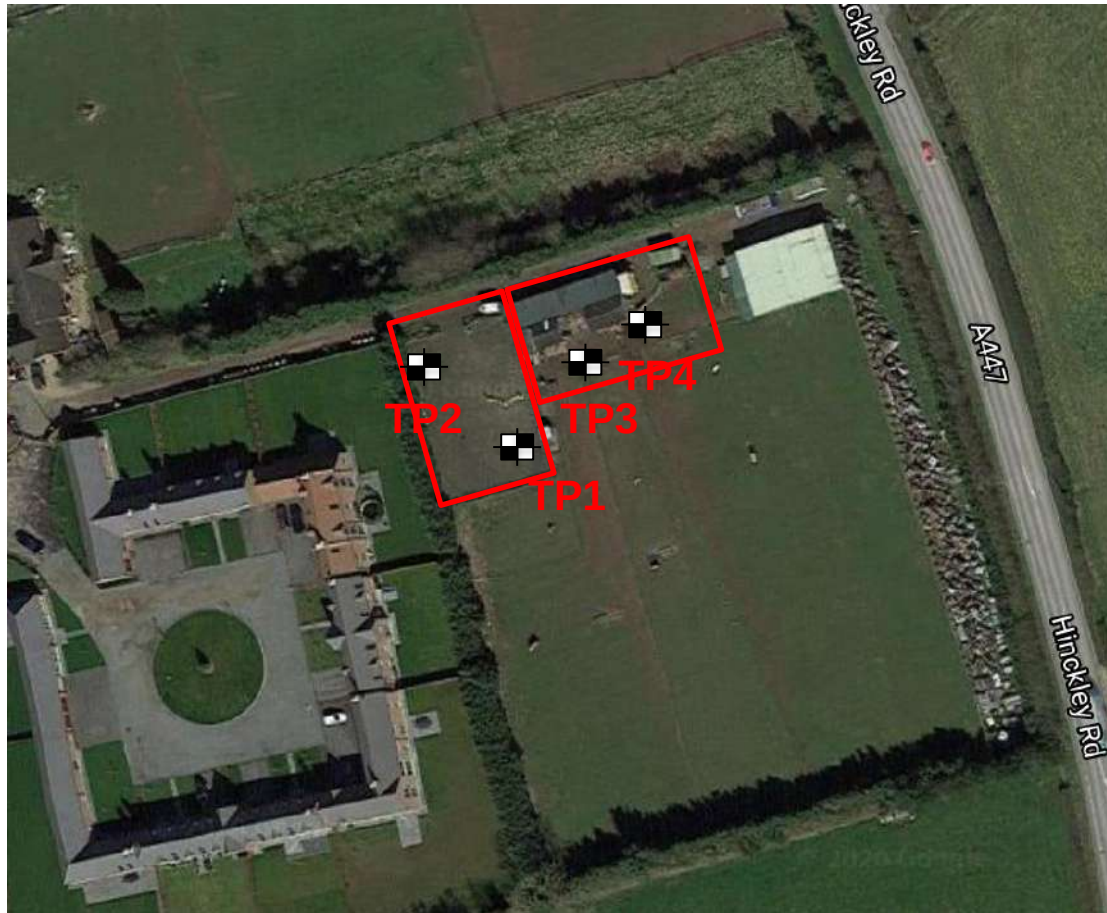
NTS

DRAWN :

JH

DWG No:

Figure 2



KEY:



DO NOT SCALE



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TITLE:

Borehole Location Plan

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 3



KEY:

DO NOT SCALE



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TITLE:

Current site layout

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE :

NTS

DRAWN :

JH

DWG No:

Figure 4

APPENDIX B



Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: County Series

Map date: 1886

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1886
 Revised 1886
 Edition N/A
 Copyright N/A
 Levelled N/A



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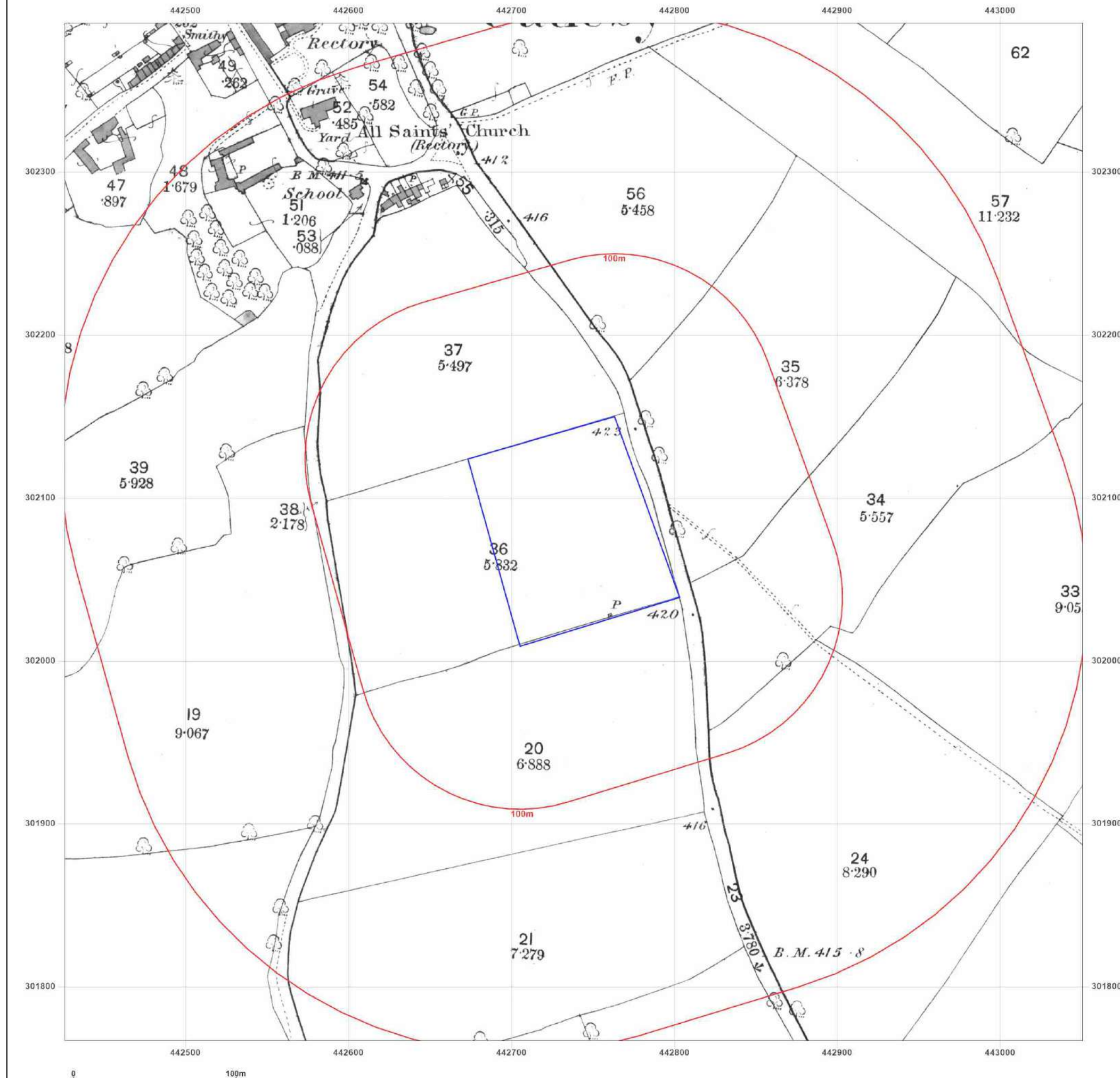


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Production date: 26 January 2021

Map legend available at:
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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: County Series

Map date: 1903

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1903
 Revised 1903
 Edition N/A
 Copyright N/A
 Levelled N/A



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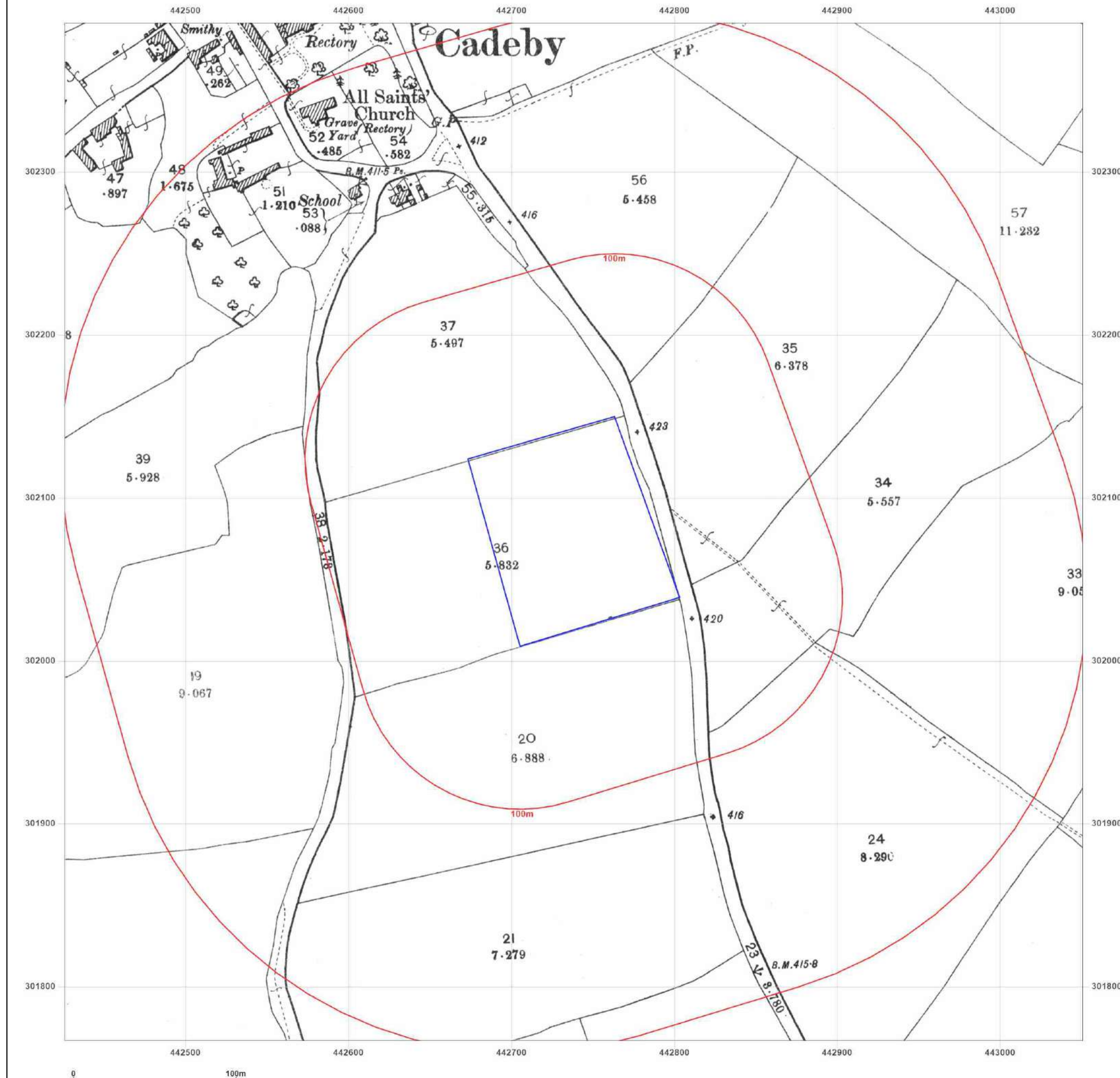


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Production date: 26 January 2021

Map legend available at:
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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 1958

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1958
 Revised 1958
 Edition N/A
 Copyright 1959
 Levelled 1949

Surveyed 1958
 Revised 1958
 Edition N/A
 Copyright 1959
 Levelled 1949

Surveyed 1958
 Revised 1958
 Edition N/A
 Copyright 1959
 Levelled 1949

Surveyed 1958
 Revised 1958
 Edition N/A
 Copyright 1959
 Levelled 1949



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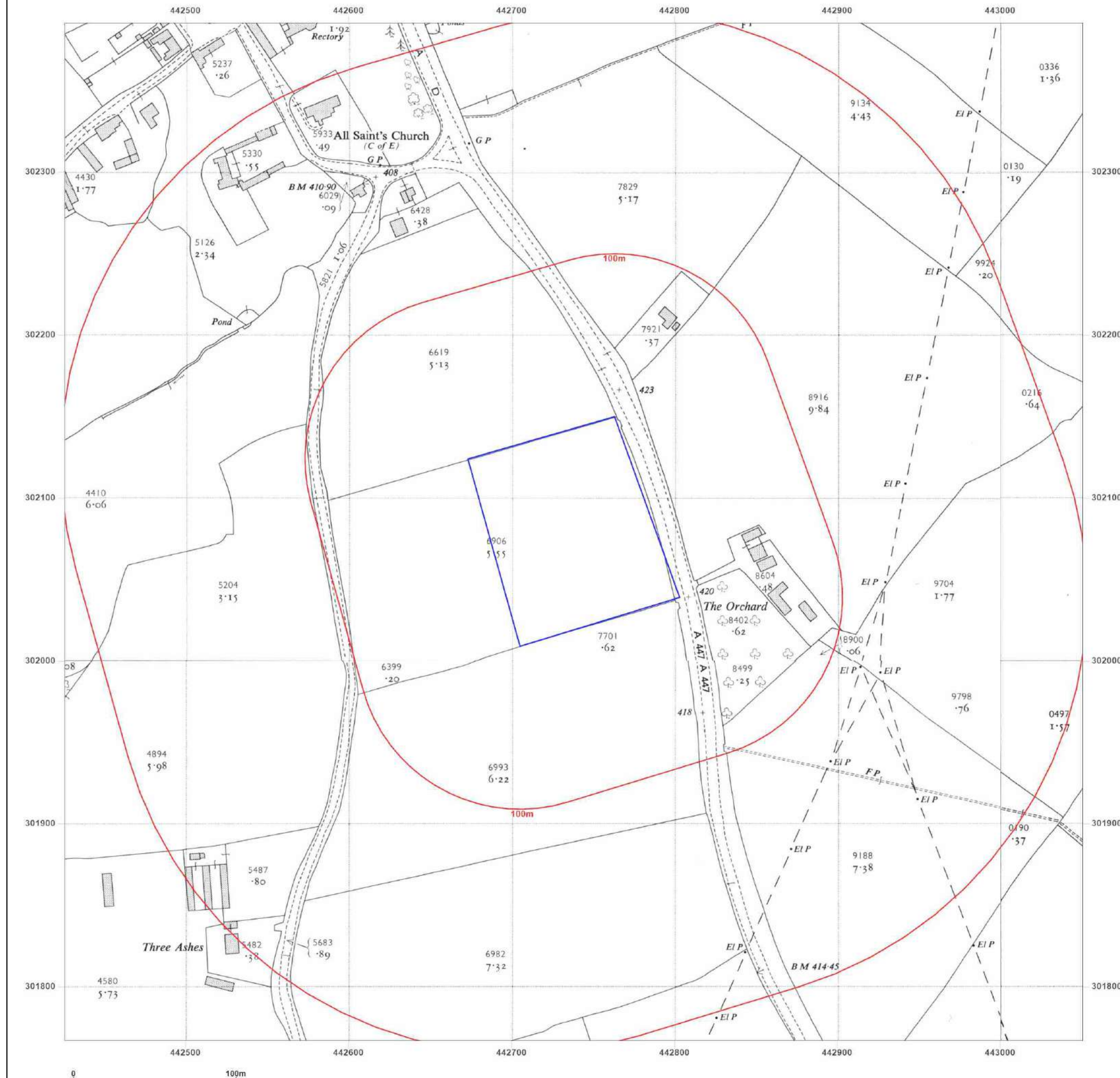


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 1976-1981

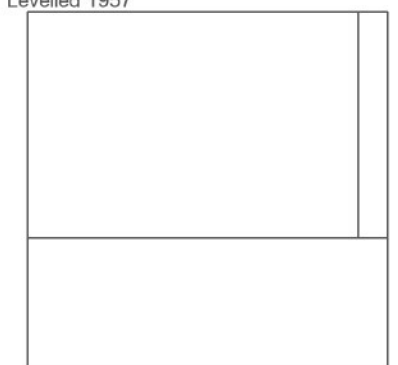
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Printed at: 1:2,500



Surveyed 1976
 Revised 1976
 Edition N/A
 Copyright 1977
 Levelled 1957

Surveyed 1958
 Revised 1981
 Edition N/A
 Copyright 1981
 Levelled 1958



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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
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 Revised 1994
 Edition N/A
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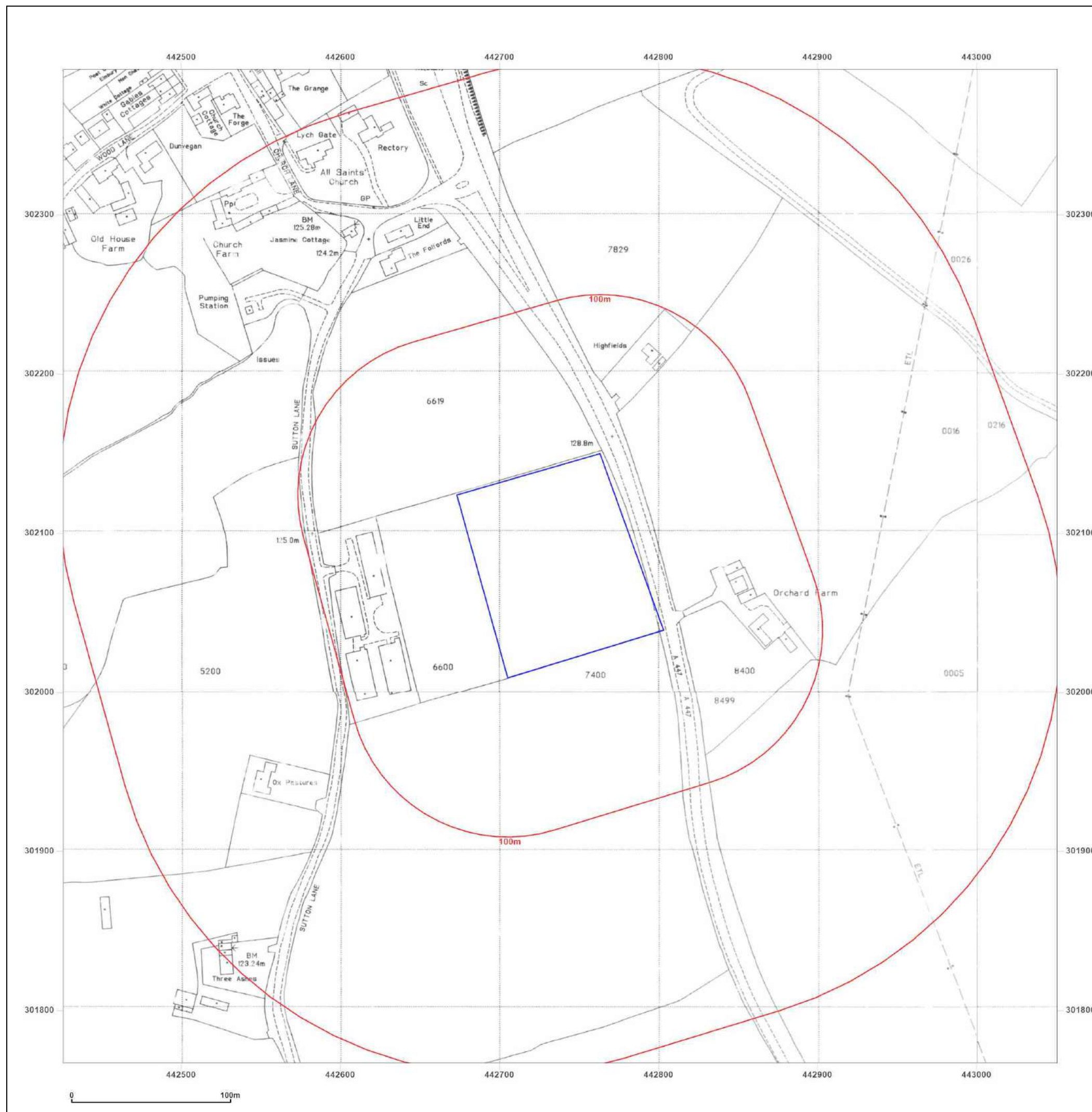


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003



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Production date: 26 January 2021

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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: County Series

