

PHASE I & II GEO-ENVIRONMENTAL
ASSESSMENT

BULLFURLONG LANE
BURBAGE

RESOLUTE RETAIL LTD

JULY 2024



SUMMARY TABLE: PHASE I & II GEO-ENVIRONMENTAL ASSESSMENT	
SITE:	Bulfurlong Lane, Burbage
CLIENT:	Resolute Retail Ltd
DATE:	July 2024
REFERENCE:	IV.64.24
DEVELOPMENT PROPOSAL:	Residential Housing
HUMAN HEALTH:	No Risk
CONTROLLED WATERS:	No Risk
GAS RISK:	No Risk
RADON GAS:	No protection required
COMMENTS:	No remediation required.
FOUNDATIONS:	Traditional foundations bearing onto the underlying firm clay.
FLOOR SLABS:	Ground bearing.
CONCRETE:	DS – 1 AC 1s
COMMENTS:	Traditional Foundations Suitable

Authorised:		Richard Sutton MRICS <i>Director</i>
Date:	29.07.24	
Version:	1.0	



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1.0 INTRODUCTION

1.1 PREAMBLE

This Phase I & II Geo-Environmental Assessment has been produced for Resolute Retail Ltd to provide a pre-development contamination and geotechnical assessment of the site known as *Bullfurlong Lane, Burbage*. The development proposal for the site is for *Residential housing*.

1.2 SITE LOCATION

The site is located approximately 750m south-west of Hinckley town centre. The National Grid Reference (NGR) for the approximate centre of the site is SP 43808 91817. The site location, 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 I Conceptual Model.
- Provide a strategy for, and to implement, a Phase II Environmental and Geotechnical Assessment.
- Development of the Phase II 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 BR211: Radon: Guidance on protective measures for new buildings.
- BSI (2020), BS 5930:2015+A1 2020 Code of practice for ground investigations.
- DEFRA (2014), SP1010 Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination.

1.5 LIMITATIONS

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

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

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

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

2.0 DESK STUDY AND SITE OBSERVATIONS

2.1 HISTORICAL REVIEW: SITE DEVELOPMENT

Ordnance Survey maps have been reviewed for the years 1886 - 2024. The historical development of the site and the locality are detailed below; the OS maps are contained in Appendix C.

DATE	ON – SITE	OFF- SITE
1886-89	<i>The site is currently a greenfield section of land with no structures occupying it.</i>	<i>The site is surrounded with similar Greenfields, a small body of water is located approx. 300m north.</i>
1925	<i>No changes to the site.</i>	<i>There is an influx of residential and commercial developments in the local area.</i>
1938	<i>The site is now illustrated as allotment gardens.</i>	<i>More of influx of residential and commercial developments in the local area.</i>
1968	<i>The site now has 2 small unnamed buildings on the western portion.</i>	<i>A spring is located approx. 300m east of the site.</i> <i>There is now a large portion of residential housing neighbouring the site.</i>
1983	<i>A third unnamed building in the western portion of the site has been illustrated.</i>	<i>No Major changes to the surrounding area.</i>
1993	<i>All Buildings are now not illustrated.</i> <i>The site remains the same.</i>	<i>More of influx of residential and commercial developments in the local area.</i>
2001	<i>The site remains the same.</i>	<i>There is a small canal running from just outside the western boundary of the site down past the southern boundary.</i>
2024	<i>No Major changes on or off site.</i>	

2.1.1 SUMMARY

The site was originally agricultural land that has seen little development over the years, the two small buildings on the site are likely to have been storage units. The surrounding areas of the site have been developed from agricultural land into a small town with residential and commercial buildings.

2.2 DEVELOPMENT PROPOSAL

The site is to be developed with two storey housing.

2.3 SITE DESCRIPTION

The site is located on Bullfurlong Lane and forms a square open area of land that measures out at approximately 4500m²; the site is covered in overgrown vegetation with a clear patch running through the centre, running from the east to the west. This clear patch is where a recently installed water main runs through the site. There are also 2 storage containers in the centre of the site set next to the path.

2.4 ANTICIPATED GEOLOGY

The BGS geological map for this area illustrates solid strata of the Mercia Mudstone Group consisting of beds of mudstone and siltstone and Oadby Member Superficial Strata.

2.5 HYDROGEOLOGY & HYDROLOGY

2.5.1 Hydrogeology

The Mercia Mudstone are classified by the Environment Agency as a *Secondary B Aquifer* and the Superficial Strata as a *Secondary Undifferentiated Strata*.

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 body (Stream) is located on the eastern border of the site.

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

2.6 MINERAL RESOURCES

The site is not at risk from historical coal mining or mineral extraction.

2.7 POTENTIALLY CONTAMINATIVE LAND USES

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

- The site is not located within 250m of a landfill site.
- There are no fuel sites located within 250m of the site.

The site was occupied by an *Allotment* in the 1930 – 60's but has been in sole agricultural use since.

2.8 ASBESTOS

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

2.9 ACCESS

Access to the site will be from the existing access on Bullfurlong Lane.

2.10 RADON GAS ASSESSMENT

The proposed residential units will not require Radon Protection.

3.0 PHASE I CONCEPTUAL MODEL

3.1 SOURCE-PATHWAY-RECEPTOR

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

The site's former uses as allotment gardens and agricultural fields are considered in respect to potential contaminative sources.

There are no landfill sites within 250m of the site.

Potential contaminants of concern for the end user include Heavy Metals, Polycyclic Aromatic Hydrocarbons (PAHs) and herbicides.

It is noted that the site is overgrown with native species and grass, therefore herbicides are not considered within the risk profile.

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

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

For the controlled waters environment the primary receptors are the *Secondary B and Secondary Undifferentiated Aquifers* underlying the site.

Potential contaminants of concern for the environment include Heavy Metals, Polycyclic Aromatic Hydrocarbons (PAHs).

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

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

Figure 3.1: Phase 1 Conceptual Site Model

HUMAN HEALTH			
SOURCE	PATHWAY	RECEPTOR	SOLUTION
Potentially contaminated made ground from historical site use (allotments, agriculture). Potential contaminants of concern include Heavy Metals, PAHs, Herbicides.	Dermal contact with potentially contaminated soil dust; ingestion and inhalation of potentially contaminated soil dust; ingestion of vegetables grown in potentially contaminated soil and potentially contaminated soil attached to vegetables.	Construction Workers	Basic PPE for all workers (overalls, gloves, dust mask if required) and wash facilities/personal hygiene
		End Users (e.g. residents)	Negligible Risk
		Water Supply/End Users	
Contaminated made ground and natural strata	Leaching into water supply pipes		
CONTROLLED WATERS			
Potentially contaminated made ground from historical site use (allotments, agriculture). Potential contaminants of concern include Heavy Metals, PAHs, Pesticides.	Leaching and vertical migration through the vadose zone to the saturated zone	Secondary Undifferentiated & Secondary B Aquifers	Mercia Mudstone Strata Predominantly Impermeable. Negligible Risk
	Leaching and horizontal migration to surface waters	Surface Waters	

4.0 PHASE II FIELDWORK

4.1 INTRODUCTION

The Phase II intrusive investigation was undertaken on the 24th June 2023 under the supervision of a suitably qualified IVENV engineer and in general accordance with the Code of Practice for Site Investigations BS5930: 2015+A1: 2020

The Phase II investigation incorporated the following:

- The advancing of 5No window sample boreholes to a maximum depth of 3.0mbgl.
- The analysis of 4No samples for a standard 'CLEA' screening suite.
- The analysis of 4No samples for geotechnical design criteria including Water Soluble Sulphate and pH and 4No Plasticity Index.

Window samples 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	Notes
WS1 - 5	General grid	CLEA Suite

4.3 LABORATORY ANALYSIS & TESTING

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

4.3.1 Chemical Analysis

A total of 4 samples Topsoil were sent for analysis at a UKAS/MCERTS accredited laboratory. The scheduled parameters are detailed in table 4.2.

Table 4.2: Soil Analysis

Sample ID	Depth (mbgl)	Strata	Suite
WS1 – 5	0.3 – 0.4	Topsoil	CLEA

The soil analysis results are contained in Appendix E.

4.3.2 Geotechnical Testing

Four samples of Mudstone were sent to a UKAS/MCERTS accredited laboratory and subjected to Plasticity Index (PI), Water Soluble Sulphate and pH testing.

The geotechnical test results are contained in Appendix F.

5.0 GROUND CONDITIONS

The intrusive investigation has revealed that Topsoil across the site overlies superficial deposits of Oadby Member, which are in turn underlain by the solid strata of the Mercia Mudstone group. The site specific observations are detailed in the following sections.

5.1 MADE GROUND

Made ground materials were not noted to be present on site.

5.2 SUPERFICIAL STRATA

Superficial Strata were not noted to be present on site.

5.3 SOLID STRATA

Solid strata of the Mercia Mudstone group were present at depths 1.2- >3.0mbgl. This strata generally consisted of Firm Brown Silty CLAY extending to very Firm Brown CLAY.

5.4 FIELD OBSERVATIONS

Table 5.1 illustrates the pertinent geological and contamination observations made during the intrusive investigation.

Table 5.1: Fieldwork Observations

Location	Depth/Strata	Observation
WS1 – 5	Topsoil – 0.3 – 0.4m	N/A

5.5 GROUNDWATER

Groundwater strikes were not encountered during the fieldwork.

5.6 FIELD TESTS

Standard Penetration Tests (SPT) were undertaken during drilling of all windowless sampler boreholes. Figure 5.1 show SPT 'N' Values vs Depth (m bgl) for tests within the superficial deposits (Oadby Member) and solid geology (Mercia Mudstone Group). Figure 5.2 illustrates the individual SPT 'N' Value profile for each borehole.

5.6.1 SPT PROFILE

Standard Penetration Tests (SPT's) were undertaken at approximately 1.0m intervals in each borehole to assess soil strength/relative density. Figures 5.1 and 5.2, overleaf, show SPT 'N' Values vs separate geology and each borehole, respectively.

