

PHASE I & II GEO-ENVIRONMENTAL ASSESSMENT

LAND OFF BURTON ROAD,
ROSLISTON, DERBYSHIRE

MR & MRS HOUSDEN

FEBRUARY 2016



SUMMARY TABLE: PHASE I & II GEO-ENVIRONMENTAL ASSESSMENT	
SITE:	Land off Burton Road, Rosliston, Derbyshire
CLIENT:	Mr & Mrs Housden
DATE:	February 2016
REFERENCE	IV.97.15
DEVELOPMENT PROPOSAL:	Thirteen residential properties with gardens.
HUMAN HEALTH:	No risk. Topsoil should be segregated & stockpiled for re-use prior to construction commencing.
CONTROLLED WATERS:	No risk. No significant on site source of contamination identified.
GAS RISK:	No risk. No source of ground gas identified within the locality.
RADON GAS:	No protection required.
COMMENTS:	No contamination to report.
FOUNDATIONS:	Trench fill, min depth 0.90m, allowable bearing pressure of 110kN/m ² . Deepening may be required with regard to trees.
FLOOR SLABS:	Ground bearing depending on trees.
CONCRETE:	DS-1 AC-1s (GEN1/RC35)
COMMENTS:	No significant development abnormalities identified at this stage.

Written:		Victoria Sutton BSc <i>Geotechnical Engineer</i>
Authorised:		Richard Sutton MRICS <i>Director</i>
Date:	26 th February 2016	
Version:	1.0	



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1.0 INTRODUCTION

1.1 PREAMBLE

This Phase I & II Geo-Environmental Assessment has been produced for Mr & Mrs Housden (Client) to provide a pre-development contamination and geotechnical assessment of the site known as Land off Burton Road, Rosliston, Derbyshire. The development proposal for the site is for thirteen residential properties with associated private gardens, car parking and access road.

1.2 SITE LOCATION

The site is located approximately 6.5km south of Burton-upon-Trent town centre. The National Grid Reference (NGR) for the approximate centre of the site is SK 241 170. The site location; the development proposal and site layout are illustrated in Appendix A.

1.3 PROJECT BRIEF

The brief for the Phase I & II Geo-Environmental 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.
- Development of a Phase 1 Conceptual Model
- Provide a strategy for, and to implement, a Phase II Environmental and Geotechnical Assessment.
- Development of the Phase 2 Conceptual Model.
- To provide recommendations to mitigate against environmental risks.
- Provide geotechnical design for the proposed development.

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.
- BRE guide BR211 (2007), Radon: Guidance on protective measures for new buildings introduced on 12th November 2007.
- HPA Radon Atlas, October 2007.
- CLR8: Potential Contaminants for the Assessment of Land (EA/DEFRA. March 2002).
- CLR11: Model Procedures for the Assessment of Land Contamination.
- BS 10175:2011 Investigation of Potentially Contaminated Sites – Code of Practice.
- BS 8576:2013 Guidance on investigations for Ground Gas, Permanent Gases and Volatile Organic Compounds.

1.5 LIMITATIONS

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

Ivy House Environmental Ltd have, in the production of this report, relied upon information provided by third parties. Ivy House Environmental Ltd do 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 1882 - 2014. The historical development of the site and the locality are detailed below; the OS maps are contained in Appendix B.

The earliest plan of the site is dated 1882 and illustrates the site as undeveloped and consisting of an open field while a small rectangular building occupies the south eastern section. An orchard occupies the south eastern section of the site. The area surrounding the site generally consists of agricultural fields. Roads form the eastern and northern site boundaries. A farm is present approximately 30m to the south. Ponds are illustrated approximately 40m west, 50m north west and 90m north east. An old gravel pit is present approximately 260m to the north east.

By 1901, the building within the south eastern section of the site was no longer shown.

The site and the surrounding area remained unchanged up until the 1980's when the farm to the south of the site was no longer shown.

The 2002 plan illustrates several residential developments to the immediate south of the site. The ponds within close proximity to the site have been backfilled.

The site and the surrounding area remained unchanged up until present day (2014).

2.1.1 SUMMARY

The site was previously occupied with a field and an orchard with a small farm building in the south eastern corner. The area surrounding the site generally consisted of agricultural fields and residential properties.

2.2 DEVELOPMENT PROPOSAL

The development proposal for the site is for thirteen residential properties with associated private gardens, car parking and access road.

2.3 SITE DESCRIPTION

The site is located to the north of the village of Rosliston. The site consists of a rectangular field/paddock with trees of varying type and maturity across the entire site. Mature trees and shrubs are present along all of the site boundaries.

The site is relatively flat lying however ground levels gently slope downwards beyond the eastern boundary.

The site is bound to the north and east by Rosliston Road and Burton Road, respectively. Residential properties and fields are present immediately beyond the southern and western site boundaries, respectively.

2.4 ANTICIPATED GEOLOGY

The BGS geological map for this area (Sheet 140, Burton upon Trent) illustrates superficial strata of glaciofluvial deposits (sand and gravel) across the eastern section of the site and Till (Diamicton) across the western section. The solid strata is anticipated to consist of the Mercia Mudstone Group (mudstone).

2.5 HYDROGEOLOGY & HYDROLOGY

2.5.1 Hydrogeology

The superficial strata across the majority of the site is classified as a Secondary A Aquifer while the south western corner is classified as a Secondary Undifferentiated Aquifer. The solid strata is classified as a Secondary B Aquifer.

There are no licensed groundwater abstractions within 250m of the site; the site is not located within a groundwater Source Protection Zone (SPZ); no information on groundwater levels is available for the site.

2.5.2 Hydrology

The nearest surface water feature to the site is a Tertiary River located approximately 280m to the south east. A Secondary River is located approximately 320m to the south west.

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

2.6 COAL FIELDS

The site is located in an area where historical coal mining activities could pose a potential risk to ground stability however the Coal Authority website shows:

- No mine entries are identified within 2km of the site.
- The site is not located within a development high risk area.
- There are no coal outcrops identified within 2km of the site.
- The site is not located within an area where surface coal mining (past or present) has occurred.
- The site is not located within an area considered to be at risk from past shallow coal mine workings.
- The site is not located within an area considered to be at risk from probable shallow coal mine workings.

2.7 MINERAL RESOURCES

There are no operational or historical mineral operations within 500m of the site.

2.8 POTENTIALLY CONTAMINATIVE LAND USES

Environmental search data supplied by Environmental Data Ltd (Appendix C) states that:

- The site is not located within 500 metres of a landfill site.
- There are no waste treatment facilities located within 500m of the site.
- There are no discharge consents within 500m of the site.
- There are no hazardous substance or IPC consents located within 500m of the site.
- There are no fuel sites located within 250m of the site.

As there are no industry profiles for open fields, a farm or an orchard, soil samples will be analysed for a general screening suite including the following chemical contaminants of concern:

Metals, speciated PAH's, asbestos, inorganics, phenols, pH and organic matter.

2.9 ASBESTOS

No Asbestos containing materials were observed on site or on neighbouring sites.

2.10 ACCESS

Access to the site is gained from Burton Road to the immediate east.

2.11 RADON GAS ASSESSMENT

The site has been assessed following the guidelines in "Radon: guidance on protective measures for new dwellings" (BRE 211 1999).

The site is not within an area recorded to require basic or full Radon precautions, as shown by a statistical analysis of Radon in houses by the National Radiological Protection Board (Annex A BRE211).

The Radon Atlas of England and Wales published by the National Radiological Protection board in November 2002 (NRPB-W26), indicates that the site has less than 1% of houses exceeding the Action level for Radon.

3.0 PHASE I CONCEPTUAL MODEL

3.1 SOURCE-PATHWAY-RECEPTOR

The conceptual model for the site considers the development proposal for a residential end use (residential with plant uptake model) and the preceding information.

The site's previous uses include a field, a farm and an orchard. Potential contaminative sources are therefore considered to be limited with respect to the risk posed to identified receptors.

There are no landfill sites within 500m of the site. Limited made ground is anticipated at the site.

Potential contaminants of concern for the end user are considered to include Heavy Metals and Polycyclic Aromatic Hydrocarbons (PAHs).

Potential 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 potentially contaminated vegetables and soil attached to vegetables; inhalation of soil vapours and ground gas.

The primary human health receptors are the end users of the site i.e. future residential occupiers.

For the controlled waters environment the primary receptor are the underlying Secondary A, B and undifferentiated Aquifers.

Potential contaminants of concern for controlled waters include Heavy Metals and Polycyclic Aromatic Hydrocarbons (PAHs).

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

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

Figure 3.1: Conceptual Site Model

HUMAN HEALTH			
SOURCE	PATHWAY	RECEPTOR	SOLUTION
Potentially contaminated made ground from historical site use (residential property). Potential contaminants of concern include Heavy Metals and PAHs.	Direct contact (dermal) with potentially contaminated soil and dust; ingestion of potentially contaminated soil attached to vegetables and inhalation of potentially contaminated soil dust.	Construction Workers	Basic PPE for all workers (overalls, gloves, dust mask if required) and wash facilities/personal hygiene
			Phase II Assessment recommended.
	Inhalation of soil vapours and ground gas (Carbon Dioxide, Methane).	End Users (residents)	Low risk – no source identified.
	Leaching into water supply pipes	Water Supply/End Users	Standard HDPE pipes potentially suitable.
CONTROLLED WATERS			
Potentially contaminated made ground from historical site use (residential property). Potential contaminants of concern include Heavy Metals and PAHs.	Leaching and vertical migration through the vadose zone to the saturated zone	Secondary A, B & Undifferentiated Aquifers	Low risk.

4.0 PHASE II FIELDWORK

4.1 INTRODUCTION

The Phase II intrusive investigation was undertaken on 27th January 2016 under the supervision of a suitably qualified Ivy House Environmental engineer and in general accordance with the Code of practice for Site Investigations BS5930: 1999+A2:2010.

The Phase II investigation incorporated the following:

- The excavation of 7 No trial pits (TP1-TP7) to a maximum depth of 3.00mbgl.
- The analysis of 4 No samples for a standard screening suite (metals/PAHs/asbestos).
- The analysis of 2 No samples for geotechnical design criteria including Plasticity Index (PI), Water Soluble Sulphate and pH.

The exploratory hole location plan is included in Appendix A and the trial pit logs are contained in Appendix D.

4.2 RATIONALE

The Phase II 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 access restrictions, the development proposal and health and safety issues, the rationale behind the location of each exploratory hole is detailed in table 4.1 below:

Table 4.1: Phase II Rationale

Hole ID	Location
TP1 –TP7	General grid

4.3 LABORATORY ANALYSIS & TESTING

Selected soil samples were analysed at specialist environmental and geotechnical laboratories or by field monitoring equipment as detailed in the following sections.

4.3.1 Chemical Analysis

A total of 4 samples of topsoil were sent for analysis at a UKAS/MCERTS accredited laboratory. The scheduled parameters are detailed in table 4.2. The chemical analysis results are contained in Appendix E.

Table 4.2: Soil Analysis

Sample ID	Depth (mbgl)	Strata	Suite
TP1	0.20	Topsoil	metals/PAH's/asbestos
TP3	0.10	Topsoil	metals/PAH's/asbestos
TP5	0.10	Topsoil	metals/PAH's/asbestos
TP7	0.10	Topsoil	metals/PAH's/asbestos

As controlled waters receptors were not considered by the Phase 1 conceptual model to be at risk, solid samples were not scheduled for leachate analysis.

4.3.2 Geotechnical Testing

Two samples of the natural cohesive materials were sent to the laboratory for plasticity testing. The geotechnical analysis results are contained in Appendix F.

4.3.3 Gas Monitoring and Sampling

As the Phase 1 conceptual model concluded that there are no potentially significant sources of carbon dioxide and methane within 500m of the site, gas monitoring installations and a monitoring programme were not included within the scope of works for the Phase 2 assessment.

5.0 GROUND CONDITIONS

The intrusive investigation has revealed that topsoil and limited made ground across the site overlies superficial deposits of Till, which are in turn underlain by solid strata of the Mercia Mudstone Group. The site specific observations are detailed in the following sections.

5.1 TOPSOIL & MADE GROUND

Topsoil has been recorded across to a maximum depth of 0.60mbgl.

Made ground materials have been recorded within TP4 to a depth of 0.80mbgl. The made ground materials generally consisted of topsoil overlying brown silty sand with fragments of concrete, quartzite and flint.

5.2 SUPERFICIAL STRATA

Superficial strata consisting of Till has been recorded within all of the exploratory holes to a maximum depth of 3.00mbgl. These materials generally consisted of firm to stiff red brown silty sandy clay and clayey silty sand.

5.3 SOLID STRATA

Solid strata of the Mercia Mudstone Group have been recorded within trial pits TP2 and TP3 to a maximum depth of 3.00mbgl. These materials generally consisted of stiff to hard red brown silty clay.

5.4 FIELD OBSERVATIONS

No olfactory or visual evidence of contamination was noted within any of the exploratory holes.

5.5 GROUNDWATER

No groundwater strikes were encountered within any of the exploratory holes during the investigation works.

No long term monitoring of the groundwater levels has been carried out as part of this investigation.

NOTE: Groundwater levels are subject to seasonal variations and may be effected by local surface water levels.

6.0 GEOTECHNICAL ASSESSMENT

The geotechnical assessment considers the development proposal for the site for thirteen residential properties with associated private gardens, car parking and access road.

6.1 GEOTECHNICAL LABORATORY TESTING

Plasticity index values of 21% and 27% have been recorded at the site indicating soils of intermediate plasticity. These materials are considered to be of intermediate shrinkage/swelling potential.

Water Soluble Sulphate and pH analysis revealed results of <10-13g/ISO4 and 5.6-7.4 respectively.

6.2 FOUNDATION DESIGN & FLOOR SLABS

It is considered that trench fill foundations will be suitable for the proposed development. The site is underlain by intermediate shrinkage potential clays therefore it is recommended that a minimum foundation depth of 0.90m be adopted.

As a guide, for a 0.60 metre wide strip/trench fill footings, bearing on the natural deposits at a minimum depth of 0.90m below ground level a minimum allowable net bearing pressure of 110kN/m² is considered appropriate (equivalent to 66kN/m run for strip/trench footings).

Should both natural cohesive soils and natural granular soils be encountered within the foundation excavations it is recommended that nominal mesh reinforcement be incorporated into the footings in order to minimise against the potential for differential settlement.

Consideration should be given to the presence of trees and shrubs across the site. Additional deepening of the foundations over and above the depths outlined above may locally be necessary for plots within the influencing distance of trees/shrubs (whether to be removed or to remain) in accordance with NHBC Standards Chapter 4.2:2014 'Building near trees' where these are to be founded on cohesive soils.

The natural soils at the site would be suitable for the use of ground bearing floor slabs however where plots are within influencing distance of trees and hedges the soils within the eastern section of the site may be susceptible to heave therefore suspended ground floor slabs may be required.

6.3 EXCAVATION & GROUNDWATER CONDITIONS

Significant water strikes were not encountered during the investigation and it is considered that significant dewatering of excavations will not be required and any localised occurrences can be dealt with by basic sump pumping.

Excavations on site should be easily achieved using conventional plant. The trial pit excavations were generally stable and the use of trench support should not be required for short term excavations; limited support may be required for long term excavations. It should be noted that excavations opened up during periods of inclement weather will be more prone to sudden collapse.

6.4 BURIED CONCRETE

Based on the recorded water soluble sulphate concentrations and pH values the site it is considered appropriate to adopt a Basic Design Sulphate Class of DS-1, together with an Aggressive Chemical Environment of Concrete (ACEC) of AC-1s. Static groundwater conditions have been assumed for this determination.

7.0 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 which do not have a published SGV, to provide a competent Tier 1 Assessment. The GAC and methodology are contained in Appendix E.

7.1 HUMAN HEALTH

An assessment of the analysis results for metals and inorganics contained in Appendix E illustrates that none of the reported chemical contaminants of concern exceed their respective GAC for a residential with plant uptake end use.

Inspection of the topsoil tested for the presence of asbestos containing material did not identify any fibres.

8.0 PHASE II CONCEPTUAL SITE MODEL

The conceptual model for the site considers the development proposal for a residential end use (residential with plant uptake model) and the preceding information.

The sites previous uses, including open fields, a farm or an orchard, are considered in respect to potential contaminative sources.

There are no landfill sites or potential sources of ground gas proximal to the site and, as such, a significant source of ground gas has not been identified.

Chemical analysis and assessment of the topsoil samples illustrate that there is no risk to human health.

Pathways for the end user of the site include the ingestion of soil and vegetables, direct contact (dermal) with soil and soil dust; ingestion and inhalation of soil dust; inhalation of ground gas.

The primary receptors for the site are the residents of the completed development.

The site is not considered to pose a risk to human health.

As there is no source of contamination on site, the site is not considered to pose a significant risk to controlled waters.

The development of the conceptual model is illustrated on Figure 8.1.

Figure 8.1: Phase II Conceptual Site Model

HUMAN HEALTH			
SOURCE	PATHWAY	RECEPTOR	SOLUTION
No source.	Ingestion of soil and vegetables, direct contact (dermal) with soil and soil dust; ingestion and inhalation of soil dust.	Construction Workers.	Basic PPE for all workers (overalls, gloves, dust mask if required) and wash facilities/personal hygiene.
		End Users (Residents).	Segregation of topsoil recommended prior to the commencement of construction.
	Leaching into water supply pipes.	Water Supply/End Users.	Standard pipes suitable.
CONTROLLED WATERS			
No source.	Leaching and vertical migration through the vadose zone to the saturated zone.	Secondary A, B & Undifferentiated Aquifers.	No risk.

9.0 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 housing with gardens.

9.1 REMEDIATION TO PROTECT END USERS

Remediation to protect the end users is not required.

9.2 REMEDIATION TO PROTECT CONTROLLED WATERS

Remediation to protect the underlying Secondary A, B & Undifferentiated Aquifers is not required.

10.0 RECOMMENDATIONS

Recommendations for further assessment of the site include:

- Should any signs of potential contamination (e.g. ash/made ground) be evident during construction activities, a qualified environmental specialist should be consulted to assess the risk posed to end users and the environment.
- An arboricultural survey is recommended to confirm species, location and height of the trees noted on the site boundaries.

11.0 CONCLUSIONS

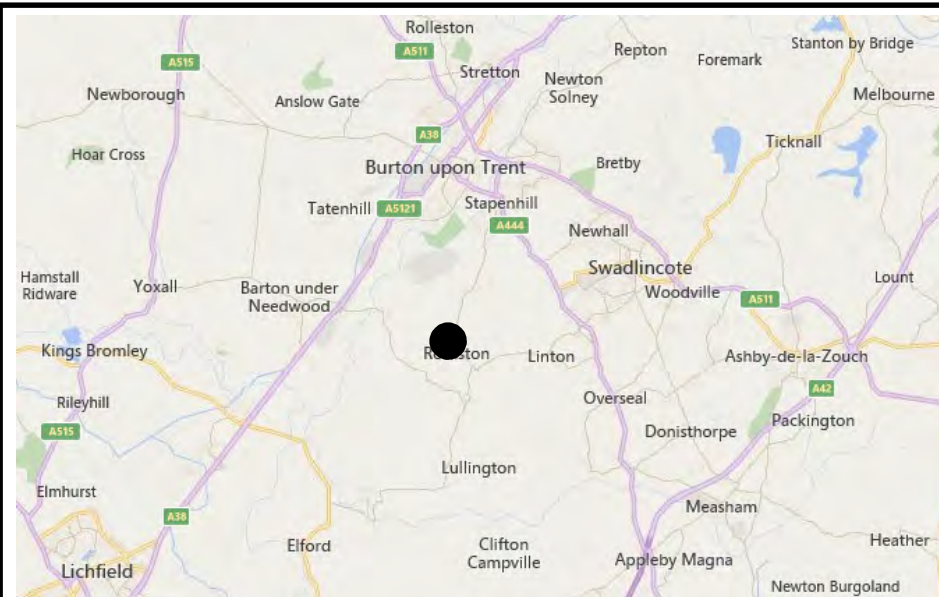
The sites previous uses include open fields, a farm or an orchard therefore potentially contaminative use is limited. The development proposal for the site is for the construction of thirteen residential properties with associated gardens and car parking.

An assessment of ground conditions has concluded that the site does not pose a risk to human health or controlled waters receptors.

The investigation has shown that traditional trench fill foundations will be suitable for the proposed houses however locally deepening may be required due to the presence of trees along the site boundaries. A tree survey will be required to further inform plot specific designs.

APPENDIX A





KEY:

● Approximate Site Location



Scotland Farm, Ockbrook, Derby, DE72 3RX
rps@ivyhouseenv.co.uk • www.ivyhouseenv.co.uk • 01332 820 488

TITLE:

Site Location Plan

PROJECT:

Burton Road, Rosliston, Derbyshire

PROJECT No:

IV.97.15

DATE:

02/2016

SCALE:

NTS

DRAWN:

VS

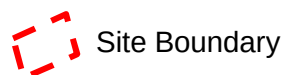
DWG No:

Figure 1

DO NOT SCALE



KEY:



Site Boundary

DO NOT SCALE



Scotland Farm, Ockbrook, Derby, DE72 3RX
rps@ivyhouseenv.co.uk • www.ivyhouseenv.co.uk • 01332 820 488

TITLE:

Site Layout

PROJECT:

Burton Road, Rosliston, Derbyshire

PROJECT No:

IV.97.15

DATE:

02/2016

SCALE:

NTS

DRAWN:

VS

DWG No:

Figure 2



KEY:

DO NOT SCALE



IVY HOUSE
environmental

Scotland Farm, Ockbrook, Derby, DE72 3RX
rps@ivyhouseenv.co.uk • www.ivyhouseenv.co.uk • 01332 820 488

TITLE: Development Proposal		
PROJECT: Burton Road, Rosliston, Derbyshire		
PROJECT No: IV.97.15	DATE: 02/2016	
SCALE: NTS	DRAWN: VS	DWG No: Figure 3



KEY:



Trial Pit Location

DO NOT SCALE



Scotland Farm, Ockbrook, Derby, DE72 3RX
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TITLE:

Exploratory Hole Location Plan

PROJECT:

Burton Road, Rosliston, Derbyshire

PROJECT No:

IV.97.15

DATE:

02/2016

SCALE:

NTS

DRAWN:

VS

DWG No:

Figure 4

APPENDIX B



Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1883

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1883
Revised 1883
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1883
Revised 1883
Edition N/A
Copyright N/A
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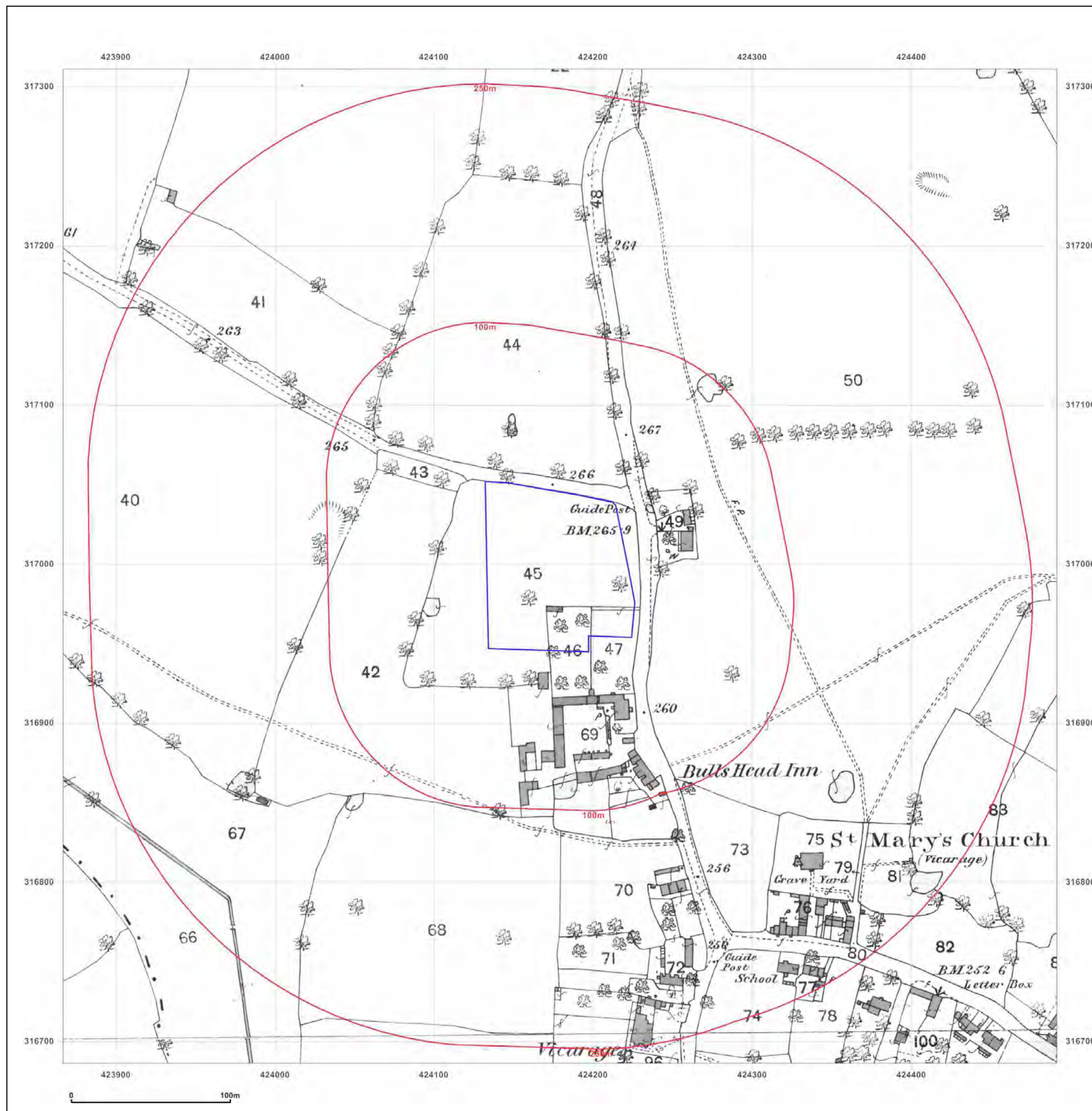