Map date: 1885

Scale: 1:10,560

Printed at: 1:10,560



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 Revised 1885
 Edition N/A
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Surveyed 1885
 Revised 1885
 Edition N/A
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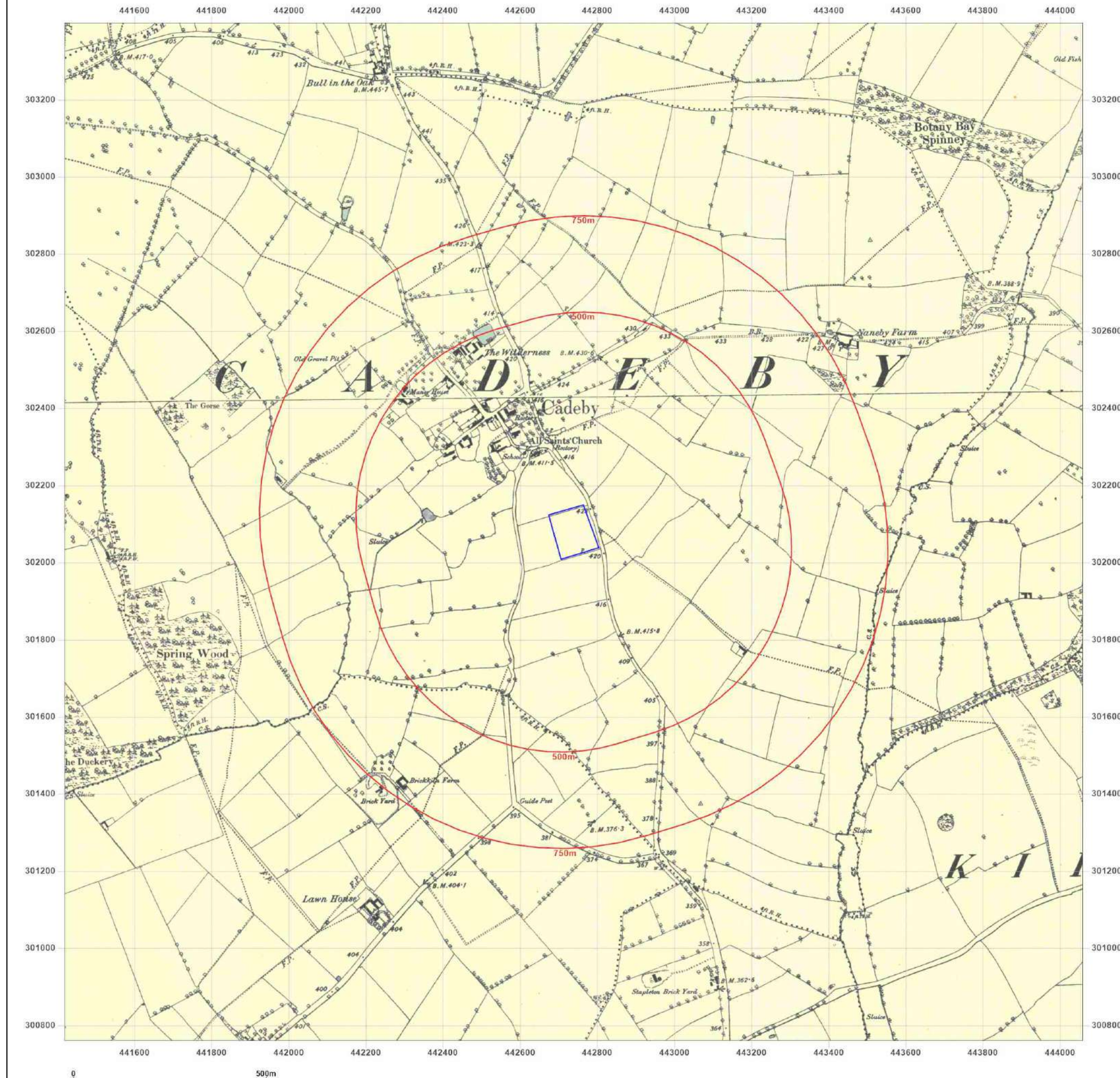


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: County Series

Map date: 1901-1904

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1885
 Revised 1904
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1885
 Revised 1901
 Edition N/A
 Copyright N/A
 Levelled N/A



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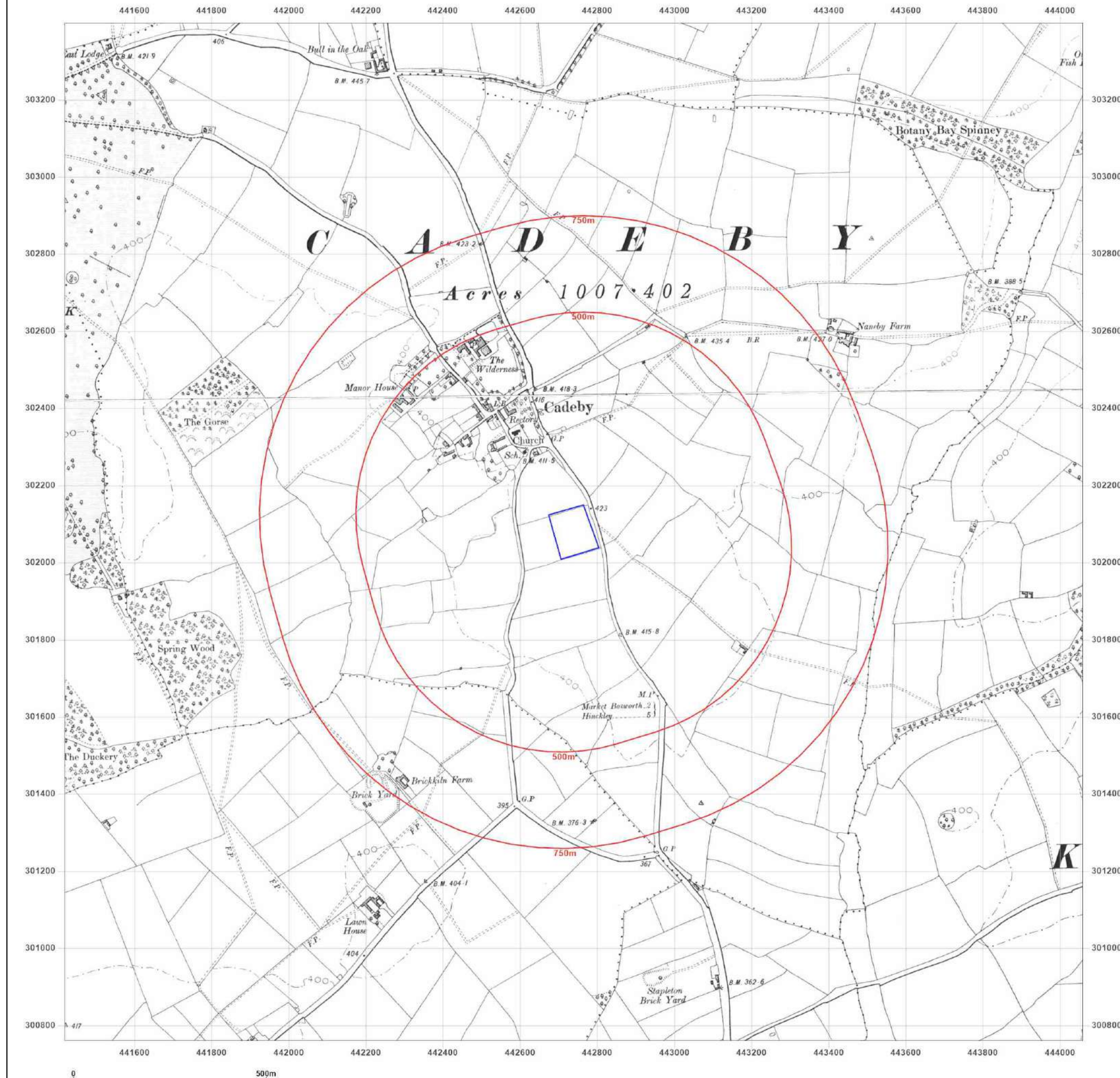


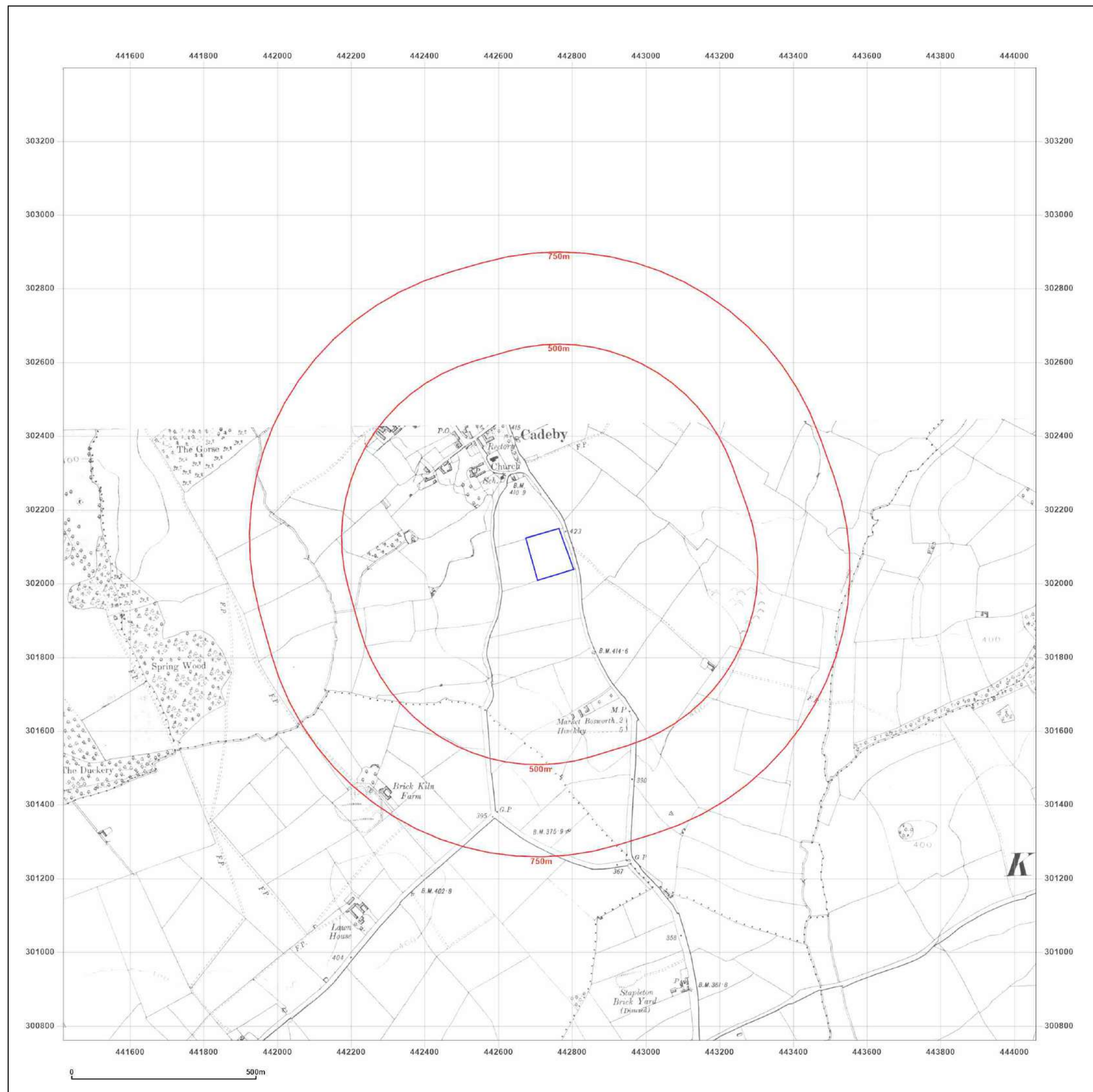
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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: County Series

Map date: 1930

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1885
Revised 1930
Edition N/A
Copyright N/A
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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: Provisional

Map date: 1955

Scale: 1:10,560

Printed at: 1:10,560



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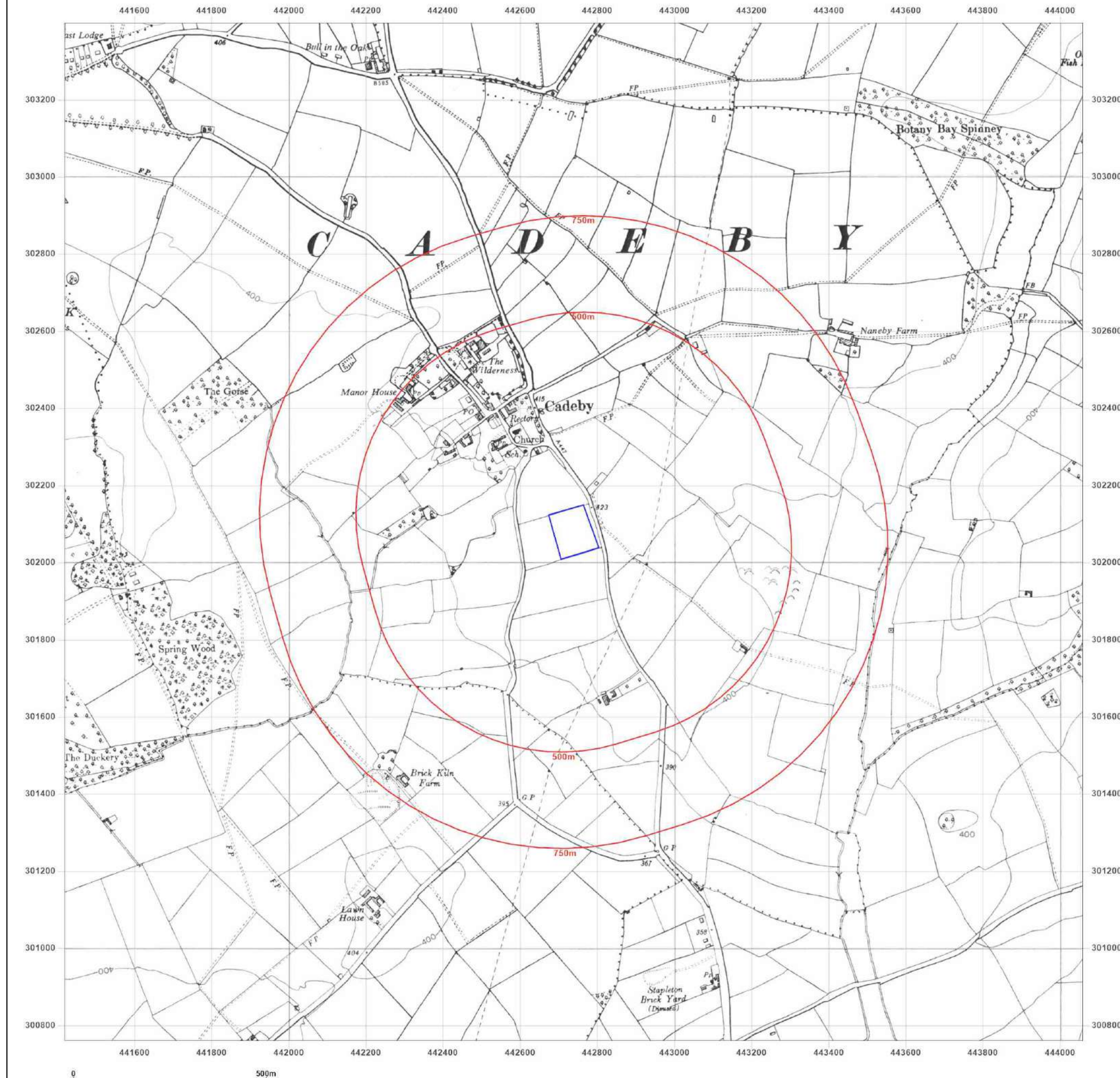


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: Provisional

Map date: 1966

Scale: 1:10,560

Printed at: 1:10,560



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



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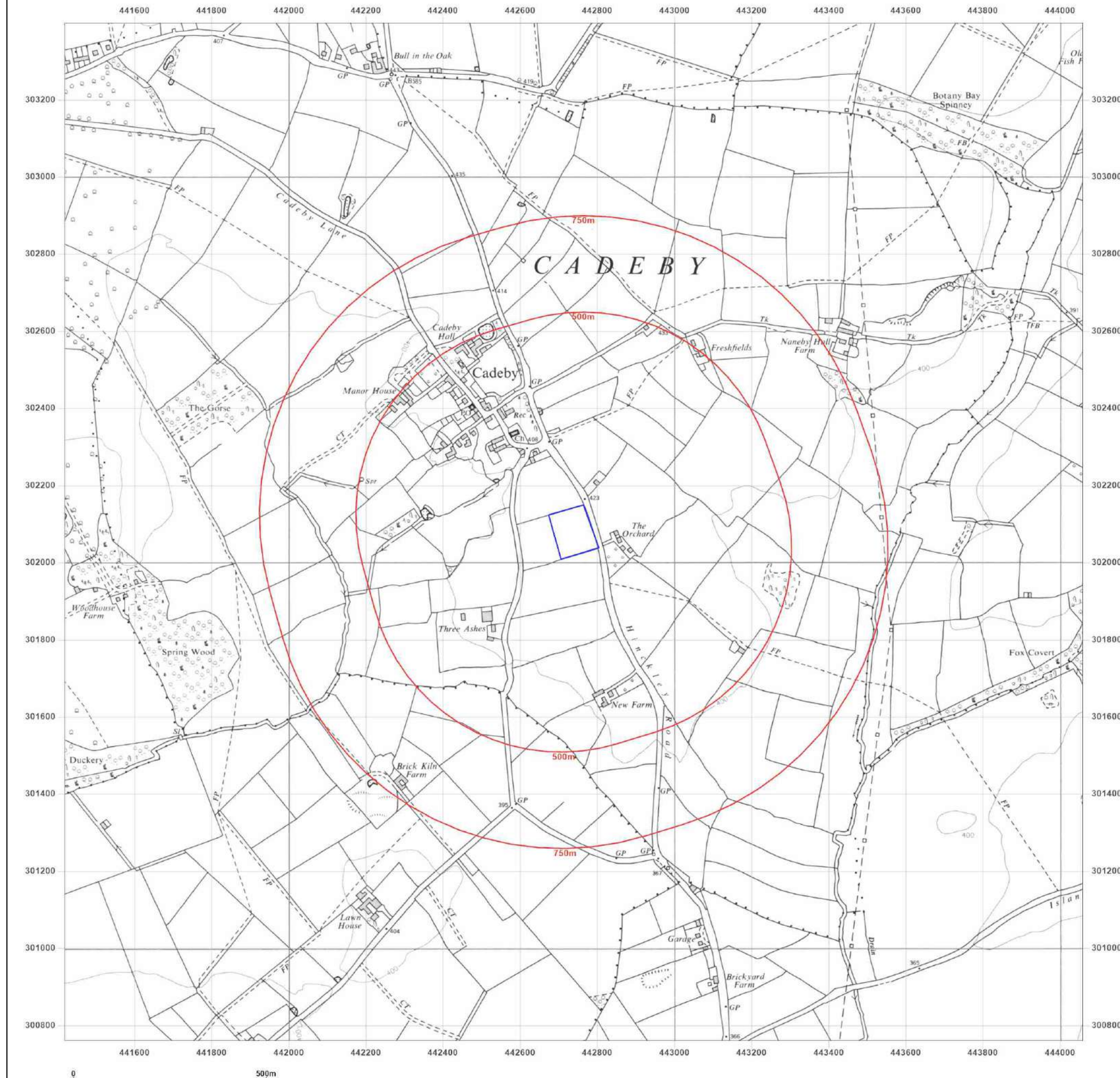


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 1980

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1976
 Revised 1980
 Edition N/A
 Copyright N/A
 Levelled N/A