Figure 5.1: SPT 'N' Value vs Depth for Oadby Member and Mercia Mudstone Group

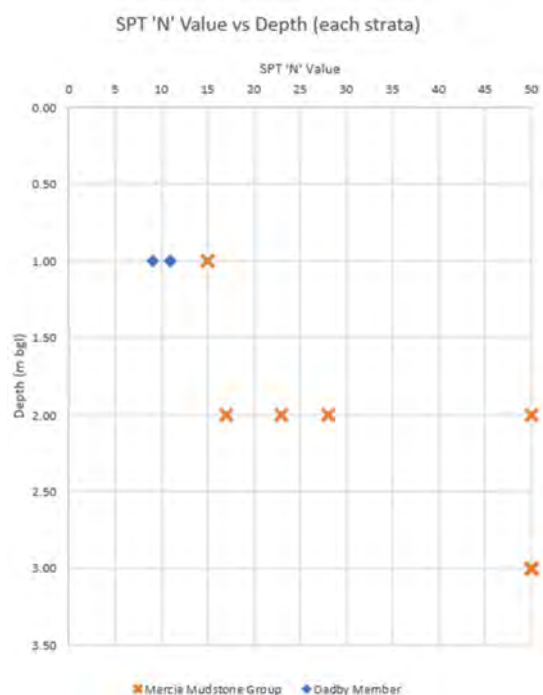


Figure 5.2: SPT 'N' Value vs Depth for Individual Borehole Profiles

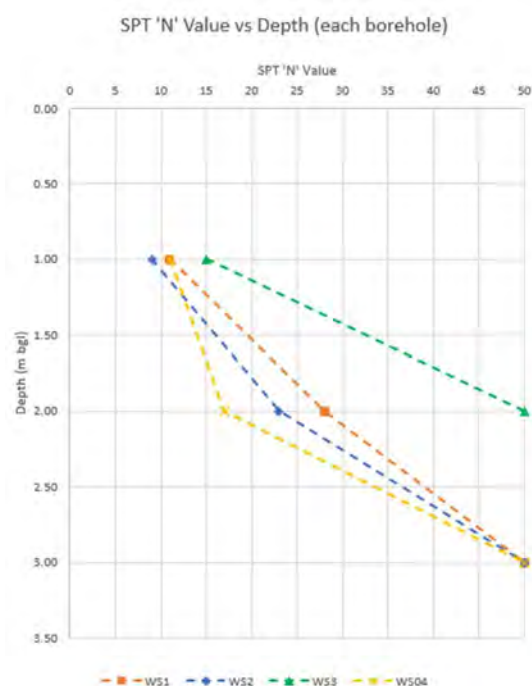


Figure 5.1 illustrates a gradual increase of SPT 'N' Values with depth (m bgl) recorded in the Mercia Mudstone deposits.

Figure 5.2 shows that the SPT 'N' Value increases with depth for all of the boreholes.

All windowless sampler borehole logs are included in Appendix D and include a full record of SPT 'N' Values.

6.0 GEOTECHNICAL ASSESSMENT

The geotechnical assessment considers the development proposal for five residential properties with associated private gardens and roadways.

6.1 GEOTECHNICAL LABORATORY TESTING

Full details of the laboratory testing results are detailed below (Table 6.1):

Table 6.1: Results of Laboratory Testing

Determinand	Topsoil	Oadby Member	Mercia Mudstone
Moisture Content %	-	17.8 – 20.3	13.9
Liquid Limit %	-	29 - 34	35
Plastic Limit %	-	13 - 17	15
Plasticity Index %	-	16 - 20	20
% passing 0.425mm %	-	69 - 98	84
Modified Plasticity Index* %	-	11 - 20	17
pH	6.7 – 7.1	4.8 - 5.4	
Water Soluble Sulphate content mg/l	<10 – 19	16 - 43	

Notes: * Modified Plasticity Index Calculated in Accordance with NHBC Guidance, Chapter 4.2

6.2 FOUNDATION DESIGN & FLOOR SLABS

The plasticity index results indicate clays of the Oadby Member and Mercia Mudstone have a volume change potential that can be classified as 'Low', after applying the correction factor recommended by the NHBC.

On this basis, a minimum foundation depth of 0.75mbgl should be implemented across the site.

Soil geotechnical laboratory analysis certificates are presented in Appendix F.

6.3

EXCAVATION & GROUNDWATER CONDITIONS

Topsoil has been recorded across the site to a maximum depth of 0.40mbgl. Underlying the topsoil, superficial strata of the Oadby Member, generally comprising soft to firm brown silty clay to a maximum depth of 1.50mbgl. Underlying the superficial strata, solid geology comprising stiff brown clay has been recorded to a maximum depth of 3.00mbgl.

It is considered that traditional strip foundations, approximately 0.60m wide, bearing on the underlying clays of at least firm consistency, should prove to be a suitable foundation option at the site. A net allowable bearing pressure of 110kN/m² is considered to be achievable when bearing on soils of at least firm strength. Localised deepening onto soils of at least stiff consistency could achieve a allowable bearing capacity of 150kN/m².

Localised deepening will be required should any made ground be encountered or where soft clays are present, particularly in the vicinity of WS2.

Trees and shrubs of varying type and maturity are present along all of the site boundaries. Shallow foundations within close proximity of trees or shrubs are likely to require deepening in accordance to the recorded distances as per NHBC Standards (Building Near Trees Chapter 4.2). Where information regarding past or future tree removal/planting is available, then the guidance provided in NHBC Standards (Chapter 4.2: Building Near Trees) should be followed together with advice from a qualified structural engineer. It is recommended to undertake an arboricultural survey to assess tree types and assist with foundation design.

The removal of trees during development of the site may also cause heave of cohesive soils and heave protection measures should be adopted in foundation design where appropriate.

A ground bearing floor slab could be utilised at the site.

The above assessment should be confirmed by the appointed structural engineer.

6.4 BURIED CONCRETE

Based on the recorded water-soluble sulphate concentrations and pH value it is considered appropriate to adopt a basic Design Sulphate Class of DS-1, together with an Aggressive Chemical Environment of Concrete (ACEC) AC-1s.

7.0 CONTAMINATION ASSESSMENT

7.1 HUMAN HEALTH

With regards to the soil risk assessment, Ivy House Environmental observe the following hierarchy:

- Category 4 Screening Levels (C4SLs)
- LQM Suitable 4 Use Levels (S4uls)

Where no C4SLs have been generated Ivy House will use the LQM S4ULs. Similar assumptions and land uses to C4SLs have been used. However, toxicological information has been based on minimal risk' as per previous guidelines and assumptions.

A review of the chemical analysis data contained in Appendix F confirms that none of the concentrations of the contaminants of concern exceed their respective Ivy House GAC (Appendix G).

No potential sources of ground gas were noted on site.

7.2 CONTROLLED WATERS

The site is underlain by strata classified as *Secondary Undifferentiated Strata and Secondary B aquifers* and groundwater was not encountered on site, subsequently no groundwater samples were taken for chemical analysis.

8.0 PHASE II CONCEPTUAL SITE MODEL

The conceptual model for the site considers the development proposal for residential with gardens use and the information gathered during the Phase I and II assessments.

The site's historical use as an *Allotment* and for *agricultural use* are considered in respect to potential contaminative sources.

There are no landfills within 250m of the site.

There Phase 2 Investigation did not report any contamination.

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

The primary receptors for the site are construction workers and end users of the site (Residents of completed development). The risk posed to human health receptors is considered negligible.

For the environment (controlled waters) the primary receptors are the underlying solid & superficial strata.

No contamination has been reported.

Relatively impermeable strata underlies the site.

The risk posed to controlled waters is considered to be negligible.

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 with soil and soil dust; ingestion and inhalation soil dust.	Construction Workers	No Risk
		End Users (Residents)	
CONTROLLED WATERS			
No Source	Impermeable Strata	Secondary A & Undifferentiated Strata	No Risk
		Surface Waters	

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 produce.

9.1 REMEDIATION TO PROTECT END USERS

No remediation is required to protect this receptor.

9.2 REMEDIATION TO PROTECT CONTROLLED WATERS

No remediation is required to protect this receptor.

9.3 REMEDIATION TO PROTECT CONSTRUCTION WORKERS

No remediation is required to protect this receptor.

9.4 REMEDIATION TO PROTECT THIRD PARTIES

No remediation is required to protect this receptor.

9.5 REMEDIATION TO PROTECT CONSTRUCTION MATERIALS

No remediation is required to protect this receptor.

9.6 WASTE MANAGEMENT

Surplus Soils produced during construction should not attract a premium for disposal and should be suitable for re-use at a restoration facility. Submission of the chemical data contained in Appendix F may be required by the receiving site.

10.0 RECOMMENDATIONS

Recommendations for further assessment of the site include:

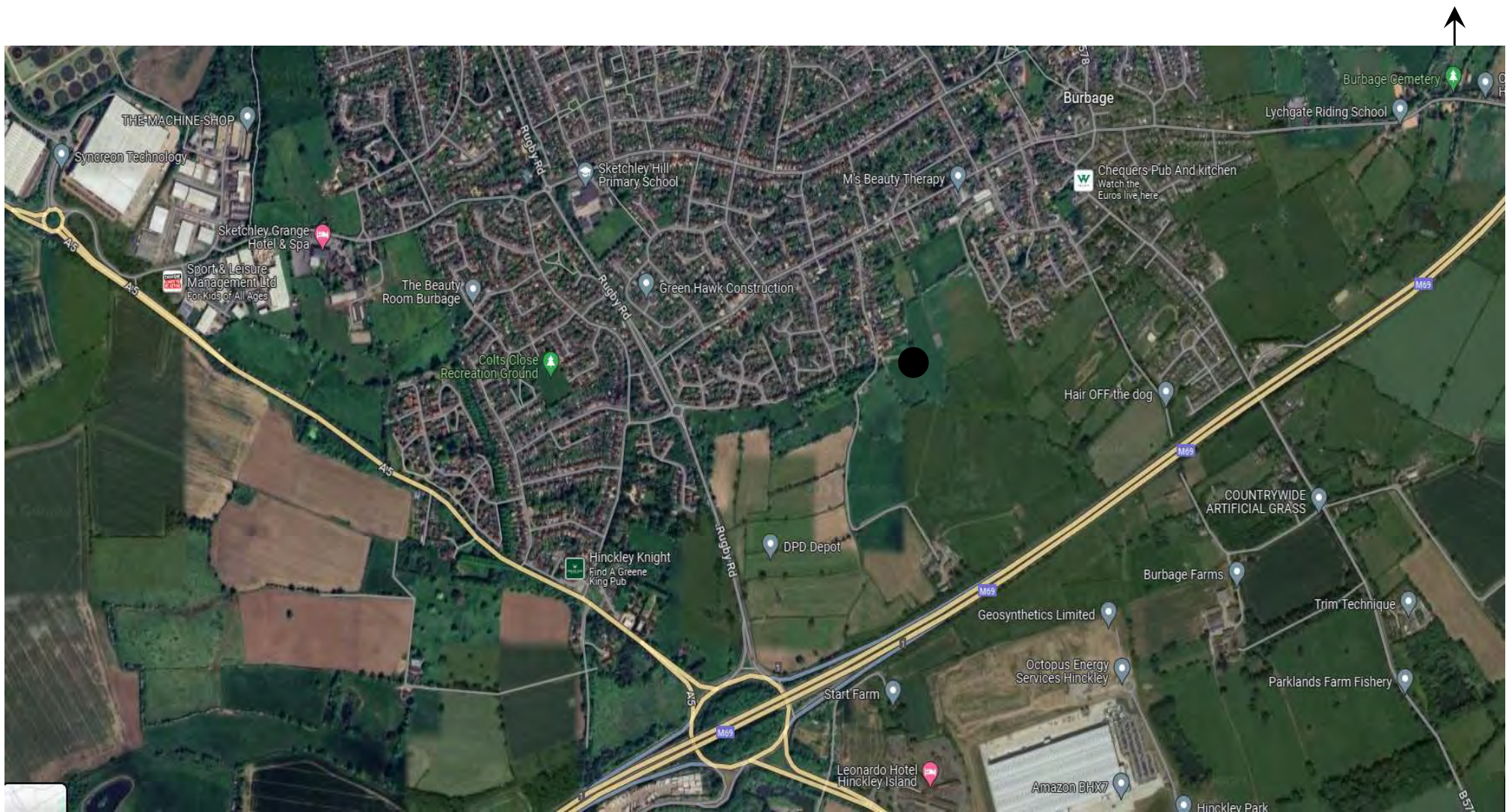
- Should any signs of organic contamination (solvents/oils/fuels) be evident during construction activities, a qualified environmental specialist should be consulted to assess the risk posed to end users and the environment.