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Production date: 15 January 2016

To view map legend click here [Legend](#)



Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1901

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1901
 Revised 1901
 Edition N/A
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Surveyed 1901
 Revised 1901
 Edition N/A
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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1923

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1923
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1923
Revised 1923
Edition N/A
Copyright N/A
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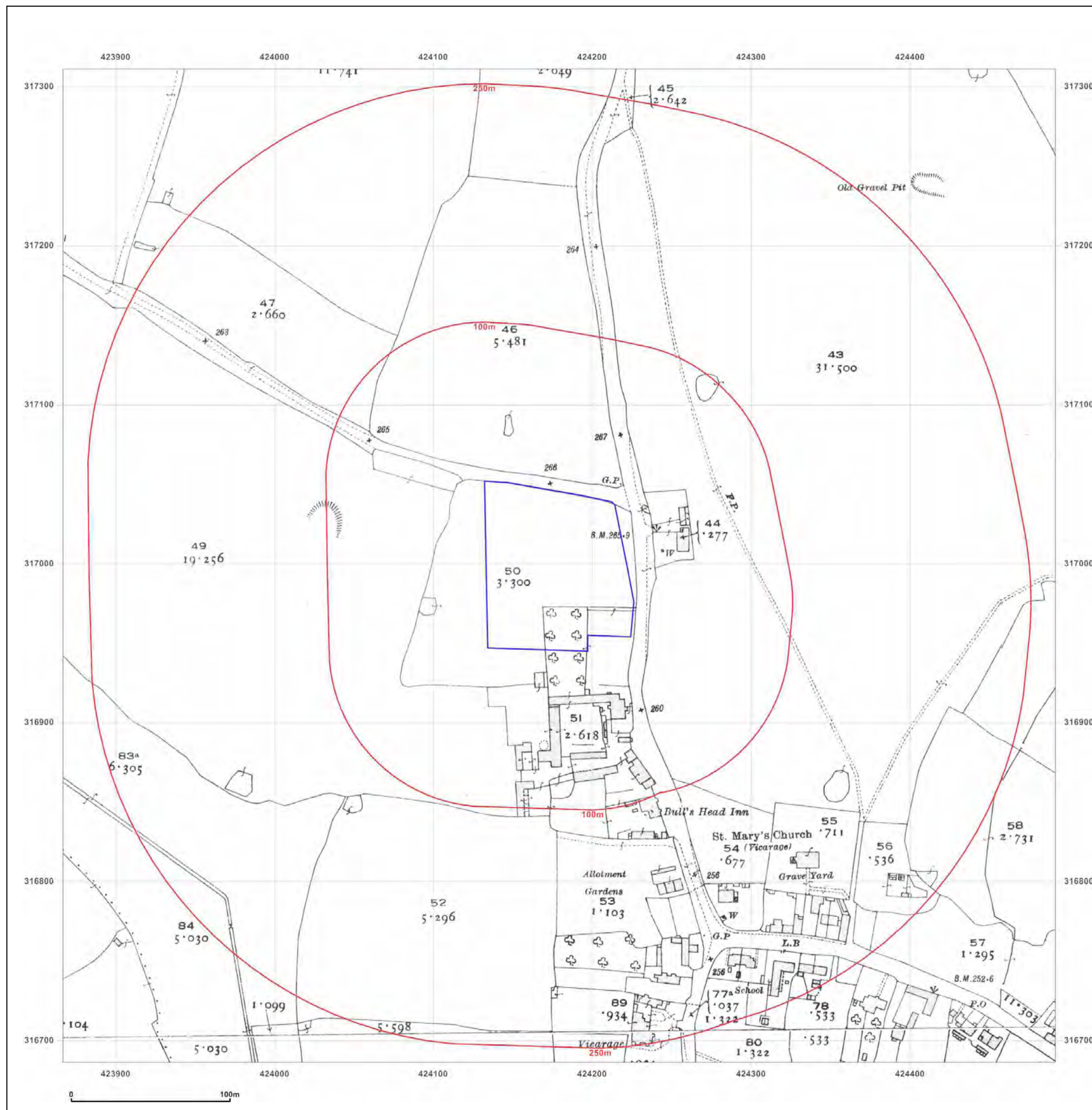


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Production date: 15 January 2016

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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 1962-1963

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised 1963
Edition N/A
Copyright 1963
Levelled 1957

Surveyed 1962
Revised 1962
Edition N/A
Copyright 1963
Levelled 1957

Surveyed N/A
Revised 1963
Edition N/A
Copyright 1963
Levelled 1957

Surveyed 1962
Revised 1962
Edition N/A
Copyright 1963
Levelled 1957



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Site Details:

Rosliston

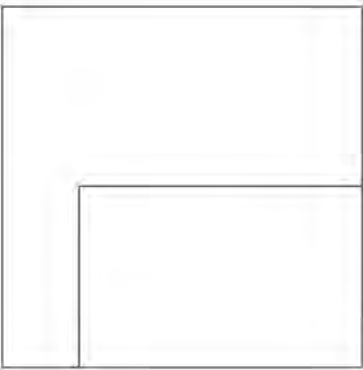
Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 1979

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1979
Revised 1979
Edition N/A
Copyright 1979
Levelled N/A



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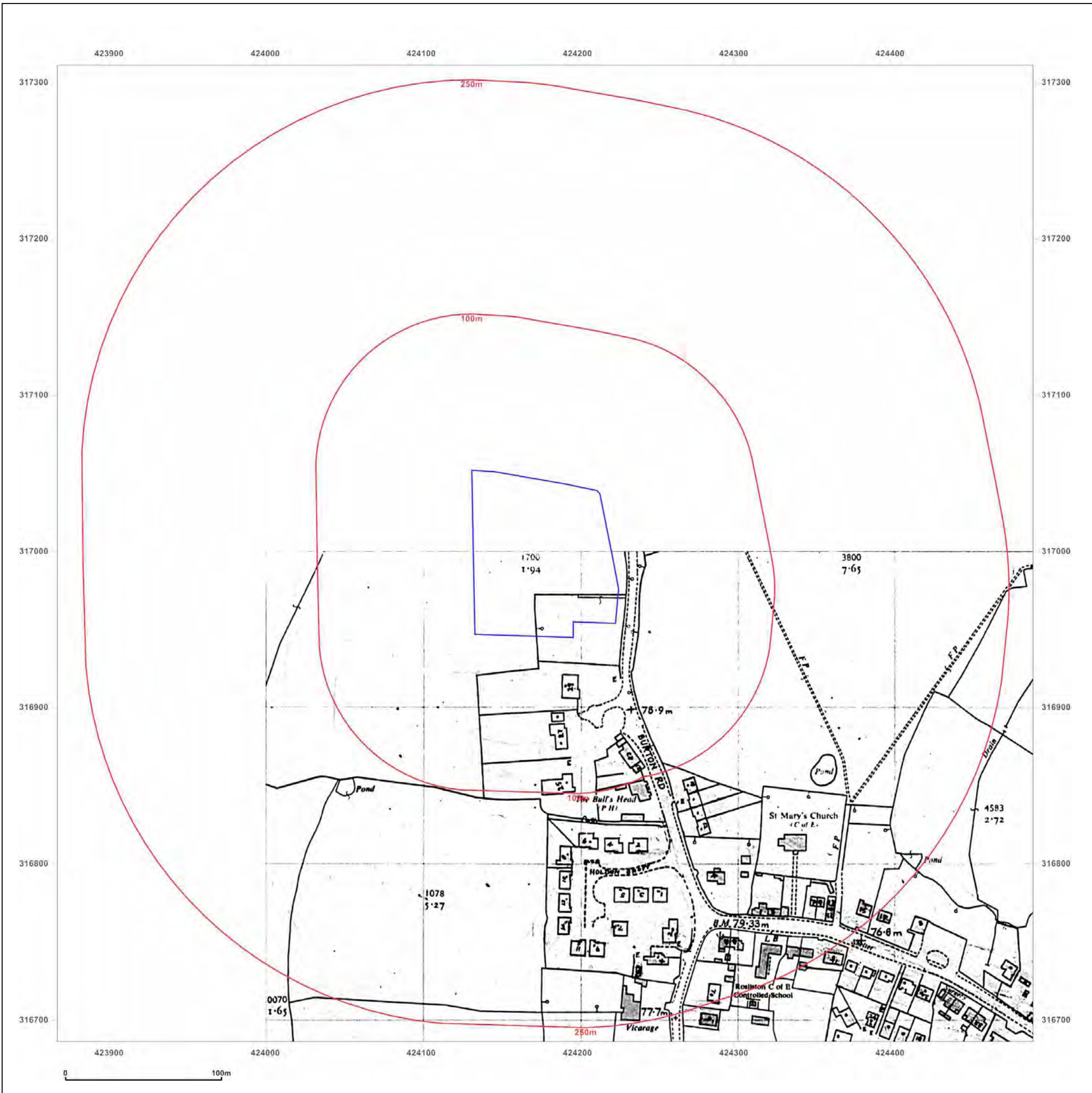


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Site Details:

Rosliston

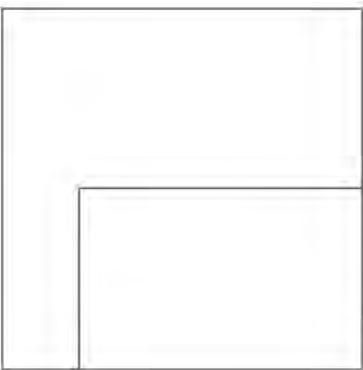
Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 1985

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1957
Revised 1985
Edition N/A
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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 1992-1994

Scale: 1:2,500

Printed at: 1:2,500



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

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

Surveyed 1957
Revised 1992
Edition N/A
Copyright 1992
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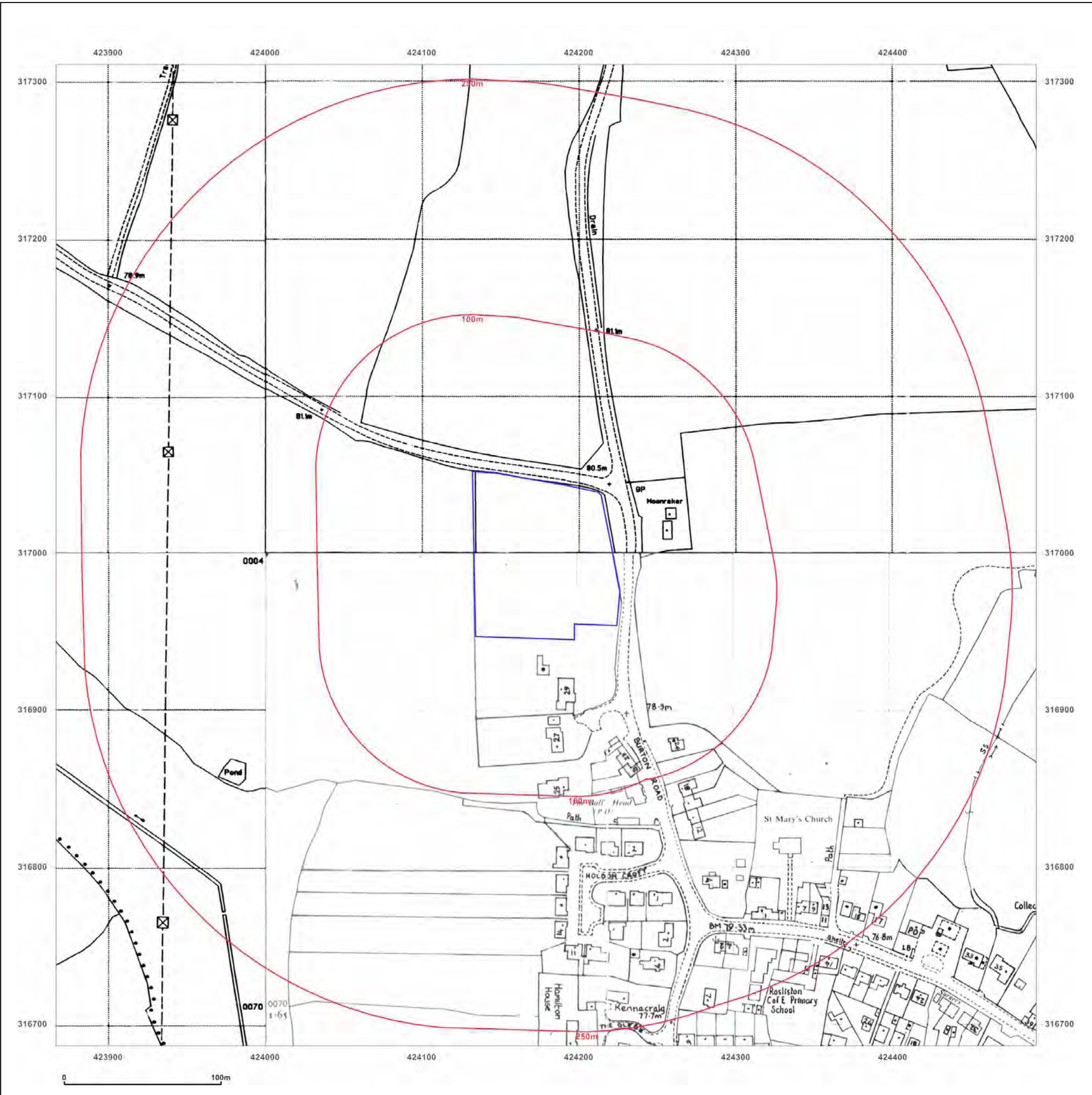


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1882-1884

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1882
 Revised N/A
 Edition 1884
 Copyright N/A
 Levelled N/A

Surveyed 1882
 Revised 1882
 Edition N/A
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 Levelled N/A

Surveyed 1882
 Revised 1882
 Edition N/A
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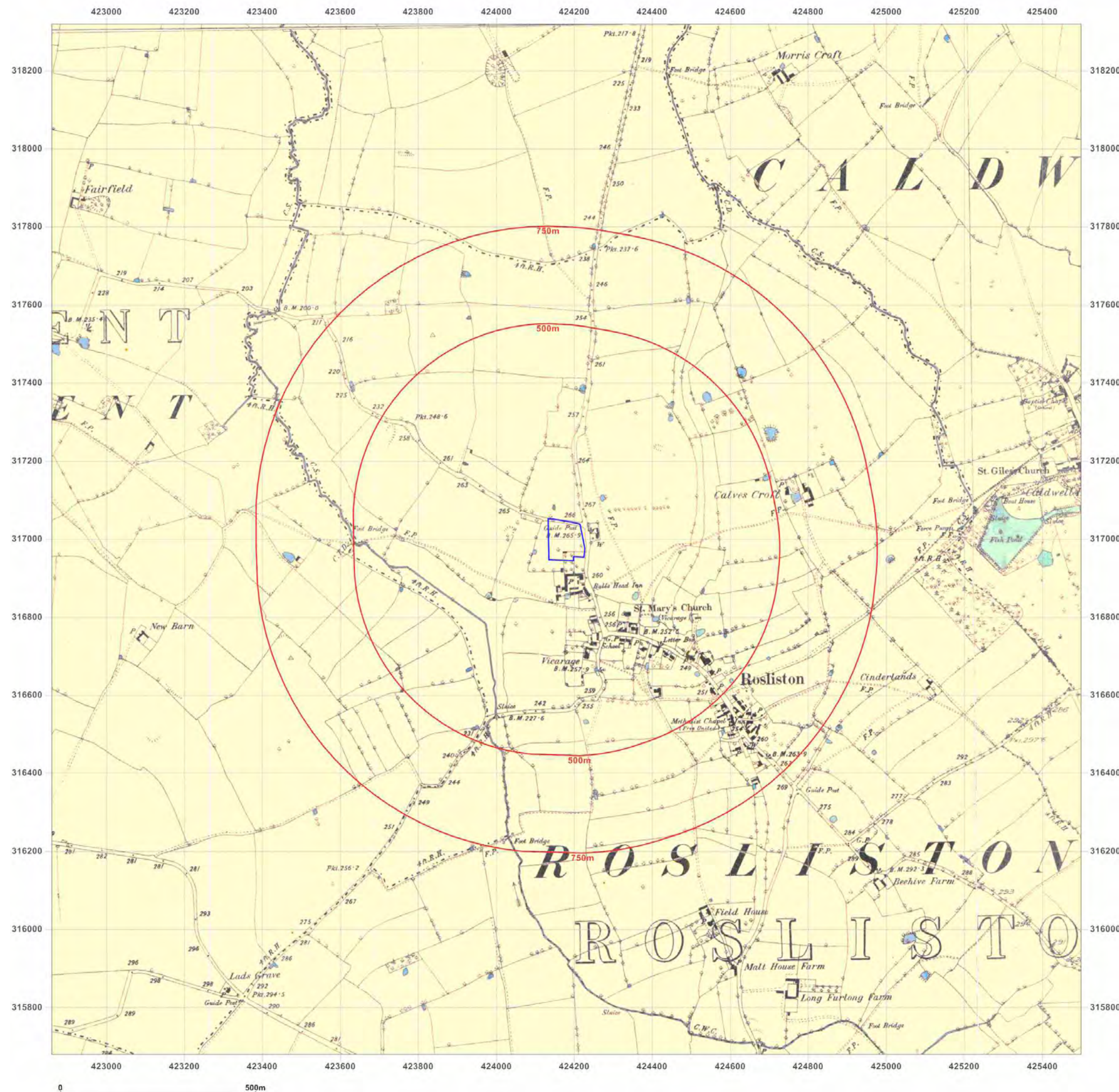


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1900

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Surveyed 1881
Revised 1900
Edition N/A
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Revised N/A
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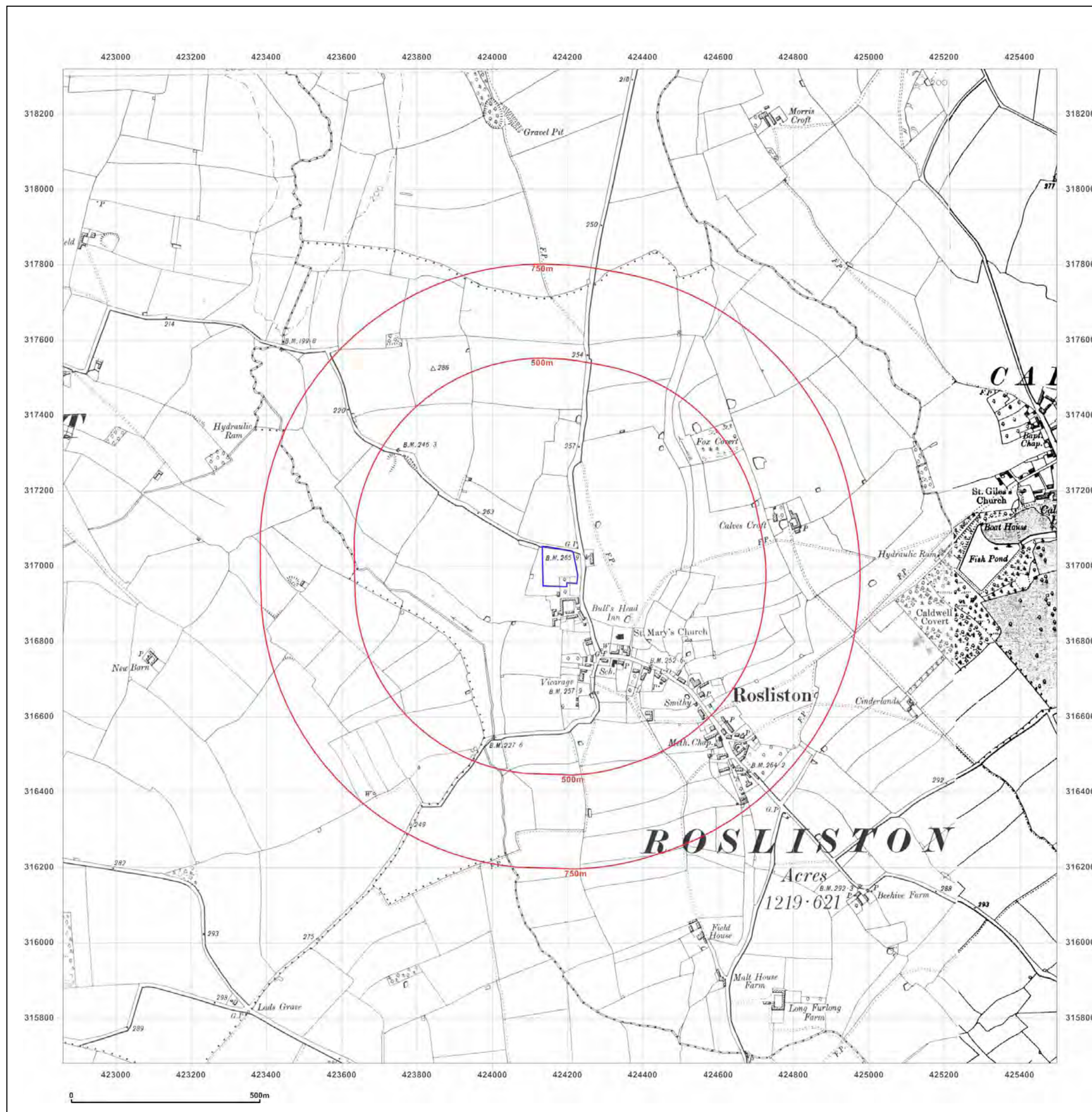


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: County Series

Map date: 1921-1925

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1882
Revised 1921
Edition N/A
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Surveyed 1881
Revised 1921
Edition N/A
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Surveyed N/A
Revised N/A
Edition 1925
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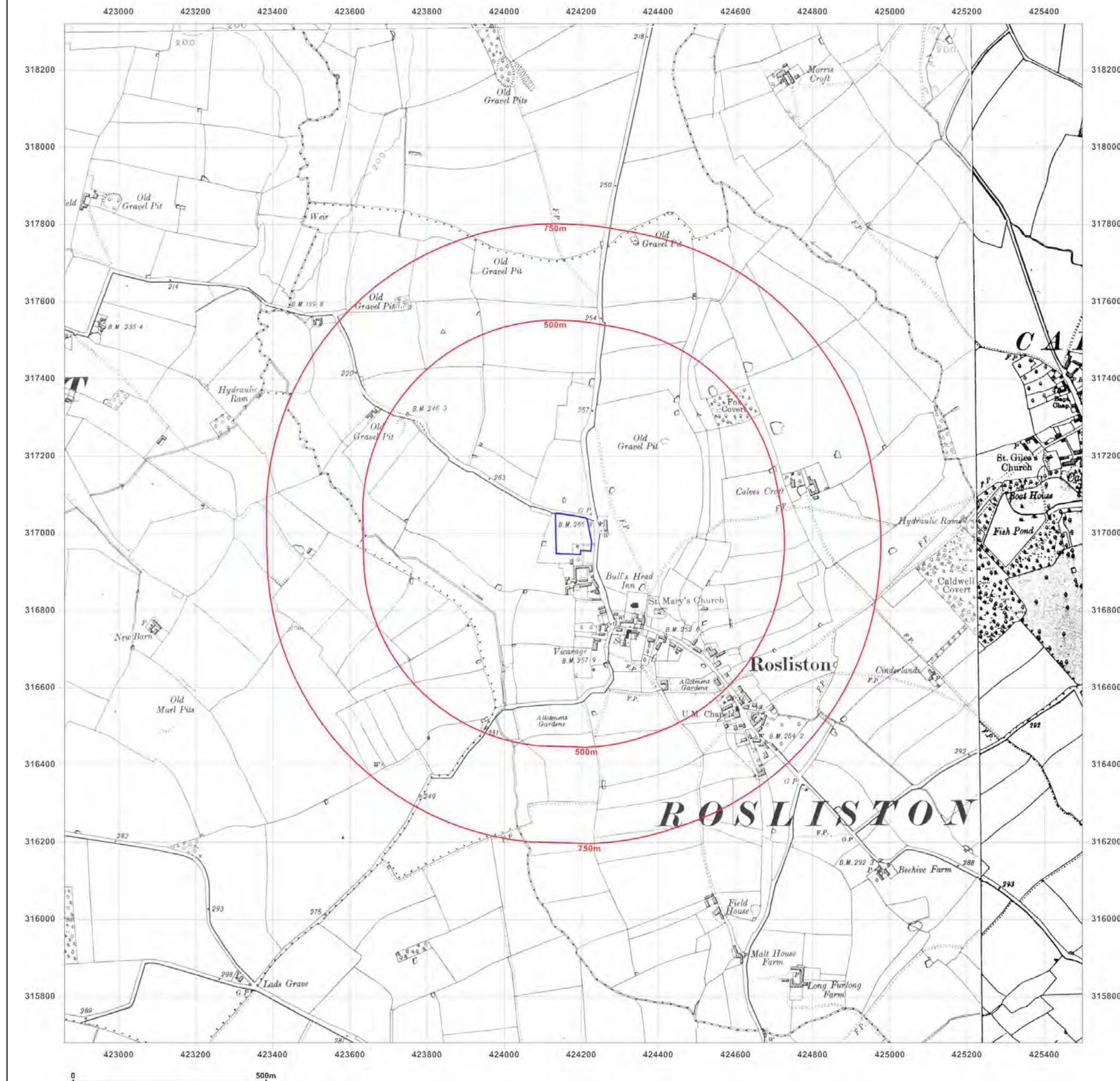