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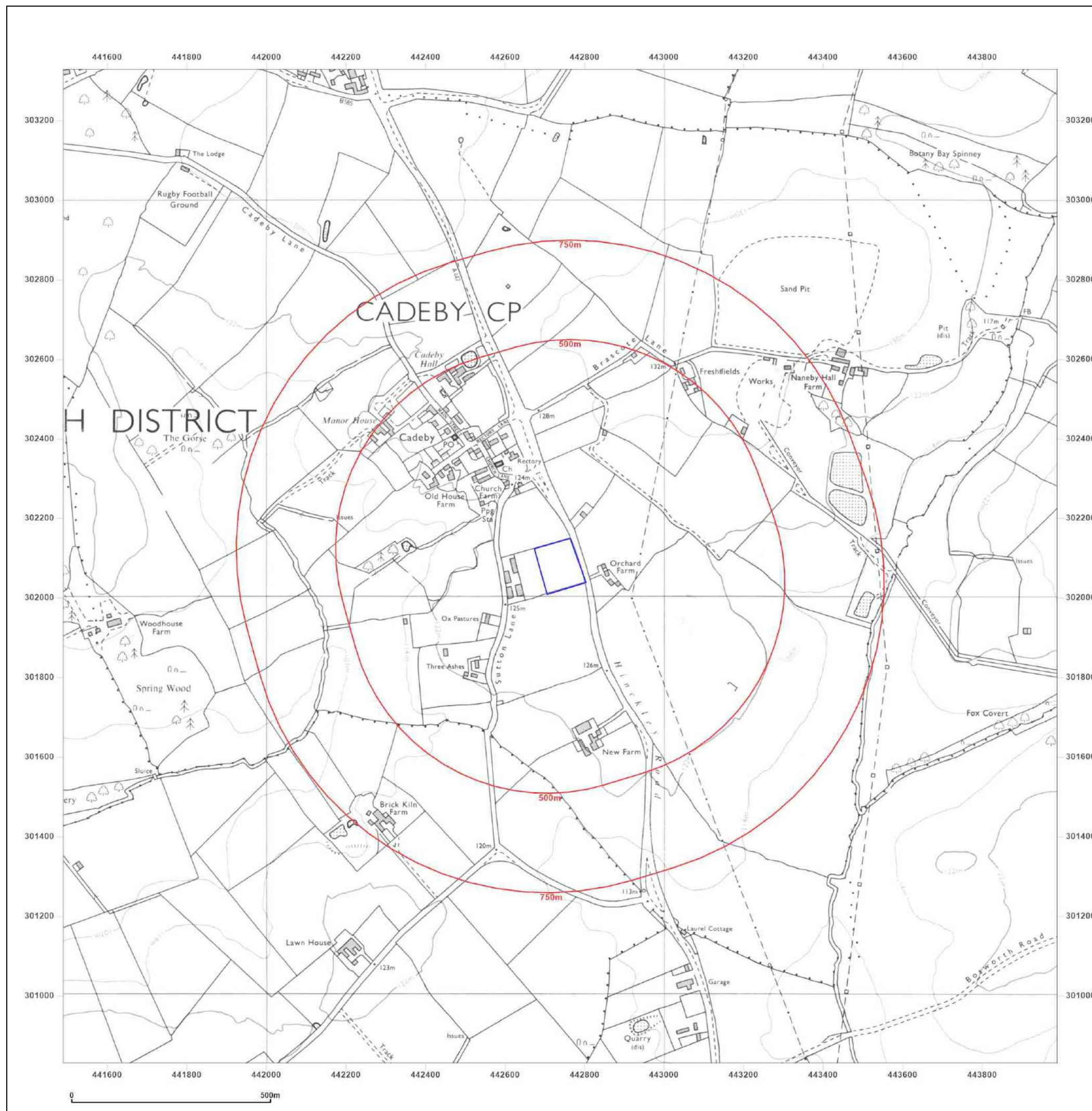


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Site Details:

Sutton Lane, Cadeby

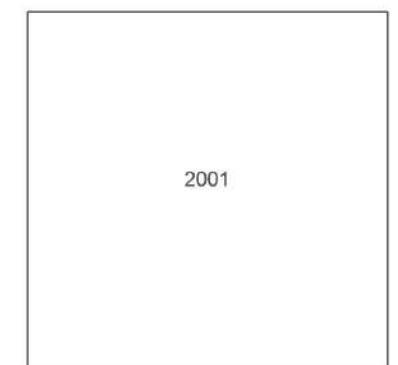
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Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



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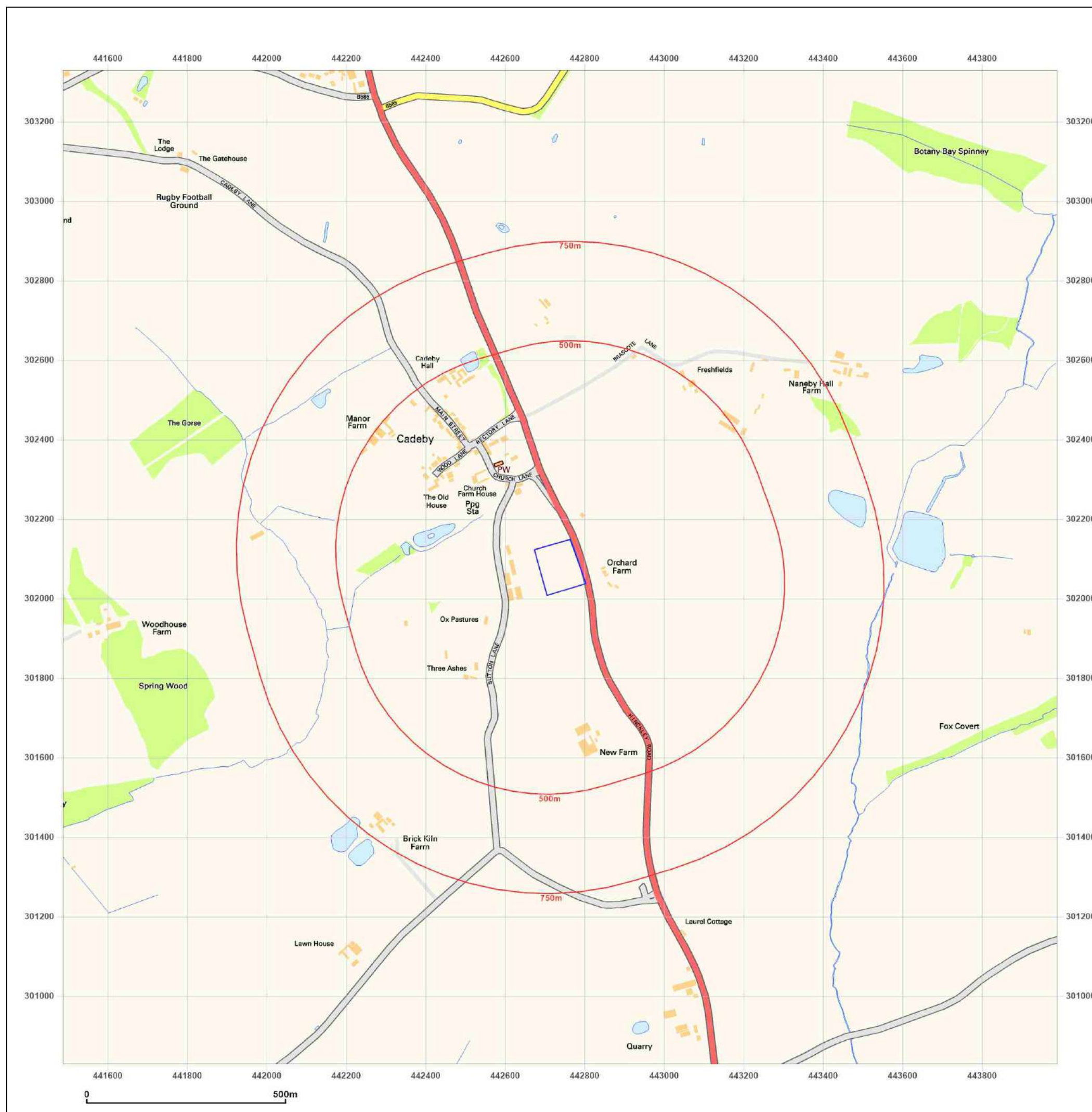


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Site Details:

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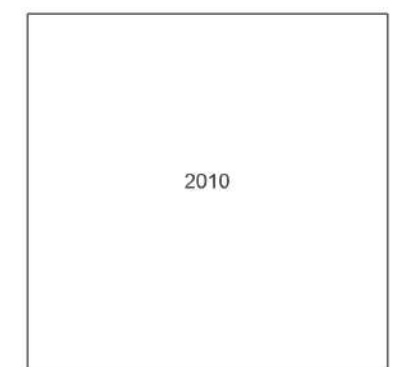
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Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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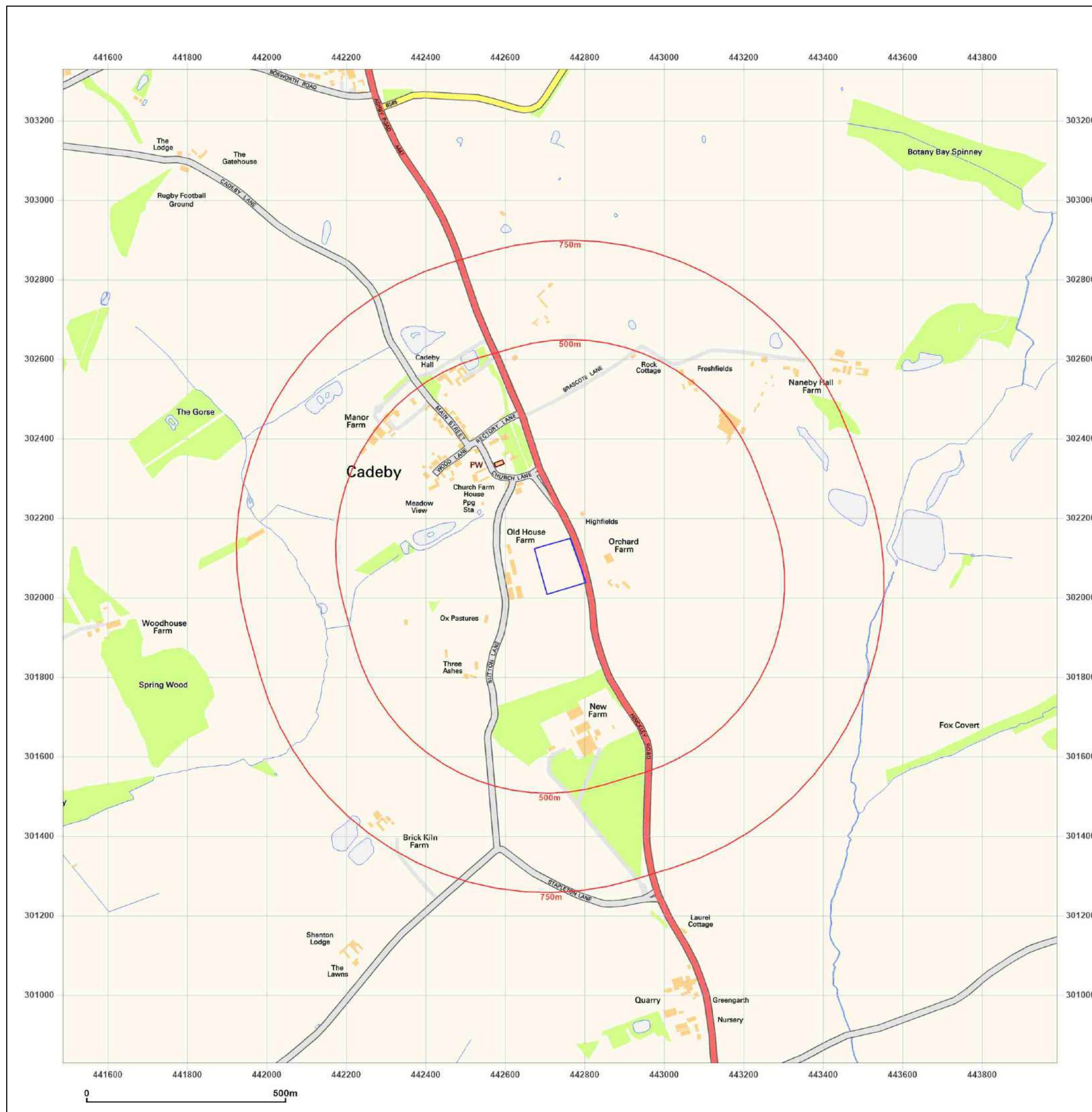


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Site Details:

Sutton Lane, Cadeby

Client Ref: EMS_664224_875929
Report Ref: EMS-664224_875929
Grid Ref: 442738, 302079

Map Name: National Grid

Map date: 2021

Scale: 1:10,000

Printed at: 1:10,000



2021



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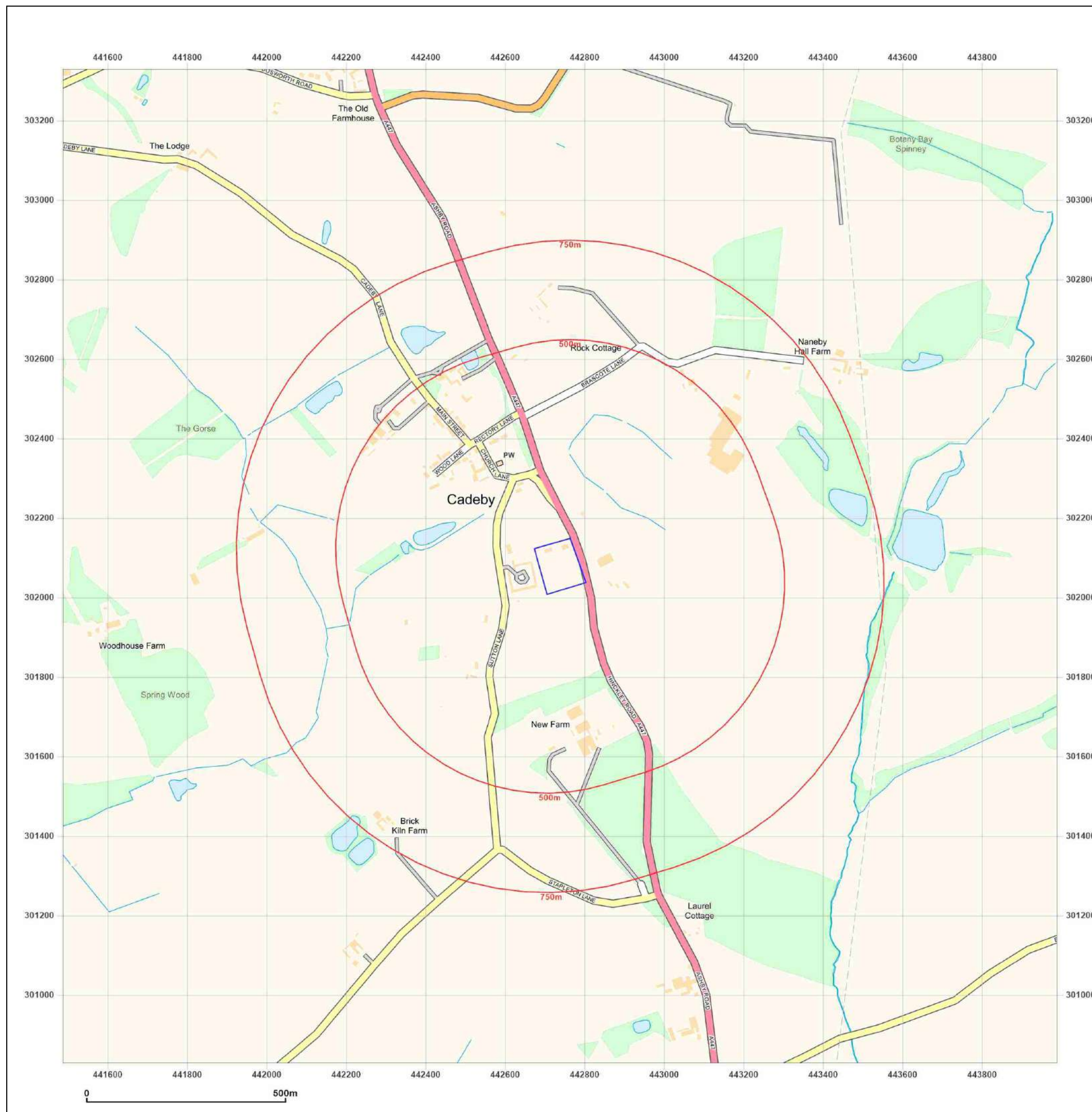


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APPENDIX C



Sutton Lane, Cadeby,

Order Details

Date: 26/01/2021
Your ref: EMS_664224_875930
Our Ref: EMS-664224_875930
Client: emapsite

Site Details

Location: 442736 302079
Area: 1.16 ha
Authority: [Hinckley and Bosworth Borough Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.12

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Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	<u>Historical industrial land uses</u>	0	0	1	0	-
14	1.2	Historical tanks	0	0	0	0	-
14	1.3	Historical energy features	0	0	0	0	-
14	1.4	Historical petrol stations	0	0	0	0	-
14	1.5	Historical garages	0	0	0	0	-
15	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
16	2.1	<u>Historical industrial land uses</u>	0	0	1	0	-
17	2.2	Historical tanks	0	0	0	0	-
17	2.3	Historical energy features	0	0	0	0	-
17	2.4	Historical petrol stations	0	0	0	0	-
17	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
18	3.1	Active or recent landfill	0	0	0	0	-
18	3.2	<u>Historical landfill (BGS records)</u>	0	0	0	1	-
19	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
19	3.4	<u>Historical landfill (EA/NRW records)</u>	0	0	2	1	-
20	3.5	Historical waste sites	0	0	0	0	-
20	3.6	Licensed waste sites	0	0	0	0	-
20	3.7	<u>Waste exemptions</u>	0	0	4	15	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
23	4.1	<u>Recent industrial land uses</u>	0	0	2	-	-
24	4.2	Current or recent petrol stations	0	0	0	0	-
24	4.3	Electricity cables	0	0	0	0	-
24	4.4	Gas pipelines	0	0	0	0	-
24	4.5	Sites determined as Contaminated Land	0	0	0	0	-



24	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
25	4.7	Regulated explosive sites	0	0	0	0	-
25	4.8	Hazardous substance storage/usage	0	0	0	0	-
25	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
25	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
25	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
26	4.12	Radioactive Substance Authorisations	0	0	0	0	-
26	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	1	0	-
26	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
26	4.15	Pollutant release to public sewer	0	0	0	0	-
27	4.16	List 1 Dangerous Substances	0	0	0	0	-
27	4.17	List 2 Dangerous Substances	0	0	0	0	-
27	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	1	0	-
27	4.19	Pollution inventory substances	0	0	0	0	-
28	4.20	Pollution inventory waste transfers	0	0	0	0	-
28	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
29	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
31	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
32	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
33	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
33	5.5	Groundwater vulnerability- local information	None (within 0m)				
34	5.6	<u>Groundwater abstractions</u>	0	0	0	2	4
36	5.7	<u>Surface water abstractions</u>	0	0	0	0	4
37	5.8	<u>Potable abstractions</u>	0	0	0	0	1
38	5.9	Source Protection Zones	0	0	0	0	-
38	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
39	6.1	<u>Water Network (OS MasterMap)</u>	0	0	7	-	-



40	6.2	<u>Surface water features</u>	0	0	4	-	-
40	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
41	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
41	6.5	<u>WFD Groundwater bodies</u>	2	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
43	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
43	7.2	Historical Flood Events	0	0	0	-	-
43	7.3	Flood Defences	0	0	0	-	-
43	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
44	7.5	Flood Storage Areas	0	0	0	-	-
45	7.6	Flood Zone 2	None (within 50m)				
45	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
46	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
47	9.1	<u>Groundwater flooding</u>	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
48	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
49	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
49	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
49	10.4	Special Protection Areas (SPA)	0	0	0	0	0
49	10.5	National Nature Reserves (NNR)	0	0	0	0	0
50	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
50	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	5
50	10.8	Biosphere Reserves	0	0	0	0	0
51	10.9	Forest Parks	0	0	0	0	0
51	10.10	Marine Conservation Zones	0	0	0	0	0
51	10.11	Green Belt	0	0	0	0	0
51	10.12	Proposed Ramsar sites	0	0	0	0	0



51	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
52	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
52	10.15	Nitrate Sensitive Areas	0	0	0	0	0
52	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	1	0	1
53	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
54	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
55	11.1	World Heritage Sites	0	0	0	-	-
56	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
56	11.3	National Parks	0	0	0	-	-
56	11.4	<u>Listed Buildings</u>	0	0	4	-	-
57	11.5	<u>Conservation Areas</u>	0	0	1	-	-
57	11.6	Scheduled Ancient Monuments	0	0	0	-	-
57	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
58	12.1	<u>Agricultural Land Classification</u>	Grade 3 (within 250m)				
59	12.2	Open Access Land	0	0	0	-	-
59	12.3	Tree Felling Licences	0	0	0	-	-
59	12.4	Environmental Stewardship Schemes	0	0	0	-	-
60	12.5	<u>Countryside Stewardship Schemes</u>	1	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
61	13.1	<u>Priority Habitat Inventory</u>	0	1	3	-	-
62	13.2	Habitat Networks	0	0	0	-	-
62	13.3	Open Mosaic Habitat	0	0	0	-	-
62	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
63	14.1	<u>10k Availability</u>	Identified (within 500m)				
64	14.2	<u>Artificial and made ground (10k)</u>	0	0	1	0	-
65	14.3	<u>Superficial geology (10k)</u>	1	0	3	2	-