11.0 CONCLUSIONS

The Phase I and Phase II Assessment and the recommendations contained within has illustrated that the proposed development of the site for residential housing use does not pose a risk to end users of the site or the environment.

APPENDIX A





KEY:

● Approximate Site Location

DO NOT SCALE



Linden, Potter St, Spondon, Derby, DE21 2LH
 rps@ivyhousenv.co.uk • www.ivyhousenv.co.uk • 01332 661 987

TITLE:

Site Location Plan

PROJECT:

Bullfurlong Lane, Burbage

PROJECT No:

IV.64.24

DATE:

06/2024

SCALE:

NTS

DRAWN:

RPS

DWG No:

Figure 1



KEY:



Site Boundary

DO NOT SCALE



Linden, Potter St, Spondon, Derby, DE21 2LH
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TITLE:

Site Layout

PROJECT:

Bullfurlong Lane, Burbage

PROJECT No:

IV.64.24

DATE:

06/2024

SCALE:

NTS

DRAWN:

RPS

DWG No:

Figure 2



KEY:



CP/WS Borehole

DO NOT SCALE



IVY HOUSE
environmental

Linden, Potter St, Spondon, Derby, DE21 2LH
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TITLE:

Borehole Location Plan

PROJECT:

Bullfurlong Lane, Burbage

PROJECT No:

IV.64.24

DATE:

06/2024

SCALE:

NTS

DRAWN:

RPS

DWG No:

Figure 3

APPENDIX B



Site Details:

unspecified

Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1888

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1888
Revised 1888
Edition N/A
Copyright N/A
Levelled N/A



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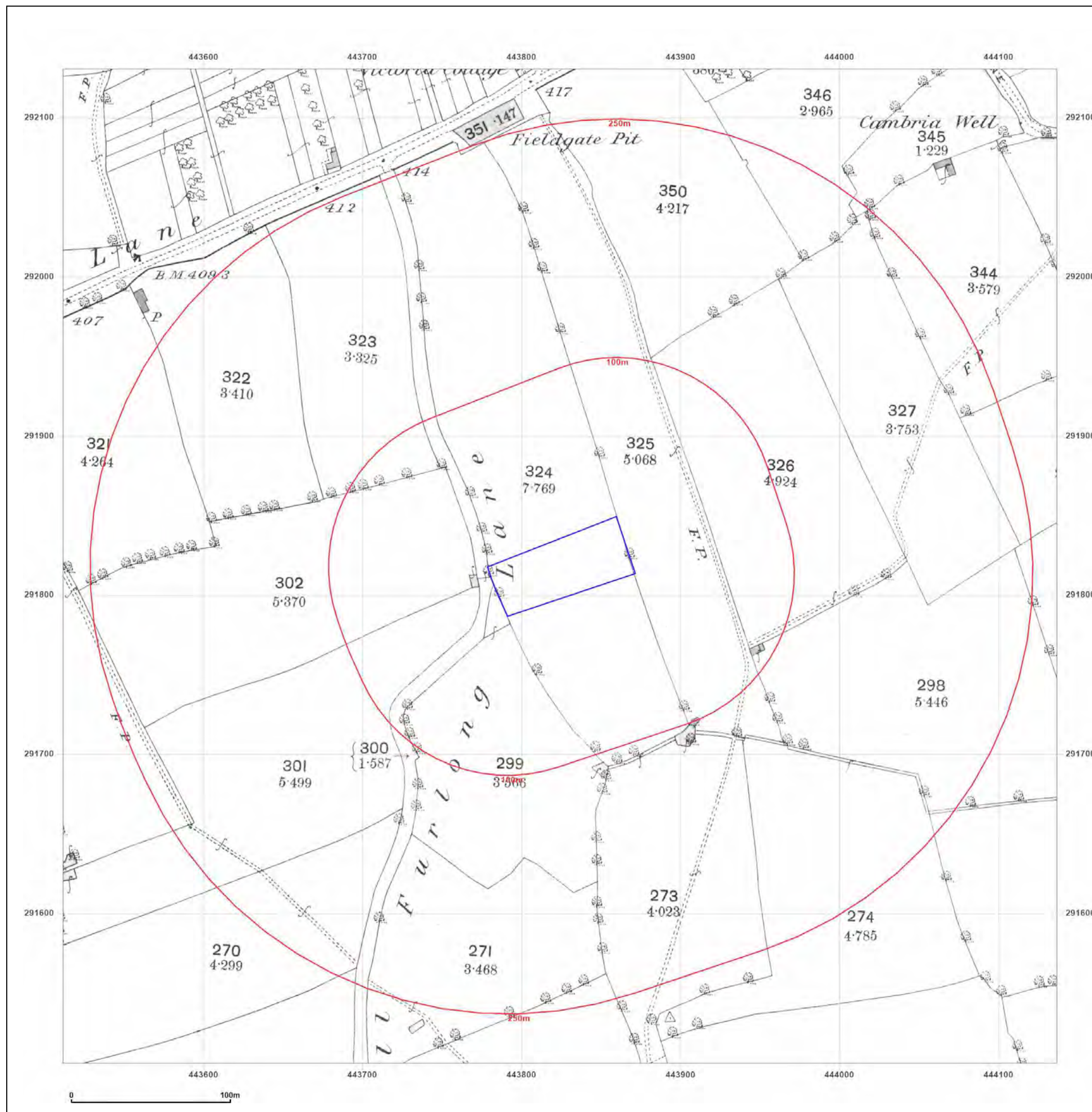


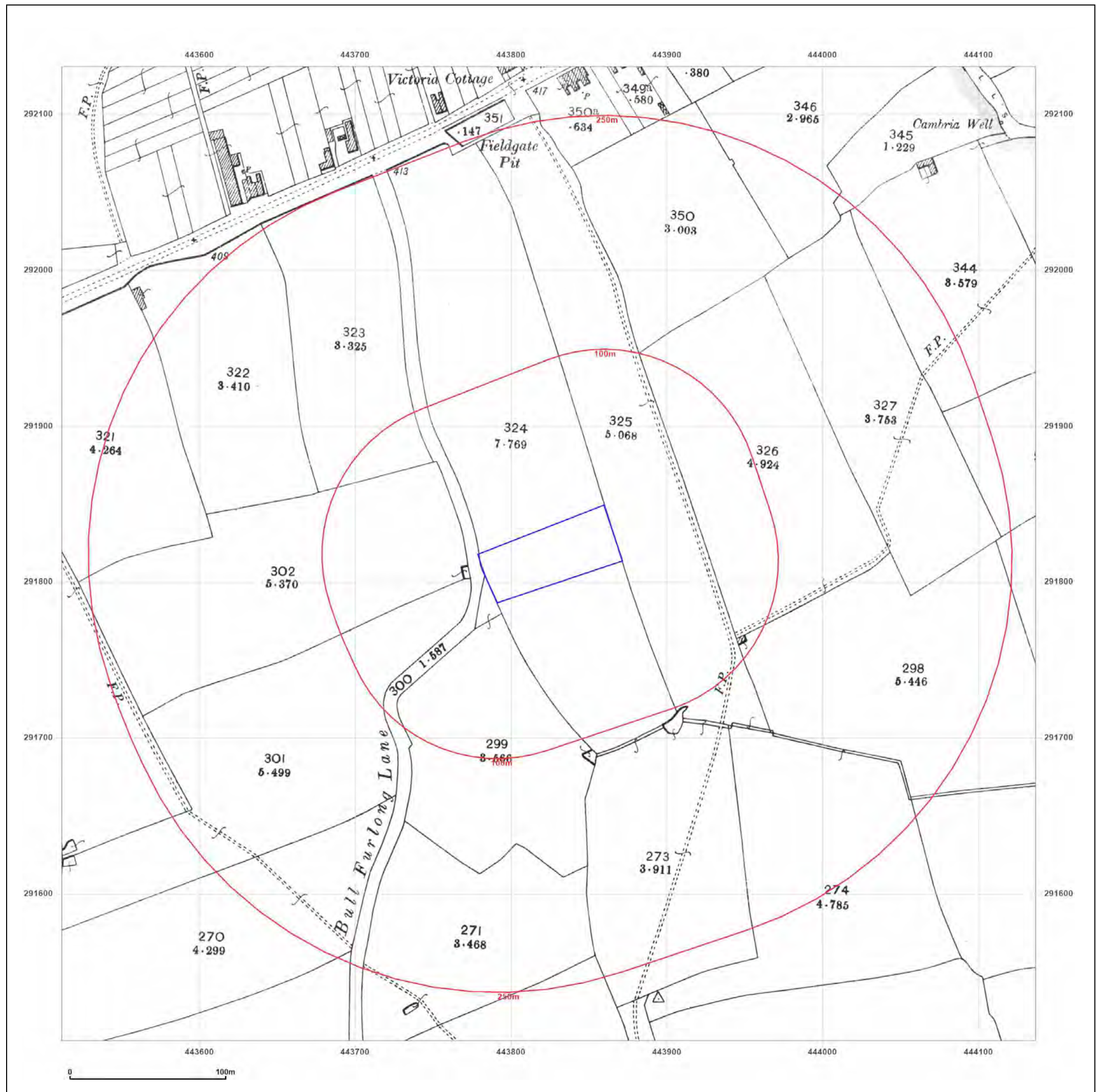
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Production date: 01 July 2024

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





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Site Details:
unspecified

Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

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Map date: 1903
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Printed at: 1:2,500