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: Provisional

Map date: 1955

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1954
Edition N/A
Copyright 1955
Levelled N/A



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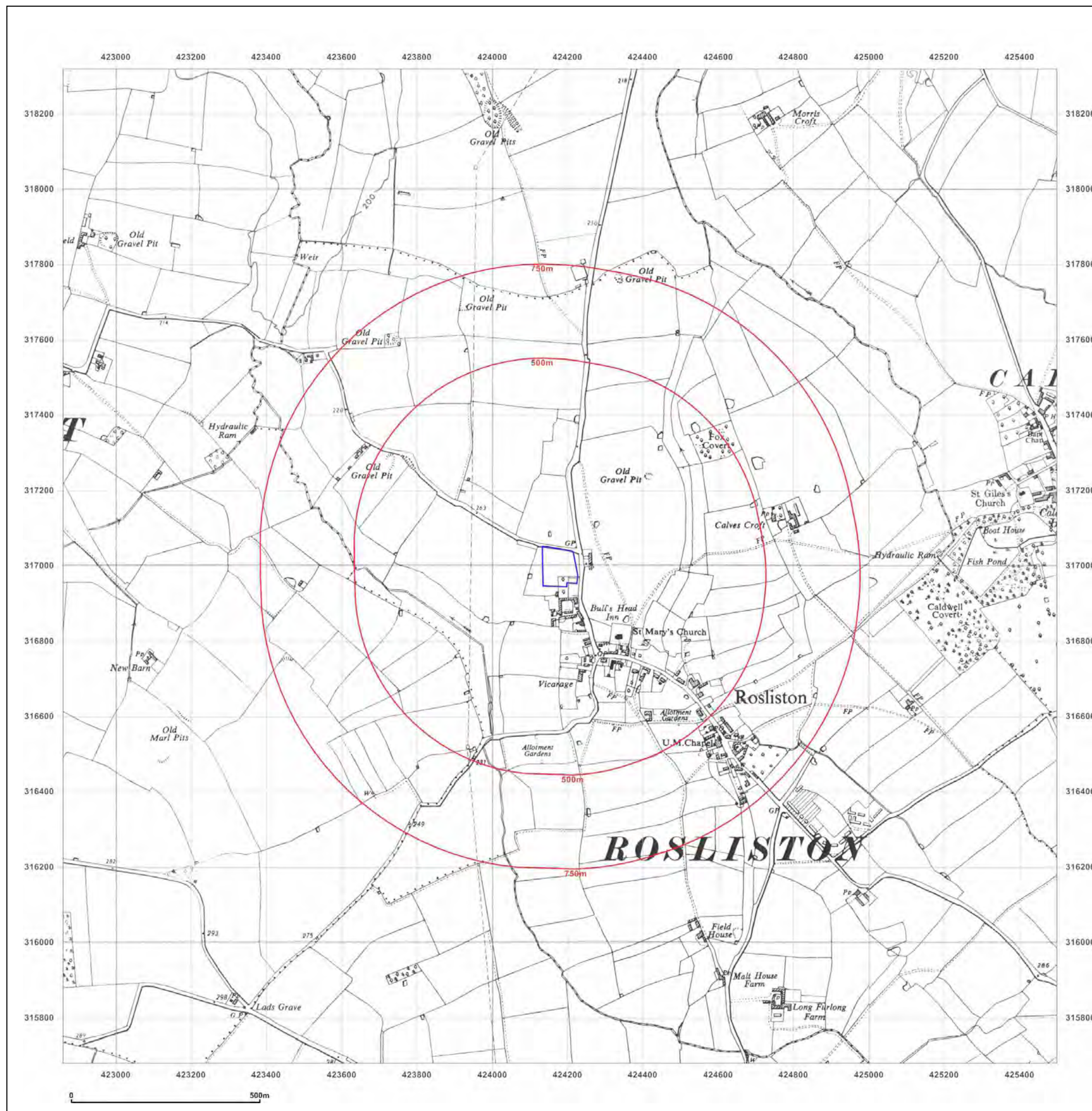


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: Provisional

Map date: 1967-1968

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
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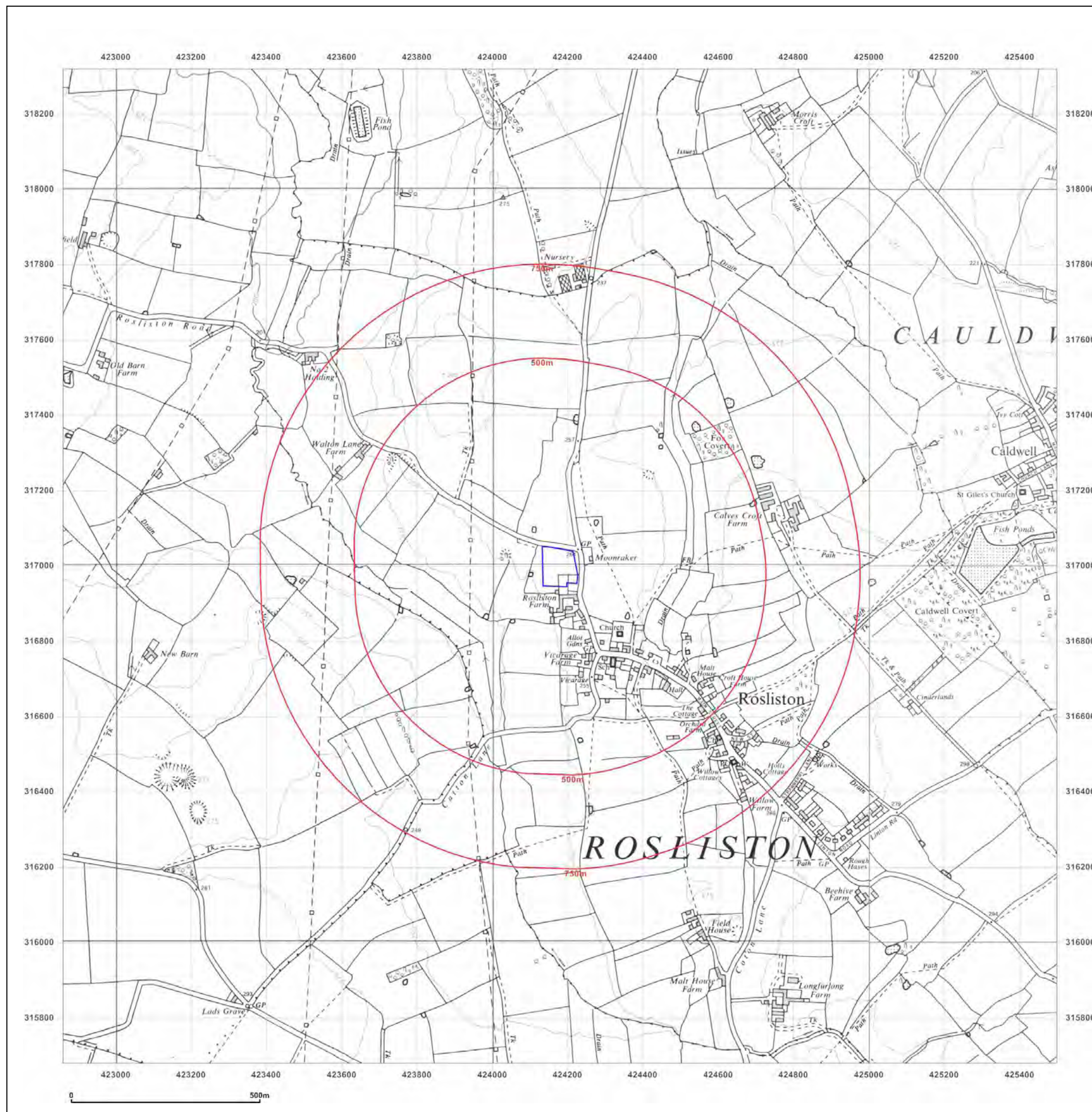


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 1989-1992

Scale: 1:10,000

Printed at: 1:10,000



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 Edition N/A
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Surveyed 1984
 Revised 1989
 Edition N/A
 Copyright N/A
 Levelled N/A



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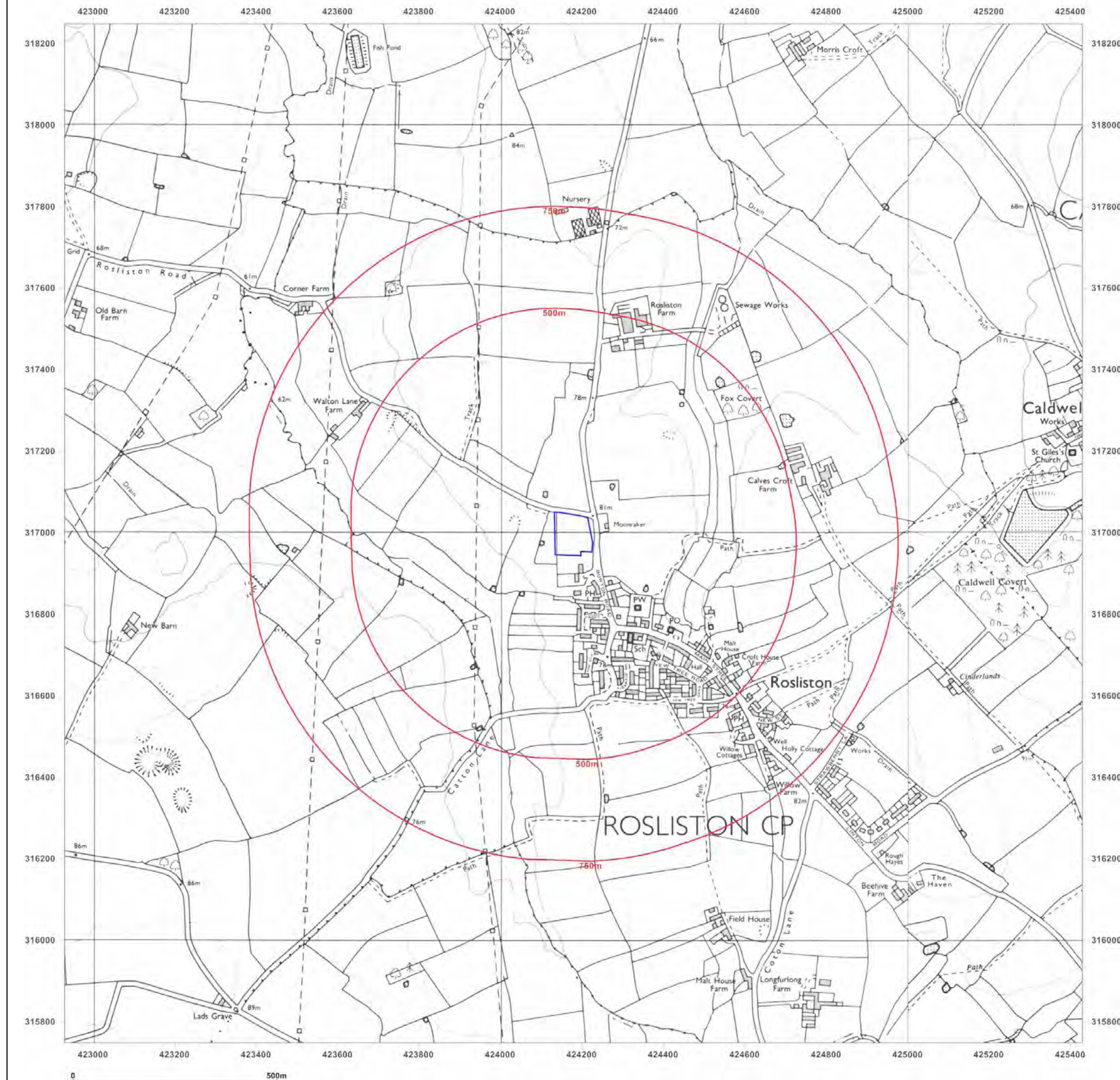


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Production date: 15 January 2016

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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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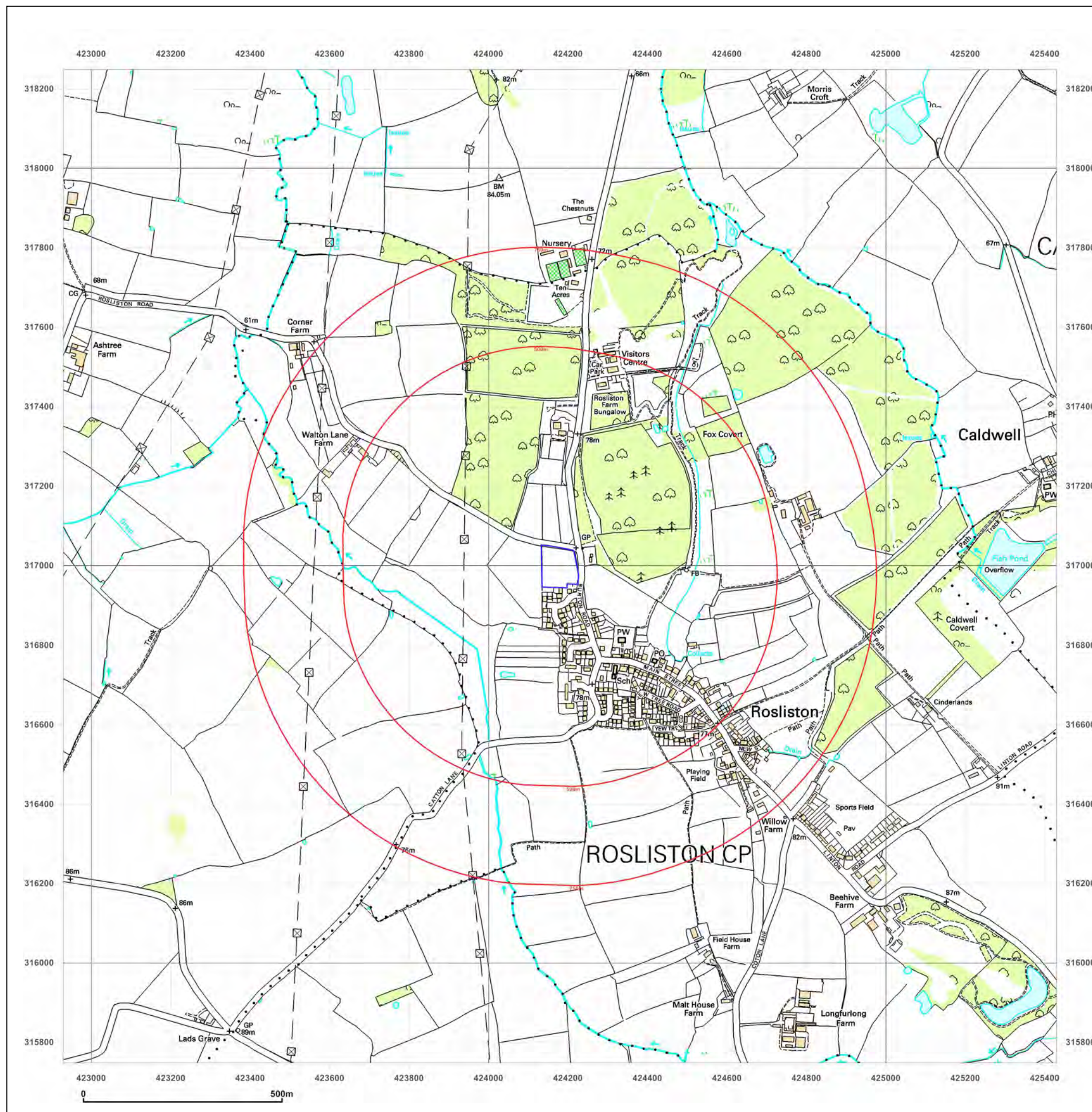


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Site Details:

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Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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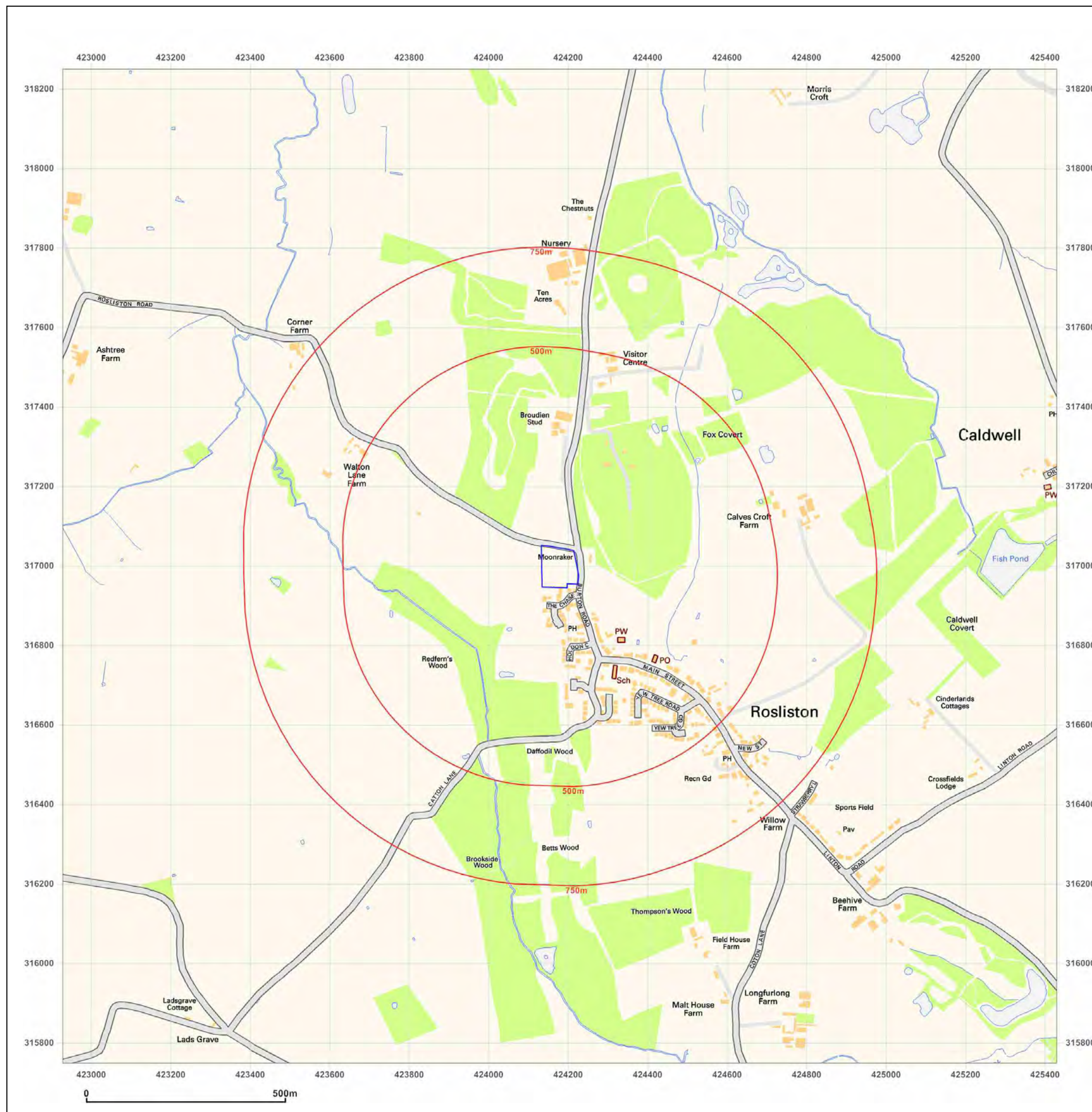


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Site Details:

Rosliston

Client Ref: EMS_341686_459733
Report Ref: EMS-341686_459733
Grid Ref: 424179, 316999

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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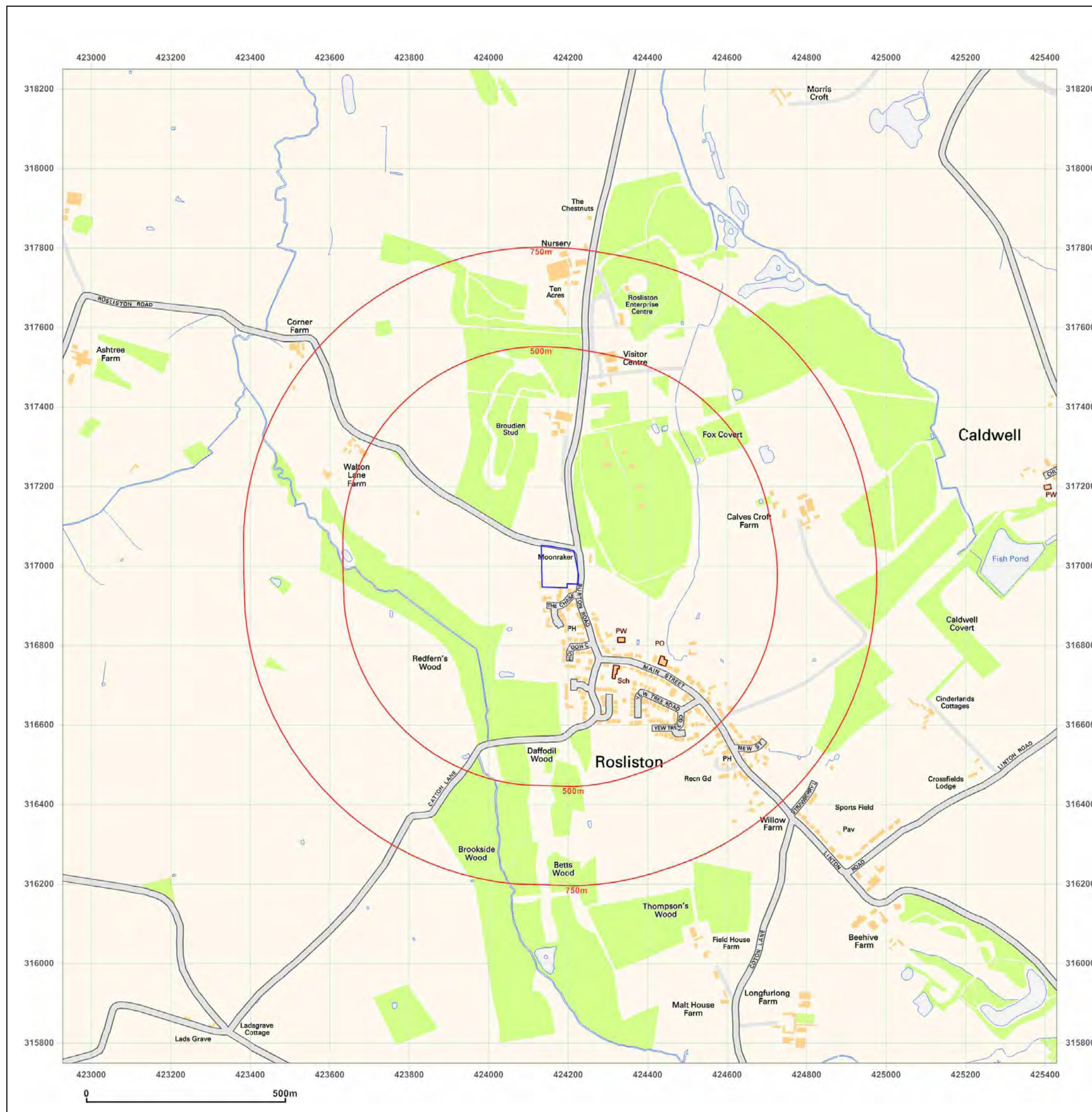