66	14.4	Landslip (10k)	0	0	0	0	-
67	14.5	<u>Bedrock geology (10k)</u>	1	0	0	0	-
68	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
69	15.1	<u>50k Availability</u>	Identified (within 500m)				
70	15.2	<u>Artificial and made ground (50k)</u>	0	0	1	0	-
71	15.3	Artificial ground permeability (50k)	0	0	-	-	-
72	15.4	<u>Superficial geology (50k)</u>	1	0	3	2	-
73	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
73	15.6	Landslip (50k)	0	0	0	0	-
73	15.7	Landslip permeability (50k)	None (within 50m)				
74	15.8	<u>Bedrock geology (50k)</u>	1	0	0	0	-
75	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
75	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
76	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
77	17.1	<u>Shrink swell clays</u>	Negligible (within 50m)				
78	17.2	<u>Running sands</u>	Very low (within 50m)				
79	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
80	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
81	17.5	<u>Landslides</u>	Very low (within 50m)				
82	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
83	18.1	Natural cavities	0	0	0	0	-
84	18.2	<u>BritPits</u>	0	0	1	1	-
84	18.3	Surface ground workings	0	0	0	-	-
84	18.4	Underground workings	0	0	0	0	0
85	18.5	<u>Historical Mineral Planning Areas</u>	0	0	1	0	-



85	18.6	Non-coal mining	0	0	0	0	0
85	18.7	Mining cavities	0	0	0	0	0
85	18.8	<u>JPB mining areas</u>	Identified (within 0m)				
86	18.9	Coal mining	None (within 0m)				
86	18.10	Brine areas	None (within 0m)				
86	18.11	Gypsum areas	None (within 0m)				
86	18.12	Tin mining	None (within 0m)				
87	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
88	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
89	20.1	<u>BGS Estimated Background Soil Chemistry</u>	1	1	-	-	-
89	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
89	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
90	21.1	Underground railways (London)	0	0	0	-	-
90	21.2	Underground railways (Non-London)	0	0	0	-	-
90	21.3	Railway tunnels	0	0	0	-	-
90	21.4	Historical railway and tunnel features	0	0	0	-	-
90	21.5	Royal Mail tunnels	0	0	0	-	-
91	21.6	Historical railways	0	0	0	-	-
91	21.7	Railways	0	0	0	-	-
91	21.8	Crossrail 1	0	0	0	0	-
91	21.9	Crossrail 2	0	0	0	0	-
91	21.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 20/04/2019

Site Area: 1.16ha



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info@groundsure.com

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Date: 26 January 2021

Recent site history - 2016 aerial photograph



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Capture Date: 07/06/2016

Site Area: 1.16ha



Recent site history - 2011 aerial photograph



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Capture Date: 09/10/2011

Site Area: 1.16ha



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Date: 26 January 2021

Recent site history - 1999 aerial photograph



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Capture Date: 06/11/1999

Site Area: 1.16ha



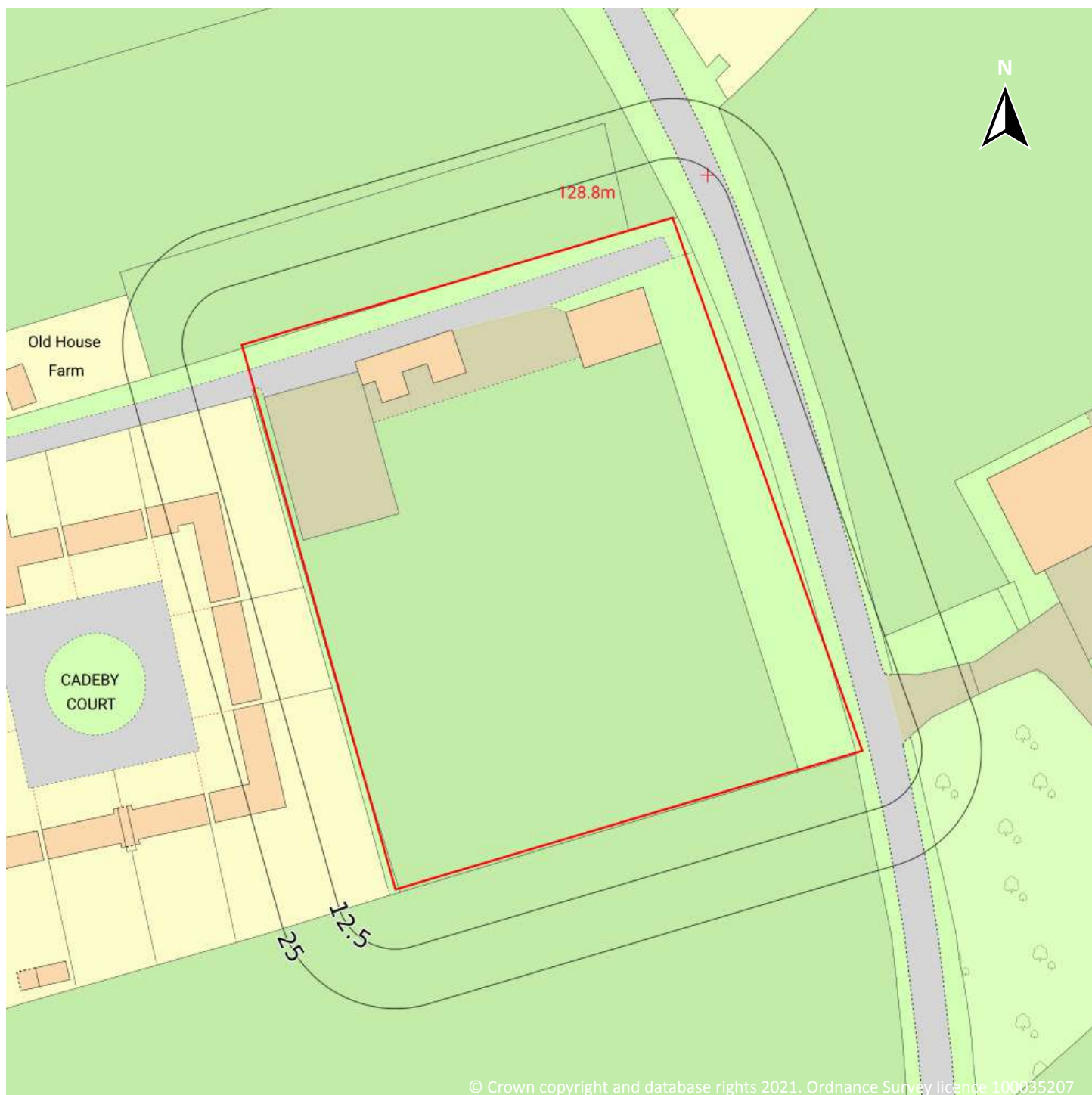
Contact us with any questions at:

info@groundsure.com

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Date: 26 January 2021

OS MasterMap site plan



Site Area: 1.16ha



1 Past land use



— Site Outline
Search buffers in metres (m)
Historical industrial land uses

1.1 Historical industrial land uses

Records within 500m

1

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 13**

ID	Location	Land use	Dates present	Group ID
1	167m NW	Pumping Station	1980	1589081

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 ungrouped 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

0

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

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 ungrouped 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 ungrouped 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



— Site Outline
Search buffers in metres (m)
■ Historical industrial land uses

2.1 Historical industrial land uses

Records within 500m

1

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 16**

ID	Location	Land Use	Date	Group ID
1	167m NW	Pumping Station	1980	1589081

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**0**

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'.

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.

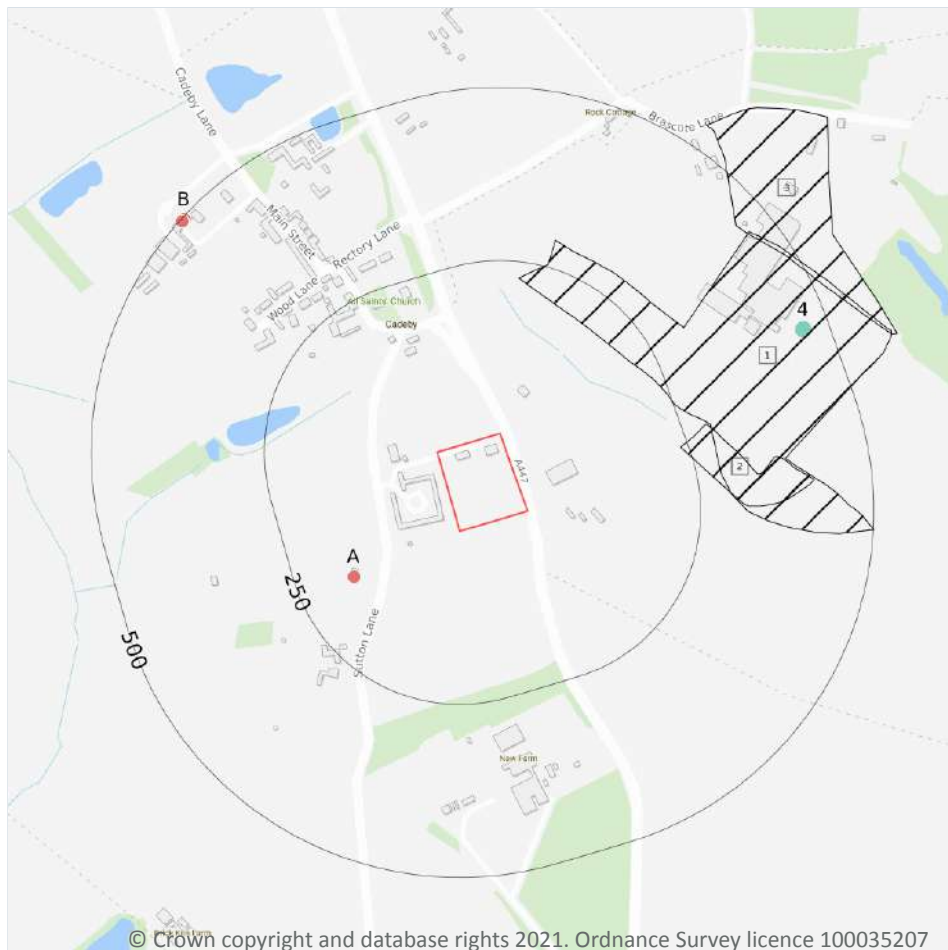
2.5 Historical garages

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)
- Historical landfill (BGS)
- 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

1

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.

Features are displayed on the Waste and landfill map on **page 18**

ID	Location	Address	BGS Number	Risk	Waste Type
4	462m E	Cadeby Tip, Broscote Lane, Cadeby, Nuneaton, Warks	2681	No risk to aquifer	N/A

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	3
----------------------------	----------

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 18**

ID	Location	Details		
1	198m NE	Site Address: Cadeby Landfill Site, Brascote Lane, Cadeby, Leicestershire Licence Holder Address: -	Waste Licence: Yes Site Reference: 0029, GDO 17 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 31/12/1977 Licence Surrender: 17/08/1989	Operator: - Licence Holder: Leicestershire County Council First Recorded 31/12/1966 Last Recorded: 31/12/1977
2	239m E	Site Address: Cadeby Tip, Broscote Lane, Cadeby, Nuneaton, Warwickshire Licence Holder Address: -	Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: Market Bosworth Rural District Council Licence Holder: - First Recorded 31/08/1973 Last Recorded: -

ID	Location	Details		
3	454m NE	Site Address: Cadeby Quarry Landfill Site B, Brascote Lane, Cadeby, Leicestershire Licence Holder Address: -	Waste Licence: Yes Site Reference: 0061, 0029, GDO 253 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 11/08/1977 Licence Surrender: 13/10/1992	Operator: - Licence Holder: Tilling Cons. Services First Recorded 31/12/1966 Last Recorded: 13/10/1992

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	19
----------------------------	-----------

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 18**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	168m SW	OX PASTURES, SUTTON LANE, CADEBY, NUNEATON, CV13 0AR	WEX191375	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
A	168m SW	OX PASTURES, SUTTON LANE, CADEBY, NUNEATON, CV13 0AR	WEX191375	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising



ID	Location	Site	Reference	Category	Sub-Category	Description
A	168m SW	OX PASTURES, SUTTON LANE, CADEBY, NUNEATON, CV13 0AR	WEX191375	Treating waste exemption	On a Farm	Aerobic composting and associated prior treatment
A	168m SW	OX PASTURES, SUTTON LANE, CADEBY, NUNEATON, CV13 0AR	WEX191375	Disposing of waste exemption	On a Farm	Burning waste in the open
B	497m NW	Manor Farm Main Street NUNEATON Warwickshire CV13 0AX	EPR/LH0374A A/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of waste from dredging of inland waters
B	497m NW	Manor Farm Main Street NUNEATON Warwickshire CV13 0AX	EPR/LH0374A A/A001	Disposing of waste exemption	Agricultural Waste Only	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
B	497m NW	Manor Farm Main Street NUNEATON Warwickshire CV13 0AX	EPR/LH0374A A/A001	Disposing of waste exemption	Agricultural Waste Only	Burning waste in the open
B	497m NW	Manor Farm Main Street NUNEATON Warwickshire CV13 0AX	EPR/LH0374A A/A001	Treating waste exemption	Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	497m NW	Manor Farm Main Street NUNEATON Warwickshire CV13 0AX	EPR/LH0374A A/A001	Using waste exemption	Agricultural Waste Only	Spreading waste on agricultural land to confer benefit
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX198033	Disposing of waste exemption	On a Farm	Burning waste in the open
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX198033	Disposing of waste exemption	On a Farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX198033	Disposing of waste exemption	On a Farm	Deposit of waste from dredging of inland waters
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX198033	Treating waste exemption	On a Farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX198033	Using waste exemption	On a Farm	Spreading waste on agricultural land to confer benefit
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX036889	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters

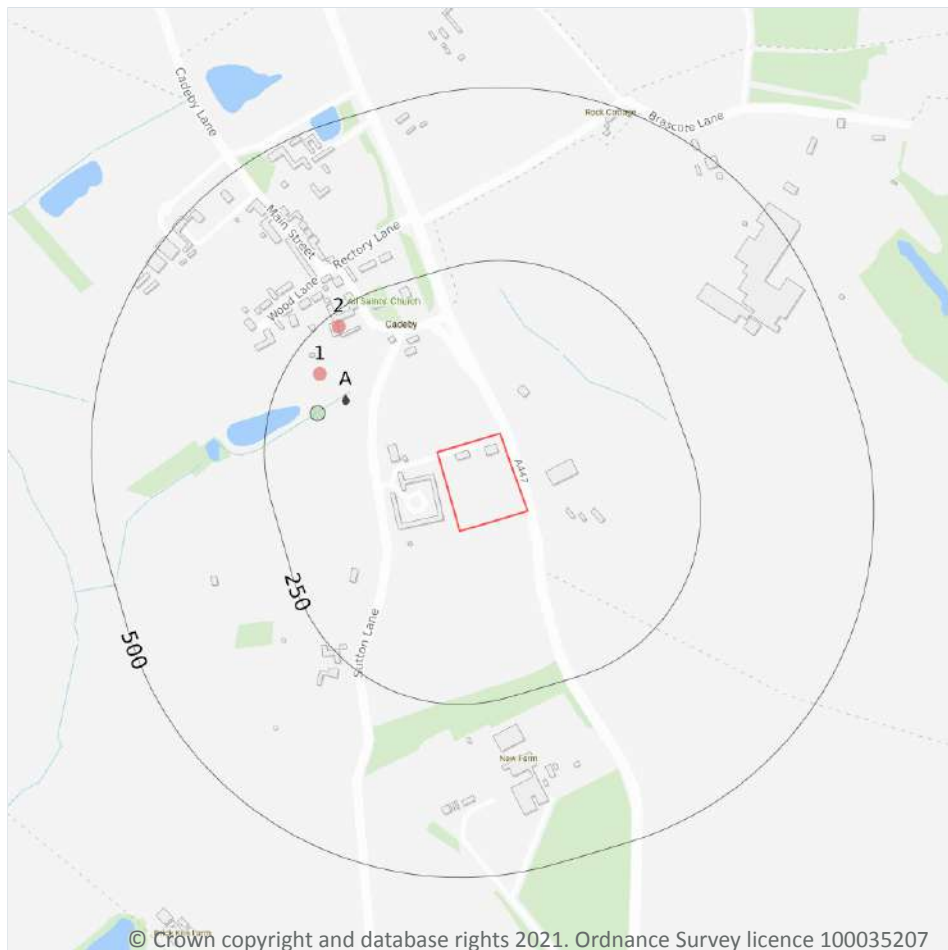


ID	Location	Site	Reference	Category	Sub-Category	Description
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX036889	Disposing of waste exemption	On a farm	Deposit of agricultural waste consisting of plant tissue under a Plant Health notice
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX036889	Disposing of waste exemption	On a farm	Burning waste in the open
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX036889	Treating waste exemption	On a farm	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
B	497m NW	MANOR FARM, MAIN STREET, CADEBY, NUNEATON, CV13 0AX	WEX036889	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 23**

ID	Location	Company	Address	Activity	Category
1	204m NW	Pumping Station	Leicestershire, CV13	Water Pumping Stations	Industrial Features
2	231m NW	Pump	Leicestershire, CV13	Water Pumping Stations	Industrial Features

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

1

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991. Features are displayed on the Current industrial land use map on **page 23**

ID	Location	Address	Details	
A	153m NW	CADEBY PUMPING STATION, SUTTON LANE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: T/20/30150/O Permit Version: 1 Receiving Water: TRIB OF SIBSON BROOK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 05/09/1995 Effective Date: 05/09/1995 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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



4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 23**

ID	Location	Details	
A	182m W	Incident Date: 30/10/2002 Incident Identification: 117694 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m

0

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

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

4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

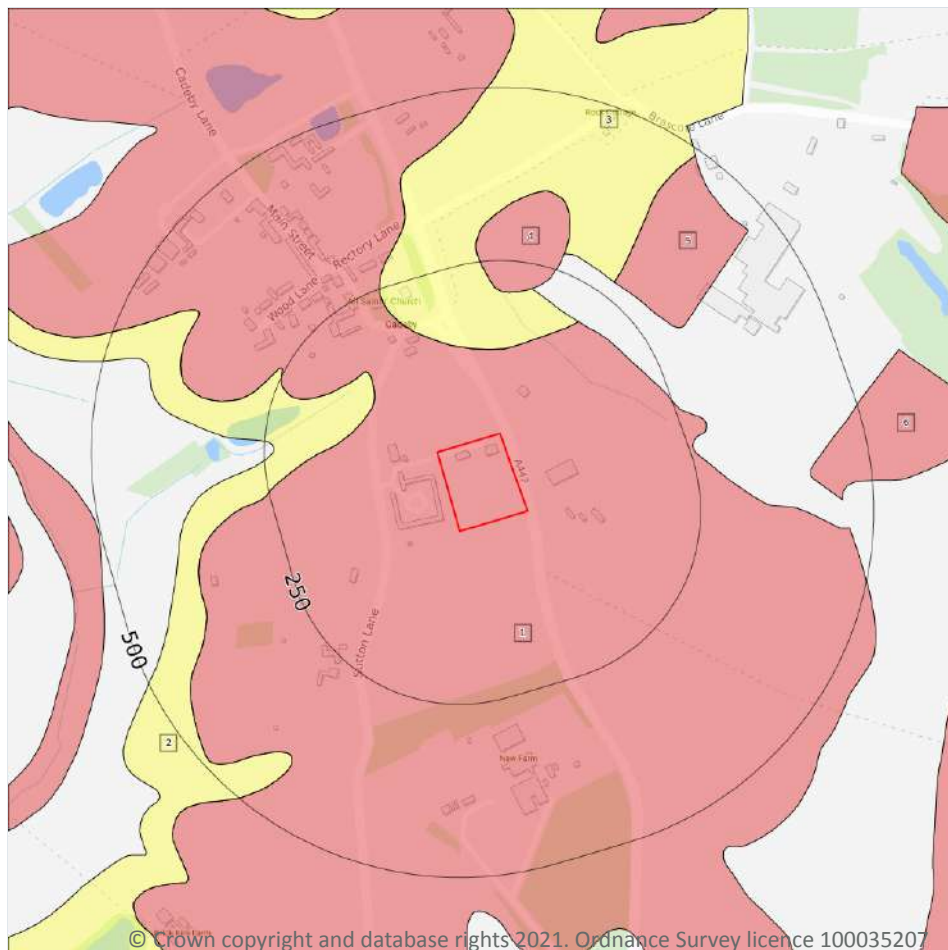
Records within 500m

0

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

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

5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

6

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 29**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	114m 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