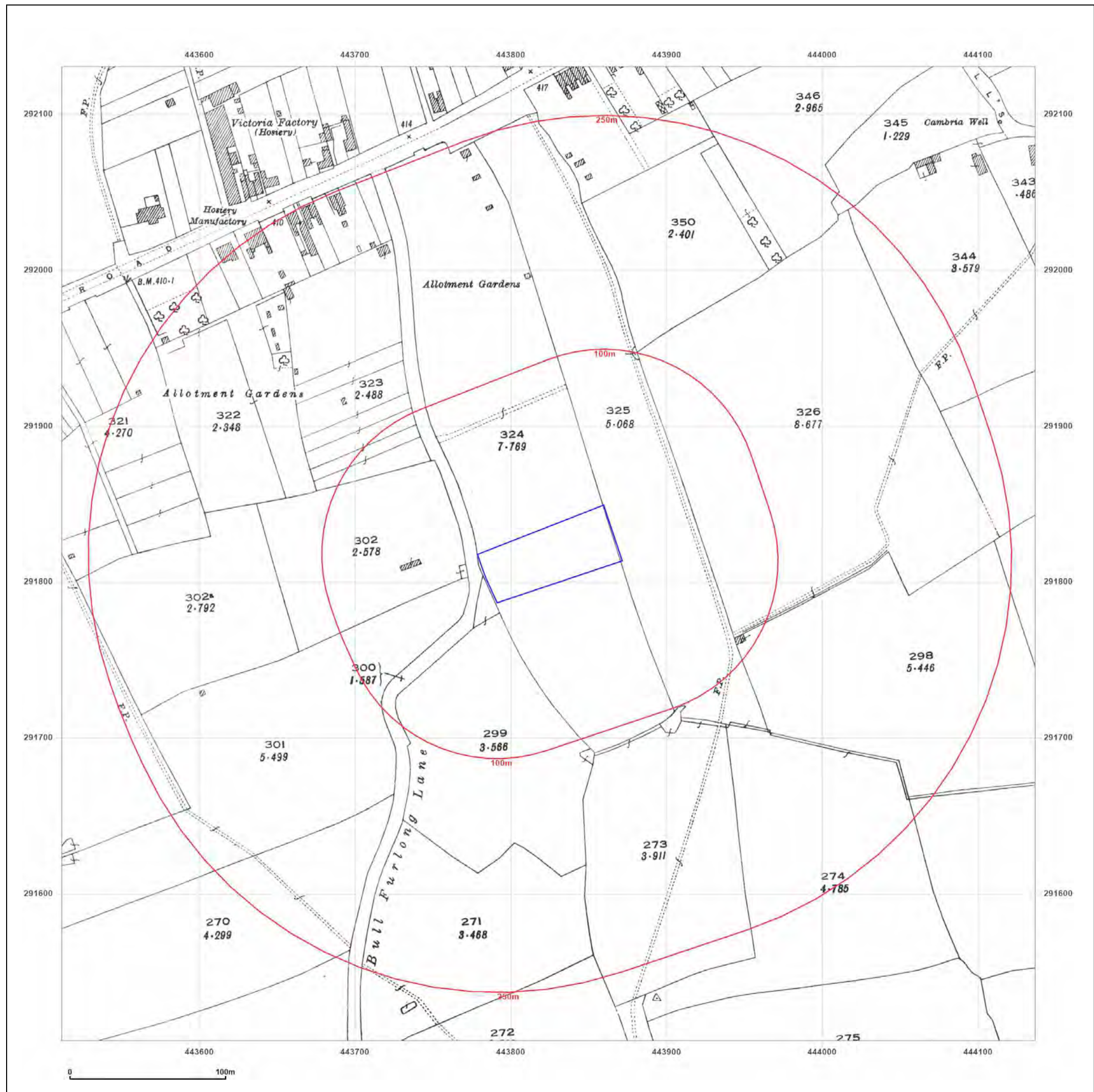
Surveyed 1903
Revised 1903
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

unspecified

Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1925

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1925
Revised 1925
Edition N/A
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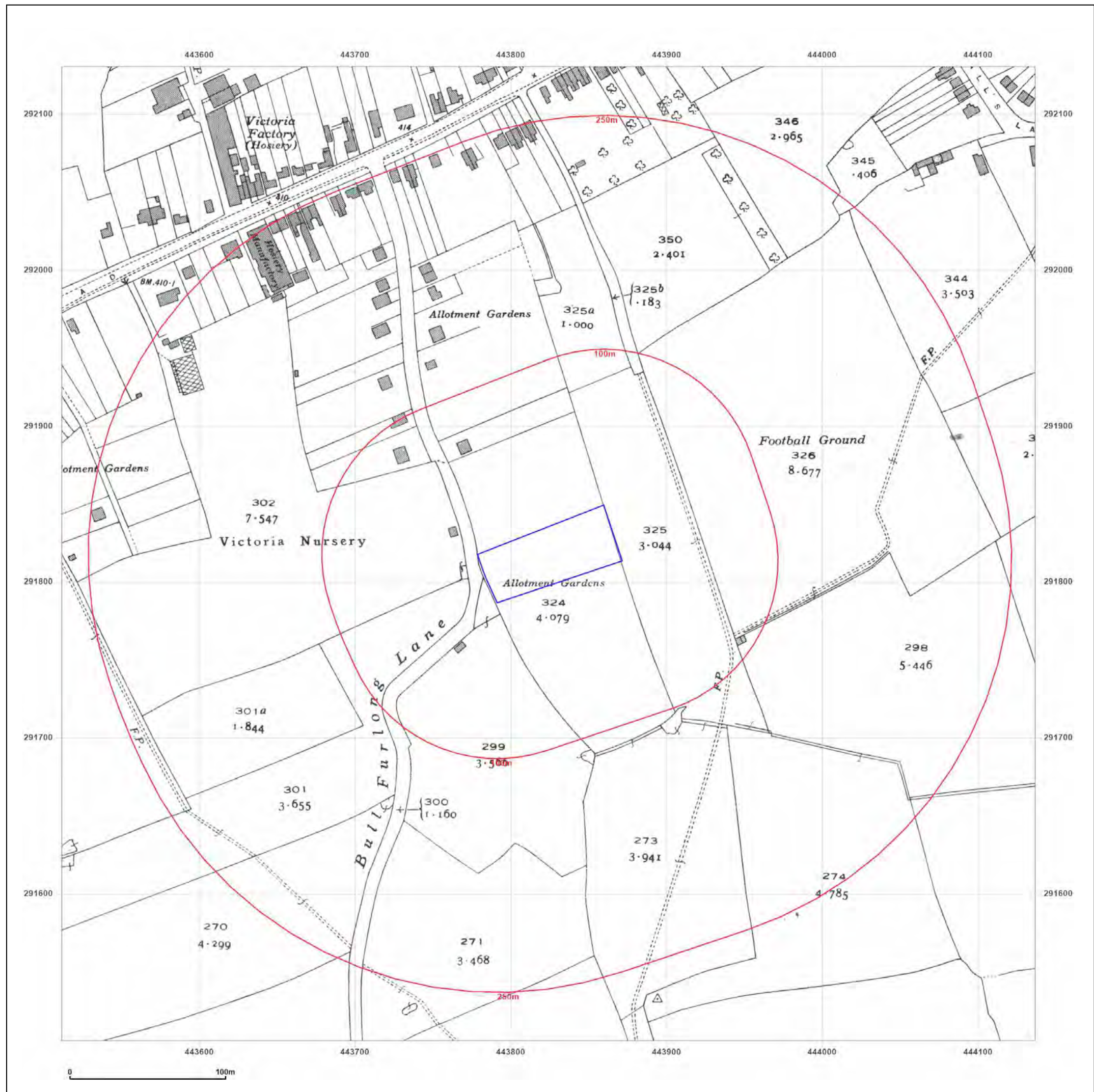


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Site Details:

unspecified

Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1938

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1938
Revised 1938
Edition N/A
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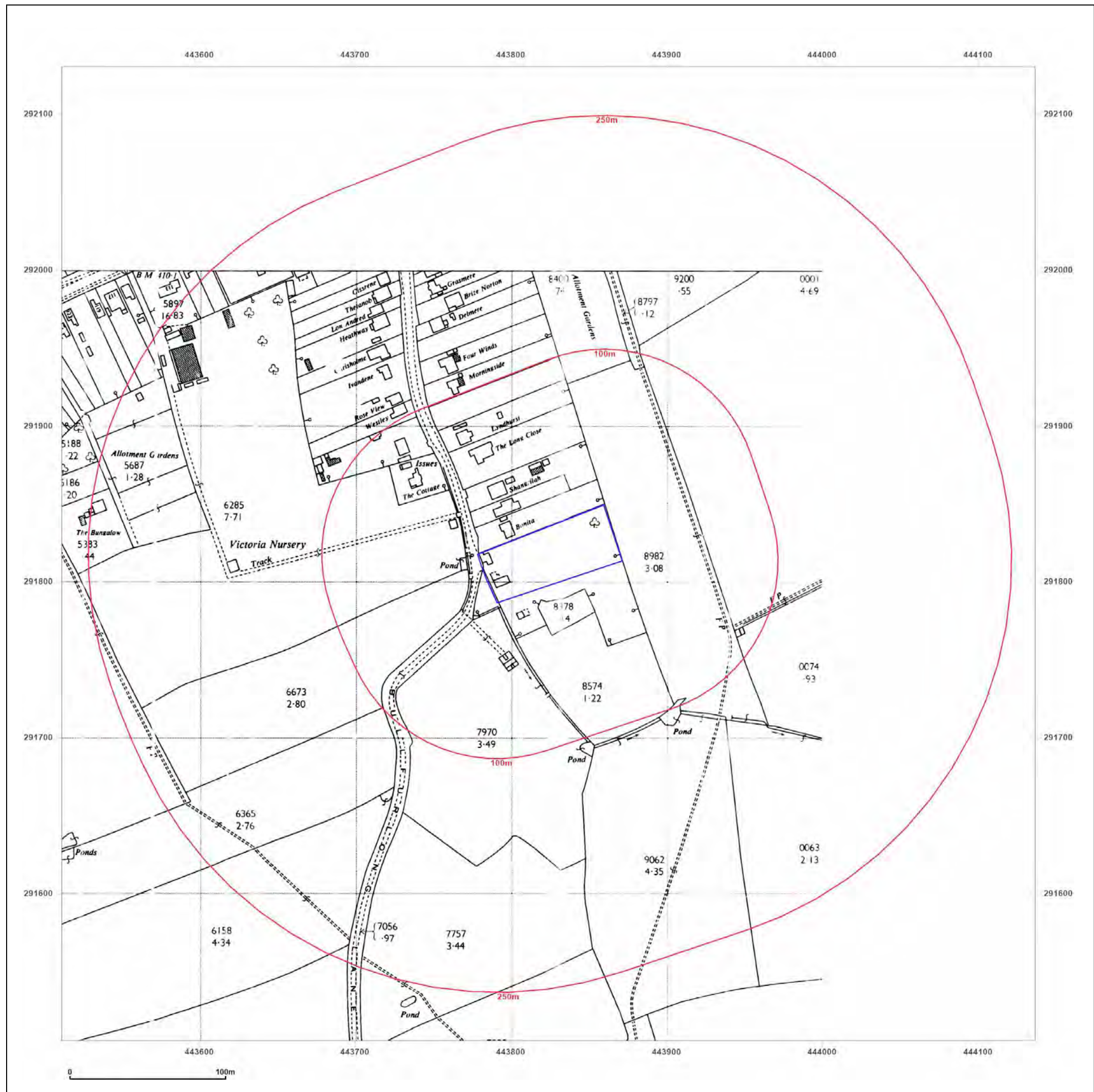