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APPENDIX C





EmapSite

Masdar House,
Eversley, RG27 0RP

Report Reference: EMS-341686_459734

Your Reference: EMS_341686_459734

Report Date 15 Jan 2016

Report Delivery Method: Email - pdf

Groundsure Geoinsight

Address: Rosliston,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Geoinsight

Groundsure Geoinsight

Address: Rosliston,
Date: 15 Jan 2016
Reference: EMS-341686_459734
Client: EmapSite



Aerial Photograph Capture date: 24-Apr-2010
Grid Reference: 424176,316996
Site Size: 0.86ha

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Overview of Findings

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

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

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

Section 1:Geology

1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.4 Radon data	1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

Section 2:Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	3	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	0	0

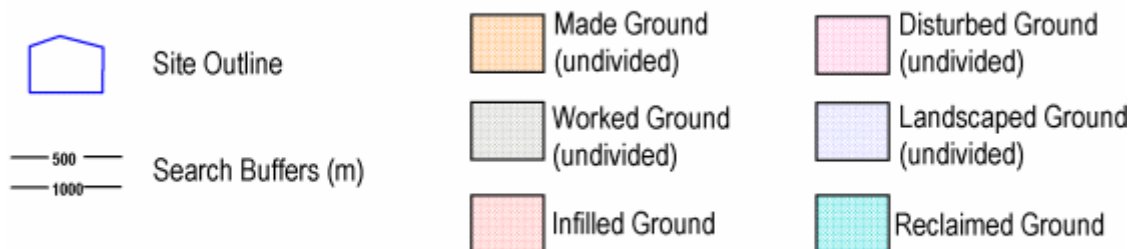
Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	1	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	2	0	2	0	6
3.4 Non-Coal Mining	0	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence	On-site				
4.1 Shrink Swell Clay	Very Low				
4.2 Landslides	Very Low				
4.3 Ground Dissolution of Soluble Rocks	Negligible				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Very Low				
Section 5: Borehole Records	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	0	0	1		
Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	6	0	13		
Section 7: Railways and Tunnels	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
7.3 Historical Railways	0	0	0	Not Searched	
7.4 Active Railways	0	0	0	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

1.1 Artificial Ground Map



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1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:140

Are there any records of Artificial/Made Ground within 500m of the study site boundary? No

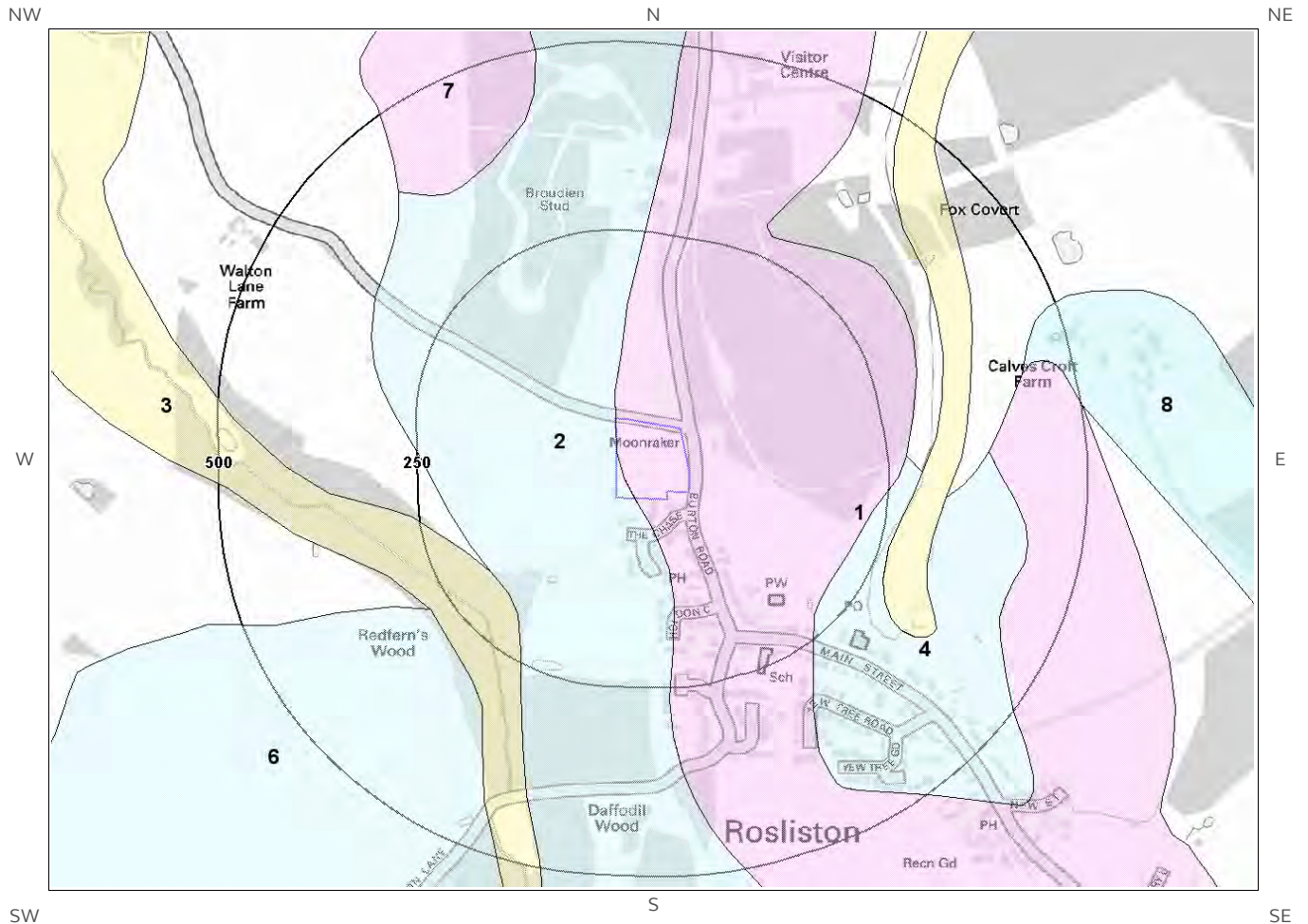
Database searched and no data found.

1.1.2 Permeability of Artificial Ground

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

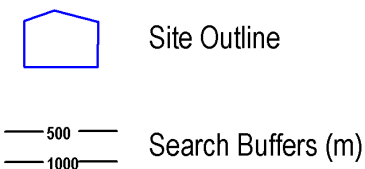
Database searched and no data found.

1.2 Superficial Deposits and Landslips Map



**Superficial Deposits and Landslips
Legend**

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1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	GFDMP	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
2	0.0	On Site	TILMP	TILL, MID PLEISTOCENE	DIAMICTON
3	185.0	SW	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
4	213.0	SE	TILMP	TILL, MID PLEISTOCENE	DIAMICTON
5	261.0	E	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
6	277.0	SW	TILMP	TILL, MID PLEISTOCENE	DIAMICTON
7	364.0	NW	GFDMP	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
8	435.0	E	THT	THRUSSINGTON MEMBER	DIAMICTON

1.2.2 Permeability of Superficial Ground

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

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

1.2.3 Landslip

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

No

Database searched and no data found.

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

1.2.4 Landslip Permeability

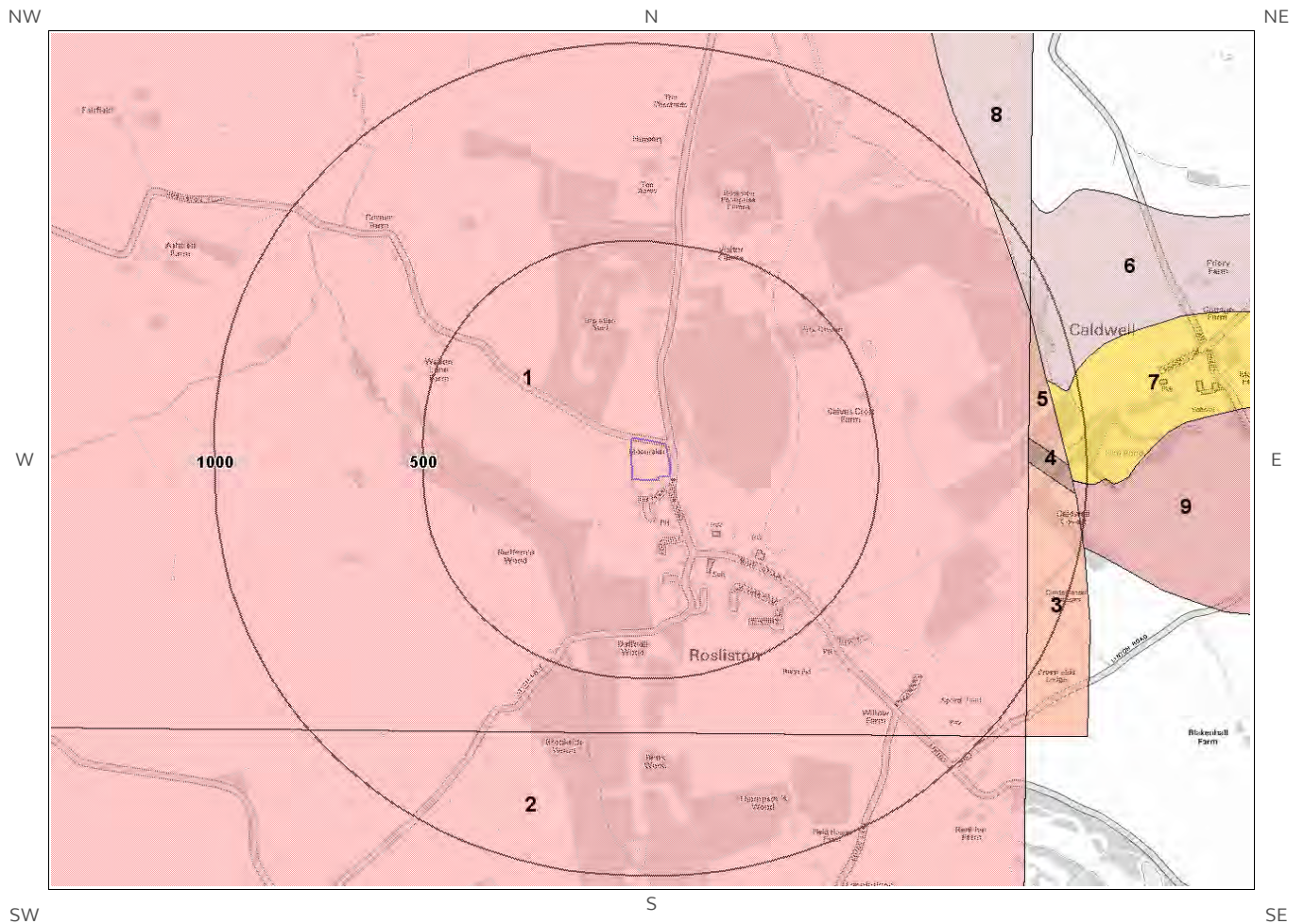
Are there any records relating to permeability of landslips within the study site** boundary?

No

Database searched and no data found.

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

1.3 Bedrock and Faults Map

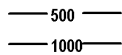


Bedrock and Faults Legend

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Site Outline



Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:140

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian /

1.3.2 Permeability of Bedrock Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

1.3.3 Faults

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

Database searched and no data found.

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

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

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

1.4 Radon Data

1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

1.4.2 Radon Protection

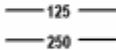
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary

2 Ground Workings Map



Ground Workings Legend

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

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	82.0	W	424036 317031	Unspecified Pit	1968
2A	82.0	W	424036 317031	Unspecified Pit	1992
3A	86.0	W	424032 317021	Unspecified Pit	1882

2.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

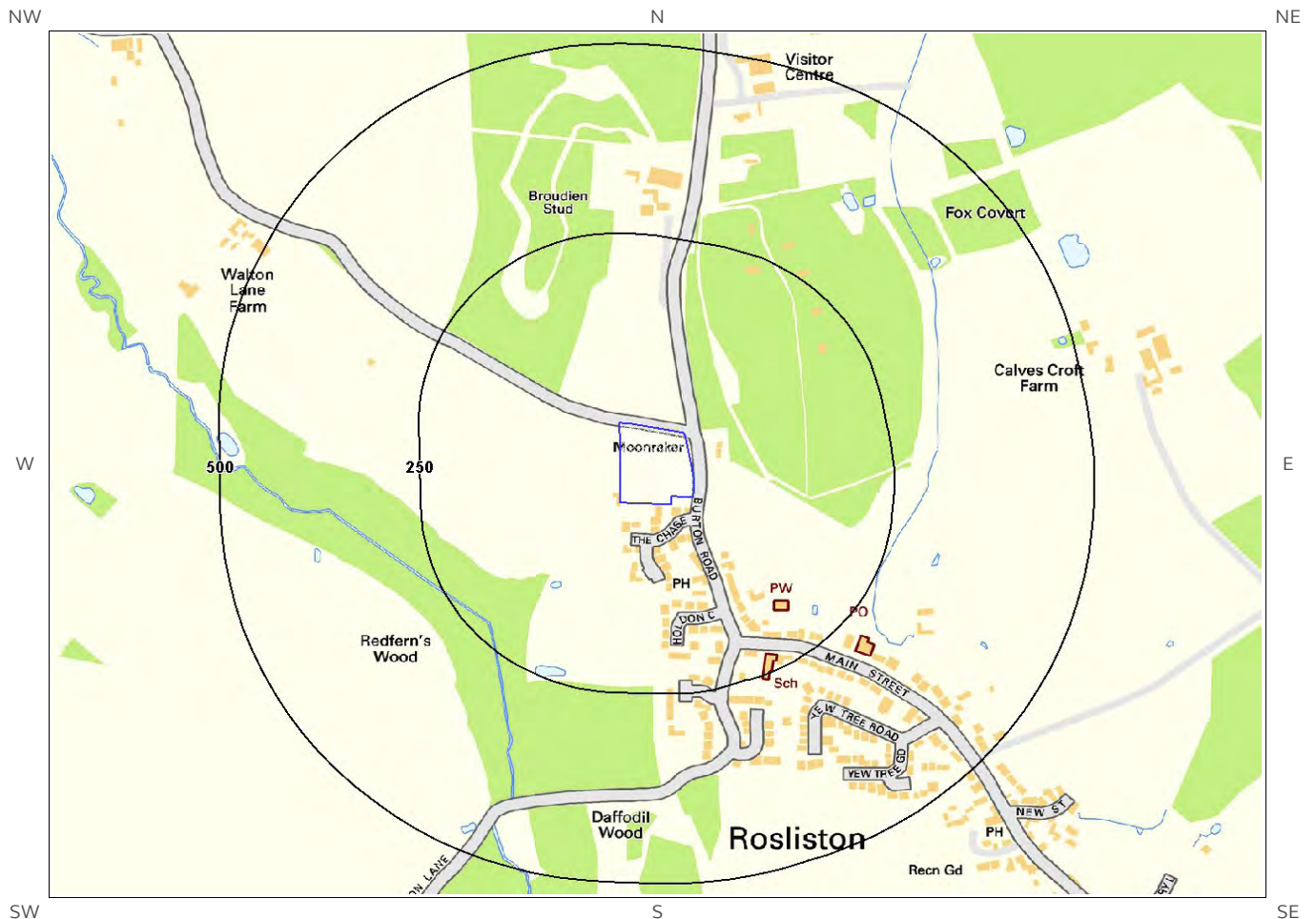
2.3 Current Ground Workings

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

Are there any BGS Current Ground Workings within 1000m of the study site boundary? No

Database searched and no data found.

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

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3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

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

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

Database searched and no data found.

3.2 Coal Mining

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

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

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

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

3.3 Johnson Poole and Bloomer

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

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

The following information provided by JPB is not represented on mapping: In addition to being located inside 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 which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

3.4 Non-Coal Mining

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

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

Database searched and no data found.

3.5 Non-Coal Mining Cavities

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

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

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

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

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

Database searched and no data found.

3.8 Gypsum Extraction

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

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

Database searched and no data found.

3.9 Tin Mining

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

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

Database searched and no data found.

3.10 Clay Mining

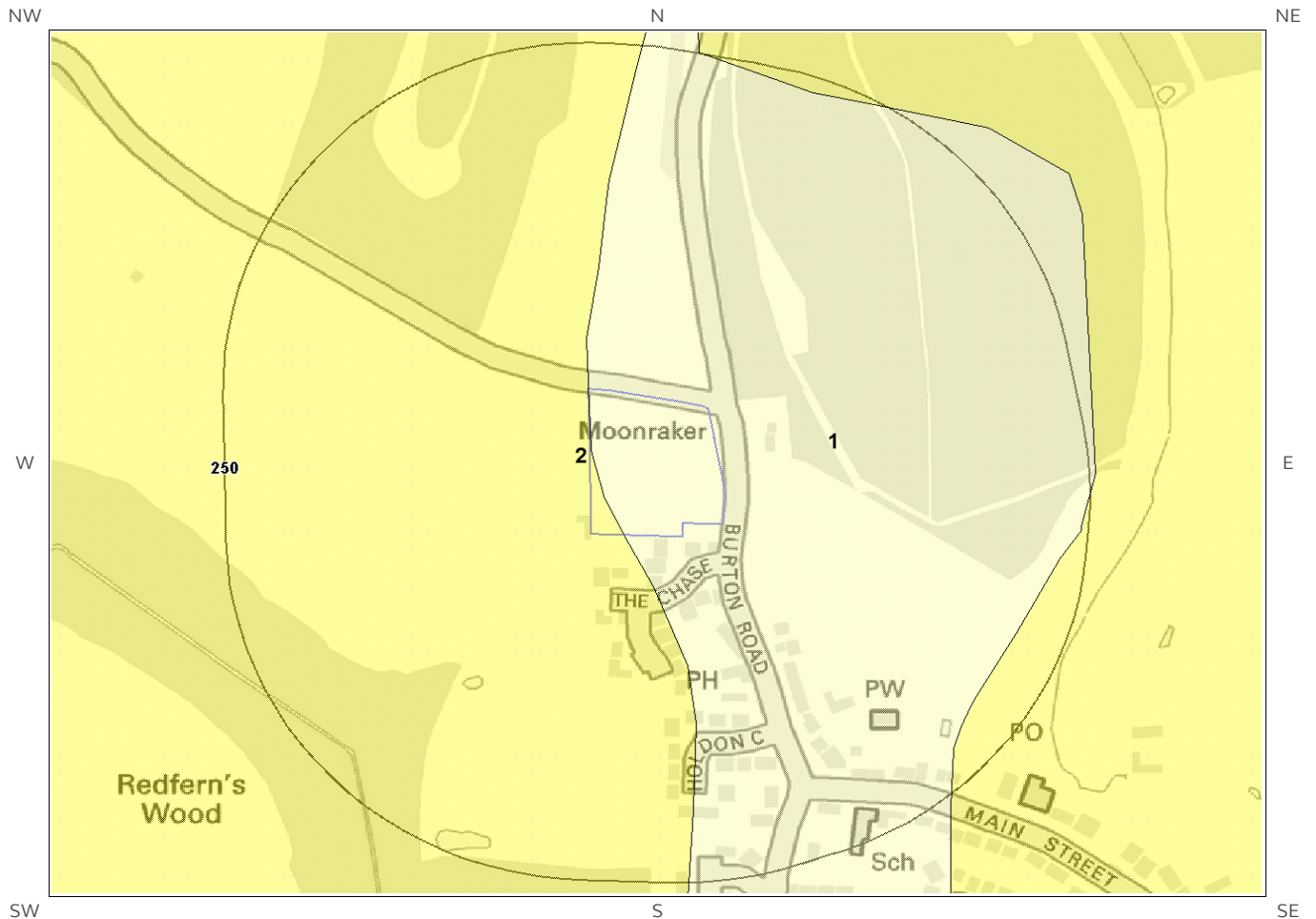
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map