ID	Location	Designation	Description
3	122m N	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	204m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	274m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	412m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

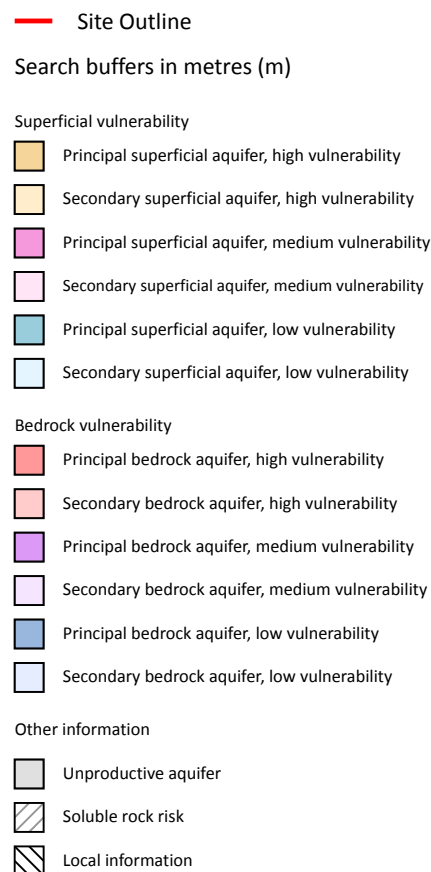
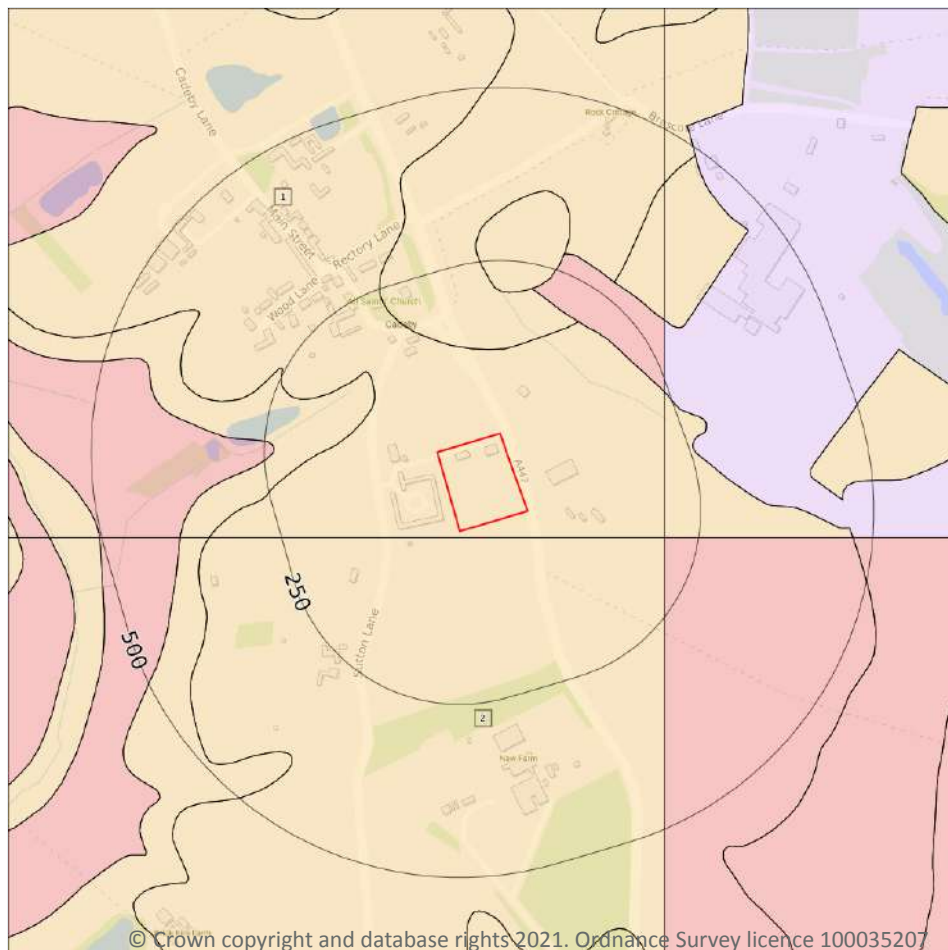
Features are displayed on the Bedrock aquifer map on **page 31**

ID	Location	Designation	Description
1	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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



Groundwater vulnerability



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 32**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	9m S	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

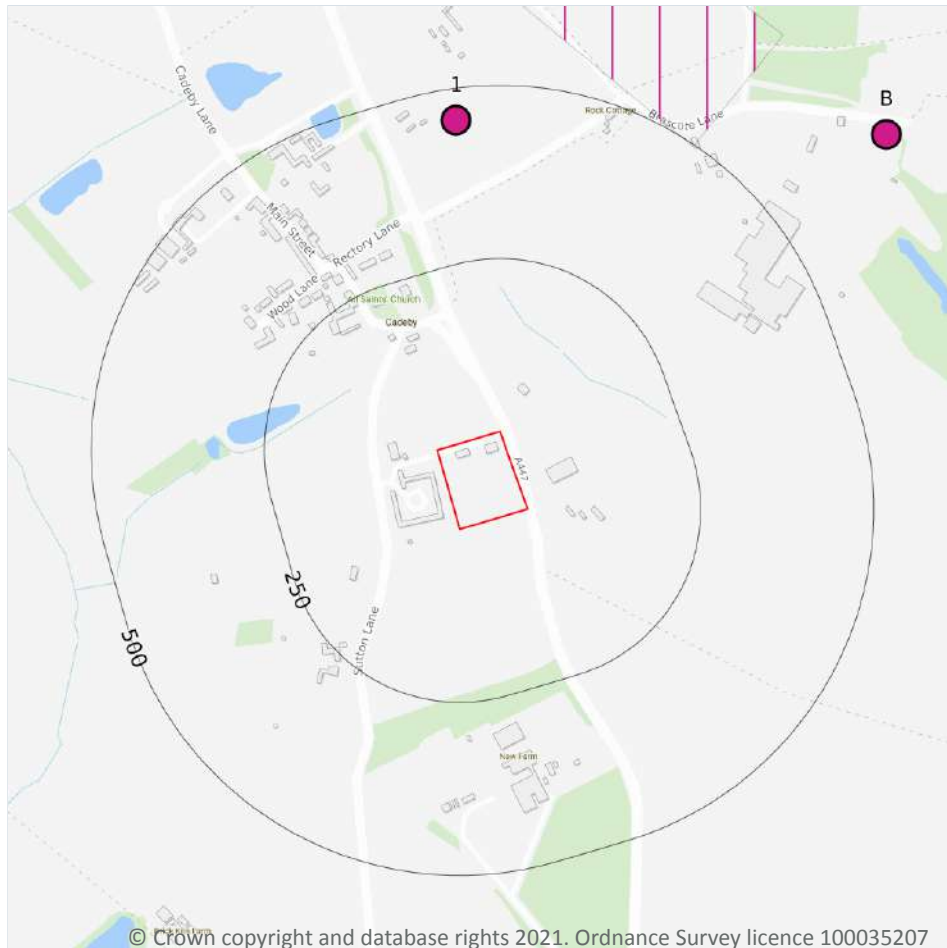
0

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
Point features
- 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

6

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 34**



ID	Location	Details	
1	454m N	Status: Historical Licence No: 03/28/20/0066 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: SOUTH FARM, WELL 4 Data Type: Point Name: S H AND T E PERRY Easting: 442700 Northing: 302600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/02/1966 Version End Date: -
2	497m NE	Status: Active Licence No: MD/028/0020/007 Details: Mineral Washing Direct Source: Groundwater Midlands Region Point: ABSTRACTION AREA - CADEBY QUARRY Data Type: Poly4 Name: Tarmac Trading Limited Easting: 442669 Northing: 302870	Annual Volume (m ³): 41,390 Max Daily Volume (m ³): 649 Original Application No: - Original Start Date: 29/04/2020 Expiry Date: 31/12/2021 Issue No: 1 Version Start Date: 29/04/2020 Version End Date: -
B	704m NE	Status: Active Licence No: MD/028/0020/007 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Groundwater Midlands Region Point: ABSTRACTION POINT - CADEBY QUARRY Data Type: Point Name: Tarmac Trading Limited Easting: 443321 Northing: 302580	Annual Volume (m ³): 41,390 Max Daily Volume (m ³): 649 Original Application No: - Original Start Date: 29/04/2020 Expiry Date: 31/12/2021 Issue No: 1 Version Start Date: 29/04/2020 Version End Date: -
-	1410m E	Status: Historical Licence No: 03/28/50/0079 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: MANOR FARM - SPRING Data Type: Point Name: FREEMAN Easting: 444100 Northing: 302600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1498m E	Status: Historical Licence No: 03/28/50/0016 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: BRASCOTE HOUSE FARM Data Type: Point Name: WIGHTMAN Easting: 444300 Northing: 302100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 03/11/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -



ID	Location	Details	
-	1760m SW	Status: Historical Licence No: 03/28/20/0069 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: HALL FARM, SUTTON CHENEY, WELL Data Type: Point Name: WYNNE Easting: 441800 Northing: 300500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 15/05/1970 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

4

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 34**

ID	Location	Details	
-	698m E	Status: Historical Licence No: 03/28/50/0065 Details: Mineral Washing Direct Source: Surface Water Midlands Region Point: CADEBY QUARRY - KIRKBY BROOK Data Type: Point Name: Tarmac Trading Limited Easting: 443500 Northing: 302000	Annual Volume (m ³): 115,000 Max Daily Volume (m ³): 3750.45 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 104 Version Start Date: 26/10/2015 Version End Date: -
-	698m E	Status: Historical Licence No: 03/28/50/0065 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Surface Water Midlands Region Point: CADEBY QUARRY - KIRKBY BROOK Data Type: Point Name: Tarmac Trading Limited Easting: 443500 Northing: 302000	Annual Volume (m ³): 115,000 Max Daily Volume (m ³): 3750.45 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 104 Version Start Date: 26/10/2015 Version End Date: -



ID	Location	Details	
-	763m E	Status: Active Licence No: 03/28/50/0065 Details: Mineral Washing Direct Source: Surface Water Midlands Region Point: CADEBY QUARRY - KIRKBY BROOK Data Type: Point Name: Tarmac Trading Limited Easting: 443566 Northing: 302038	Annual Volume (m ³): 115,000 Max Daily Volume (m ³): 560 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 105 Version Start Date: 12/06/2017 Version End Date: -
-	763m E	Status: Active Licence No: 03/28/50/0065 Details: Process Water Direct Source: Surface Water Midlands Region Point: CADEBY QUARRY - KIRKBY BROOK Data Type: Point Name: Tarmac Trading Limited Easting: 443566 Northing: 302038	Annual Volume (m ³): 115,000 Max Daily Volume (m ³): 560 Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 105 Version Start Date: 12/06/2017 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

1

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 34**

ID	Location	Details	
B	704m NE	Status: Active Licence No: MD/028/0020/007 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Groundwater Midlands Region Point: ABSTRACTION POINT - CADEBY QUARRY Data Type: Point Name: Tarmac Trading Limited Easting: 443321 Northing: 302580	Annual Volume (m ³): 41,390 Max Daily Volume (m ³): 649 Original Application No: - Original Start Date: 29/04/2020 Expiry Date: 31/12/2021 Issue No: 1 Version Start Date: 29/04/2020 Version End Date: -

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



5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

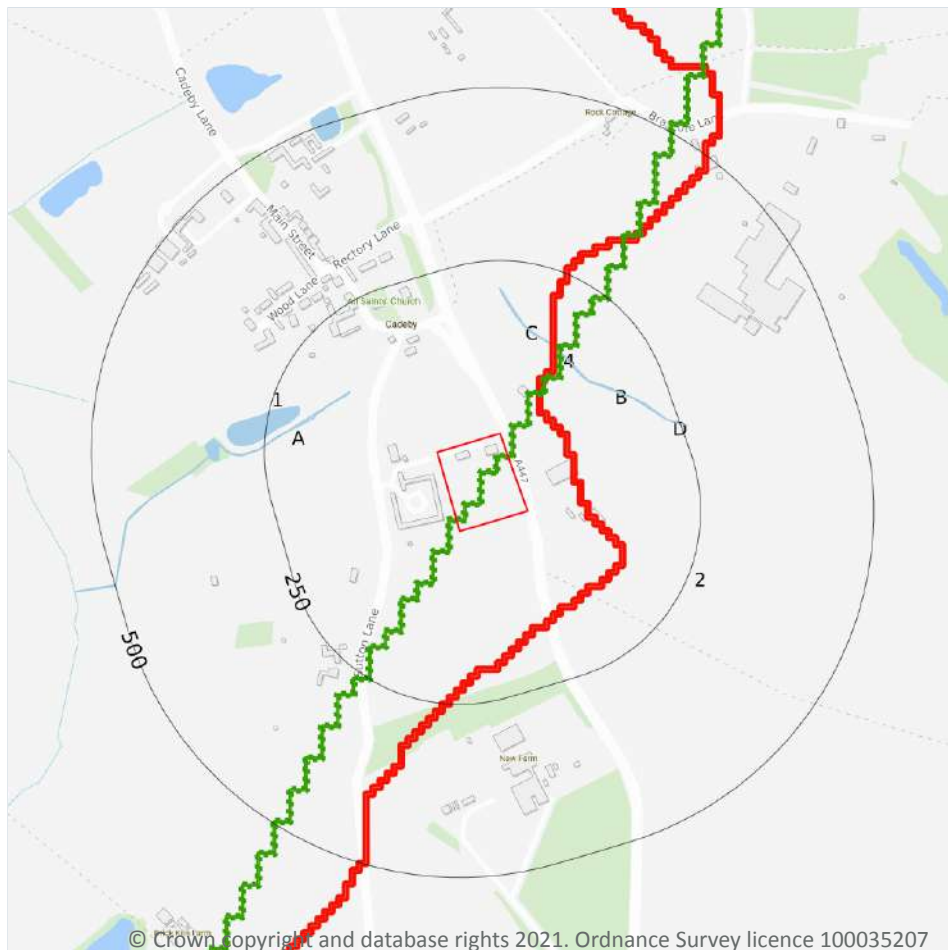
0

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

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



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

7

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

Features are displayed on the Hydrology map on **page 39**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	143m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
4	145m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	147m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	153m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	233m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	243m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	246m E	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

4

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

Features are displayed on the Hydrology map on **page 39**

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 39**



ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Stoke Golding Brook from Source to R Sence	GB104028046640	Sence, Anker and Bourne Rivers and Lakes	Tame Anker and Mease

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 39**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	3554m SW	River	Stoke Golding Brook from Source to R Sence	GB104028046640	Poor	Good	Poor	2016

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

6.5 WFD Groundwater bodies

Records on site	2
------------------------	----------

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 39**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Tame Anker Mease - Secondary Combined	GB40402G990800	Good	Good	Good	2015
2	On site	Soar - Secondary Combined	GB40402G990600	Good	Good	Good	2015



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



7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

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

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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding

8.1 Surface water flooding

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

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.

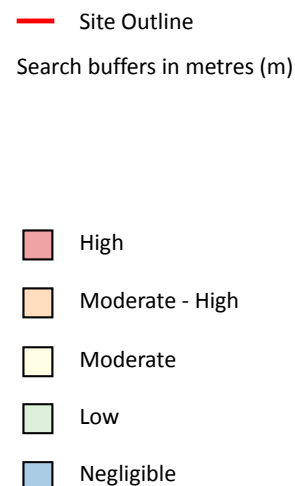
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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



9.1 Groundwater flooding

Highest risk on site

Moderate

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 47**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- / / / / Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

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**0**

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

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

10.7 Designated Ancient Woodland

Records within 2000m**5**

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 48**

ID	Location	Name	Woodland Type
1	872m W	Spring Wood	Ancient Replanted Woodland
2	891m SE	Fox Covert	Ancient & Semi-Natural Woodland
3	1029m W	Spring Wood	Ancient Replanted Woodland
4	1219m E	Fox Covert	Ancient & Semi-Natural Woodland
-	1561m W	Old Covert	Ancient Replanted 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

3

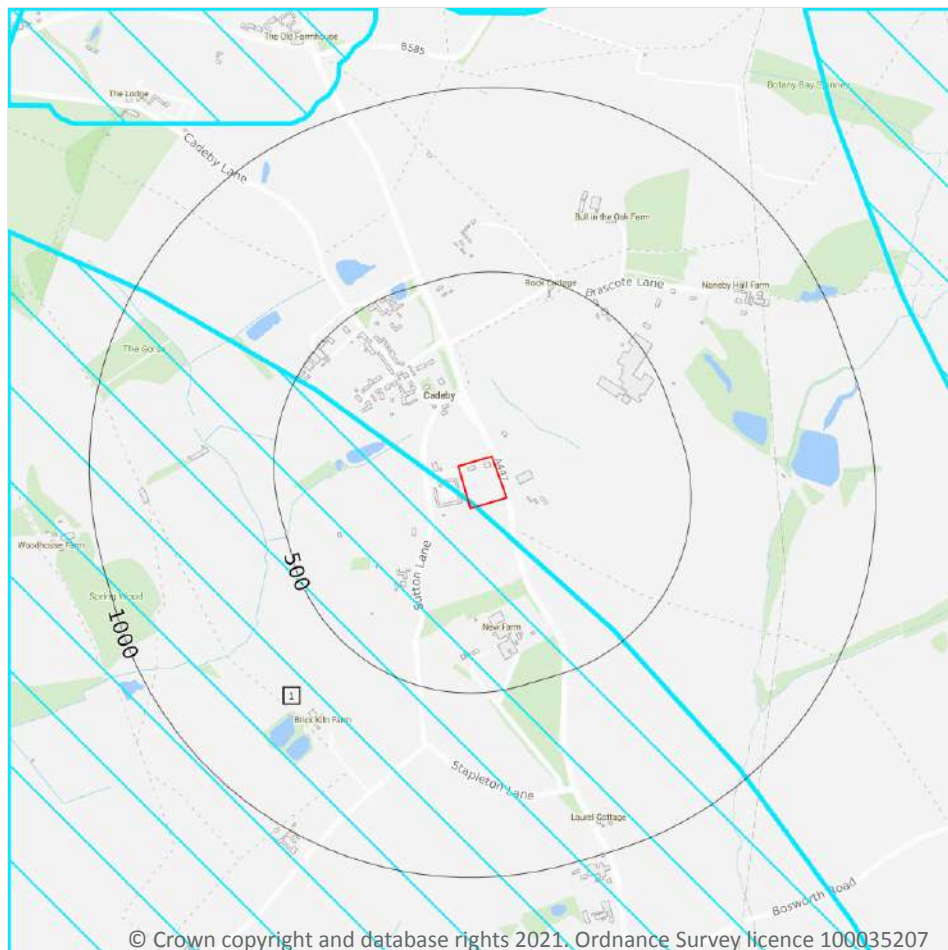
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	River Trent (source to confluence with Derwent)	Surface Water	S308	Changed
75m SE	SOAR R NVZ	Surface Water	S309	Existing
1289m E	SOAR R NVZ	Surface Water	S309	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 53**

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

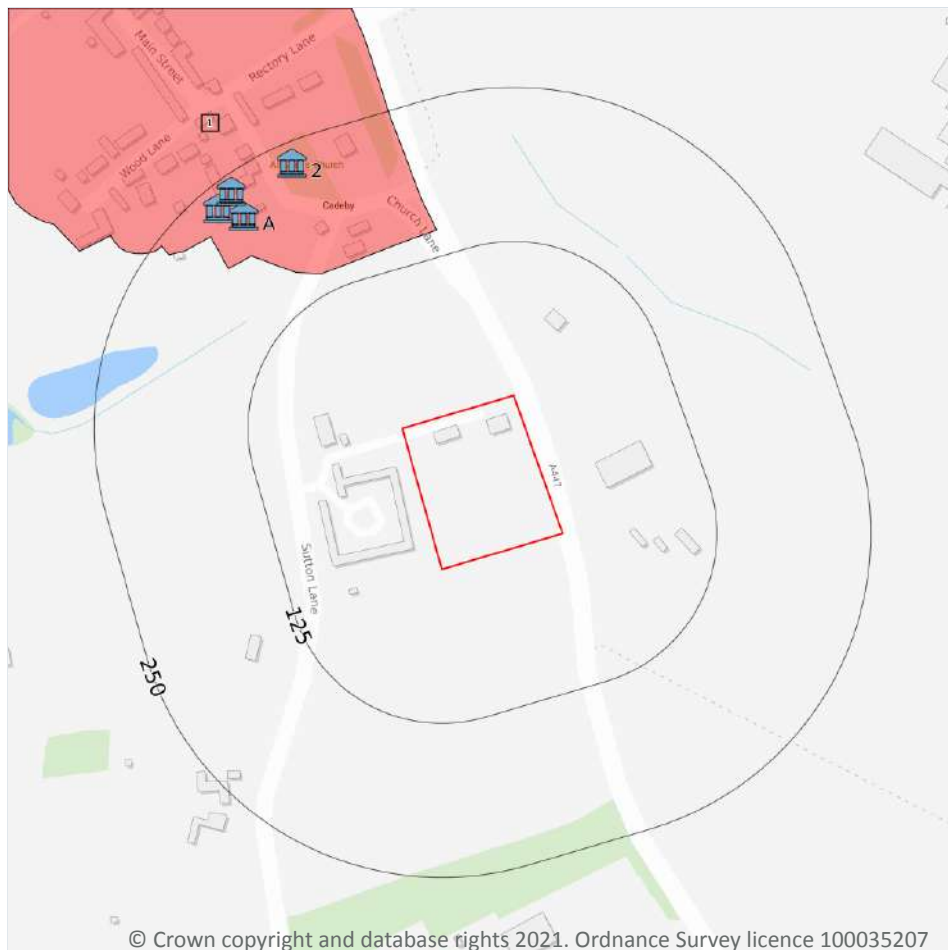
0

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.