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Site Details:

unspecified

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Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



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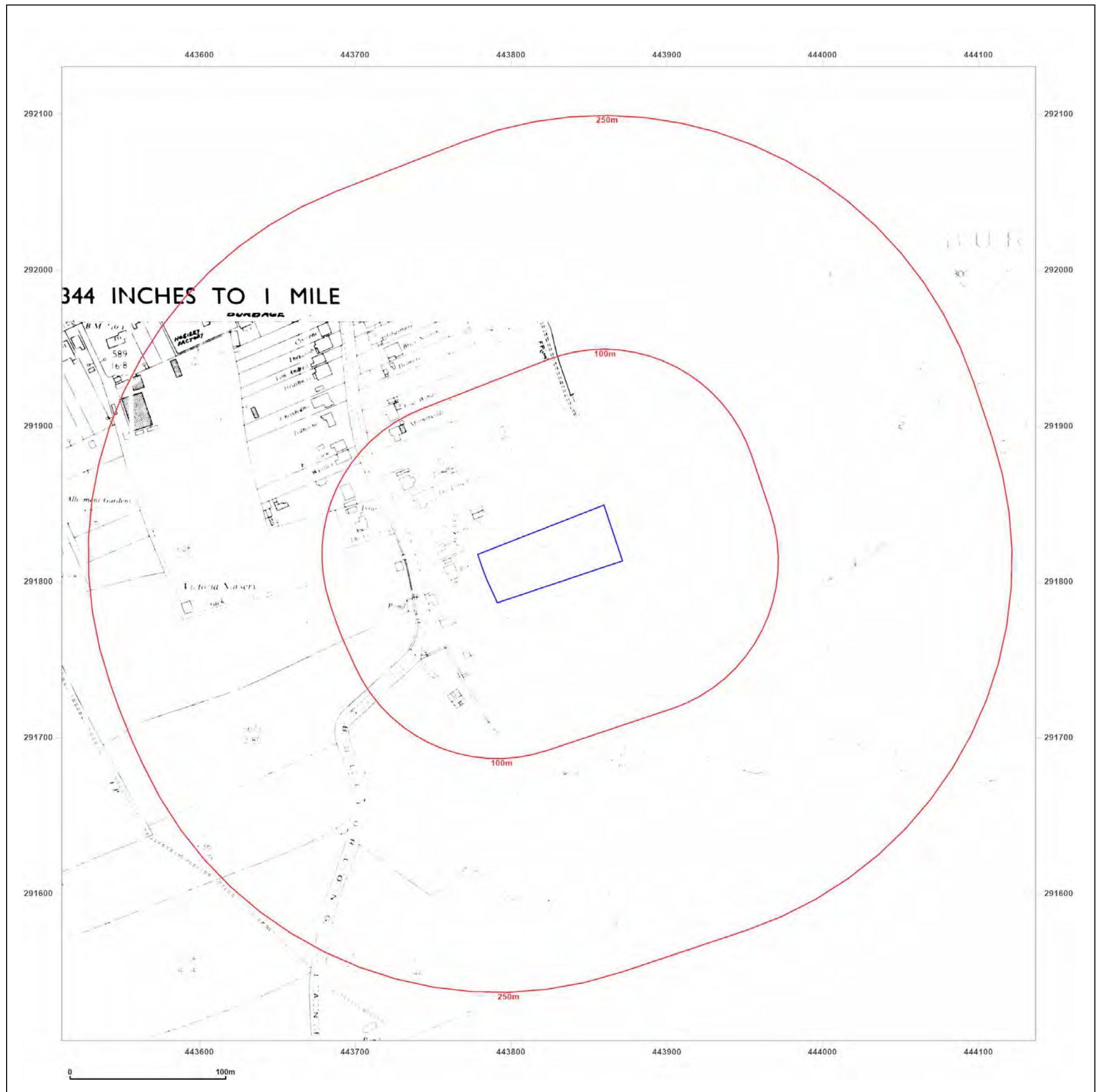


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Site Details:

unspecified

Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid

Map date: 1975

Scale: 1:2,500

Printed at: 1:2,500



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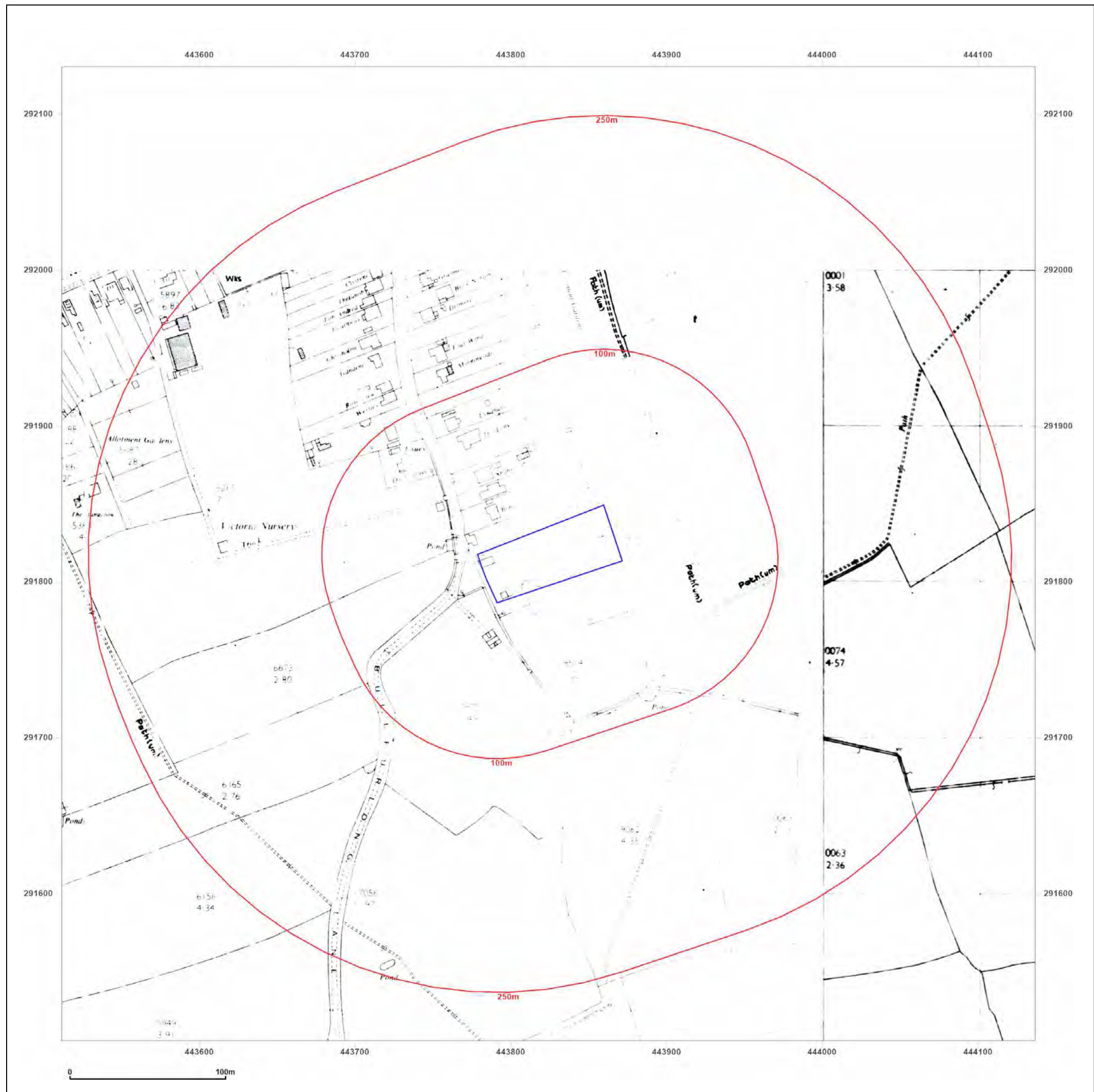


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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid

Map date: 1977-1978

Scale: 1:2,500

Printed at: 1:2,500



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Revised N/A
Edition N/A
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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000



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Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid
Map date: 1994-1995
Scale: 1:1,250
Printed at: 1:2,000

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Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid
Map date: 1994-1995
Scale: 1:1,250
Printed at: 1:2,000

Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

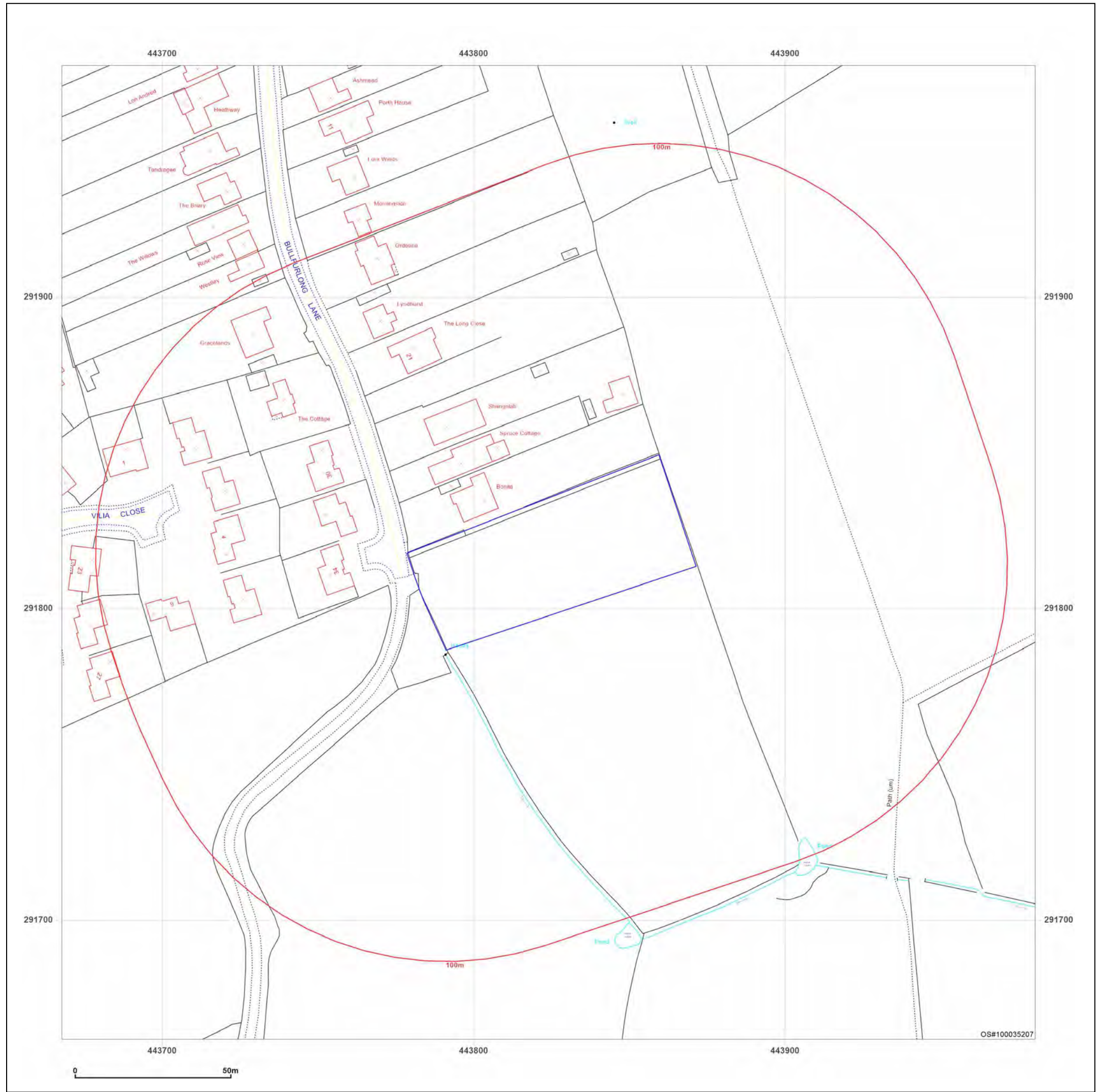
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Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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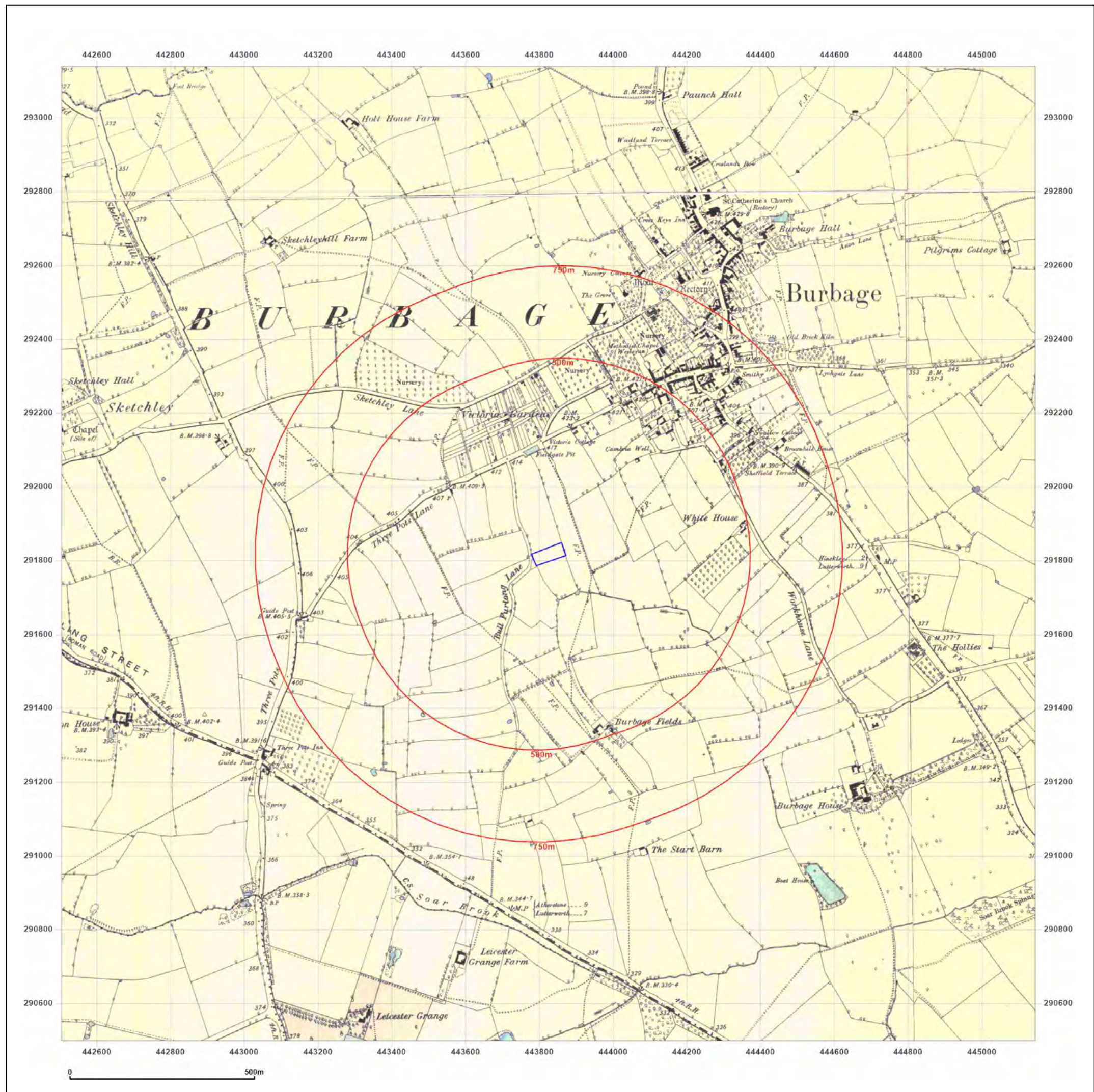


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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1886

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1886
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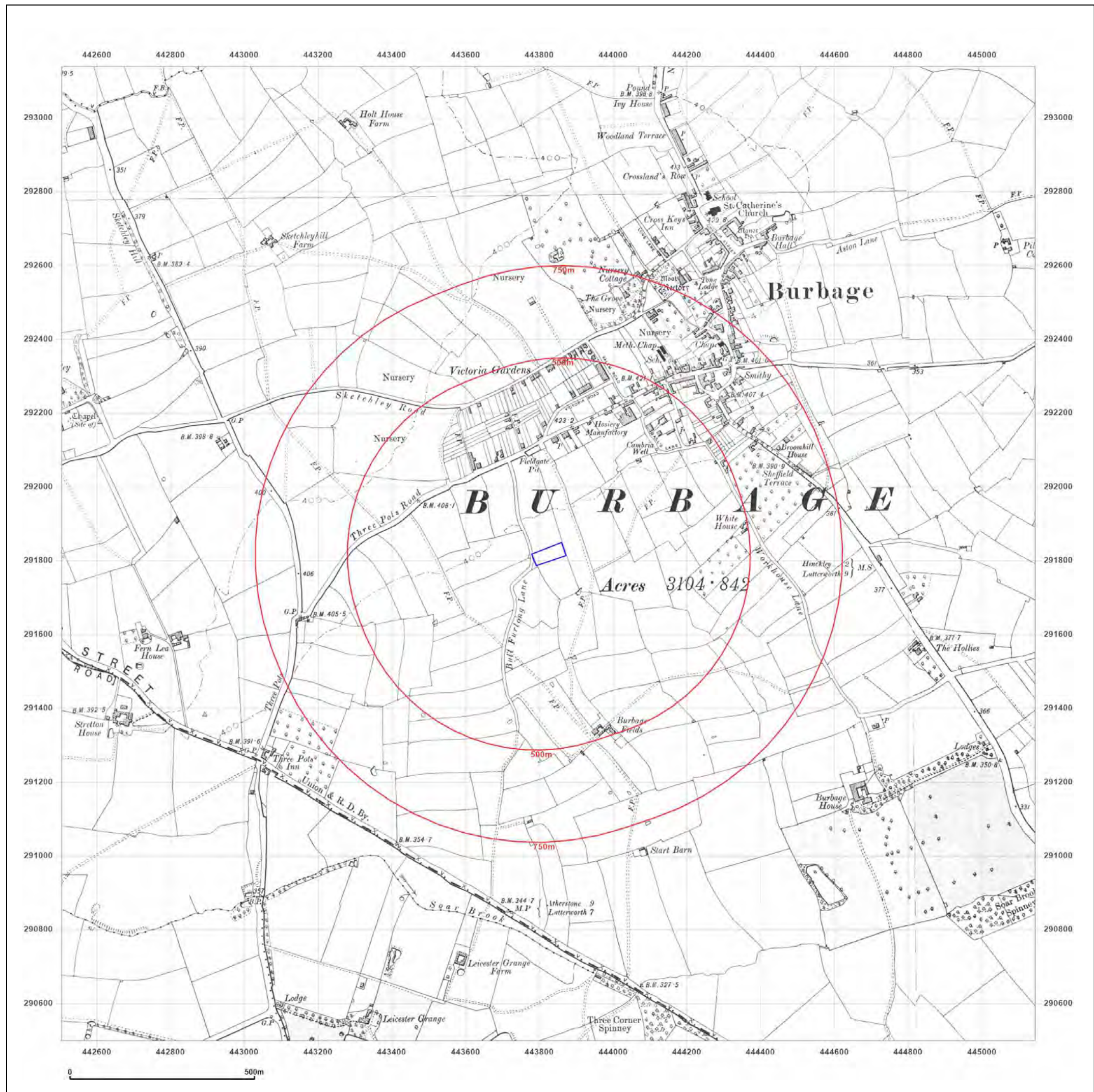


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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1901-1904

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1887
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Edition N/A
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Revised 1904
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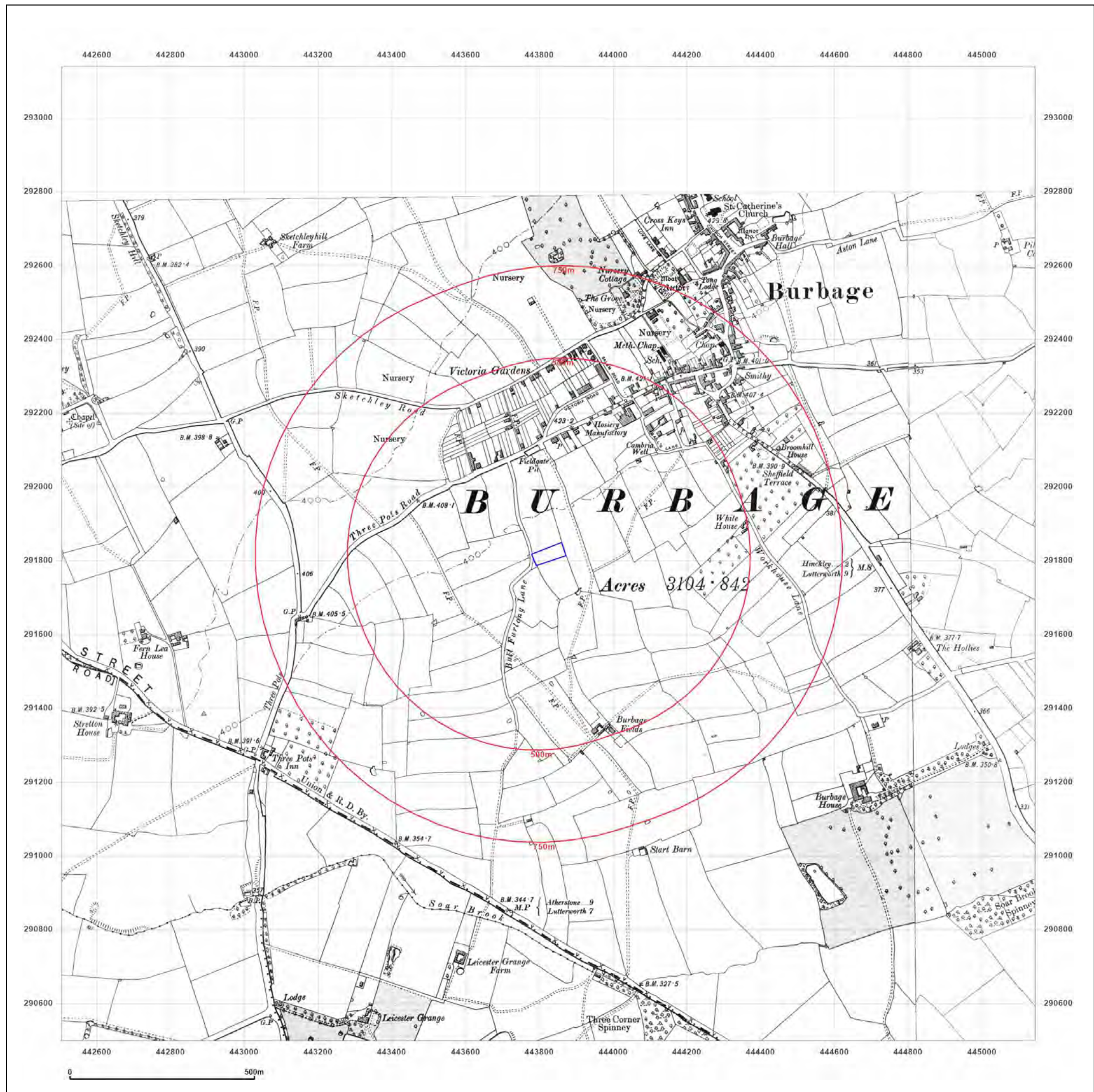