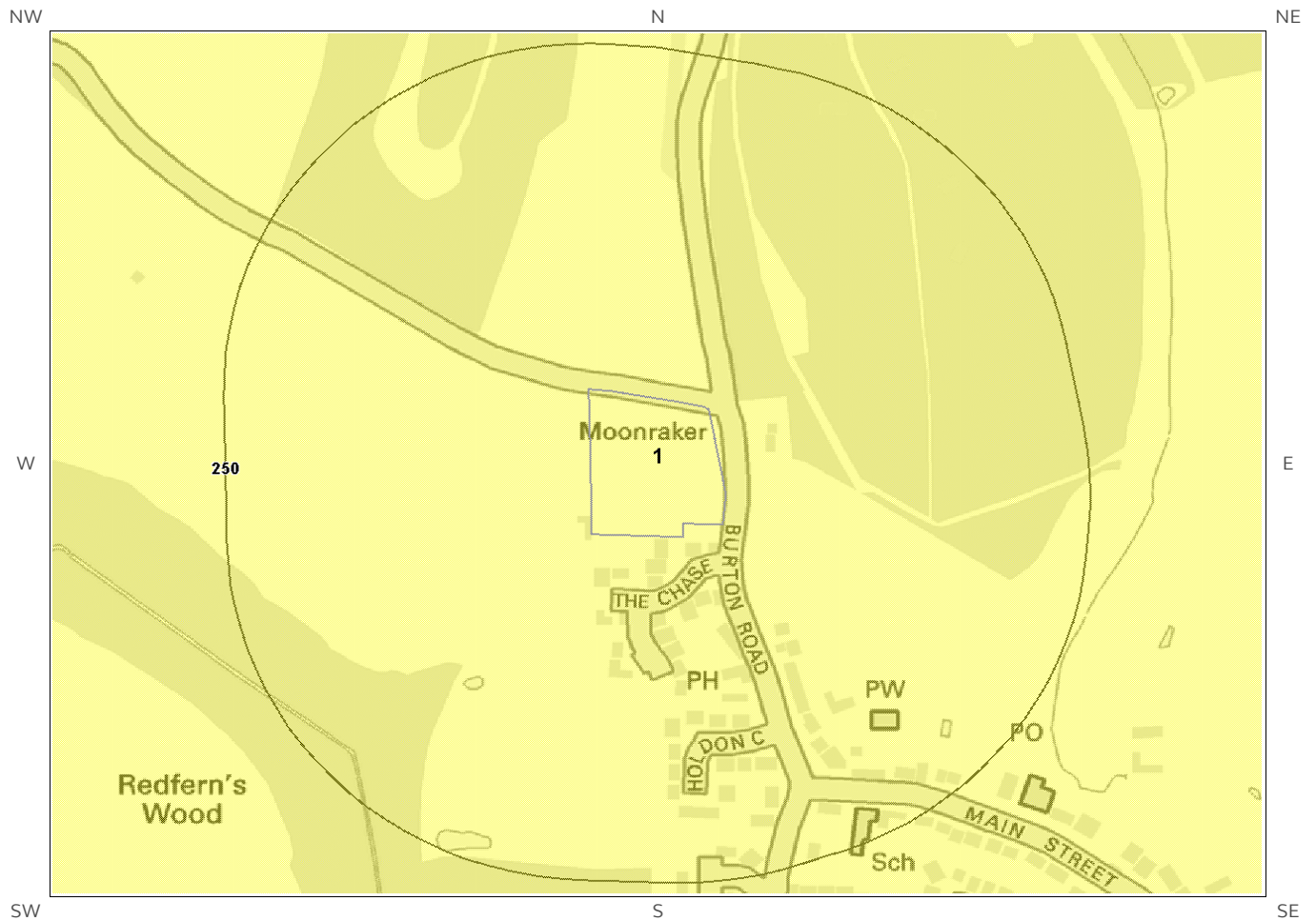


Shrink Swell Clay Legend

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4.2 Landslides Map

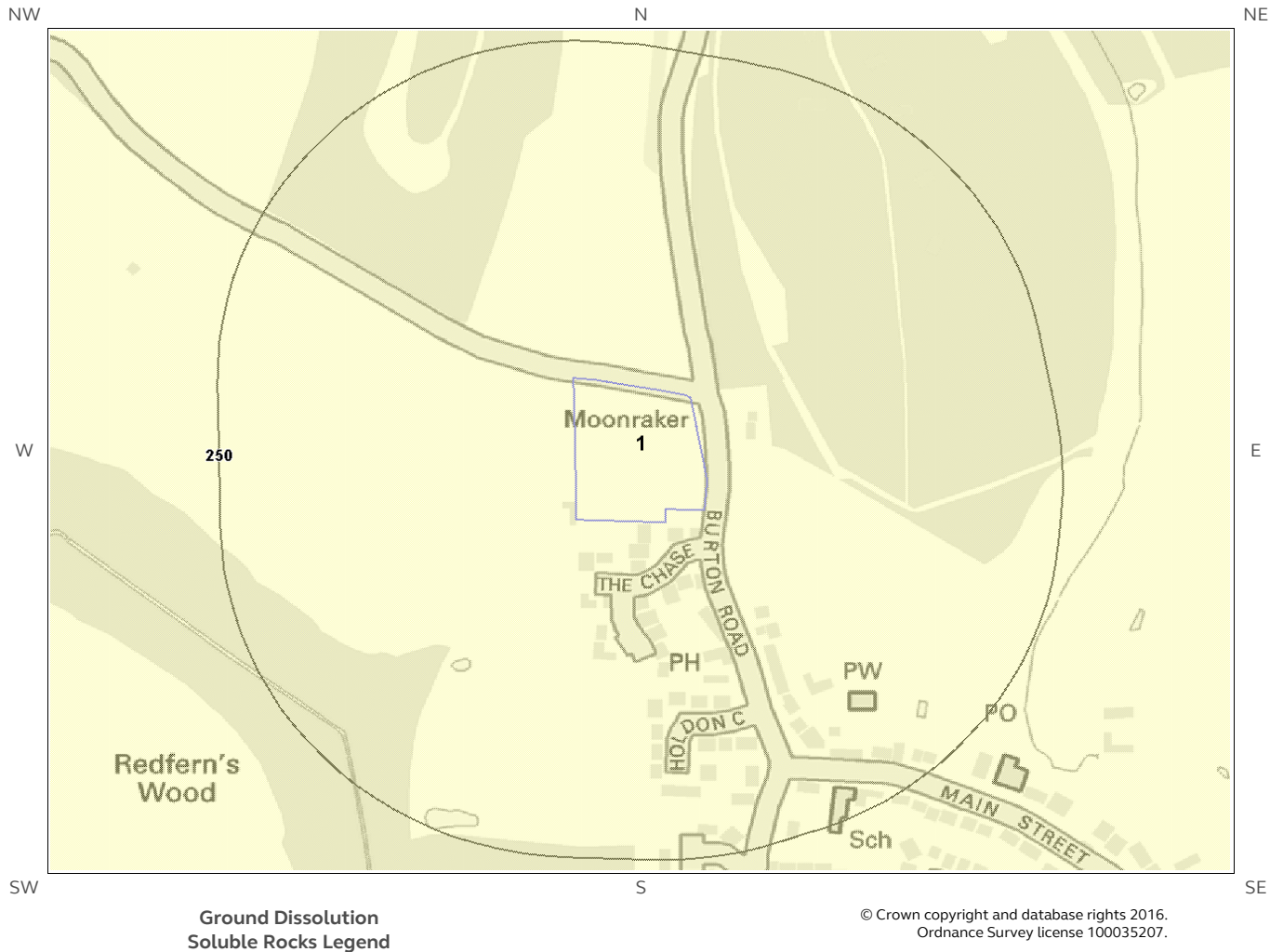


Landslides Legend

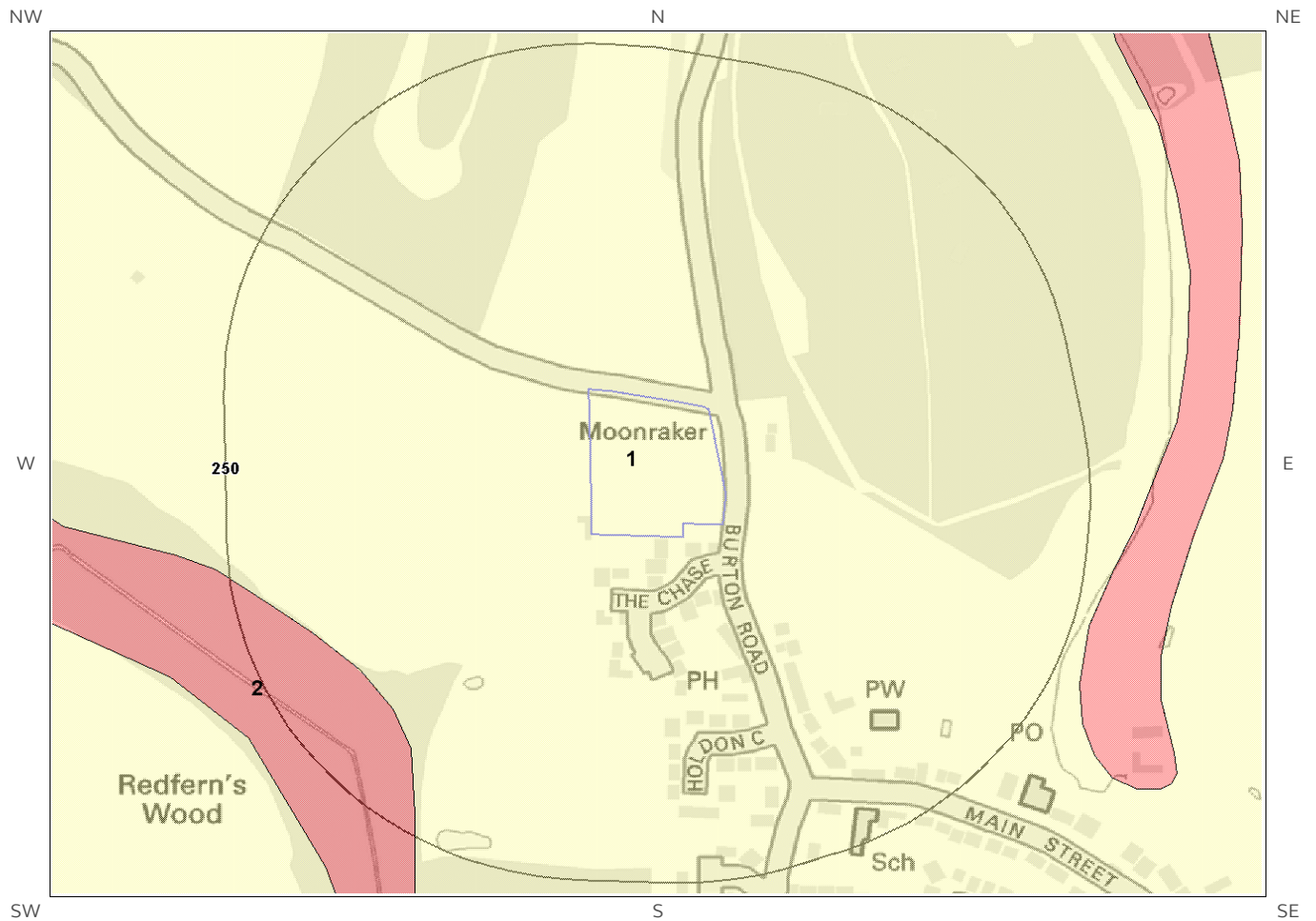
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4.3 Ground Dissolution Soluble Rocks Map



4.4 Compressible Deposits Map

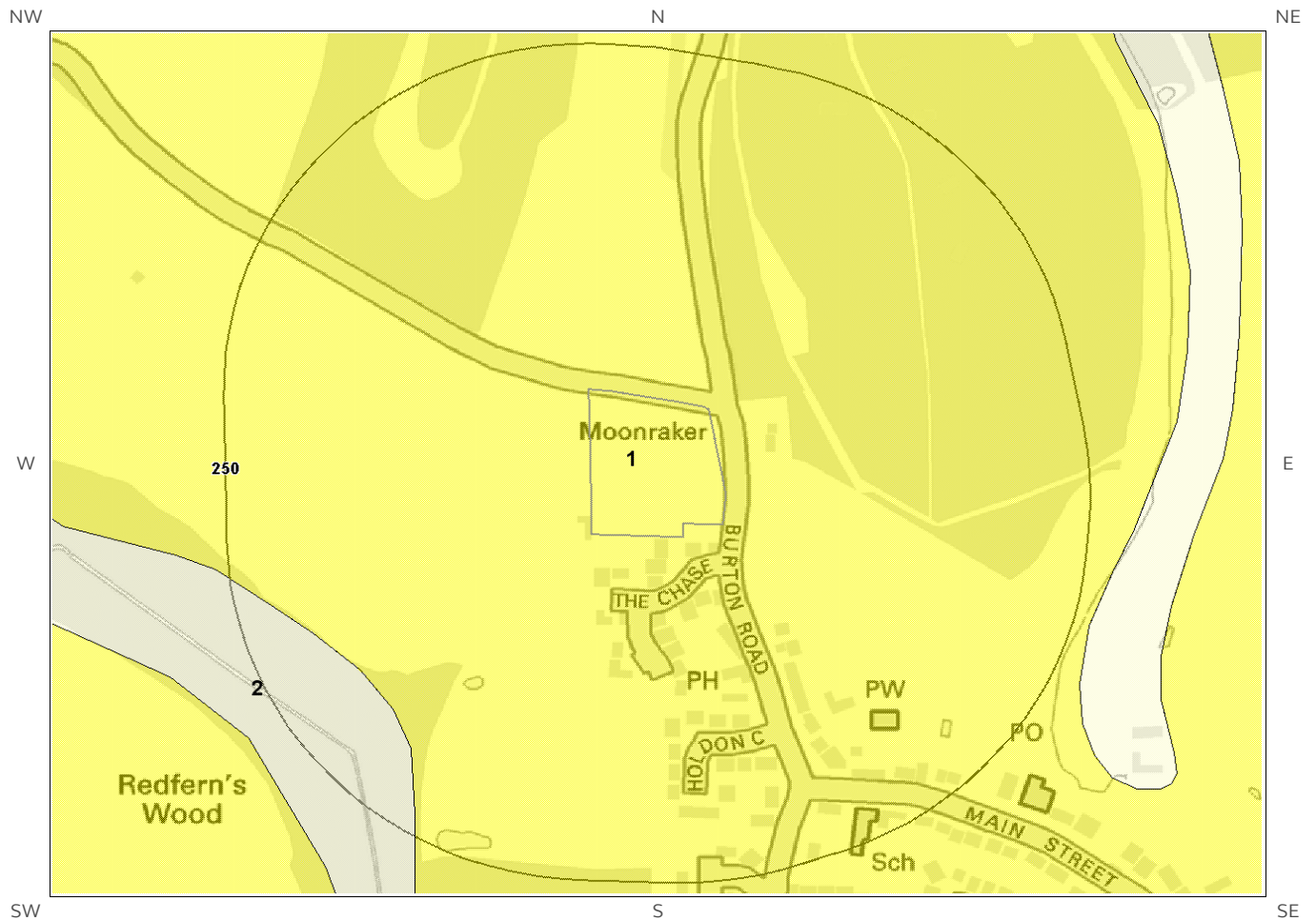


Compressible Deposits Legend

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4.5 Collapsible Deposits Map

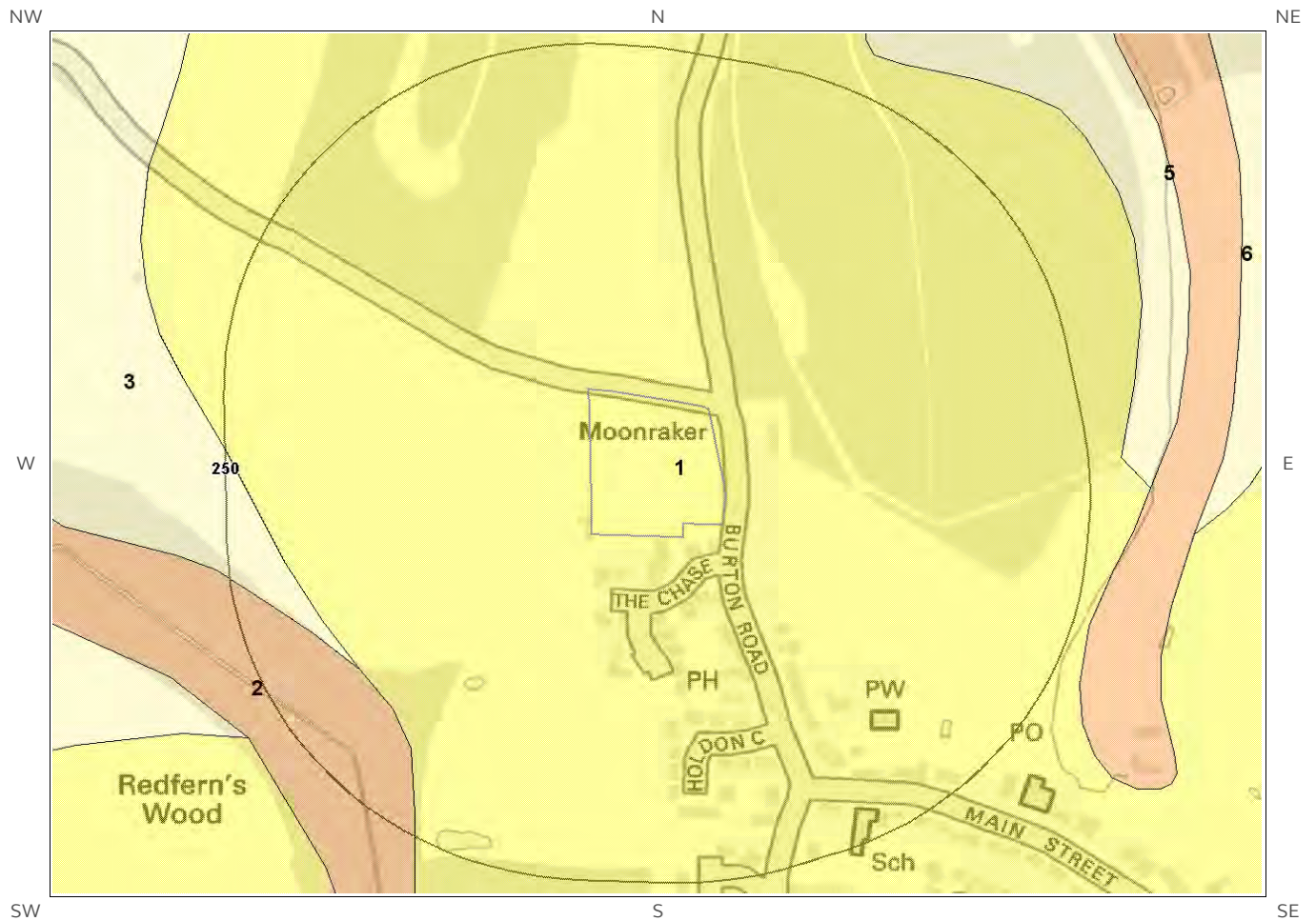


Collapsible Deposits Legend

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4.6 Running Sand Map



Running Sand Legend

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4 Natural Ground Subsidence

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

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

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

4.1 Shrink-Swell Clays

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

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

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

4.3 Ground Dissolution of Soluble Rocks

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

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

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

4.4 Compressible Deposits

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

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

4.5 Collapsible Deposits

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

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

4.6 Running Sands

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

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

5 Borehole Records Map



5 Borehole Records

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

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

1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	166.0	SW	424011 316835	SK21NW21	340.0	BULLS HEAD

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/199771

6 Estimated Background Soil Chemistry

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

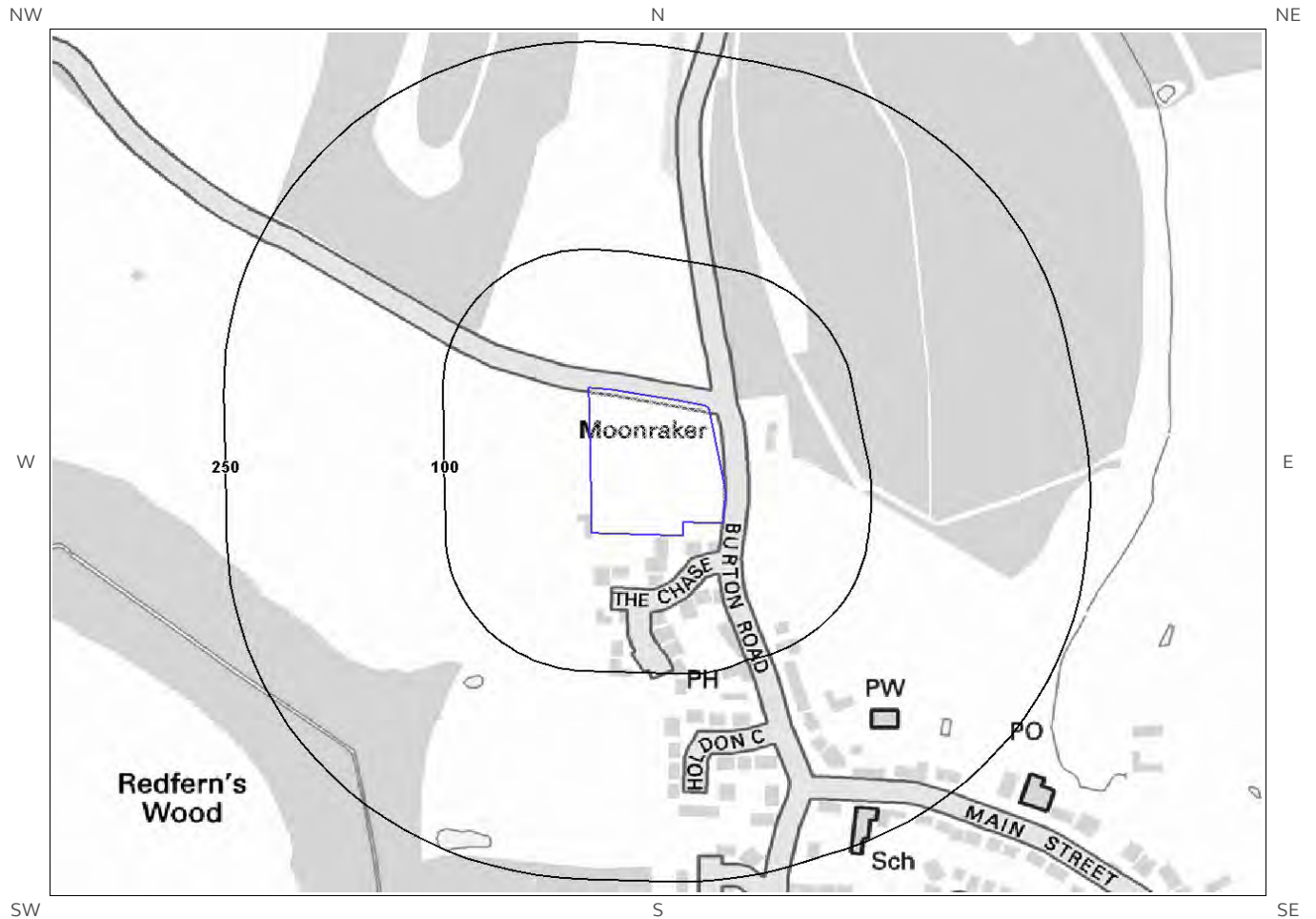
19

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	20 - 40 mg/kg	<15 mg/kg	<100 mg/kg
132.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
132.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
133.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
133.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
133.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
133.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
185.0	SW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
187.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
187.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
187.0	SW	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
213.0	SE	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
246.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
246.0	W	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg

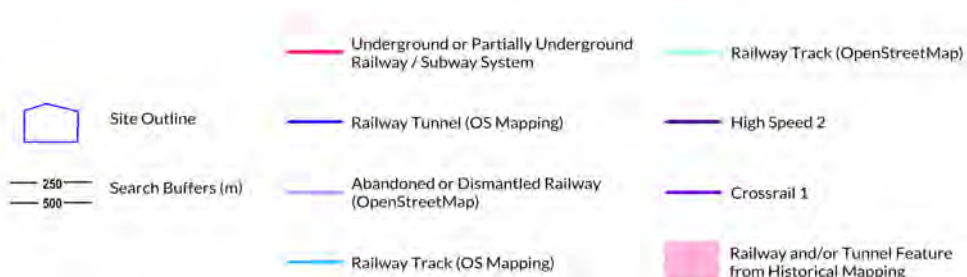
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7 Railways and Tunnels Map



Railways and Tunnels Legend

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7 Railways and Tunnels

7.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

7.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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

7.3 Historical Railways

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

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

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

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

7.4 Active Railways

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

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

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

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

7.5 Railway Projects

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

Is the study site within 5km of the route of the High Speed 2 rail project?	No
Is the study site within 500m of the route of the Crossrail 1 rail project?	No

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

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

Contact Details

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Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



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The Coal Authority

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DX 716176 Mansfield 5
www.coal.gov.uk



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<https://www.gov.uk/government/organisations/public-health-england>
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Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure.

Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,
(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together “Fees”).

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client (“Payment Date”). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and
(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure

acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event
(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law



EmapSite

Masdar House, ,
Eversley, RG27 0RP

Groundsure
Reference:

EMS-341686_459735

Your Reference:

EMS_341686_459735

Report Date

15 Jan 2016

Report Delivery
Method:

Email - pdf

Groundsure Enviroinsight

Address: Rosliston,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.

Groundsure Enviroinsight

Groundsure Enviroinsight

Address: Rosliston,
Date: 15 Jan 2016
Reference: EMS-341686_459735
Client: EmapSite



Aerial Photograph Capture date: 24-Apr-2010
Grid Reference: 424176,316996
Site Size: 0.86ha

Report Reference: EMS-341686_459735
Client Reference: EMS_341686_459735

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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	0	3	14
1.2 Additional Information – Historical Tank Database	0	0	0	0
1.3 Additional Information – Historical Energy Features Database	0	0	0	4
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	0	0	3	14
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	4
2.3.2 National Incidents Recording System, List 1	0	0	0	1
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

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

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

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	2	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	1	3	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential below Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 8: Designated Environmentally Sensitive Sites

On-site 0-50m 51-250 251-500 501-1000 1000-2000

8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	1	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	Yes
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

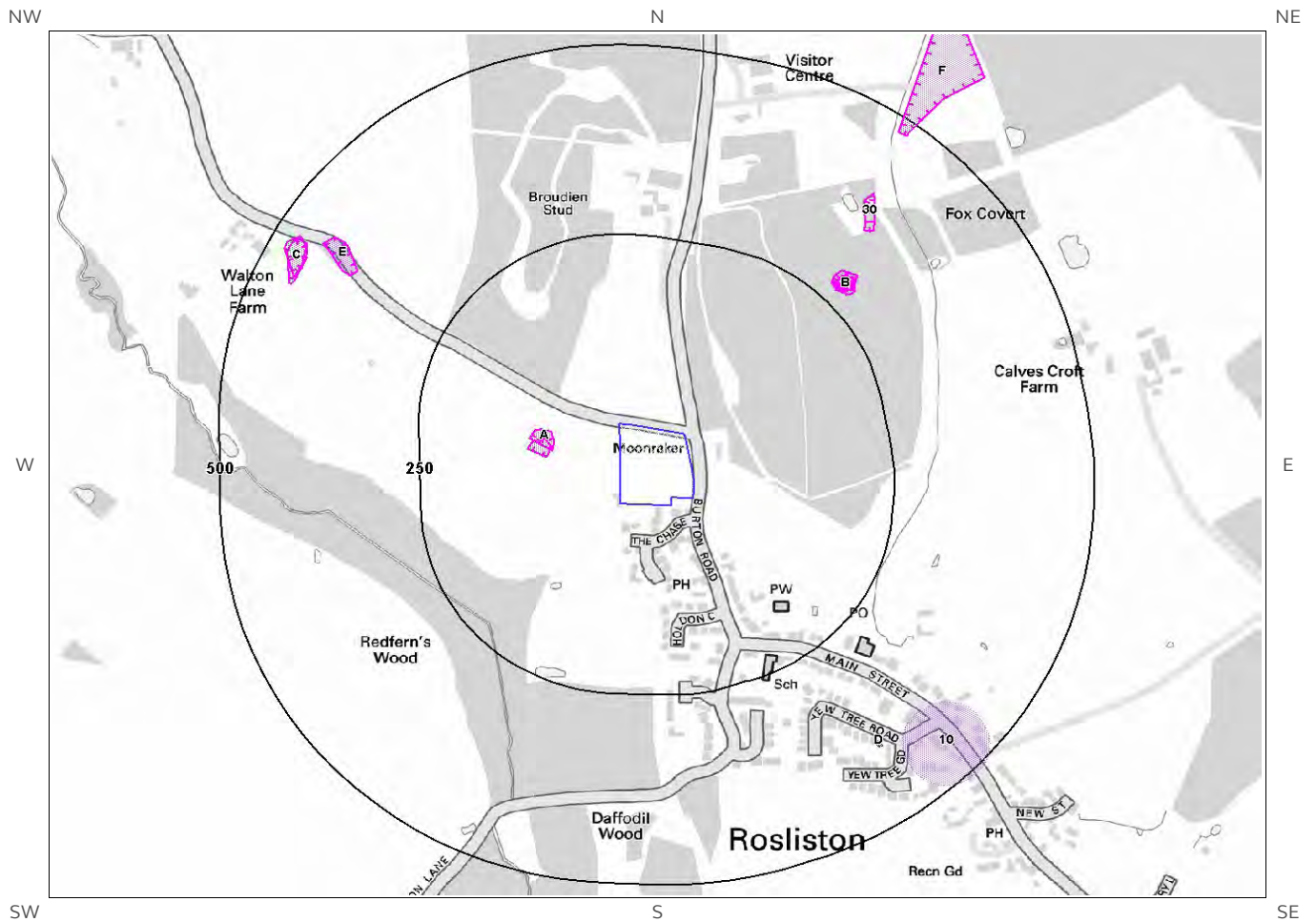
Note: Maps

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

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

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

1. Historical Land Use



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1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 17

ID	Distance [m]	Direction	Use	Date
1A	82	W	Unspecified Pit	1992
2A	82	W	Unspecified Pit	1968
3A	86	W	Unspecified Pit	1882
4B	270	NE	Unspecified Pit	1882
5B	271	NE	Unspecified Pit	1992
6B	271	NE	Unspecified Pit	1968
7B	273	NE	Old Gravel Pit	1949
8B	274	NE	Old Gravel Pit	1921
9E	384	NW	Cuttings	1882
10	397	SE	Smithy	1900
11C	447	NW	Unspecified Pit	1882
12C	447	NW	Unspecified Pit	1900
13C	447	NW	Old Gravel Pit	1921
14C	448	NW	Unspecified Pit	1992
15C	448	NW	Unspecified Pit	1968
16C	448	NW	Old Gravel Pit	1949
17F	481	NE	Sewage Works	1992

1.2 Additional Information – Historical Tank Database

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

Records of historical tanks within 500m of the search boundary: 0

Database searched and no data found.