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

4

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 55**

ID	Location	Name	Grade	Reference Number	Listed date
A	215m NW	Farm Building At Church Farm, Cadeby, Hinckley And Bosworth, Leicestershire, CV13	II	1361282	13/10/1986
A	233m NW	Church Farmhouse, Cadeby, Hinckley And Bosworth, Leicestershire, CV13	II	1074284	14/06/1979
2	234m NW	Church Of All Saints, Cadeby, Hinckley And Bosworth, Leicestershire, CV13	II*	1074283	07/11/1966

ID	Location	Name	Grade	Reference Number	Listed date
A	237m NW	Farm Buildings At Church Farm, Cadeby, Hinckley And Bosworth, Leicestershire, CV13	II	1074285	13/10/1986

This data is sourced from English Heritage, 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 55**

ID	Location	Name	District	Date of designation
1	141m N	Cadeby	Hinckley and Bosworth	02/1989

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

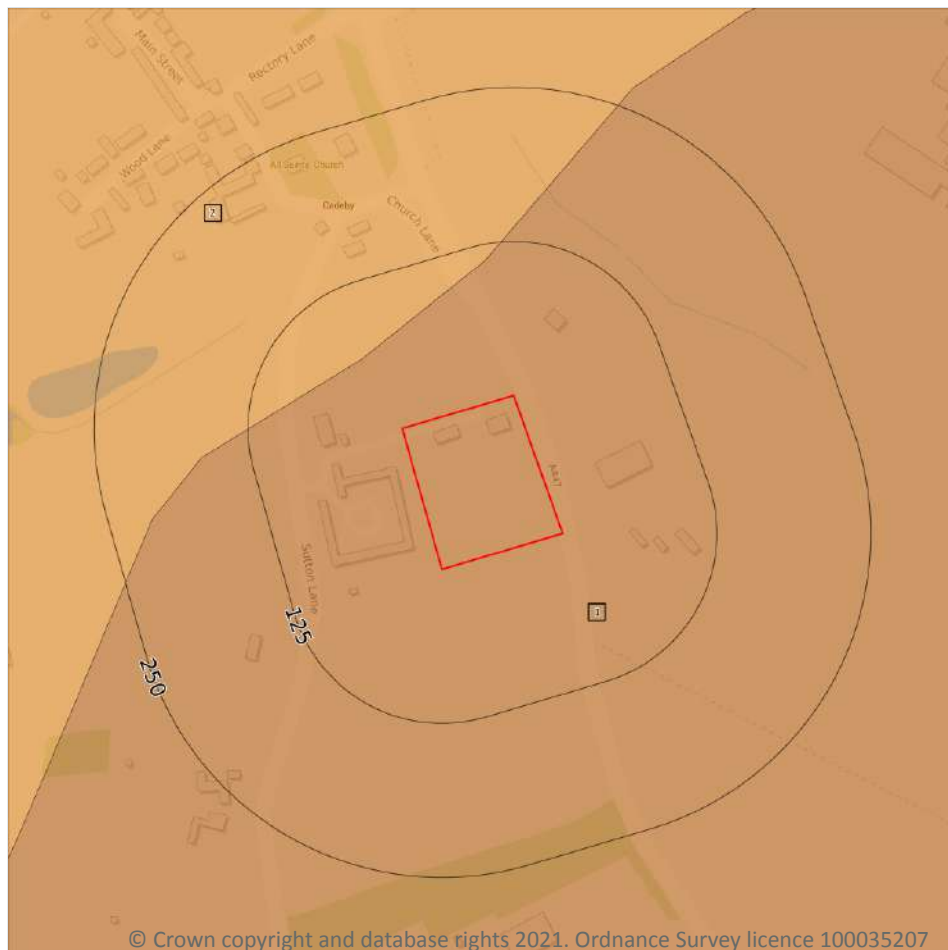
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Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process,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

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



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

2

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 58**

ID	Location	Classification	Description
1	On site	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
2	65m NW	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

0

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

This data is sourced from Natural England.



12.5 Countryside Stewardship Schemes

Records within 250m**2**

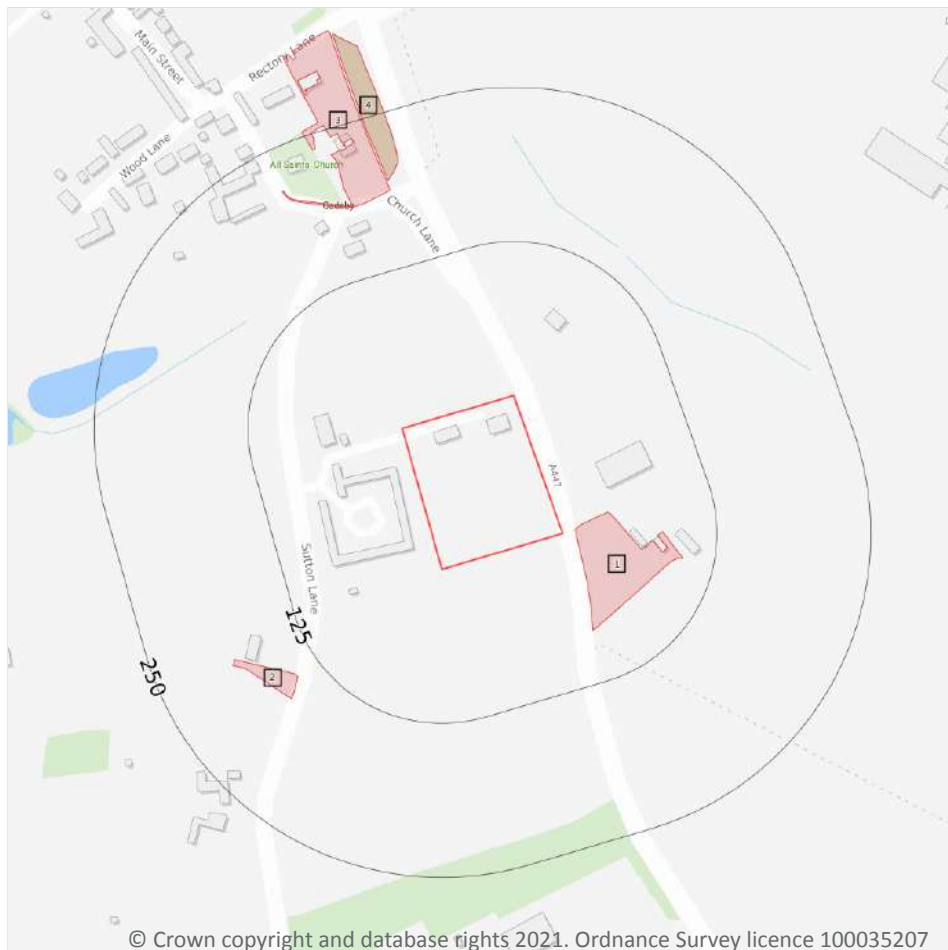
Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	314876	Countryside Stewardship (Middle Tier)	01/01/2017	31/12/2021
96m SW	314876	Countryside Stewardship (Middle Tier)	01/01/2017	31/12/2021

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 61**

ID	Location	Main Habitat	Other habitats
1	11m E	Traditional orchard	Main habitat: TORCH (INV > 50%)
2	146m SW	Traditional orchard	Main habitat: TORCH (INV > 50%)
3	183m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	196m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

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 63**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SK40SW

This data is sourced from the British Geological Survey.



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



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

1

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.

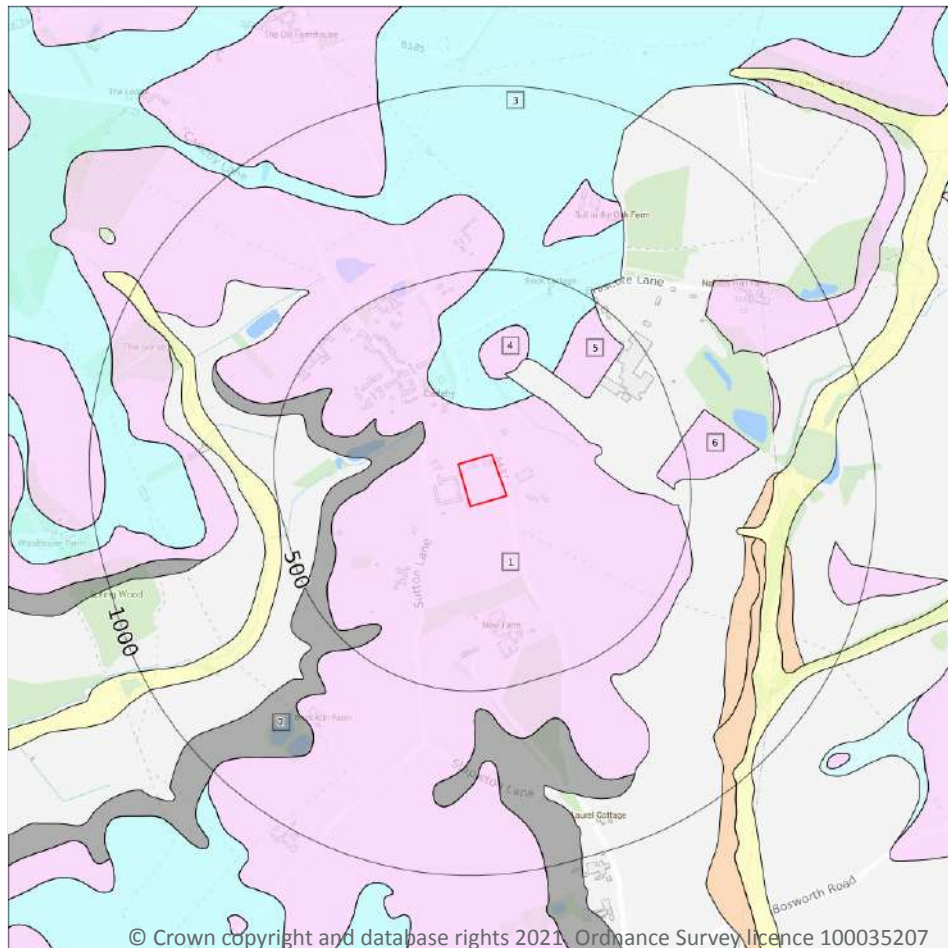
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 64**

ID	Location	LEX Code	Description	Rock description
1	197m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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

6

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 65**

ID	Location	LEX Code	Description	Rock description
1	On site	GFDMP-XSV	Glaciofluvial Deposits, Mid Pleistocene - Sand And Gravel	Sand And Gravel
2	113m NW	WOC-XCZS	Wolston Clay - Clay, Silt And Sand	Clay, Silt And Sand
3	122m N	ODT-DMTN	Oadby Member - Diamicton	Diamicton
4	205m N	GFDMP-XSV	Glaciofluvial Deposits, Mid Pleistocene - Sand And Gravel	Sand And Gravel



ID	Location	LEX Code	Description	Rock description
5	274m NE	GFDMP-XSV	Glaciofluvial Deposits, Mid Pleistocene - Sand And Gravel	Sand And Gravel
6	412m E	GFDMP-XSV	Glaciofluvial Deposits, Mid Pleistocene - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

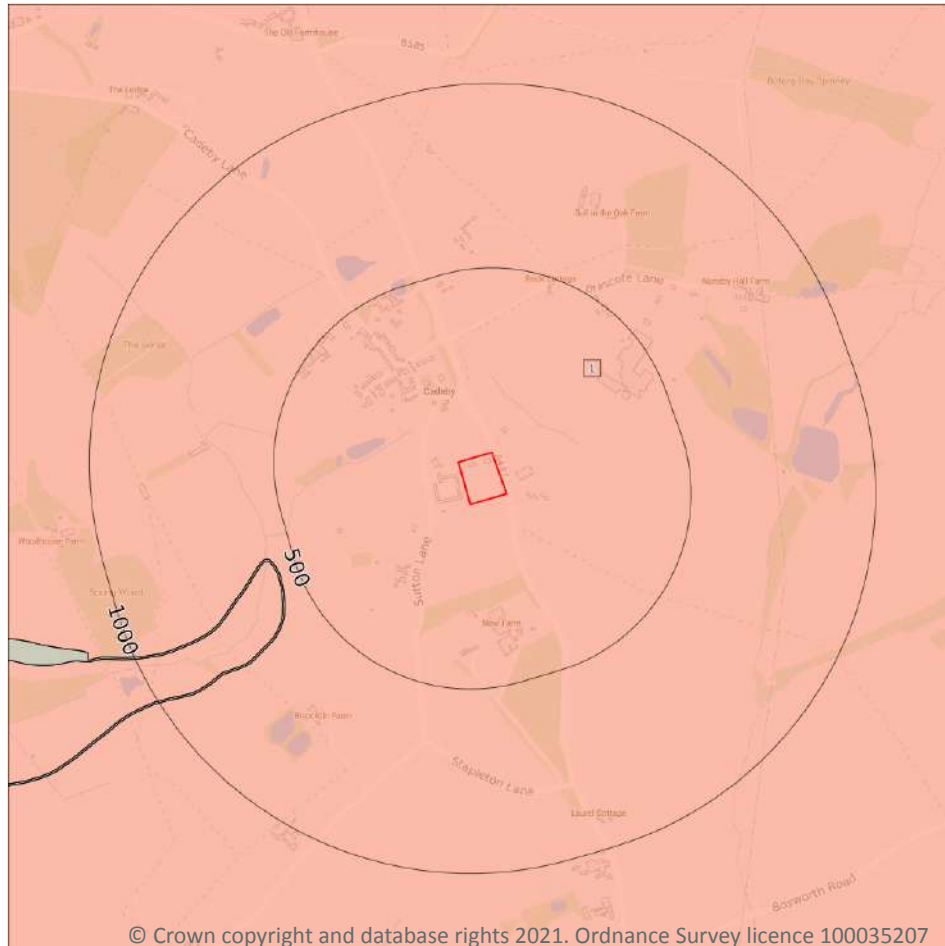
0

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

1

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 67**

ID	Location	LEX Code	Description	Rock age
1	On site	GUN-MDST	Gunthorpe Member - Mudstone	Ladinian Age - Anisian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

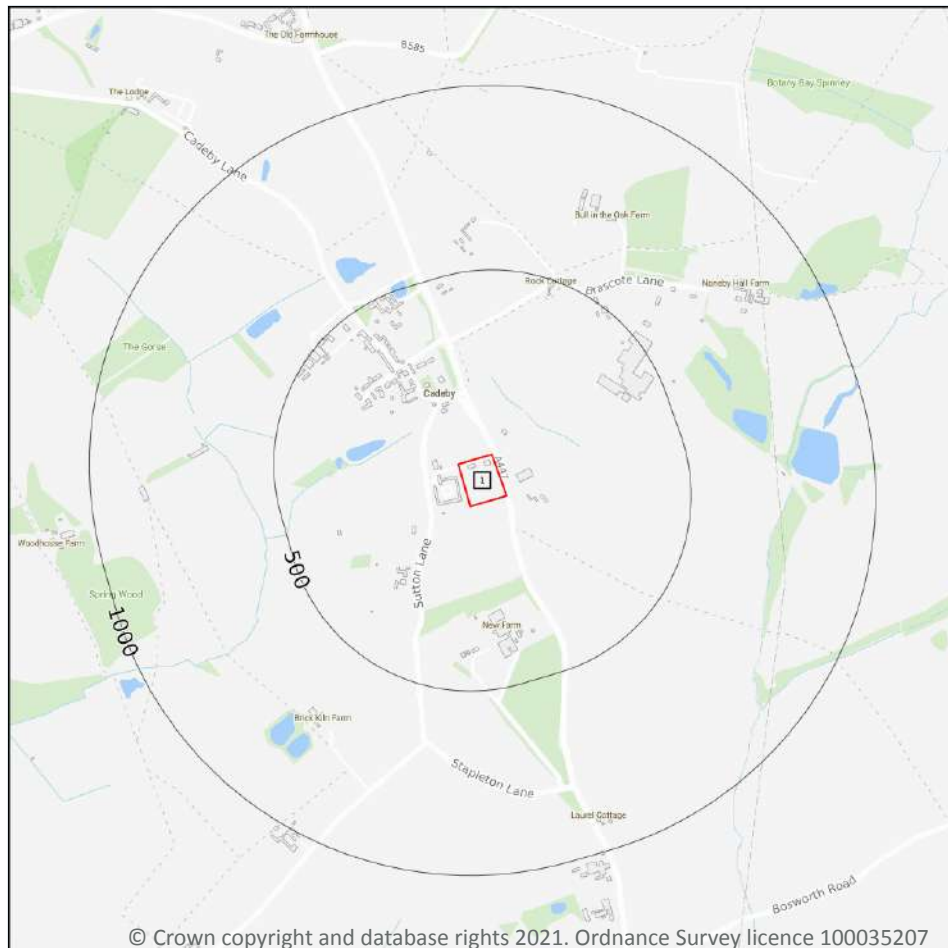
0

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



- Site Outline
- Search buffers in metres (m)
- ☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 69**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW155_coalville_v4

This data is sourced from the British Geological Survey.