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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1902-1904

Scale: 1:10,560

Printed at: 1:10,560



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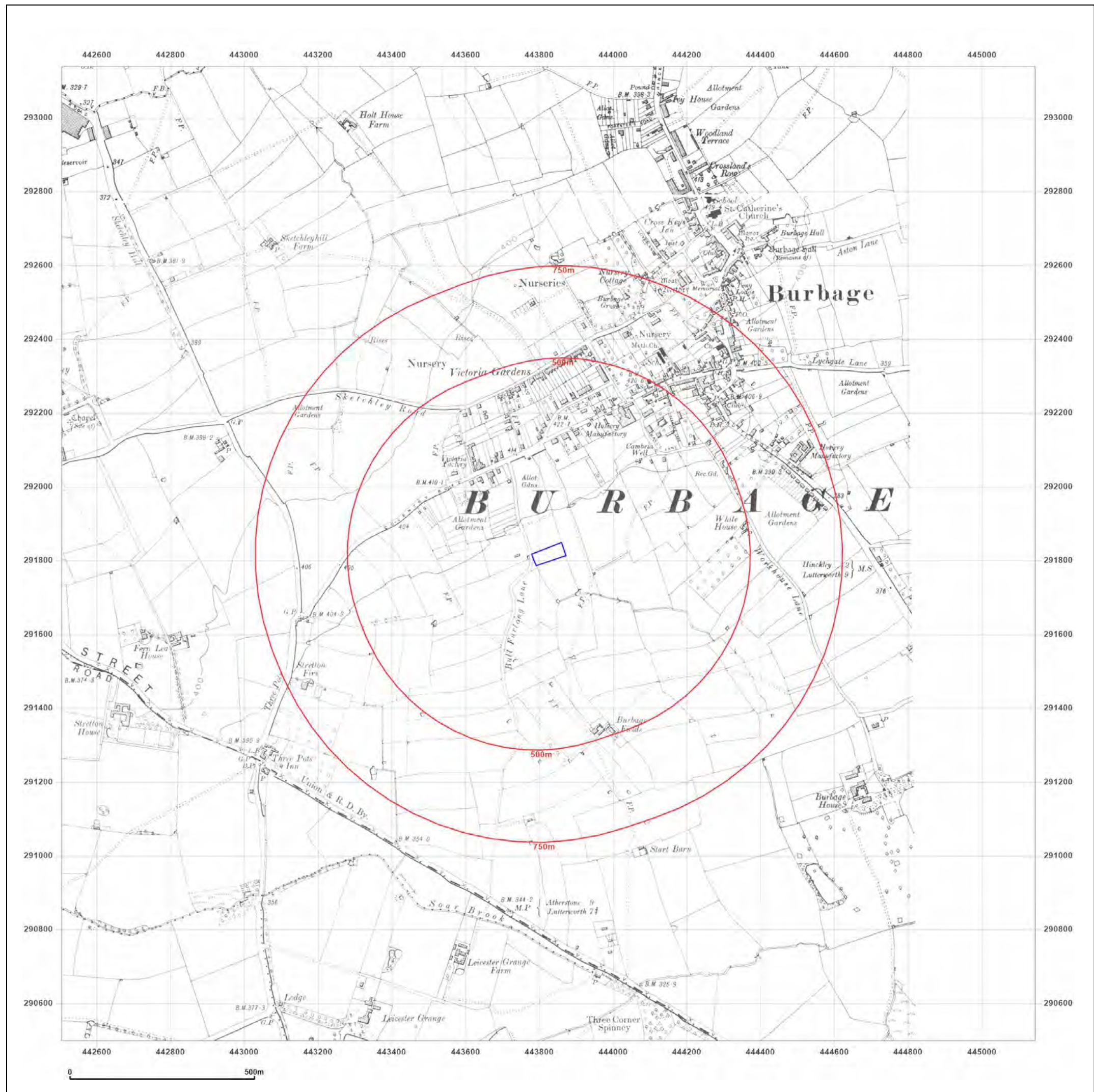


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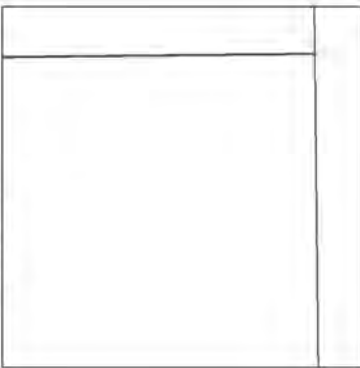
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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series
Map date: 1923
Scale: 1:10,560
Printed at: 1:10,560



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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1925

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886
Revised 1923
Edition 1925
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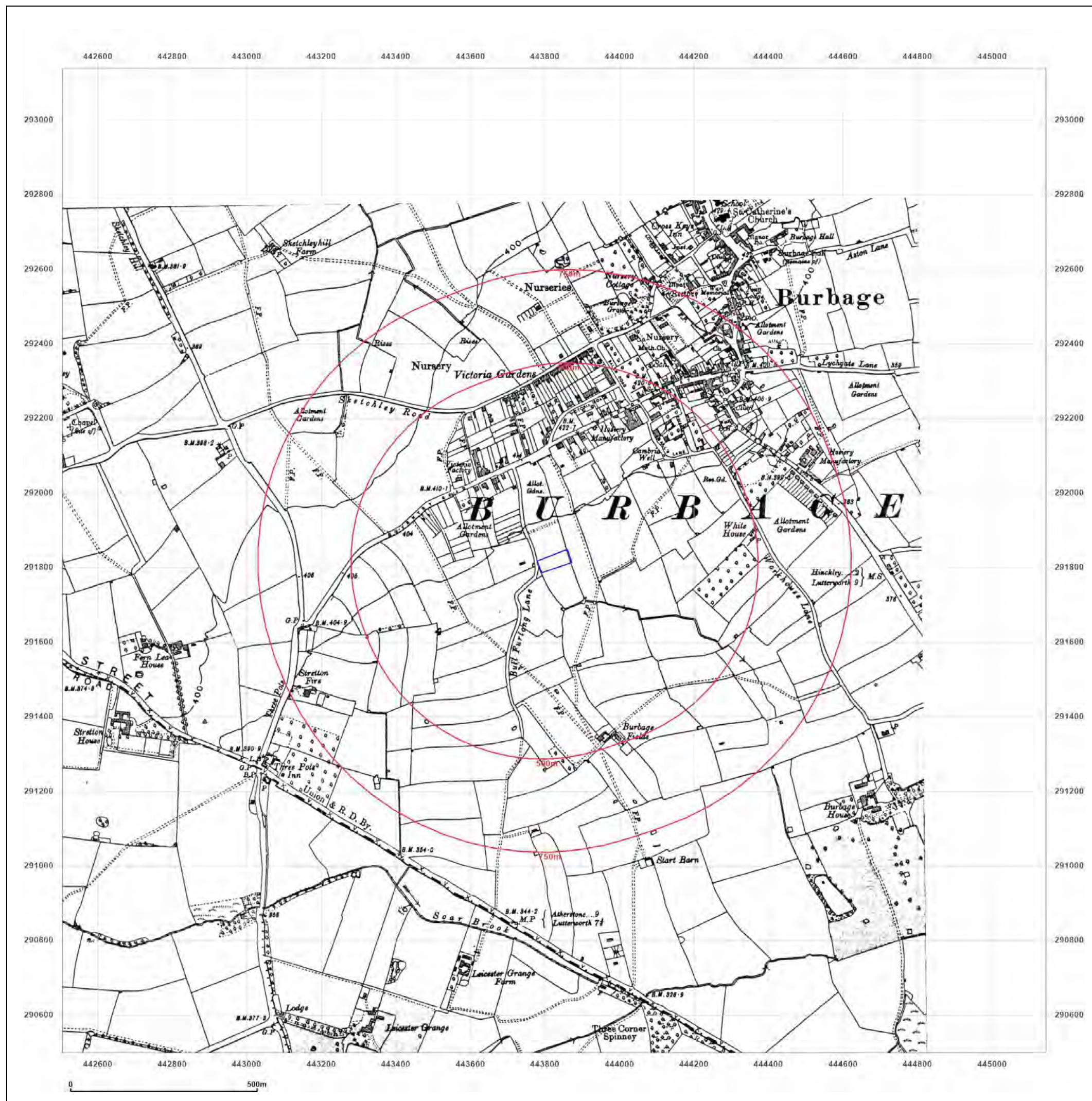