1.3 Additional Information – Historical Energy Features Database

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

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

4

ID	Distance (m)	Direction	Use	Date
18D	393	SE	Electricity Substation	1985
19D	393	SE	Electricity Substation	1992
20D	395	SE	Gas Governor	1985
21D	395	SE	Gas Governor	1992

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

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

0

Database searched and no data found.

1.6 Potentially Infilled Land

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

17

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

ID	Distance(m)	Direction	Use	Date
22A	82	W	Unspecified Pit	1968
23A	82	W	Unspecified Pit	1992
24A	86	W	Unspecified Pit	1882
25B	270	NE	Unspecified Pit	1882
26B	271	NE	Unspecified Pit	1992
27B	271	NE	Unspecified Pit	1968
28B	273	NE	Old Gravel Pit	1949
29B	274	NE	Old Gravel Pit	1921
30	352	NE	Ponds	1949
31E	384	NW	Cuttings	1882

32C	447	NW	Unspecified Pit	1882
33C	447	NW	Unspecified Pit	1900
34C	447	NW	Old Gravel Pit	1921
35C	448	NW	Old Gravel Pit	1949
36C	448	NW	Unspecified Pit	1992
37C	448	NW	Unspecified Pit	1968
38F	481	NE	Sewage Works	1992

2. Environmental Permits, Incidents and Registers Map



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2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

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

4

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

ID	Distance (m)	Direction	NGR	Details
1A	296	SE	424461 316777	Incident Date: 10-Apr-2002 Incident Identification: 70378 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
2A	307	SE	424468 316768	Incident Date: 23-Aug-2001 Incident Identification: 26315 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
3A	307	SE	424467 316766	Incident Date: 16-Jul-2001 Incident Identification: 16642 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
4A	312	SE	424472 316764	Incident Date: 17-Dec-2001 Incident Identification: 48500 Pollutant: Oils and Fuel Pollutant Description: Petrol Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

1

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

ID	Distance (m)	Direction	NGR	Details
5	304	SE		Incident Date: 23-Oct-1999 Incident Identification: 5840.0 Catchments Name: TRENT TO CONF WITH DOVE Water Description: NOT APPLICABLE Water Course: TRENT TO CONF WITH DOVE Incident Substantiated: Yes Priority Description: Immediate (2 Hours) Waste Description: Not Available Water Impact: Significant Impact Land Impact: No Impact Air Impact: No Impact Action Taken: Not Available

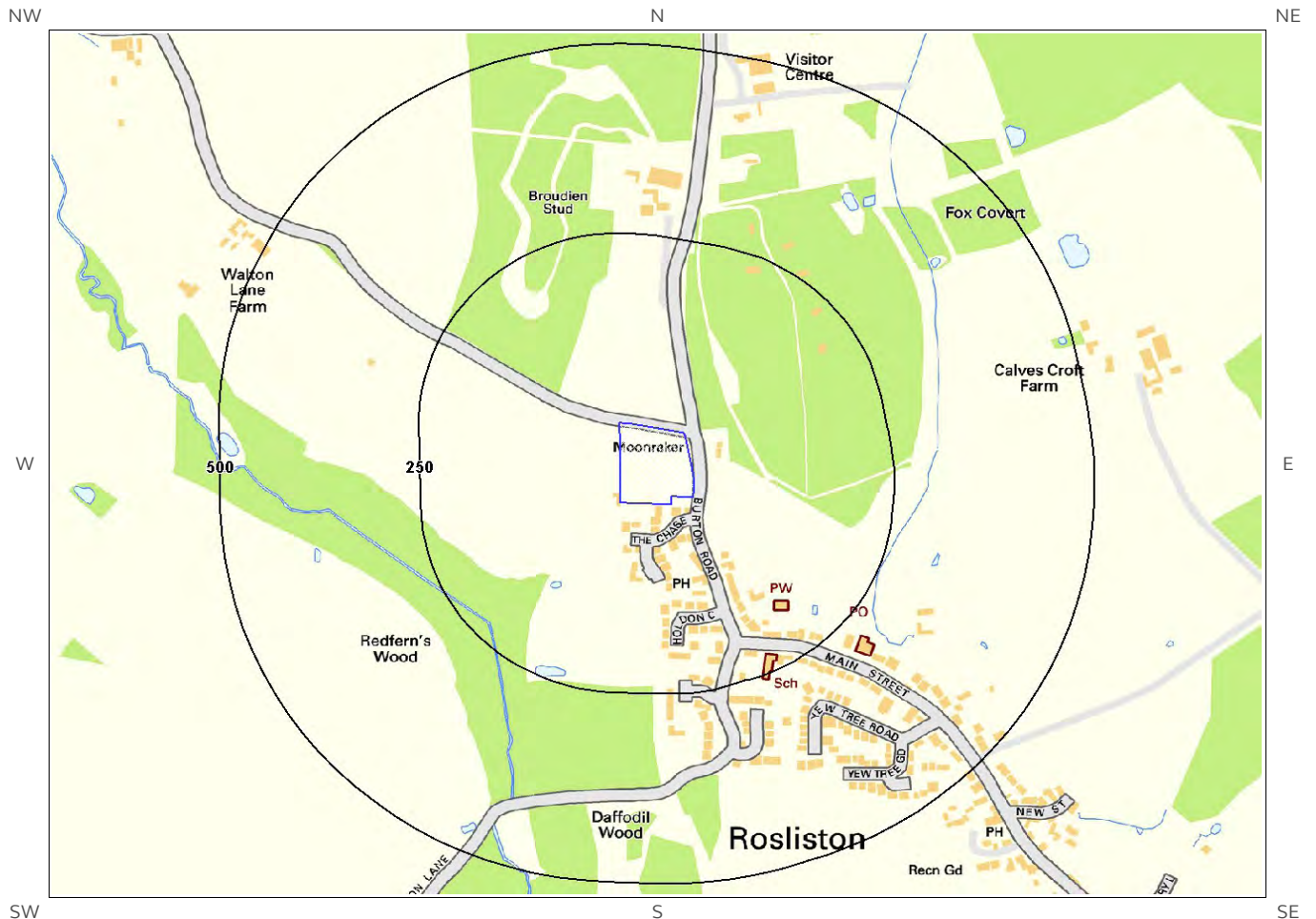
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

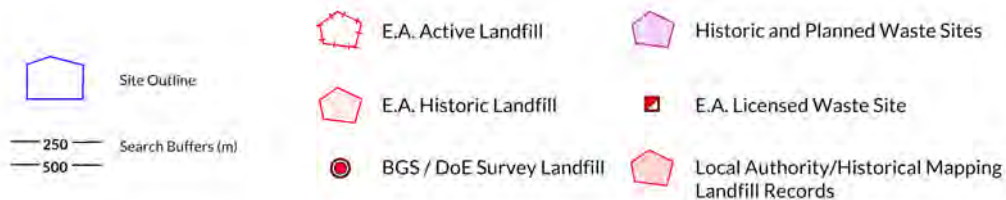
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

0

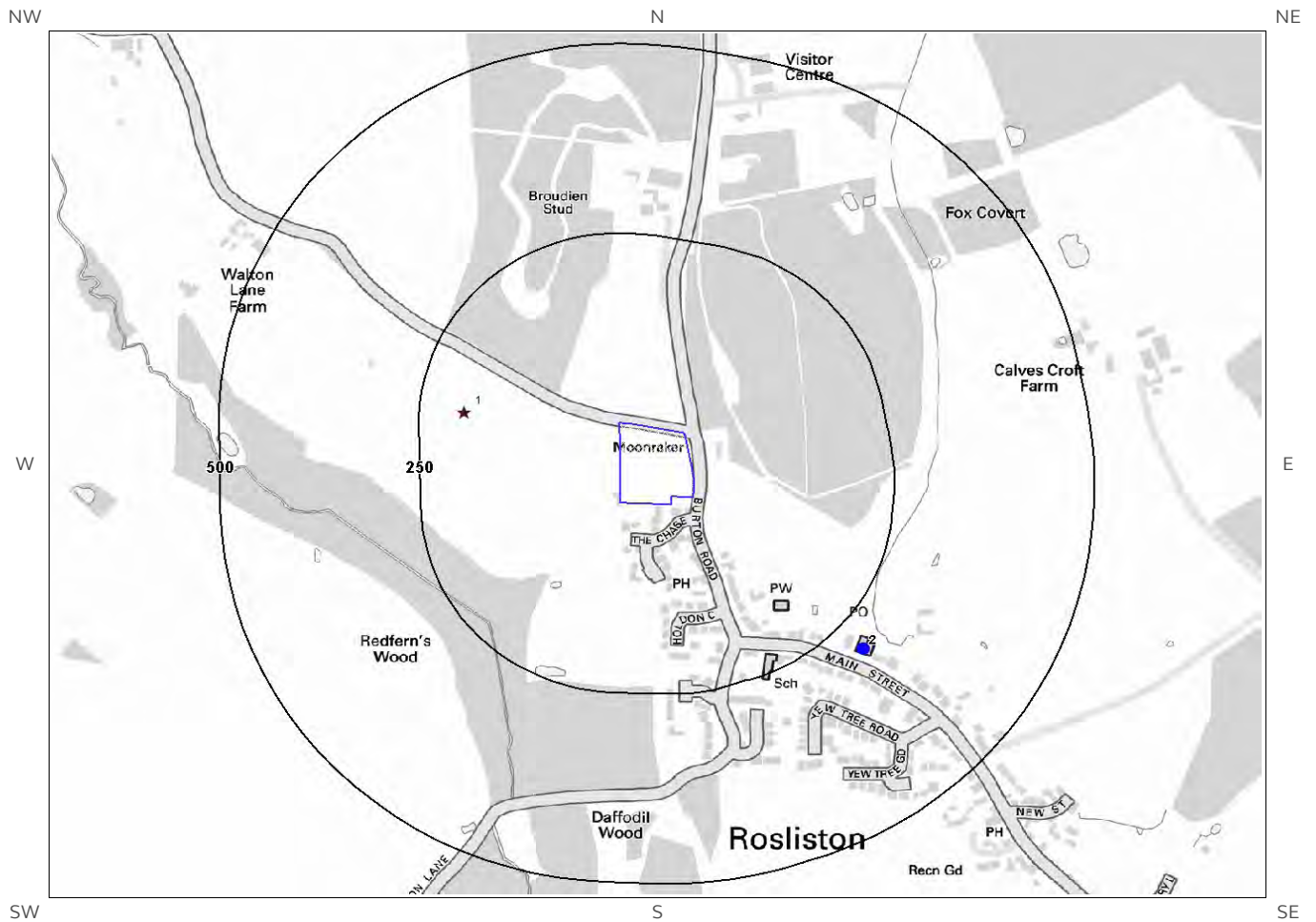
Database searched and no data found.

3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

0

Database searched and no data found.

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

1

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	195	W	Pylon	423938 317066	DE12	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

1

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
2	292	SE	424437 316754	Obsolete	Rosliston Convenience Store, Main Street, Main Street, Rosliston, Derbyshire, DE12 8JL	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
GFDMP	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]
TILMP	TILL, MID PLEISTOCENE	DIAMICTON

5.3 Bedrock and Solid Geology

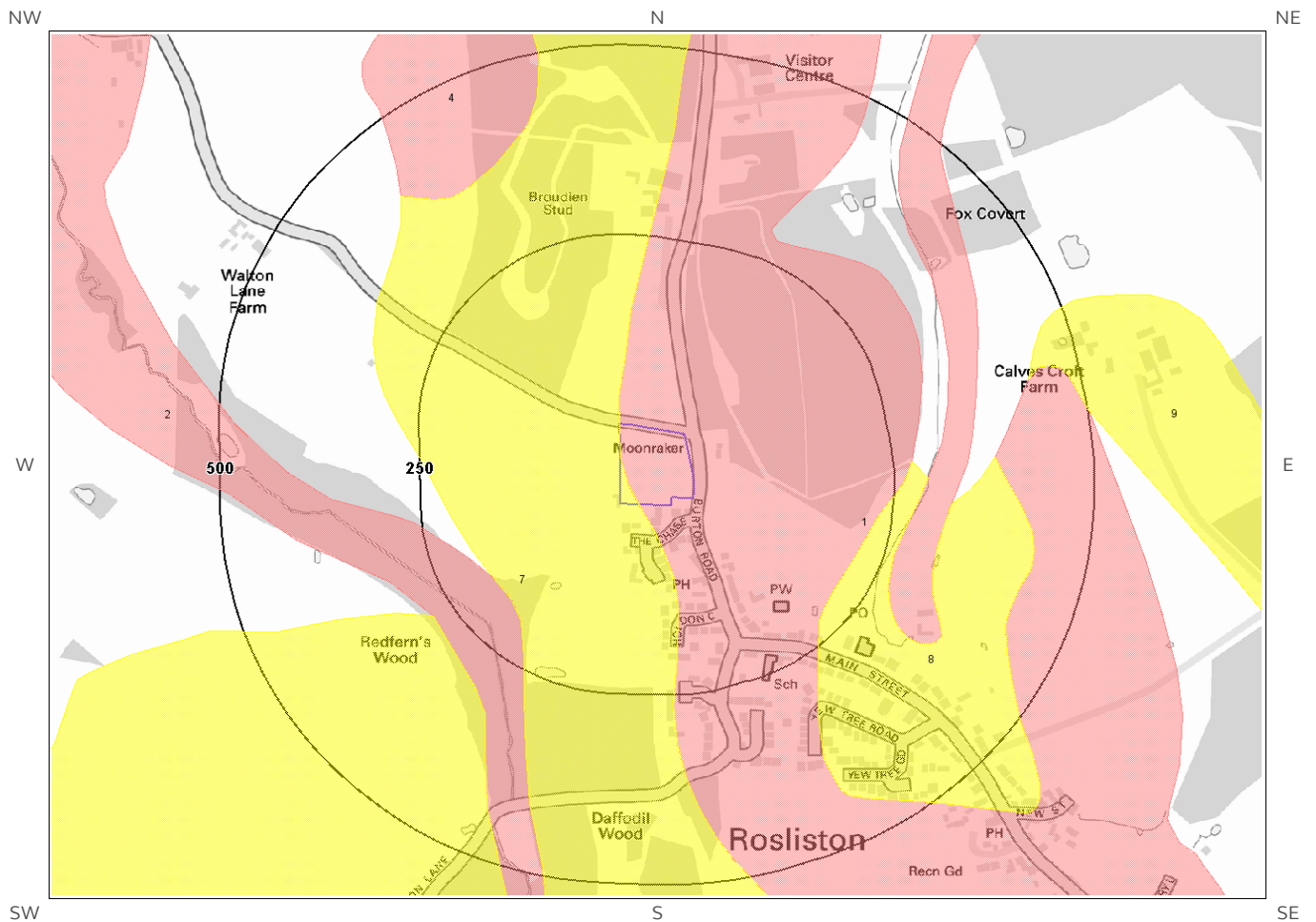
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
MMG-MDST	MERCIA MUDSTONE GROUP	MUDSTONE

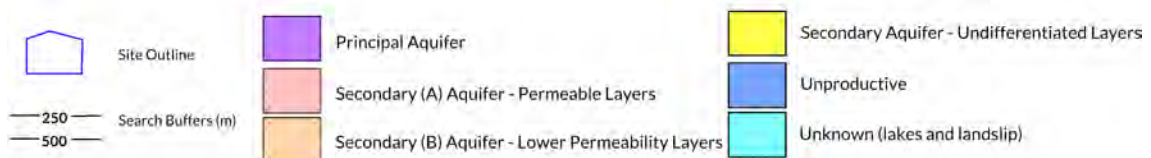
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



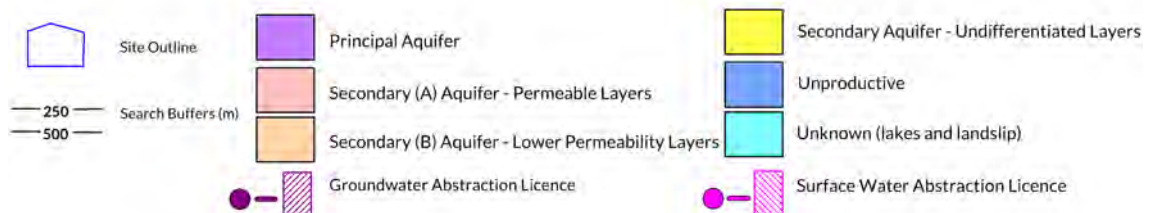
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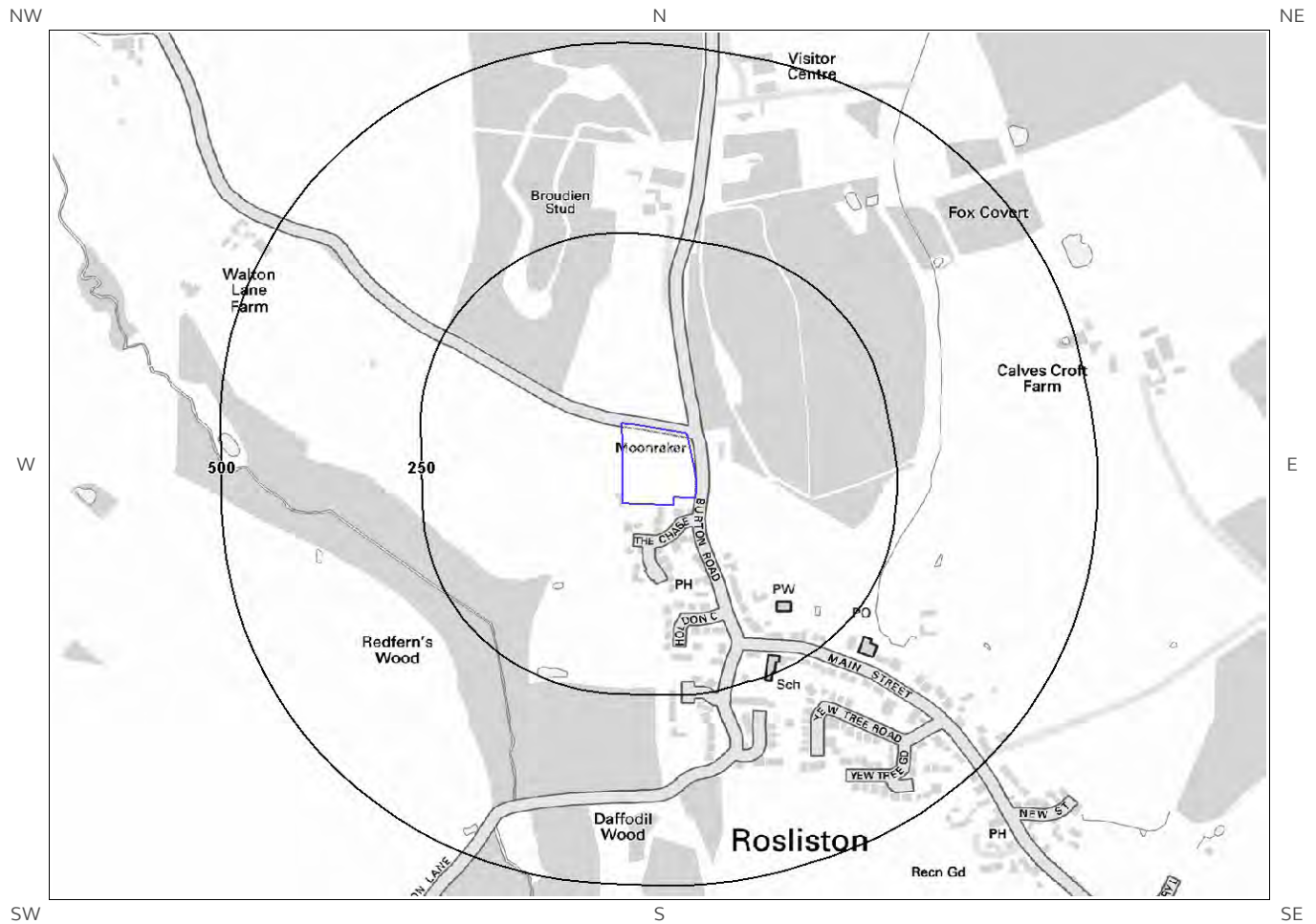
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



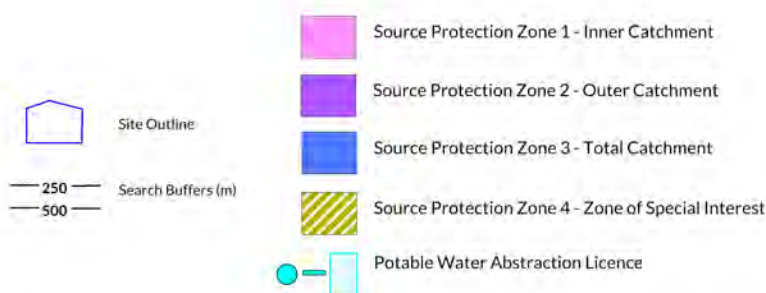
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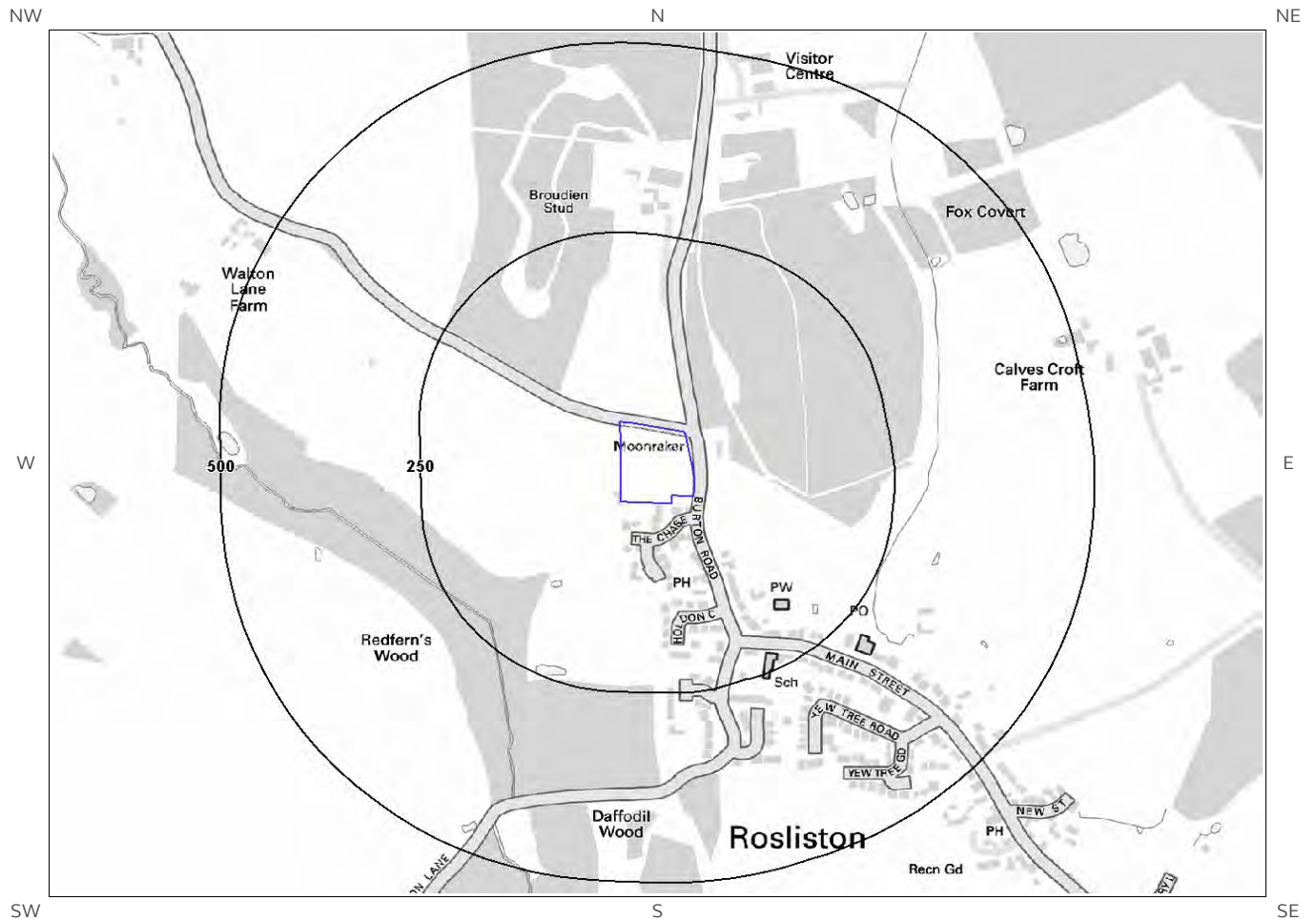
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