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



- Site Outline
- Search buffers in metres (m)
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

1

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.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 70**

ID	Location	LEX Code	Description	Rock description
1	197m NE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

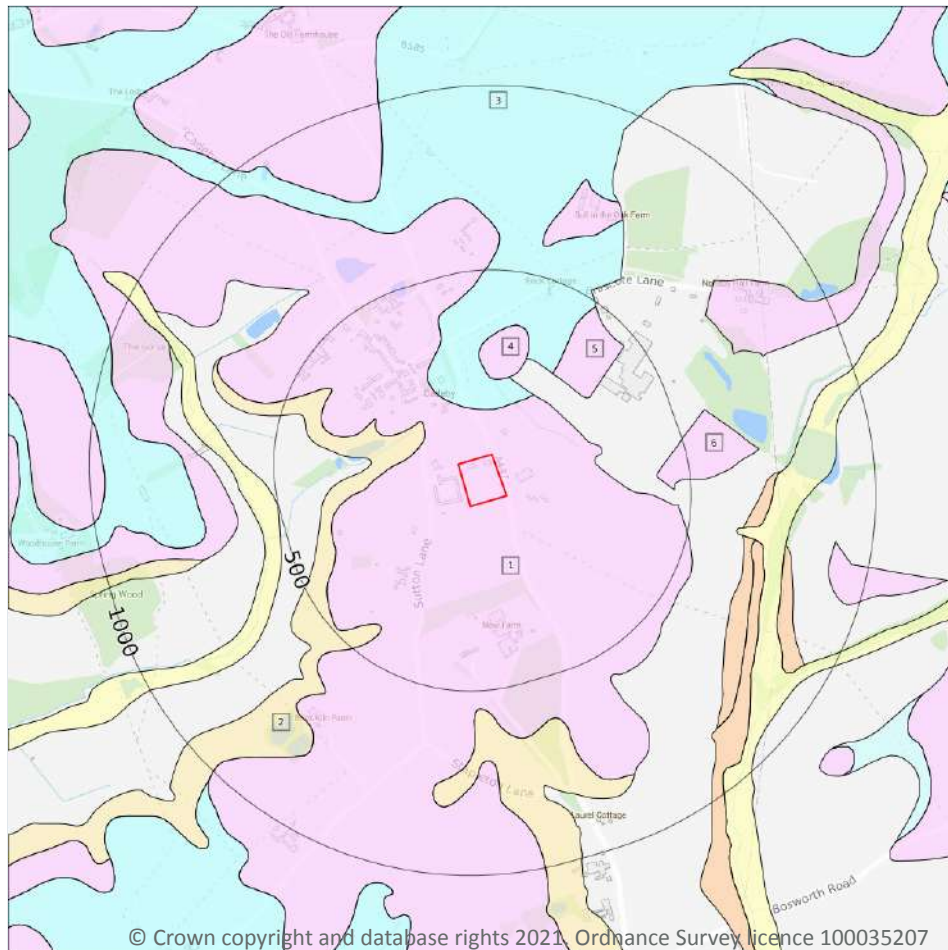
0

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

6

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 72**

ID	Location	LEX Code	Description	Rock description
1	On site	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL
2	114m NW	BOSW-XCZ	BOSWORTH CLAY MEMBER	CLAY AND SILT
3	122m N	ODT-DMTN	OADBY MEMBER	DIAMICTON
4	204m N	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
5	274m NE	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL
6	412m E	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	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	Intergranular	Very High	High

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

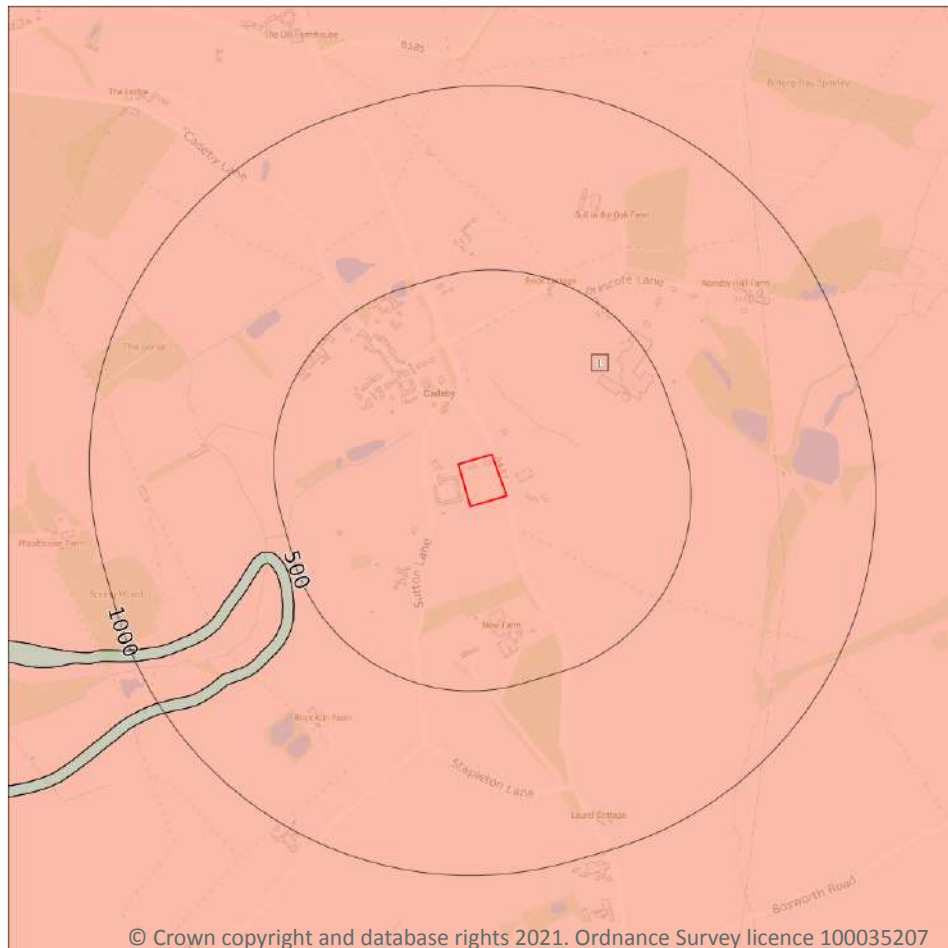
0

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

1

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 74**

ID	Location	LEX Code	Description	Rock age
1	On site	GUN-MDST	GUNTORPE MEMBER - MUDSTONE	ANISIAN

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	Low	Low

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

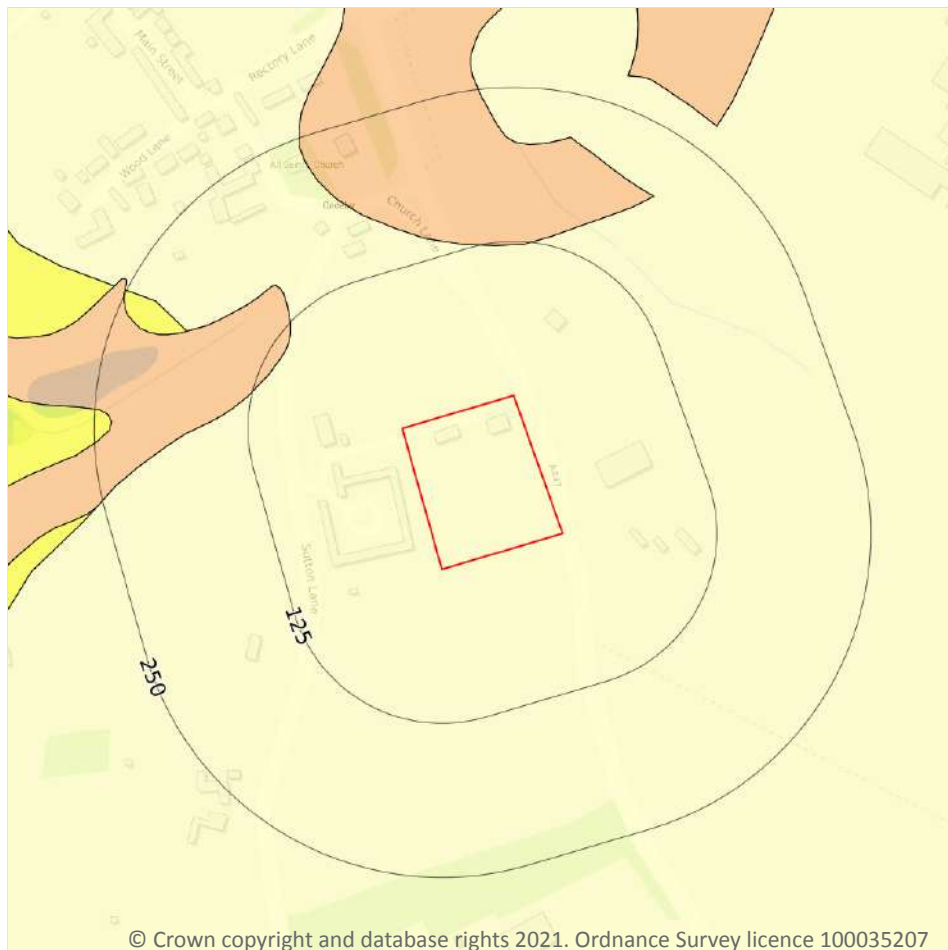
0

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

1

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

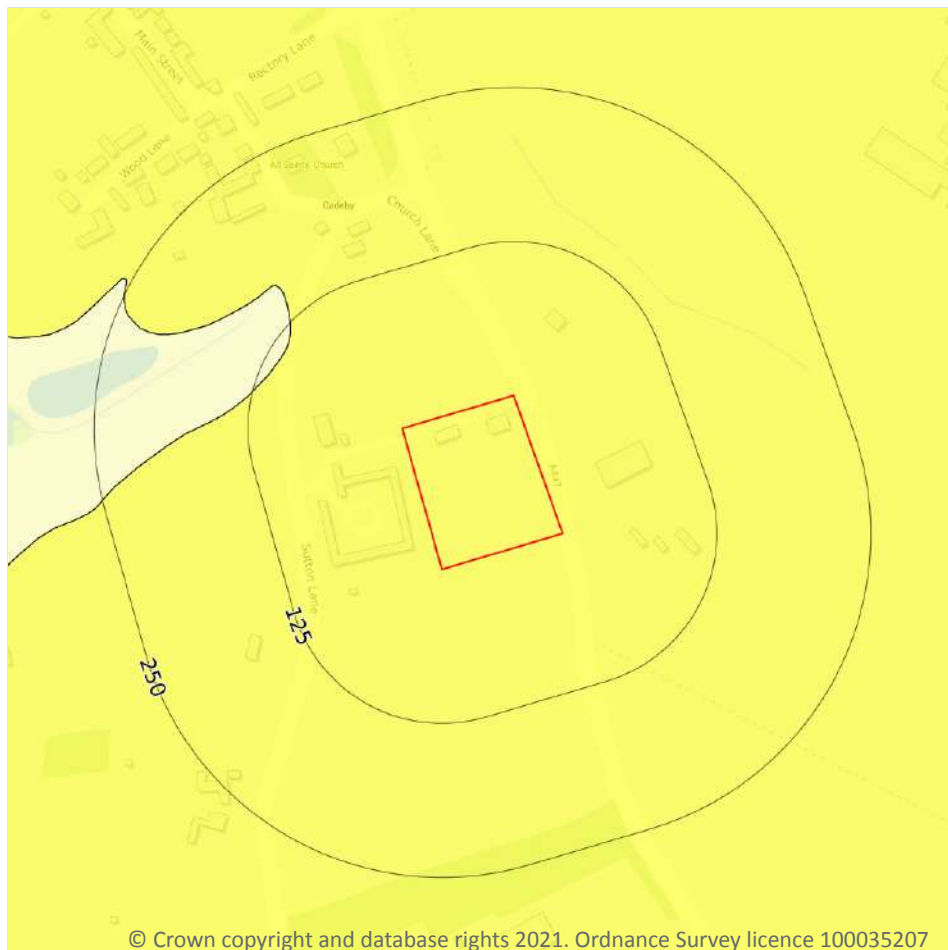
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 77**

Location	Hazard rating	Details
On site	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 78**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

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

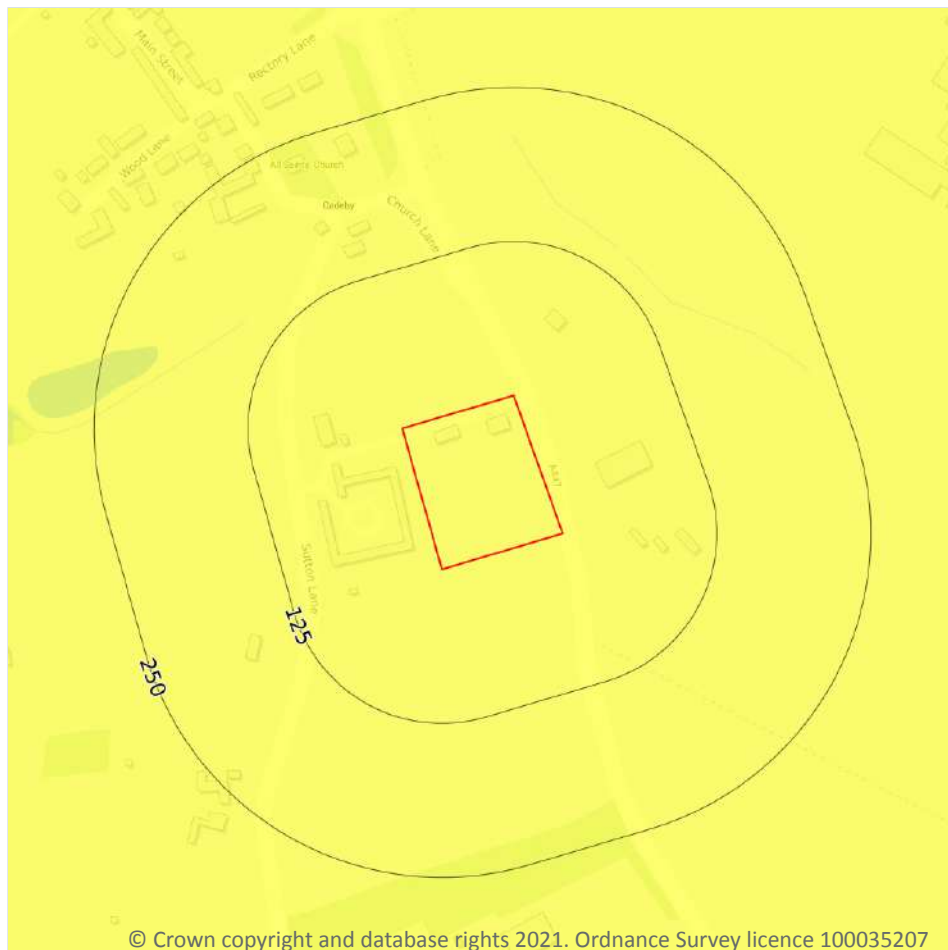
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 79**

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.

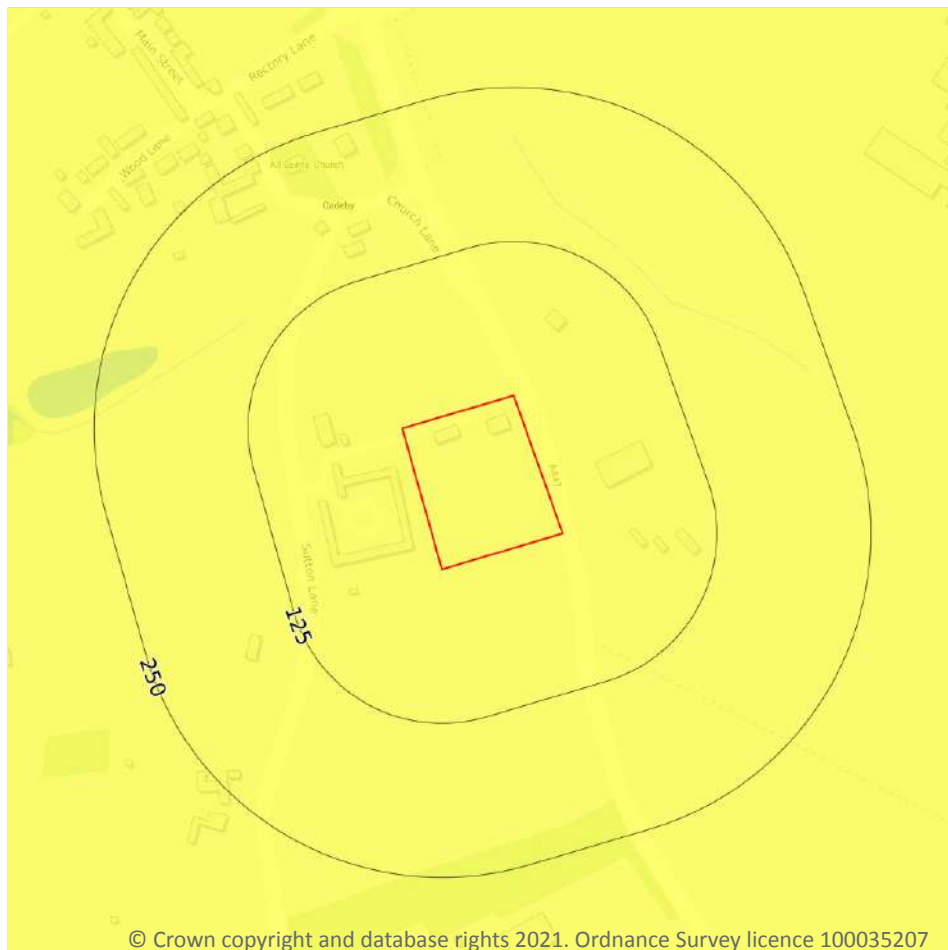
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 80**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

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

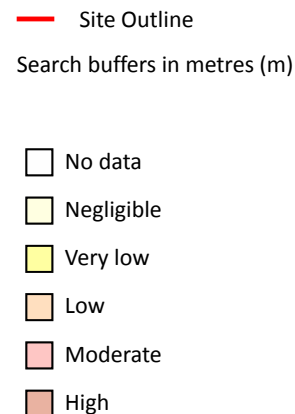
Features are displayed on the Natural ground subsidence - Landslides map on **page 81**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

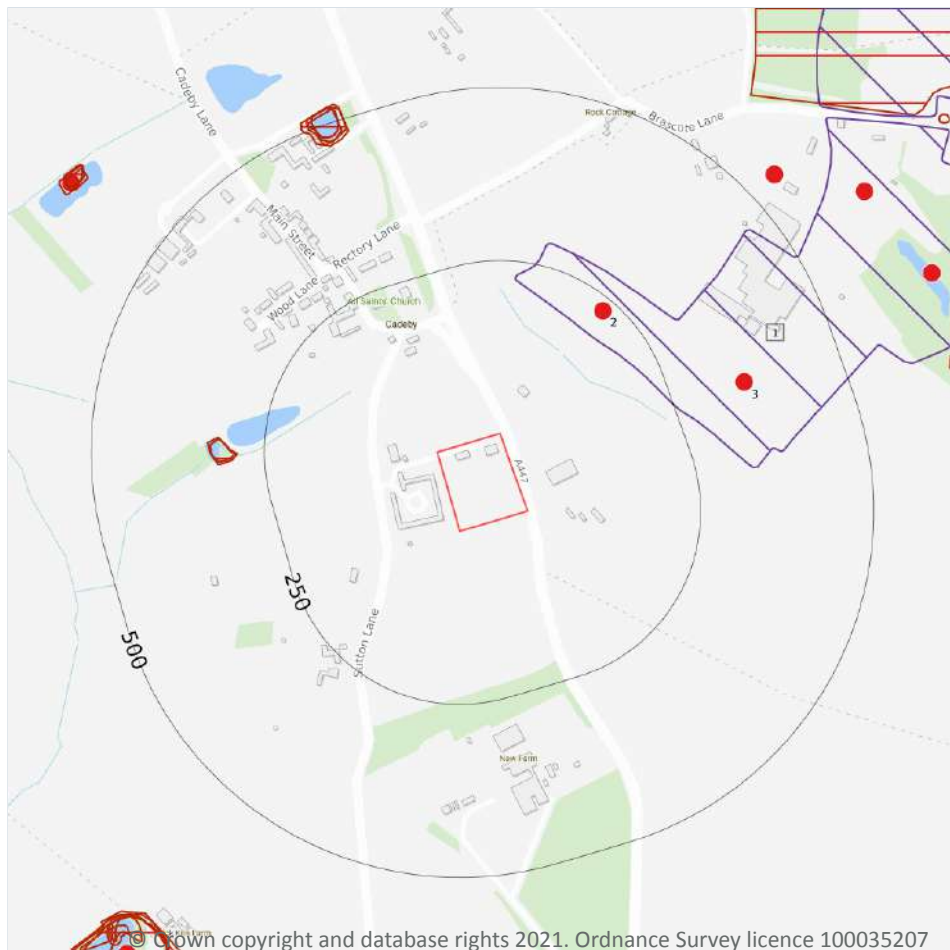
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 82**

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

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- 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 Natural cavities

Records within 500m

0

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

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

18.2 BritPits

Records within 500m

2

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 83**

ID	Location	Details	Description
2	231m NE	Name: Cadeby Address: Cadeby, NUNEATON, Warwickshire Commodity: Sand & Gravel 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
3	356m E	Name: Naneby Hall Farm Address: Cadeby, MARKET BOSWORTH, Leicestershire Commodity: Sand & Gravel 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.

18.3 Surface ground workings

Records within 250m

0

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.

This data is sourced from Ordnance Survey/Groundsure.

18.4 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 data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

1

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 83**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
1	192m NE	Naneby Hall Farm	Sand and gravel	Surface mineral working	Valid	2/2/62

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

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).

This data is sourced from the British Geological Survey.