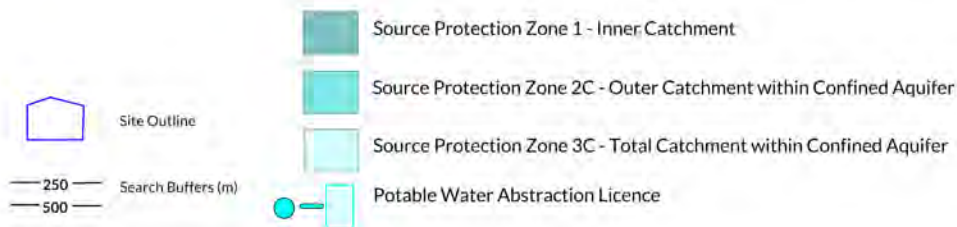
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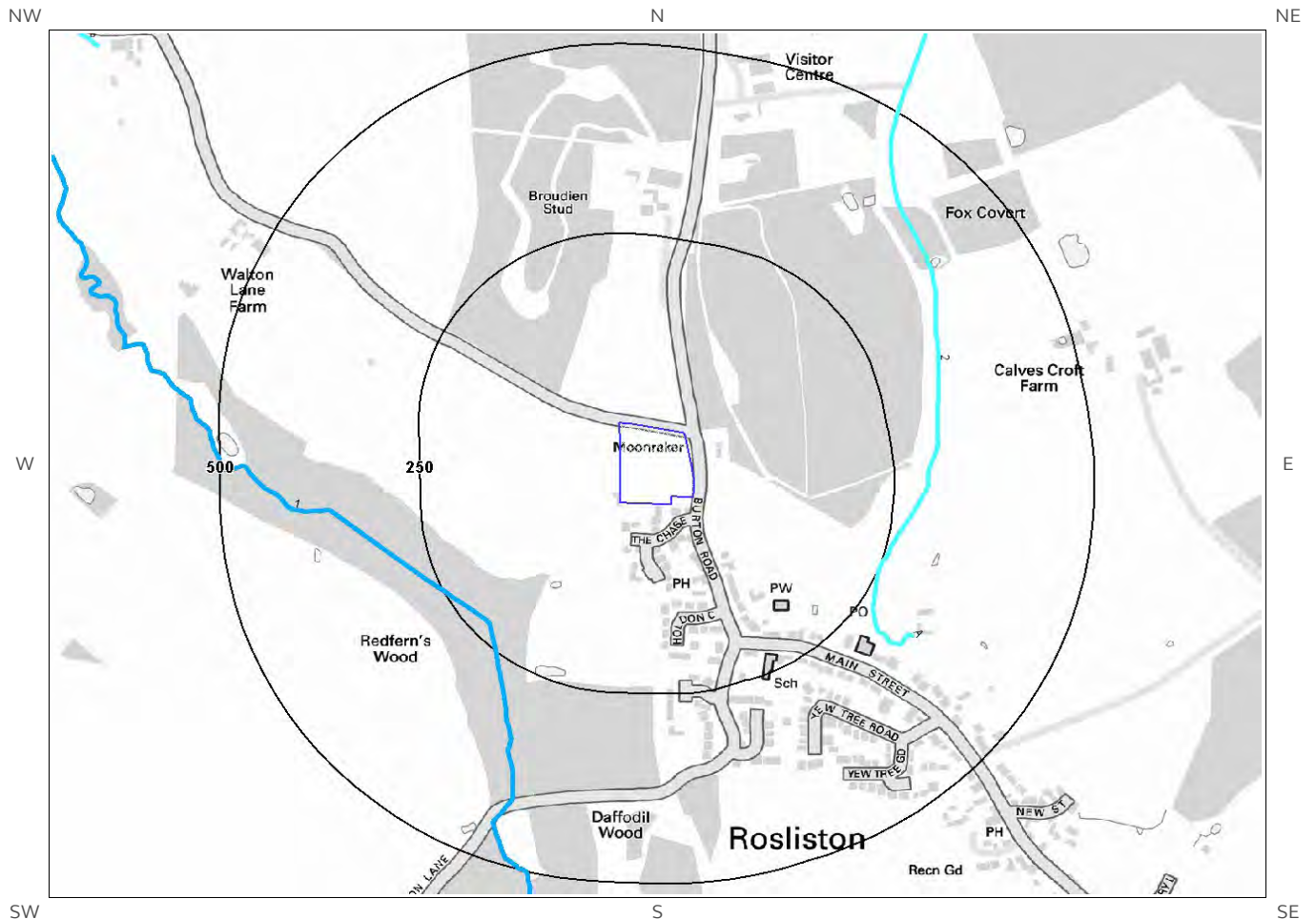
6d. Hydrogeology – Source Protection Zones within confined aquifer



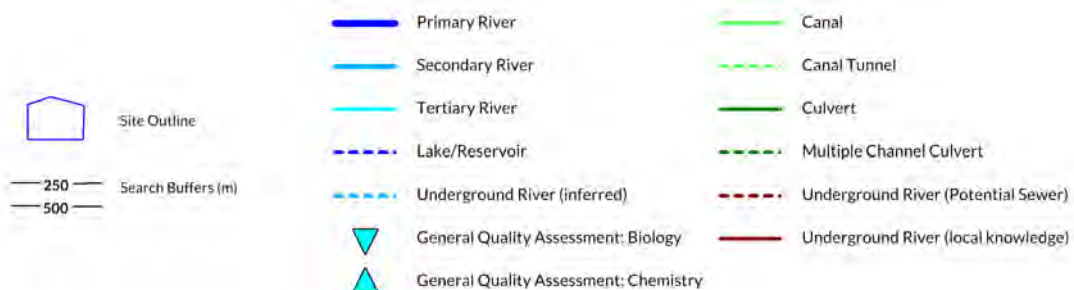
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6e. Hydrology – Detailed River Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? **Yes**

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	185	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
8	213	SE	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
3	261	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	364	NW	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
9	435	E	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

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? **Yes**

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

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

ID	Distance (m)	Direction	Designation	Description
4	0	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

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site?

Yes

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1473	NW	422920 317890	Status: Historical Licence No: 03/28/24/0099 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: Fairfields Farm - Borehole Data Type: Point Name: S E AVERY & SON Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 15/7/1992 Expiry Date: - Issue No: 100 Version Start Date: 15/7/1992 Version End Date:
Not shown	1929	NE	425000 318800	Status: Historical Licence No: 03/28/24/0059/G Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: Royle Farm, drakelow - Well Data Type: Point Name: MOUNTFORD PARTNERS Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/6/1993 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

Yes

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

ID	Distance (m)	Direction	NGR	Details
Not shown	909	NE	424790 317740	Status: Historical Licence No: 03/28/24/0141 Details: Lake & Pond Throughflow Direct Source: Surface Water Midlands Region Point: Rosliston Forestry Centre - Unnamed Trib Of Darklands Brook Data Type: Point Name: FOREST ENTERPRISES Annual Volume (m³): 182500 Max Daily Volume (m³): 500 Application No: A/28/24/0030 Original Start Date: 23/12/1999 Expiry Date: 31/3/2008 Issue No: 1 Version Start Date: 1/4/2000 Version End Date:
Not shown	909	NE	424790 317740	Status: Historical Licence No: 03/28/24/0141/1 Details: Lake & Pond Throughflow Direct Source: Surface Water Midlands Region Point: Rosliston Forestry Centre - Unnamed Trib Of Darklands Brook Data Type: Point Name: FORESTRY COMMISSION Annual Volume (m³): 182500 Max Daily Volume (m³): 500 Application No: A/28/24/0030 Original Start Date: 1/4/2008 Expiry Date: 31/3/2026 Issue No: 1 Version Start Date: 1/4/2008 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.
251	SW	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
415	NE	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

Is there any Environment Agency information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

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

ID	Distance (m)	Direction	Details	
1	228	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
2	251	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3A	329	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4A	329	SE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

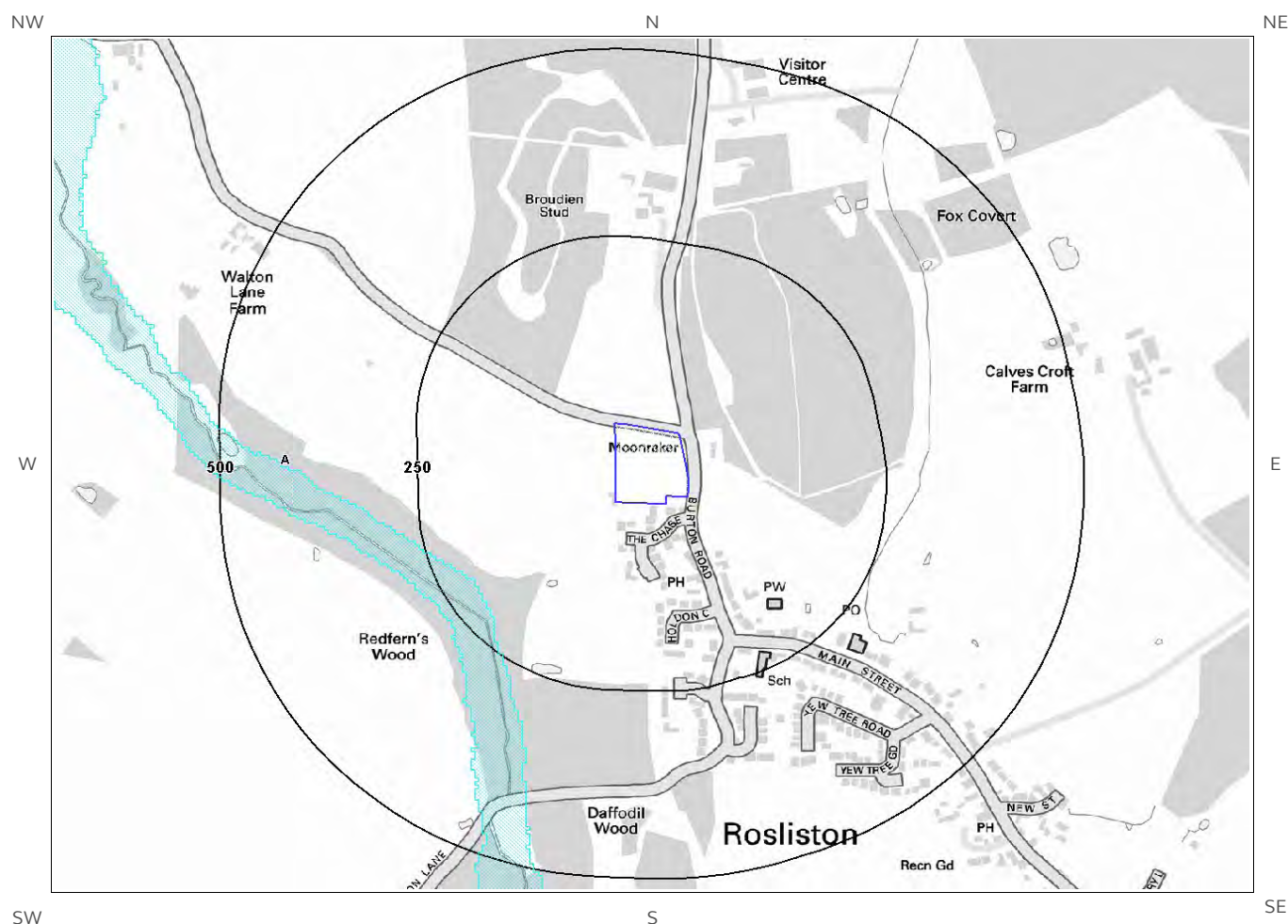
6.11 Surface Water Features

Are there any surface water features within 250m of the study site? Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
226	SW
237	SW

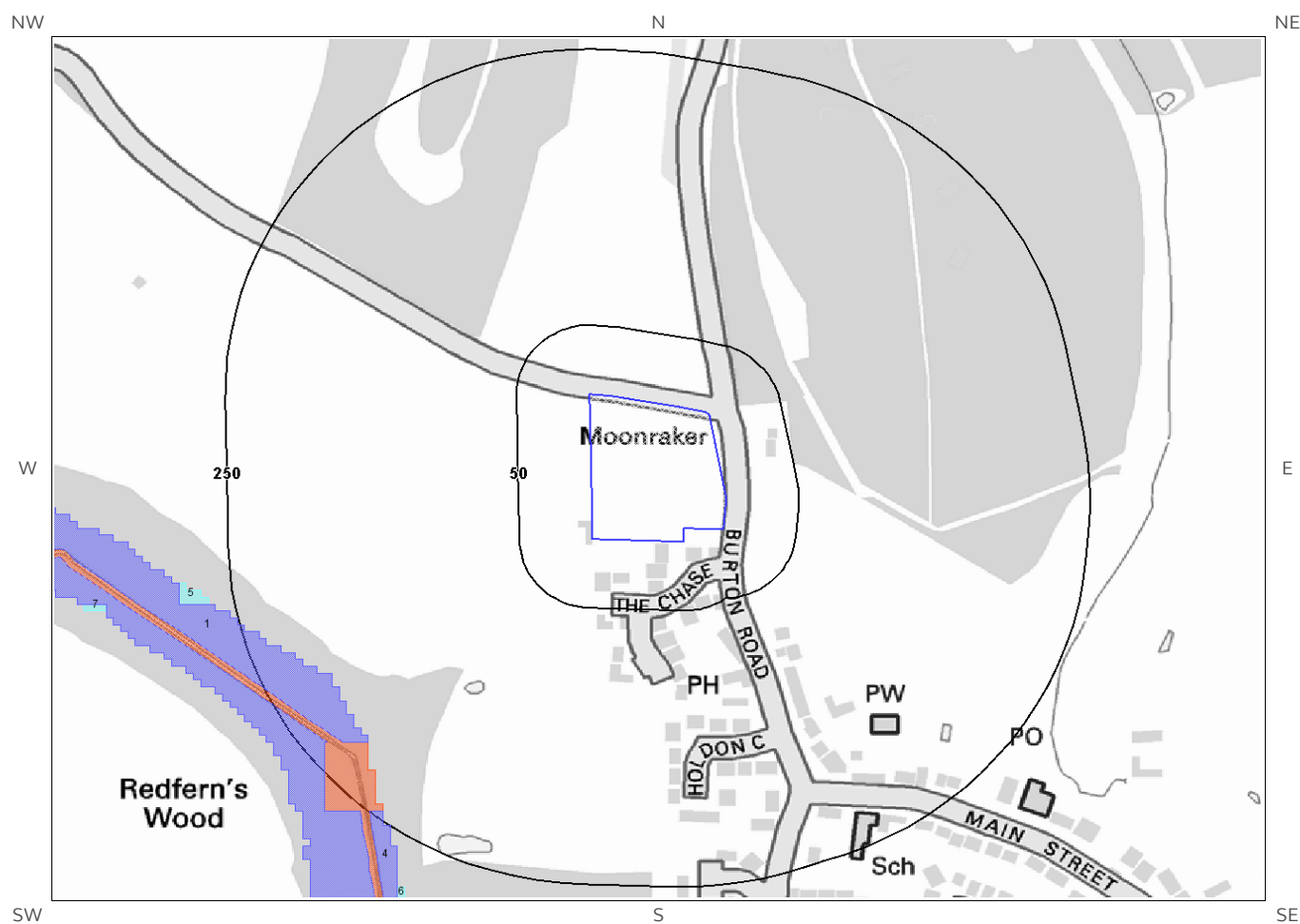
7a. Environment Agency Flood Map for Planning (from rivers and the sea)



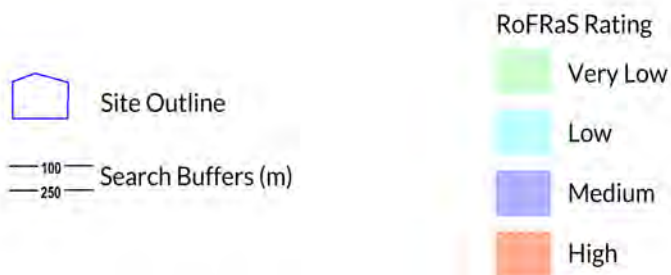
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7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

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

ID	Distance (m)	Direction	Update	Type
1A	206	SW	18-Nov-2015	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

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

ID	Distance (m)	Direction	Update	Type
1A	206	SW	18-Nov-2015	Zone 3 - (Fluvial Models)

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

What is the highest risk of flooding onsite? Very Low

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

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

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Superficial Deposits Flooding

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

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential below Surface

Where potential for groundwater flooding of property situated below ground level is indicated, this means that given the geological conditions there may be a groundwater flooding hazard to basements and other below surface infrastructure. Unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area you need take no further action in relation to groundwater flooding hazard. If there are records of previous incidences of groundwater flooding, then is recommended that other information e.g. rainfall history, property type, and land drainage information in addition to previous records of flooding be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

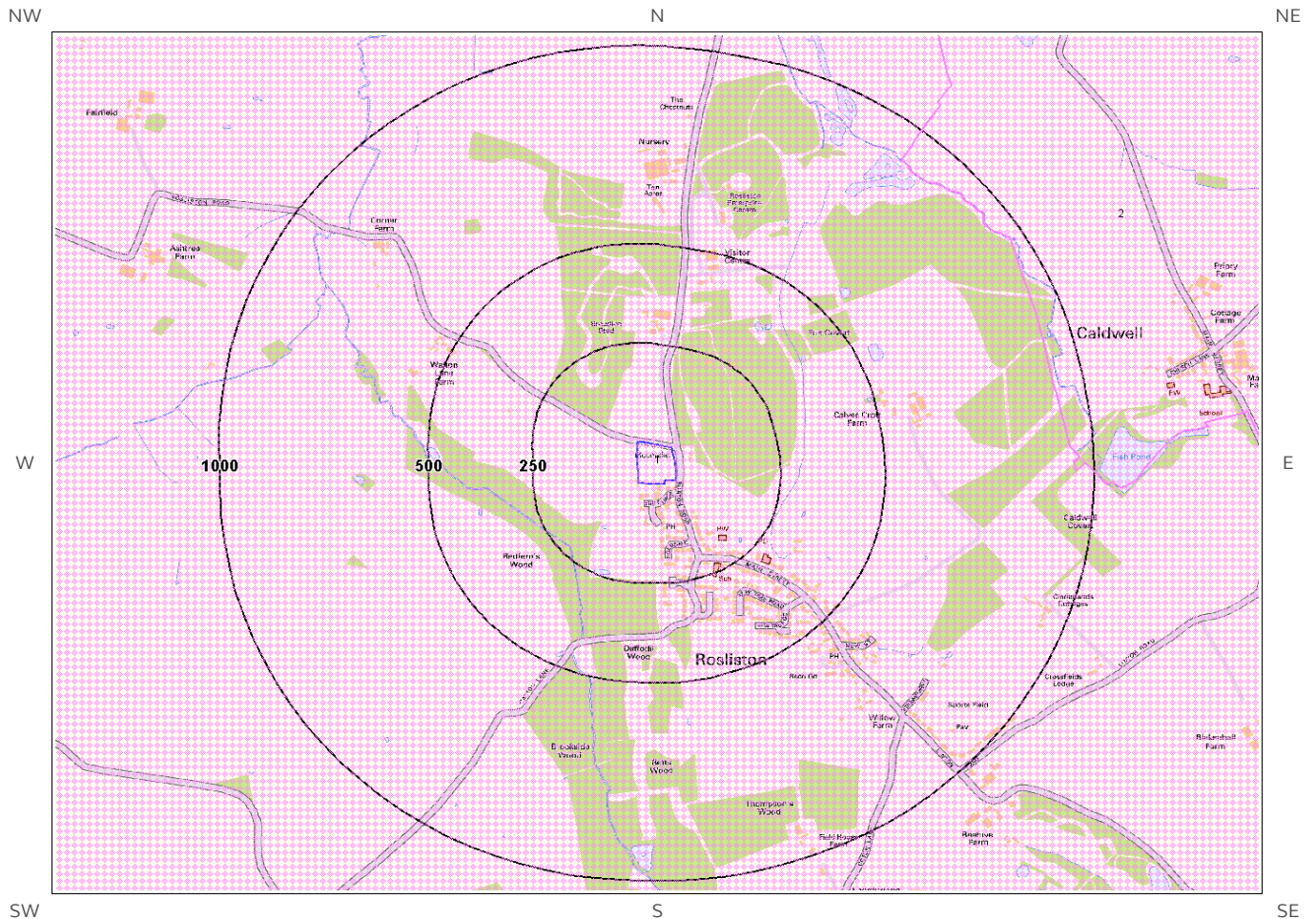
What is the British Geological Survey confidence rating in this result?

High

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

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?

Yes

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1712	N	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1901	N	UNKNOWN	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	0	On Site	Existing	DEFRA
2	903	NE	Existing	DEFRA

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

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

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

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

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

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

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

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

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

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

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

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

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

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

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

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

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

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Very Low

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

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

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

Is the property in an area where Radon Protection are required for new properties or extensions to existing

ones as described in publication BR211 by the Building Research Establishment?

No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? Yes

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

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

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

Contact Details

EmapSite
Telephone: 0118 9736883
sales@emapsite.com

emapsite™

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:

Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk



Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506

Web: www.environment-agency.gov.uk

Email: enquiries@environment-agency.gov.uk



Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority

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



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority

Authority: South Derbyshire District Council
Phone: 01283 595 795

Web: <http://www.south-derbys.gov.uk/>

Address: Civic Offices, Civic Way, Swadlincote, Derbyshire, DE11 0AH

Gemapping PLC

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



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

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].

This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
- (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013

APPENDIX D





Burton Road, Rosliston

Dimensions:

IV.97.15

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
									KC	RCS	27.01.16	NTS



Burton Road, Rosliston

Dimensions:

IV.97.15

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
								KC	RCS	27.01.16	NTS



IVY HOUSE

environmental

Sustainable Farms For Sale: Dickson, DE72 5HX
info@ivyhouseenv.co.uk • 01532 820 455

CLIENT

Mr & Mrs Housden

SITE LOCATION

Burton Road, Rosliston

Date: 27th January 2016

Ground Level:

Orientation:

Coordinates:

Plant: Mechanical Excavator

Dimensions:

TRIAL PIT NO.

TP3

Sheet No. 1 of 1

Job No.

IV.97.15

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results						N Value	Test Sample Details
				Depth	No	Type	Sealing	Test Drive						
							75mm	75mm	75mm	75mm	75mm			
TOPSOIL - Soft brown silty sandy clay with occasional fine to coarse rounded gravel of quartzite.	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)	0.10		G								
Loose brown/yellow brown silty SAND with much fine to coarse sub-angular to rounded gravel of quartzite.	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)	0.80		D								
Stiff red brown/grey silty sandy CLAY.	1.25 1.30 1.35 1.40		1.40 (0.20)	1.30		D								
Medium dense red brown silty SAND.	1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90		1.90 (0.50)	1.50		D								
Stiff red brown silty very dessicated CLAY with occasional fine to coarse rounded gravel of quartzite. ... becoming very hard to dig below 2.25m.	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		3.00 (1.10)	2.20		D								
Trial pit ended at 3.00m.	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

KC

RCS

27.01.16

NTS

 Southland Farms, P.O. Box 264, Pukekohe, 0122 599 info@ivyhouse.co.nz • 09 332 8200 • 01 332 8200 455				Date: 27th January 2016										TRIAL PIT NO.	
CLIENT Mr & Mrs Housden				Ground Level:										TP4	
				Orientation:										Sheet No. 1 of 1	
				Coordinates:										Job No.	
SITE LOCATION				Plant: Mechanical Excavator										IV.97.15	
Burton Road, Rosliston				Dimensions:											
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 - soft brown silty sandy clay with occasional fine to coarse rounded gravel of quartzite.	0.05 0.10 0.15 0.20 0.25 0.30		0.30 (0.30)	0.10		G									
MADE GROUND - loose brown silty sand with much concrete, quartzite and flint.	0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80		0.80 (0.50)	0.40		D									
Soft grey brown silty very sandy CLAY with much fine to coarse sub-angular to rounded gravel of quartzite.	0.85 0.90 0.95 1.00 1.05 1.10		1.10 (0.30)	0.90		D									
Stiff red brown silty sandy CLAY.	1.15 1.20 1.25 1.30 1.35 1.40 1.45 1.50		1.50 (0.40)	1.20		D									
Loose red brown silty SAND.	1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90		1.90 (0.40)	1.60		D									
Stiff red brown mottled grey silty sandy CLAY with occasional fine to coarse sub-angular to rounded gravel of quartzite.	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		3.00 (1.10)	2.50		D									
Trial pit ended at 3.00m.	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:							Logged By:	Checked By:	Date	Scale	
							KC	RCS	27.01.16	NTS	

1. Trial pit reinstated with arisings upon completion.
2. Trial pit remained stable during excavation.
3. Groundwater not encountered.