18.7 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 Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site

1

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

Location	Details
On site	Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0
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Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

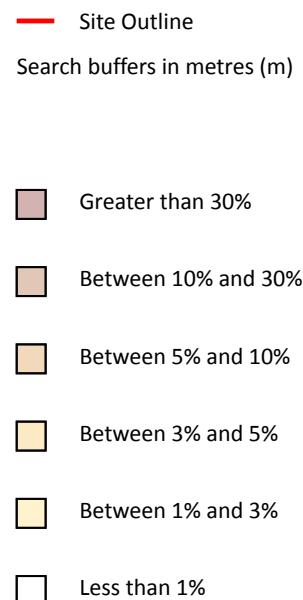
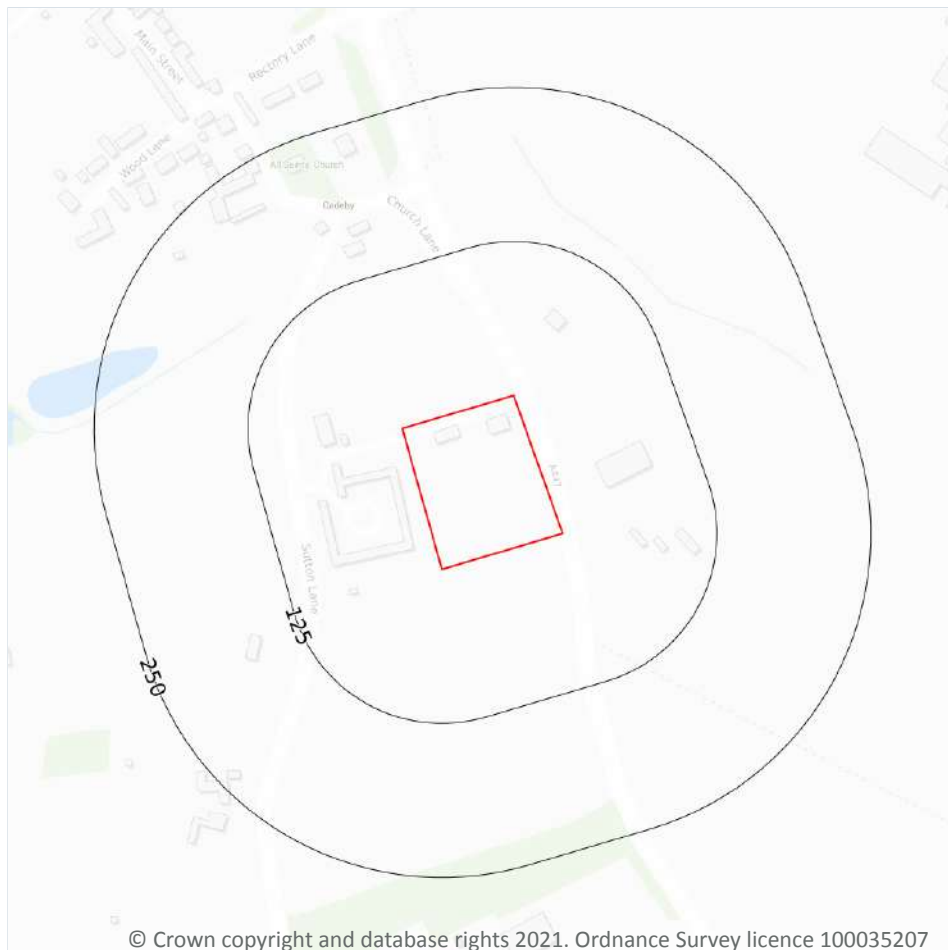
Records on site	0
-----------------	---

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

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



19 Radon



19.1 Radon

Records on site

1

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

Features are displayed on the Radon map on **page 88**

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

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



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

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 km². 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 km²; 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 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
9m S	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0
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Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0
---------------------	---

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0
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Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	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.

21.5 Royal Mail tunnels

Records within 250m	0
---------------------	---

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



This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

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



APPENDIX D



 Scotford Farm, Fair Lane, Oakbrook, DE72 3PX info@ivyhouse.co.uk • www.ivyhouse.co.uk • 01332 620 456				Date: 5th January 2021 Ground Level: Orientation: Coordinates: Plant: Mini Digger Dimensions:				TRIAL PIT NO. TPI						
CLIENT Statue Home Ltd								Sheet No. 1 of 1						
SITE LOCATION Sutton Lane, Cadeby								Job No. IV.02.21						
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N Value	Installation	Test Sample Details
				Depth	No	Type	Seating		Test Drive					
							75mm	75mm	75mm	75mm	75mm			
MADE GROUND: Shredded Carpet material for menage.	0.05 0.10 0.15 0.20 0.25		0.25 (0.25)											
MADE GROUND: Gravel and hardcore.	0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70		0.70 (0.45)	0.60	1	ES								
Relic TOPSOIL	0.75 0.80 0.85 0.90		0.90 (0.20)	0.85	2	ES								
End of trial pit at 0.90mbgl.	0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 2.50 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 3.00 3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 3.50 3.55 3.60 3.65 3.70 3.75 3.80 3.85 3.90 3.95 4.00													

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Trial pit reinstated with arisings upon completion. 2. Trial pit remained stable during excavation. 3. Groundwater not encountered.							Logged By:	Checked By:	Date	Scale	
							JH	RCS	05.01.21	NTS	

 Scotford Farm, Fair Lane, Oakbrook, DE72 3PX info@ivyhouse.co.uk • www.ivyhouse.co.uk • 01332 620 466				Date: 5th January 2021 Ground Level: Orientation: Coordinates: Plant: Mini Digger Dimensions:				TRIAL PIT NO. TP2 Sheet No. 1 of 1 Job No. IV.02.21						
CLIENT Statue Home Ltd				SITE LOCATION Sutton Lane, Cadeby										
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N° Value	Installation	Test Sample Details
				Depth	No	Type	Seating		Test Drive					
							75mm	75mm	75mm	75mm	75mm			
MADE GROUND: Shredded Carpet material for menage.	0.05 0.10 0.15 0.20		0.20 (0.20)											
MADE GROUND: Gravel and hardcore.	0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60		0.60 (0.40)	0.30	1	ES								
Relic TOPSOIL	0.65 0.70 0.75 0.80 0.85		0.85 (0.25)	0.70	2	ES								
End of trial pit at 0.85mbgl.	0.90 0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 2.50 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 3.00 3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 3.50 3.55 3.60 3.65 3.70 3.75 3.80 3.85 3.90 3.95 4.00													

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Trial pit reinstated with arisings upon completion. 2. Trial pit remained stable during excavation. 3. Groundwater not encountered.							Logged By:	Checked By:	Date	Scale	
							JH	RCS	05.01.21	NTS	

 Scotford Farm, Fair Lane, Oakbrook, DE72 3PX info@ivyhouse.co.uk • www.ivyhouse.co.uk • 01332 620 466				Date: 5th January 2021 Ground Level: Orientation: Coordinates: Plant: Mini Digger Dimensions:				TRIAL PIT NO. TP3						
CLIENT Statue Home Ltd								Sheet No. 1 of 1						
SITE LOCATION Sutton Lane, Cadeby								Job No. IV.02.21						
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N° Value	Installation	Test Sample Details
				Depth	No	Type	Seating		Test Drive					
							75mm	75mm	75mm	75mm	75mm			
MADE GROUND: Brick hardcore	0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50		0.50 (0.50)	0.25	1	ES								
SAND AND coarse subangular and subrounded GRAVEL of quartz and flint.	0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90		0.90 (0.40)	0.60	2	ES								
End of trial pit at 0.90mbgl.	0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 2.50 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 3.00 3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 3.50 3.55 3.60 3.65 3.70 3.75 3.80 3.85 3.90 3.95 4.00													

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Trial pit reinstated with arisings upon completion. 2. Trial pit remained stable during excavation. 3. Groundwater not encountered.							Logged By:	Checked By:	Date	Scale	
							JH	RCS	05.01.21	NTS	

 Scotford Farm, Fair Lane, Oakbrook, DE72 3PX info@ivyhouse.co.uk • www.ivyhouse.co.uk • 01332 620 466				Date: 5th January 2021 Ground Level: Orientation: Coordinates: Plant: Mini Digger Dimensions:				TRIAL PIT NO. TP4						
CLIENT Statue Home Ltd				Sheet No. 1 of 1										
SITE LOCATION Sutton Lane, Cadeby				Job No. IV.02.21										
Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N Value	Installation	Test Sample Details
				Depth	No	Type	Seating		Test Drive					
							75mm	75mm	75mm	75mm	75mm			
MADE GROUND: Brick hardcore	0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60		0.60 (0.60)	0.40	1	ES								
SAND AND coarse subangular and subrounded GRAVEL of quartz and flint.	0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00 1.05 1.10 1.15 1.20		1.20 (0.60)	0.90	2	ES								
End of trial pit at 1.20mbgl.	1.25 1.30 1.35 1.40 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 2.50 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 3.00 3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 3.50 3.55 3.60 3.65 3.70 3.75 3.80 3.85 3.90 3.95 4.00													

Casing record			Chiselling records								
Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
Remarks: 1. Trial pit reinstated with arisings upon completion. 2. Trial pit remained stable during excavation. 3. Groundwater not encountered.							Logged By:	Checked By:	Date	Scale	
							JH	RCS	05.01.21	NTS	

APPENDIX E





Richard Sutton
Ivy House Environmental Ltd
Scotland Farm
Ockbrook
Derby
DE72 3RX

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 21-00338

Site Reference: Sutton Lane, Cadeby

Project / Job Ref: IV.02.21

Order No: IV.02.21/RS

Sample Receipt Date: 08/01/2021

Sample Scheduled Date: 13/01/2021

Report Issue Number: 1

Reporting Date: 21/01/2021

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



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Soil Analysis Certificate						
DETS Report No: 21-00338	Date Sampled	05/01/21	05/01/21	05/01/21	05/01/21	05/01/21
Ivy House Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Sutton Lane, Cadeby	TP / BH No	TP1	TP2	TP2	TP3	TP4
Project / Job Ref: IV.02.21	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: IV.02.21/RS	Depth (m)	0.60	0.30	0.70	0.25	0.40
Reporting Date: 21/01/2021	DETS Sample No	520073	520074	520075	520076	520077

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Detected	Detected	Not Detected	Not Detected	Not Detected
Sample Matrix ^(S)	Material Type	N/a	NONE	Bundle of Chrysotile fibres	Bundle of Chrysotile fibres			
Asbestos Type ^(S)	PLM Result	N/a	ISO17025	Chrysotile	Chrysotile			
Asbestos Quantification ^(S)	%	< 0.001	ISO17025	< 0.001	0.002			
pH	pH Units	N/a	MCERTS	8.1	8.5	8.2	8.2	8.3
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	653	990	< 200	1222	1466
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.07	0.10	< 0.02	0.12	0.15
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	10	10	< 10	17	11
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01	0.01	< 0.01	0.02	0.01
Organic Matter	%	< 0.1	MCERTS	2.8	2.3	0.4	3.1	2.4
Arsenic (As)	mg/kg	< 2	MCERTS	8	8	5	7	8
Cadmium (Cd)	mg/kg	< 0.2	NONE	0.2	0.3	< 0.2	0.6	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	13	13	9	20	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	21	24	10	37	33
Lead (Pb)	mg/kg	< 3	MCERTS	46	81	14	129	81
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	10	11	8	11	11
Selenium (Se)	mg/kg	< 2	MCERTS	< 3	< 3	< 3	< 3	< 3
Vanadium (V)	mg/kg	< 1	MCERTS	22	20	14	36	31
Zinc (Zn)	mg/kg	< 3	MCERTS	82	126	41	174	171
EPH (C10 - C40)	mg/kg	< 6	MCERTS	429	146	< 6	696	558

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 21-00338	Date Sampled	05/01/21				
Ivy House Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Sutton Lane, Cadeby	TP / BH No	TP4				
Project / Job Ref: IV.02.21	Additional Refs	None Supplied				
Order No: IV.02.21/RS	Depth (m)	0.90				
Reporting Date: 21/01/2021	DETS Sample No	520078				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
Sample Matrix ^(S)	Material Type	N/a	NONE				
Asbestos Type ^(S)	PLM Result	N/a	ISO17025				
Asbestos Quantification ^(S)	%	< 0.001	ISO17025				
pH	pH Units	N/a	MCERTS	8.3			
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	244			
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.02			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	47			
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.05			
Organic Matter	%	< 0.1	MCERTS	0.3			
Arsenic (As)	mg/kg	< 2	MCERTS	11			
Cadmium (Cd)	mg/kg	< 0.2	NONE	0.6			
Chromium (Cr)	mg/kg	< 2	MCERTS	13			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	20			
Lead (Pb)	mg/kg	< 3	MCERTS	16			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	24			
Selenium (Se)	mg/kg	< 2	MCERTS	< 3			
Vanadium (V)	mg/kg	< 1	MCERTS	22			
Zinc (Zn)	mg/kg	< 3	MCERTS	65			
EPH (C10 - C40)	mg/kg	< 6	MCERTS	< 6			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 21-00338	Date Sampled	05/01/21	05/01/21	05/01/21	05/01/21	05/01/21
Ivy House Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Sutton Lane, Cadeby	TP / BH No	TP1	TP2	TP2	TP3	TP4
Project / Job Ref: IV.02.21	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: IV.02.21/RS	Depth (m)	0.60	0.30	0.70	0.25	0.40
Reporting Date: 21/01/2021	DETS Sample No	520073	520074	520075	520076	520077

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	1.35	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	7.72	< 0.1	< 0.1	< 0.1	0.16
Fluorene	mg/kg	< 0.1	MCERTS	4.83	0.12	< 0.1	< 0.1	0.14
Phenanthrene	mg/kg	< 0.1	MCERTS	37.80	0.84	< 0.1	0.65	1.74
Anthracene	mg/kg	< 0.1	MCERTS	5.44	0.22	< 0.1	0.16	0.42
Fluoranthene	mg/kg	< 0.1	MCERTS	30.60	1.65	< 0.1	1.26	3.58
Pyrene	mg/kg	< 0.1	MCERTS	26.20	1.59	< 0.1	1.22	3.25
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	7.30	0.73	< 0.1	0.55	1.87
Chrysene	mg/kg	< 0.1	MCERTS	7.07	0.72	< 0.1	0.59	1.65
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	6.36	1.09	< 0.1	0.70	2.04
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	2.14	0.42	< 0.1	0.23	0.79
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	5.28	0.95	< 0.1	0.55	1.79
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	2.34	0.61	< 0.1	0.59	1.02
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.60	< 0.1	< 0.1	0.12	0.23
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	2.39	0.65	< 0.1	0.61	1.02
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	147	9.6	< 1.6	7.2	19.7



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 21-00338	Date Sampled	05/01/21				
Ivy House Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Sutton Lane, Cadeby	TP / BH No	TP4				
Project / Job Ref: IV.02.21	Additional Refs	None Supplied				
Order No: IV.02.21/RS	Depth (m)	0.90				
Reporting Date: 21/01/2021	DETS Sample No	520078				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	0.37			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	0.28			
Pyrene	mg/kg	< 0.1	MCERTS	0.24			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			



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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 21-00338
Ivy House Environmental Ltd
Site Reference: Sutton Lane, Cadeby
Project / Job Ref: IV.02.21
Order No: IV.02.21/RS
Reporting Date: 21/01/2021



DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
520073	TP1	None Supplied	0.60	14.5	Brown sandy clay with stones
520074	TP2	None Supplied	0.30	13.4	Brown sandy clay with stones and brick
520075	TP2	None Supplied	0.70	11.3	Brown sandy clay
520076	TP3	None Supplied	0.25	8.8	Brown sandy clay with stones and concrete
520077	TP4	None Supplied	0.40	8.9	Brown sandy clay with brick and concrete
520078	TP4	None Supplied	0.90	8.7	Brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{u/s}



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 21-00338

Ivy House Environmental Ltd

Site Reference: Sutton Lane, Cadeby

Project / Job Ref: IV.02.21

Order No: IV.02.21/RS

Reporting Date: 21/01/2021

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

APPENDIX F



Tier 1 Generic Assessment Criteria

	Residential With Produce	Residential Without Produce	Allotments	Commercial (office)	Commercial (warehouse)
Arsenic	32.40	35.00	43.00	635.00	635.00
Cadmium	5.17	17.70	1.05	230.00	230.00
Mercury, elemental	1.02	1.02	316.00	109.00	83.40
Mercury, inorganic	169.00	238.00	80.30	3640.00	3640.00
Mercury, methyl	11.40	14.10	7.97	407.00	409.00
Selenium	350.00	595.00	121.00	13000.00	13000.00
Phenol	415.00	519.00	282.00	37600.00	38000.00
Toluene	611.00	2710.00	118.00	189000.00	166000.00
Lead	210.00	210.00	84.00	2300.00	2300.00
Nickel	130.00	130*	180.00	980.00	980.00
Total Cyanide	34.00	34.00			
Benzo(a)pyrene	3.00	3.20	3.50	36.00	14.40
Dibenzo(a,h)anthracene	0.30	0.32	0.43	3.60	13.00
Acenaphthene	1100.00	6000.00	200.00	100000.00	103000.00
Acenaphthylene	920.00	6000.00	160.00	100000.00	103000.00
Anthracene	11000.00	37000.00	2200.00	540000.00	542000.00
Benzo(a)anthracene	13.00	15.00	13.00	180.00	97.50
Benzo(b)fluoranthene	3.70	4.00	3.90	45.00	103.00
Benzo(g,h,i)perylene	350.00	360.00	640.00	4000.00	661.00
Benzo(k)fluoranthene	100.00	110.00	130.00	1200.00	144.00
Chrysene	27.00	32.00	19.00	350.00	143.00
Fluoranthene	890.00	1600.00	290.00	23000.00	22700.00
Fluorene	860.00	4500.00	160.00	71000.00	70700.00
Indeno(1,2,3-c,d)pyrene	41.00	46.00	39.00	510.00	61.70
Phenanthrene	440.00	1500.00	90.00	23000.00	22600.00
Pyrene	2000.00	3800.00	620.00	54000.00	54500.00
Napthalene	13.00	13.00	24.00	1100.00	875.00
Chromium VI	3.38	4.12	2.11	34.20	34.20
Chromium III	627.00	627.00	15300.00	8840.00	8840.00
Copper	2330.00	6200*	524.00	71700.00	71700.00
Vanadium	79.00	226.00	17.90	5590.00	5590.00
Zinc	3750.00	40400*	618.00	665000.00	665000.00

Note:

All figures are in mg/kg

Values calculated using CLEA v1.071

Soil type chosen is sandy loam, pH 7

All organic determinands calculated using 6% SOM

PAH = S4UL (except warehouse model - CLEAv1.071)

* Phytotoxic assessment based on pH range of <6.0 to >7.0

Copper = 100 - 200mg/kg

Nickel = 60 - 110mg/kg

Zinc = 200 - 300mg/kg



Generic Assessment Criteria

Contaminants	Land Use Scenario				
	Residential With Produce	Residential Without Produce	Allotments	Commercial (office)	Commercial (warehouse)
Benzene	0.33	1.00	0.07	94.70	80.30
Ethylbenzene	354.00	843.00	91.20	65700.00	55600.00
Phenol	415.00	519.00	282.00	37600.00	38000.00
Toluene	611.00	2710.00	118.00	189000.00	166000.00
Xylene, o-	246.00	321.00	159.00	34600.00	27600.00
Xylene, m-	240.00	302.00	175.00	32700.00	26100.00
Xylene, p-	228.00	288.00	164.00	31400.00	25100.00
Aliphatic C5 - C6	113.00	113.00	3910.00	12800.00	10800.00
Aliphatic C6 - C8	48.10	48.20	13300.00	5470.00	4620.00
Aliphatic C8 - C10	108.00	109.00	1710.00	11900.00	10200.00
Aliphatic C10 - C12	537.00	538.00	7280.00	49300.00	43700.00
Aliphatic C12 - C16	3030.00	3040.00	13400.00	90500.00	89600.00
Aliphatic C16 - C35	88400.00	89100.00	281000.00	1910000.00	1910000.00
Aliphatic C35 - C44	88400.00	89100.00	281000.00	1910000.00	1910000.00
Aromatic C5 - C7	275.00	978.00	57.30	89900.00	76800.00
Aromatic C7 - C8	611.00	2710.00	118.00	189000.00	166000.00
Aromatic C8 - C10	151.00	189.00	50.50	17800.00	15700.00
Aromatic C10 - C12	346.00	866.00	73.80	34500.00	33800.00
Aromatic C12 - C16	593.00	1710.00	134.00	37800.00	37800.00
Aromatic C16 - C21	770.00	1340.00	260.00	28600.00	28600.00
Aromatic C21 - C35	1230.00	1340.00	1550.00	28600.00	28600.00
Aromatic C35 - C44	1230.00	1340.00	1550.00	28600.00	28600.00
Combined Ali & Aro C44 - C70	1300.00	1340.00	2950.00	28600.00	28600.00

Note:

All figures are in mg/kg

Values calculated using CLEA v1.071

Soil type chosen is sandy loam, pH 7

All organic determinands calculated using 6% SOM