Southland Farms For Sale: Dickson, DE72 5HX
 ivyhouse@btinternet.co.uk • 01332 820 455

CLIENT

Mr & Mrs Housden

SITE LOCATION

Burton Road, Rosliston

Date: 27th January 2016

Ground Level:

Orientation:

Coordinates:

Plant: Mechanical Excavator

Dimensions:

TRIAL PIT NO.

TP5

Sheet No. 1 of 1

Job No.

IV.97.15

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS			SPT Results					N Value	Test Sample Details
				Depth	No	Type	Seating	Test Drive					
							75mm	75mm	75mm	75mm	75mm		
TOPSOIL - soft brown silty sandy clay with occasional fine to coarse rounded gravel of quartzite.	0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40		0.40 (0.40)	0.10		G							
Loose brown silty clayey SAND with occasional fine to coarse sub-angular to rounded gravel of quartzite.	0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90		0.90 (0.50)	0.50		D							
Firm red brown silty sandy CLAY with occasional fine to coarse sub-angular to rounded gravel of quartzite.	0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40		1.40 (0.50)	1.00		D							
Loose red brown silty SAND.	1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90		1.90 (0.40)	1.50		D							
Stiff red brown silty CLAY with some fine to coarse sub-angular to rounded gravel of quartzite.	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		3.00 (1.10)	2.20		D							
Trial pit ended at 3.00m.	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

Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)

Chiselling records

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
KC	RCS	27.01.16	NTS



Mr & Mrs Housden

Burton Road, Rosliston

Ground Level:

Orientation:

Coordinates:

Plant: Mechanical Excavator

Dimensions:

TRIAL PIT NO.

TP6

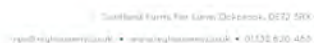
Sheet No. 1 of 1

Job No.

IV.97.15

[illegible]

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
									KC	RCS	27.01.16	NTS



CLIENT

Mr & Mrs Housden

SITE LOCATION

Burton Road, Rosliston

Date: 27th January 2016

Ground Level:

Orientation:

Coordinates:

Plant: Mechanical Excavator

Dimensions:

TRIAL PIT NO.

TP7

Sheet No. 1 of 1

Job No.

IV.97.15

[illegible]

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
								KC	RCS	27.01.16	NTS

APPENDIX E





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



QTS Environmental Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410
russell.jarvis@qtsenvironmental.com

QTS Environmental Report No: 16-40059

Site Reference: Burton Road, Rosliston

Project / Job Ref: IV.97.15

Order No: None Supplied

Sample Receipt Date: 29/01/2016

Sample Scheduled Date: 29/01/2016

Report Issue Number: 1

Reporting Date: 05/02/2016

Authorised by:

Russell Jarvis
Associate Director of Client Services
On behalf of QTS Environmental Ltd

A handwritten signature in black ink, appearing to read 'R Jarvis', is written over the printed name of Russell Jarvis.

Authorised by:

Kevin Old
Associate Director of Laboratory
On behalf of QTS Environmental Ltd

A handwritten signature in black ink, appearing to read 'Kevin Old', is written over the printed name of Kevin Old.



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
QTS Environmental Report No: 16-40059	Date Sampled	27/01/16	27/01/16	27/01/16	27/01/16	27/01/16
Ivy House Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Burton Road, Rosliston	TP / BH No	TP1	TP1	TP3	TP5	TP7
Project / Job Ref: IV.97.15	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.20	0.80	0.10	0.10	0.10
Reporting Date: 05/02/2016	QTSE Sample No	189262	189263	189264	189265	189266

Determinand	Unit	RL	Accreditation					
Asbestos Screen	N/a	N/a	ISO17025	Not Detected		Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.4	6.8	5.6	6.5	6.1
Total Cyanide	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Total Sulphate as SO ₄	mg/kg	< 200	NONE	< 200		518	269	413
Total Sulphate as SO ₄	%	< 0.02	NONE	< 0.02		0.05	0.03	0.04
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	21	< 10	< 10	< 10	10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.02	< 0.01	< 0.01	< 0.01	0.01
Organic Matter	%	< 0.1	MCERTS	0.3		4.3	2.6	2.5
Arsenic (As)	mg/kg	< 2	MCERTS	4		5	3	4
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2		< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	28		15	9	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	16		13	10	11
Lead (Pb)	mg/kg	< 3	MCERTS	11		33	22	24
Mercury (Hg)	mg/kg	< 1	NONE	1.6		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	29		10	7	8
Selenium (Se)	mg/kg	< 3	NONE	< 3		< 3	< 3	< 3
Vanadium (V)	mg/kg	< 2	NONE	32		20	14	16
Zinc (Zn)	mg/kg	< 3	MCERTS	62		62	47	51
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2		< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

The samples have been examined to identify the presence of asbestiform minerals by polarising light microscopy and dispersion staining technique to In-House Procedures QTSE600 Determination of Asbestos in Bulk Materials; Asbestos in Soils/Sediments (fibre screening and identification)

This report refers to samples as received, and QTS Environmental Ltd, takes no responsibility for the accuracy or competence of sampling by others.

The material description shall be regarded as tentative and is not included in our scope of UKAS Accreditation.

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

Asbestos Analyst: Marcus Jones

RL: Reporting Limit

Pinch Test: Where pinch test is positive it is reported "Loose Fibres - PT" with type(s).

Subcontracted analysis ^(S)



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
QTS Environmental Report No: 16-40059	Date Sampled	27/01/16				
Ivy House Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Burton Road, Rosliston	TP / BH No	TP7				
Project / Job Ref: IV.97.15	Additional Refs	None Supplied				
Order No: None Supplied	Depth (m)	0.80				
Reporting Date: 05/02/2016	QTSE Sample No	189267				

Determinand	Unit	RL	Accreditation					
Asbestos Screen	N/a	N/a	ISO17025					
pH	pH Units	N/a	MCERTS	7.0				
Total Cyanide	mg/kg	< 2	NONE					
Total Sulphate as SO ₄	mg/kg	< 200	NONE					
Total Sulphate as SO ₄	%	< 0.02	NONE					
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	13				
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01				
Organic Matter	%	< 0.1	MCERTS					
Arsenic (As)	mg/kg	< 2	MCERTS					
Cadmium (Cd)	mg/kg	< 0.2	MCERTS					
Chromium (Cr)	mg/kg	< 2	MCERTS					
Chromium (hexavalent)	mg/kg	< 2	NONE					
Copper (Cu)	mg/kg	< 4	MCERTS					
Lead (Pb)	mg/kg	< 3	MCERTS					
Mercury (Hg)	mg/kg	< 1	NONE					
Nickel (Ni)	mg/kg	< 3	MCERTS					
Selenium (Se)	mg/kg	< 3	NONE					
Vanadium (V)	mg/kg	< 2	NONE					
Zinc (Zn)	mg/kg	< 3	MCERTS					
Total Phenols (monohydric)	mg/kg	< 2	NONE					

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

The samples have been examined to identify the presence of asbestiform minerals by polarising light microscopy and dispersion staining technique to In-House Procedures QTSE600 Determination of Asbestos in Bulk Materials; Asbestos in Soils/Sediments (fibre screening and identification)

This report refers to samples as received, and QTS Environmental Ltd, takes no responsibility for the accuracy or competence of sampling by others.

The material description shall be regarded as tentative and is not included in our scope of UKAS Accreditation.

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

Asbestos Analyst: Marcus Jones

RL: Reporting Limit

Pinch Test: Where pinch test is positive it is reported "Loose Fibres - PT" with type(s).

Subcontracted analysis ^(S)



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
QTS Environmental Report No: 16-40059	Date Sampled	27/01/16	27/01/16	27/01/16	27/01/16	
Ivy House Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Burton Road, Rosliston	TP / BH No	TP1	TP3	TP5	TP7	
Project / Job Ref: IV.97.15	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: None Supplied	Depth (m)	0.20	0.10	0.10	0.10	
Reporting Date: 05/02/2016	QTSE Sample No	189262	189264	189265	189266	

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

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions	
QTS Environmental Report No: 16-40059	
Ivy House Environmental Ltd	
Site Reference: Burton Road, Rosliston	
Project / Job Ref: IV.97.15	
Order No: None Supplied	
Reporting Date: 05/02/2016	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
& 189262	TP1	None Supplied	0.20	13.3	Light brown sandy clay
189263	TP1	None Supplied	0.80	14.5	Brown sandy clay with vegetation
189264	TP3	None Supplied	0.10	20.5	Brown sandy clay with vegetation
189265	TP5	None Supplied	0.10	13.4	Brown sandy clay with vegetation
189266	TP7	None Supplied	0.10	13.7	Brown sandy clay with vegetation
189267	TP7	None Supplied	0.80	11.1	Brown sandy clay with vegetation

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample ^{1/5}
& samples received in inappropriate containers for hydrocarbon analysis



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information				
QTS Environmental Report No: 16-40059				
Ivy House Environmental Ltd				
Site Reference: Burton Road, Rosliston				
Project / Job Ref: IV.97.15				
Order No: None Supplied				
Reporting Date: 05/02/2016				

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	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

Generic Assessment Criteria

	Residential With Plant Uptake	Residential Without Plant Uptake	Commercial/Industrial
Arsenic	32	35	640
Cadmium	10	17	230
Chromium (III)	2500	2700	29,000
Chromium (IV)	32	35	326
Lead	450	450	5000
Mercury	170	170	3600
Selenium	350	595	13000
Nickel	130	786	1800
Phenol	415	519	1,100,000
Acenaphthene	1,000	3,910	100,000
Acenaphthylene	850	3,870	100,000
Anthracene	9,200	23,000	500,000
Benzo(a)anthracene	5.90	6.00	97.00
Benzo(a)pyrene	1.00	1.04	14.00
Benzo(b)fluoranthene	7.00	7.30	100.00
Benzo(ghi)perylene	43	47	660
Benzo(k)fluoranthene	10.0	10.4	140.0
Chrysene	9	10	140
Copper	2,300	6,200	70,000
Free Cyanide	34	34	34
Dibenzo(ah)anthracene	0.90	0.93	13.00
Fluoranthene	670	1,000	23,000
Fluorene	780	2,800	71,000
Ideno(1,2,3-cd)pyrene	4.20	4.40	62.00
Napthalene	8.7	9.0	1,100
Phenanthrene	380	940	23,000
Pyrene	1,600	2,400	54,000
Zinc	3,700	40,000	600,000
PETROLEUM HYDROCARBONS			
Aliphatics			
C6-C8	110	113	13,000
C8-C10	370	370	42,000
C10-C12	110	110	12,000
C12-C16	540	540	49,000
C16-C35	88,400	89,000	1,800,000
Aromatics			
C5-C7	280	970	90,000
C7-C8	610	2,700	190,000
C8-C10	150	190	18,000
C10-C12	340	860	34,000
C12-C16	590	1,700	37,000
C16-C21	770	1,300	28,000
C21-C35	1,200	1,300	28,000

Note:

All figures are in mg/kg

Values calculated using CLEA v1.06

All organic determinands calculated using 6% SOM

SGV for Inorganic Hg quoted (ref. SGV Pg5, para 4)

APPENDIX F





Laboratory Report



Site	Burton Road, Rosliston
Client	QTS Environmental
Date	03-Feb-16
Our Ref	IV.97.15 / 40060
CGL Ref	CGL6406



Content Summary

This report contains all test results as indicated on the test instruction/summary.

CGL Reference : CGL6406

Client Reference : IV.97.15 / 40060

For the attention of : QTS Environmental

This report comprises of the following : 1 Cover Page

1 Inside Cover/Contents Page

2 Pages of Results

1 Moisture/Shear Strength Chart

1 Plasticity Chart

1 Limitations of Report Page

Notes :

General

Please refer to report summary notes for details pertaining to methods undertaken and their subsequent accreditations

Samples were supplied by Chelmer Site Investigations

All tests performed in-house unless otherwise stated

Deviant Samples

Samples were received in suitable containers Yes

A date and time of sampling was provided Yes

Arrived damaged and/or denatured No

BS 1377 : 1990



Job Number : CGL6406
Client : QTS Environmental
Client Reference : IV.97.15 / 40060
Site Name : Burton Road, Rosliston

Date Received : 01/02/2016
Date Testing Started : 01/02/2016
Date Testing Completed : 03/02/2016
Laboratory Used : Chelmer Geotechnical, CM3 8AB

[illegible]

Notes :- *UKAS Accredited Tests

[1] BS 1377 : Part 2 : 1990, Test No 3.2

[2] Estimated if <5%, otherwise measured

[3] BS 1377 : Part 2 : 1990, Test No 4.4

[4] BS 1377 : Part 2 : 1990, Test No 5.3

[5] BS 1377 : Part 2 : 1990, Test No 5.4

[6] BRE Digest 240 : 1993

[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils

[8] In-house method S9a adapted from BRE IP 4/93

[9] Values of shear strength were determined in situ by Chelmer Site Investigations using a Pilcon hand vane or Geonor vane (GV).

[10] BS 1377 : Part 3 : 1990, Test No 4

[11] BS 1377 : Part 2 : 1990, Test No 9

[12] BS 1377 : Part 3 : 1990, Test No 5.6

[13] $\text{SO}_4 = 1.2 \times \text{SO}_3$

[14] BRE Special Digest One (Concrete in Aggressive Ground) 2005

Note that if the SO_4 content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4m or DS-5m class respectively unless water soluble magnesium testing is undertaken to prove otherwise

	Key
	D - Disturbed sample
	B - Bulk sample
	U - U100 (undisturbed sample)
	W - Water sample
	ENP - Essentially Non-Plastic
	U/S - Underside Foundation



Comments :-

Technician :- HS

Checked By :- SG

Date Checked :- 03-Feb-16

BS 1377 : 1990



Job Number : CGL6406
Client : QTS Environmental
Client Reference : IV.97.15 / 40060
Site Name : Burton Road, Rosliston

Date Received : 01/02/2016
Date Testing Started : 01/02/2016
Date Testing Completed : 03/02/2016
Laboratory Used : Chelmer Geotechnical, CM3 8AB

[illegible]

Notes :- *UKAS Accredited Tests

[1] BS 1377 : Part 2 : 1990, Test No 3.2

[2] Estimated if <5%, otherwise measured

[3] BS 1377 : Part 2 : 1990, Test No 4.4

[4] BS 1377 : Part 2 : 1990, Test No 5.3

[5] BS 1377 : Part 2 : 1990, Test No 5.4

[6] BRE Digest 240 : 1993

[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils

[8] In-house method S9a adapted from BRE IP 4/93

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[10] BS 1377 : Part 3 : 1990, Test No 4

[11] BS 1377 : Part 2 : 1990, Test No 9

[12] BS 1377 : Part 3 : 1990, Test No 5.6

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[14] BRE Special Digest One (Concrete in Aggressive Ground) 2005

Note that if the SO_4 content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4m or DS-5m class respectively unless water soluble magnesium testing is undertaken to prove otherwise

	<u>Key</u>
	D - Disturbed sample
	B - Bulk sample
	U - U100 (undisturbed sample)
	W - Water sample
	ENP - Essentially Non-Plastic
	U/S - Underside Foundation



Comments :-

Technician :- HS

Checked By :- SG

Date Checked :- 03-Feb-16

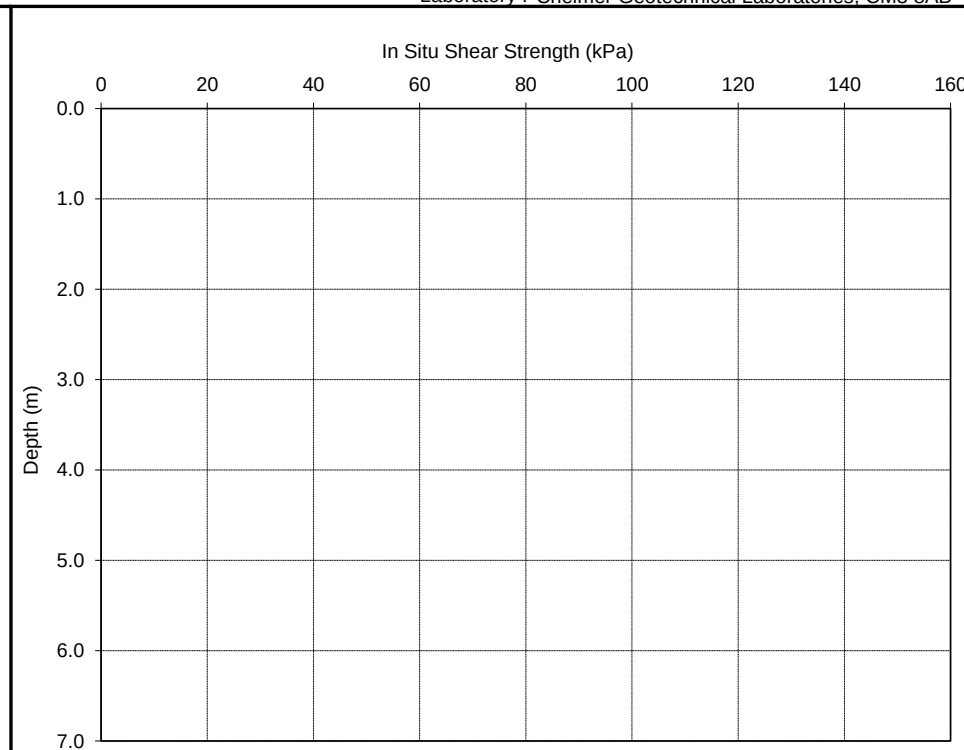
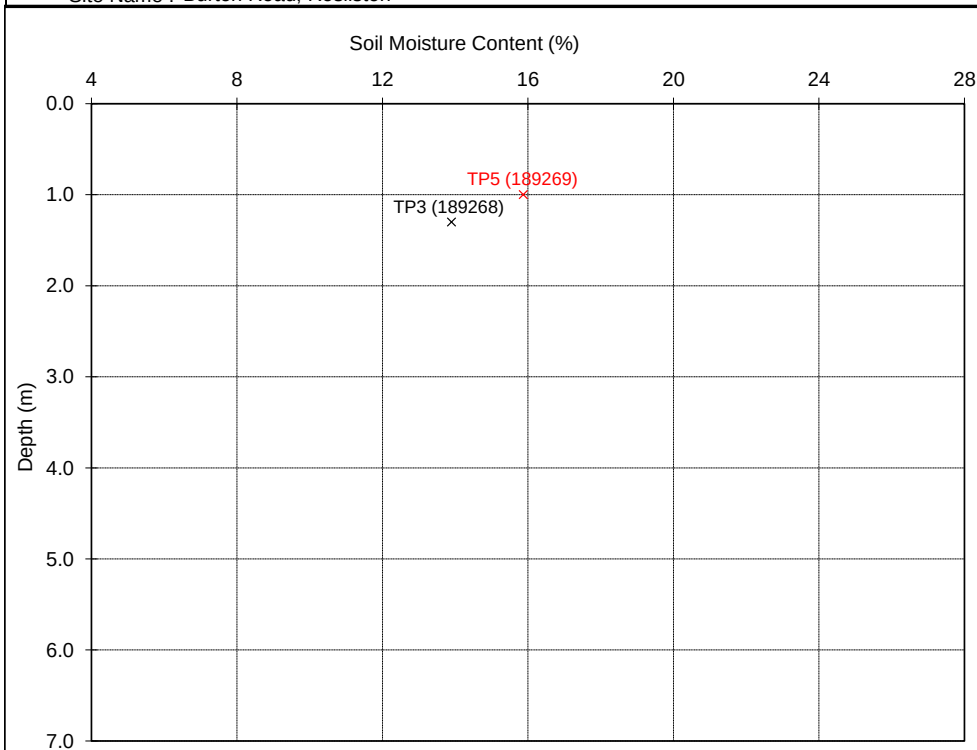
Laboratory Testing Results

Moisture Content/Shear Strength Profile



Job Number : CGL6406
 Client : QTS Environmental
 Client Reference : IV.97.15 / 40060
 Site Name : Burton Road, Rosliston

Date Received : 01/02/2016
 Date Testing Started : 01/02/2016
 Date Testing Completed : 03/02/2016
 Laboratory : Chelmer Geotechnical Laboratories, CM3 8AB



Notes :-

1. If the Soil Fraction > 0.425mm exceeds 5% the Equivalent Moisture Content of the remainder (calculated in accordance with BS 1377: Part 2 : 1990, cl.3.2.4 note 1) is also plotted and the alternative profile additionally shown as an appropriately coloured broken line.
2. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly over consolidated clays) at shallow depths.

Comments :-

Unless otherwise stated, values of Shear Strength were determined in situ by Chelmer Site Investigations using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 140 kPa. (Not UKAS accredited)



Checked By :- SG

Date Checked :- 03-Feb-16

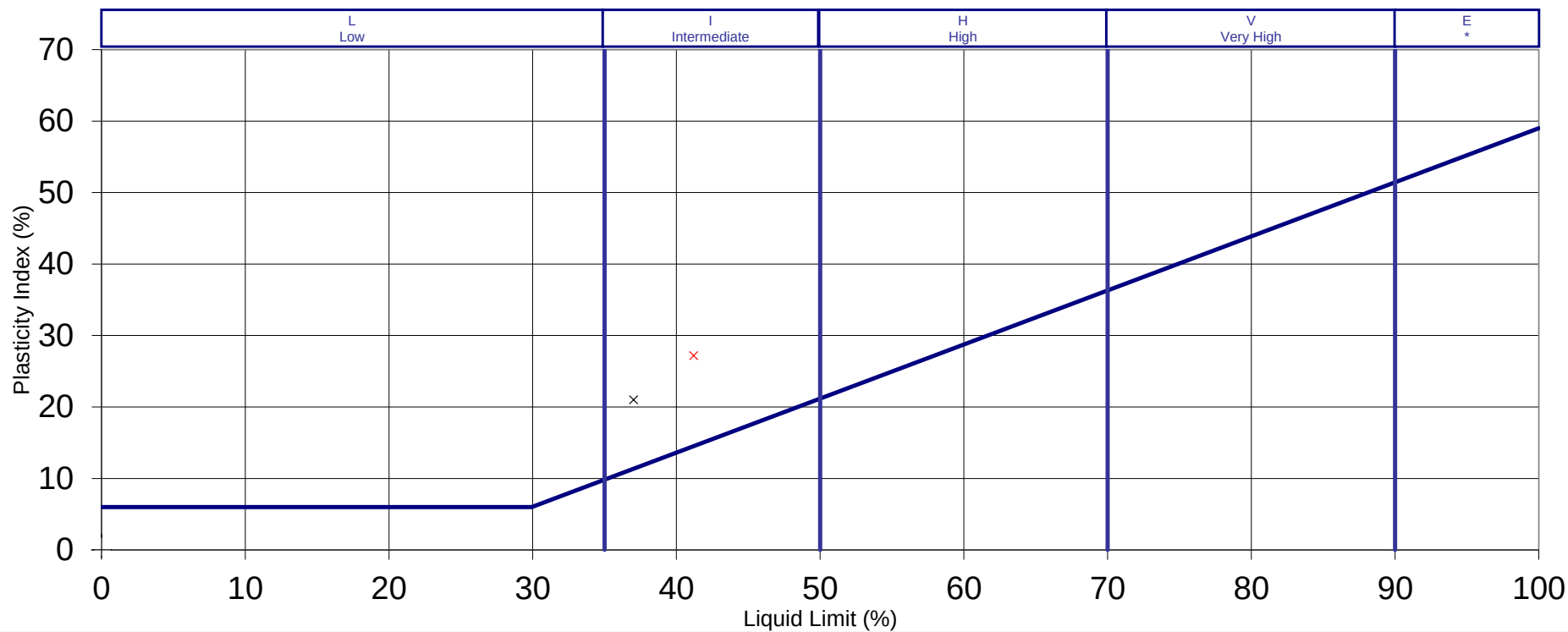
Laboratory Testing Results

Plasticity Chart for the classification of fine soils and the finer part of coarse soils
In Compliance with BS5930 : 1999



Job Number : CGL6406
Client : QTS Environmental
Client Reference : IV.97.15 / 40060
Site Name : Burton Road, Rosliston

Date Received : 01/02/2016
Date Testing Started : 01/02/2016
Date Testing Completed : 03/02/2016
Laboratory : Chelmer Geotechnical Laboratories, CM3 8AB



Notes :-

SILT (M-SOIL), M, plots below A-Line
CLAY, C, plots above A-Line } M and C may be combined as FINE SOIL, F.

Key :- TP3 (189268)

TP5 (189269)



Comments :-

Checked By :- SG

Date Checked :- 03-Feb-16



8284



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Where our involvement consists exclusively of testing samples, the results and comments (if provided) relate only to the samples tested.

Any samples that are deemed to be subject to deviation will be recorded as such within the test summary.