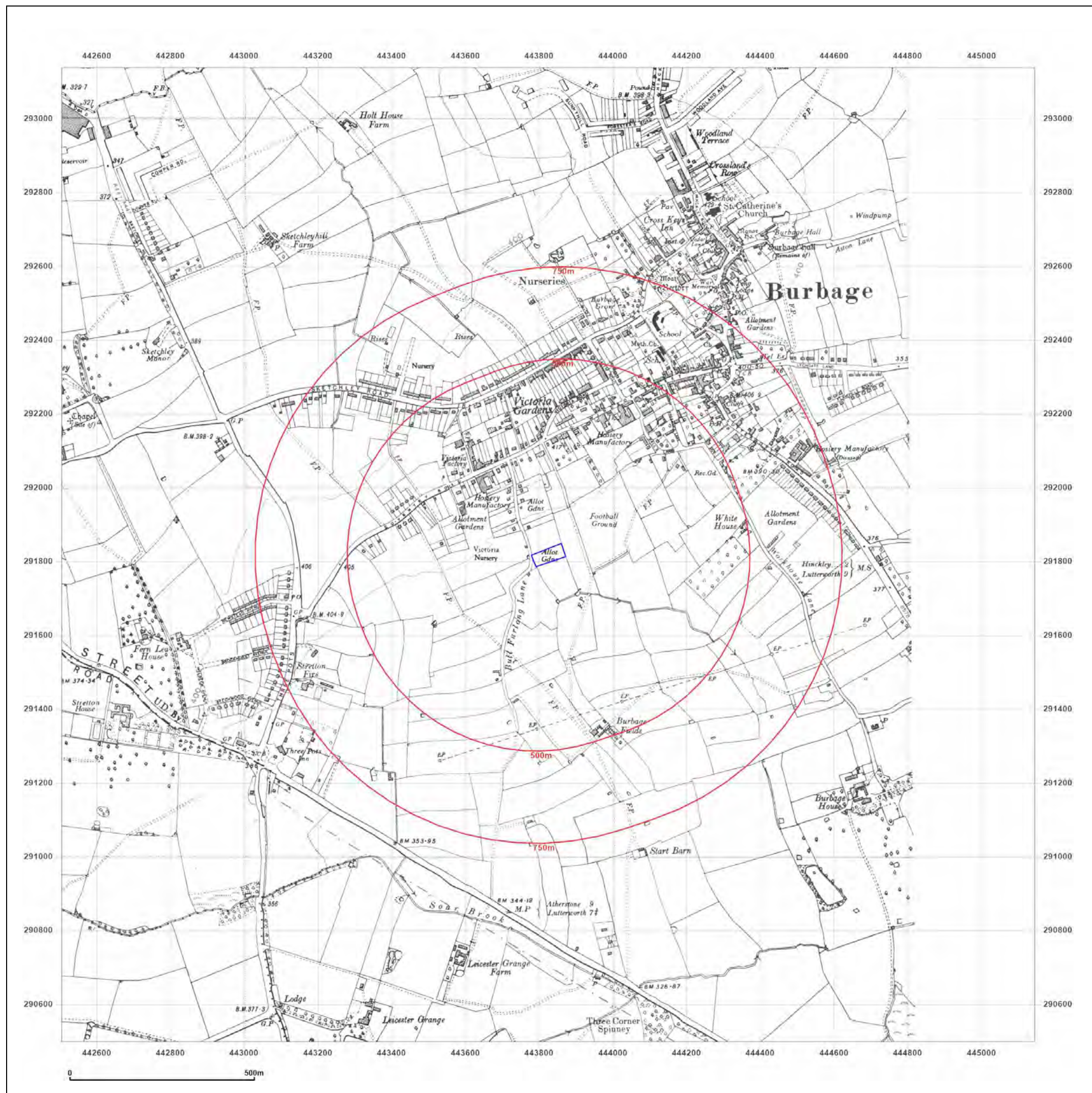
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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1938
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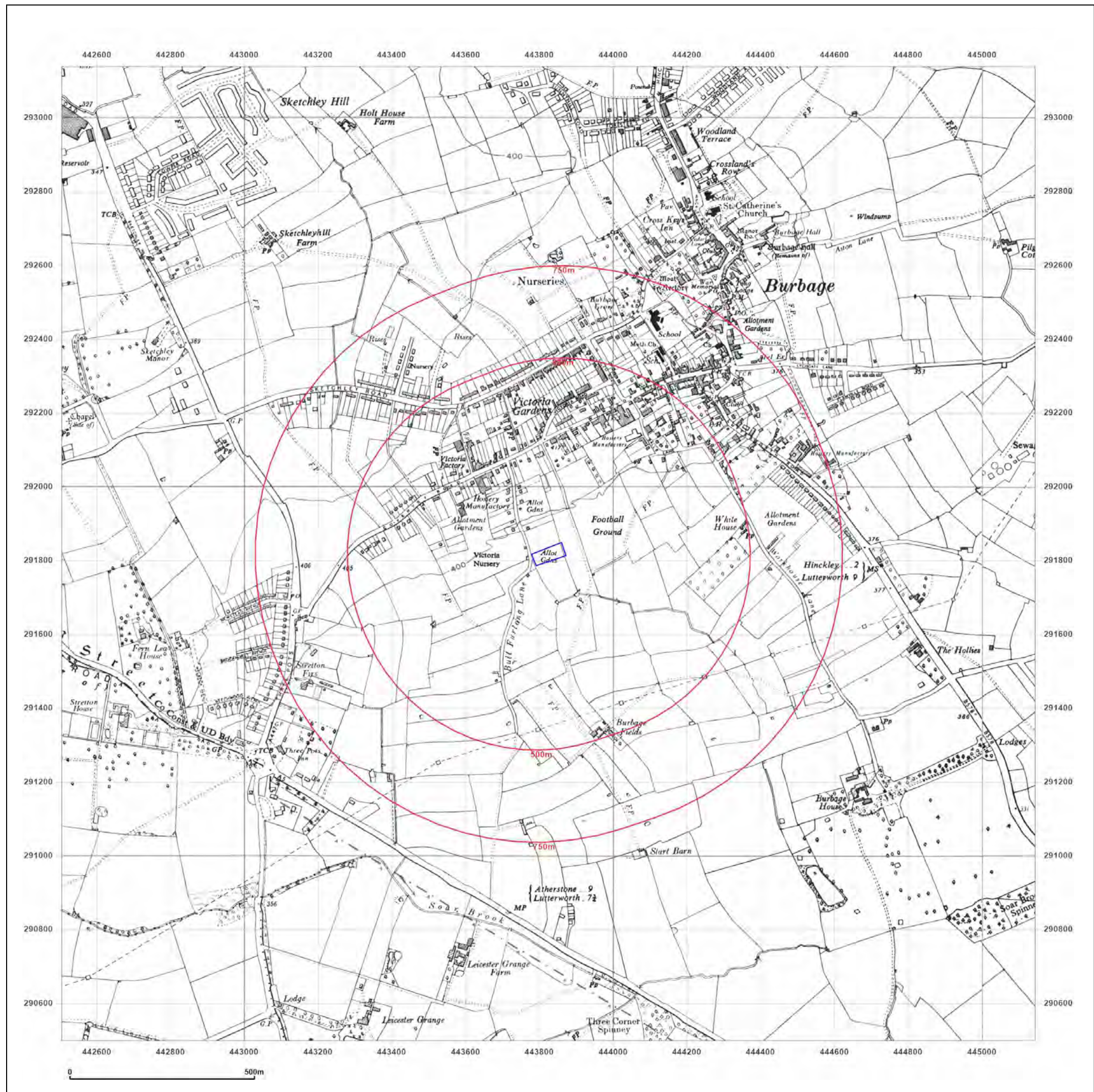


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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: Provisional

Map date: 1950-1955

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Surveyed N/A
Revised 1954
Edition 1955
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Site Details:

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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



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Surveyed 1968
Revised 1968
Edition N/A
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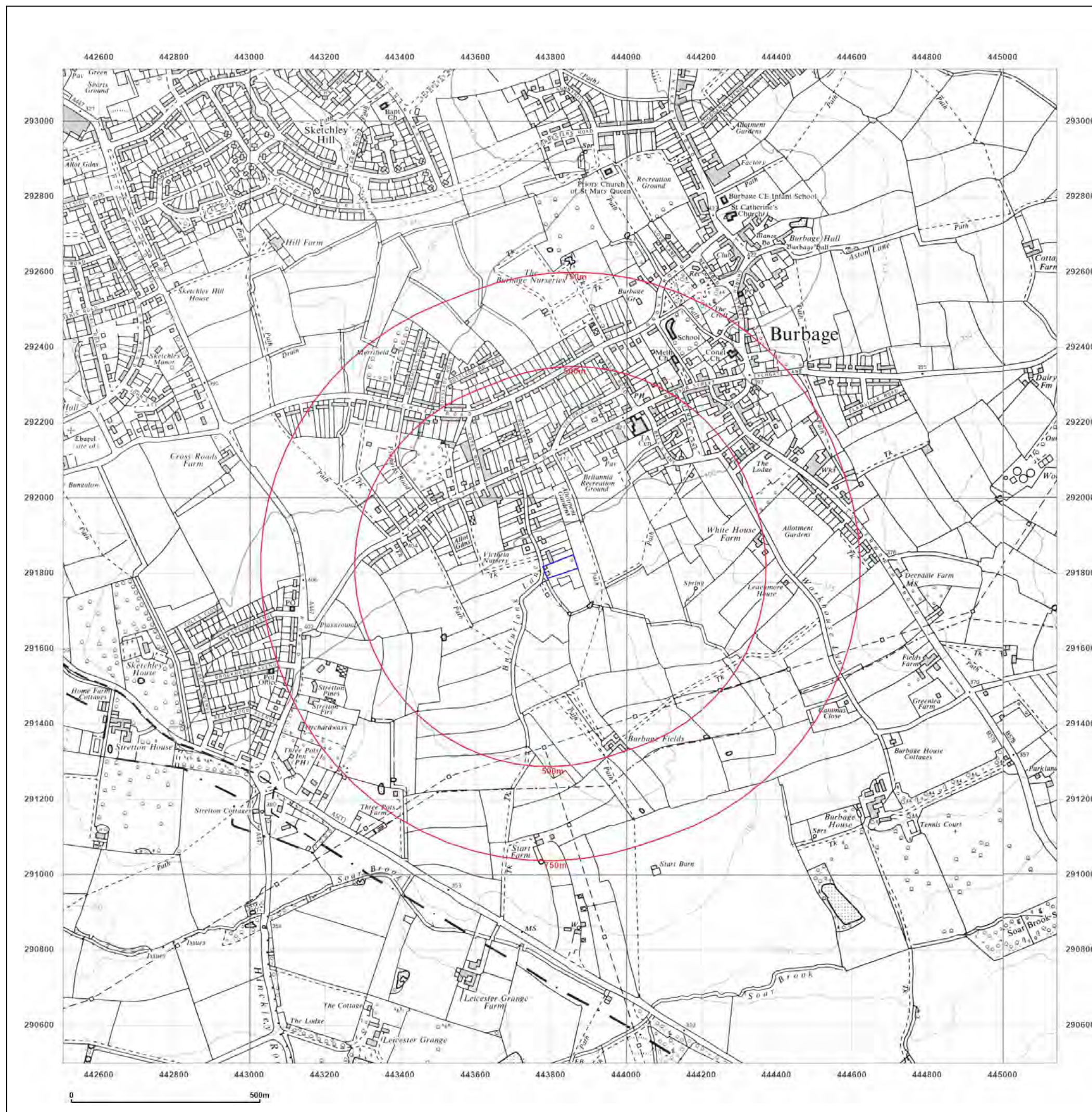


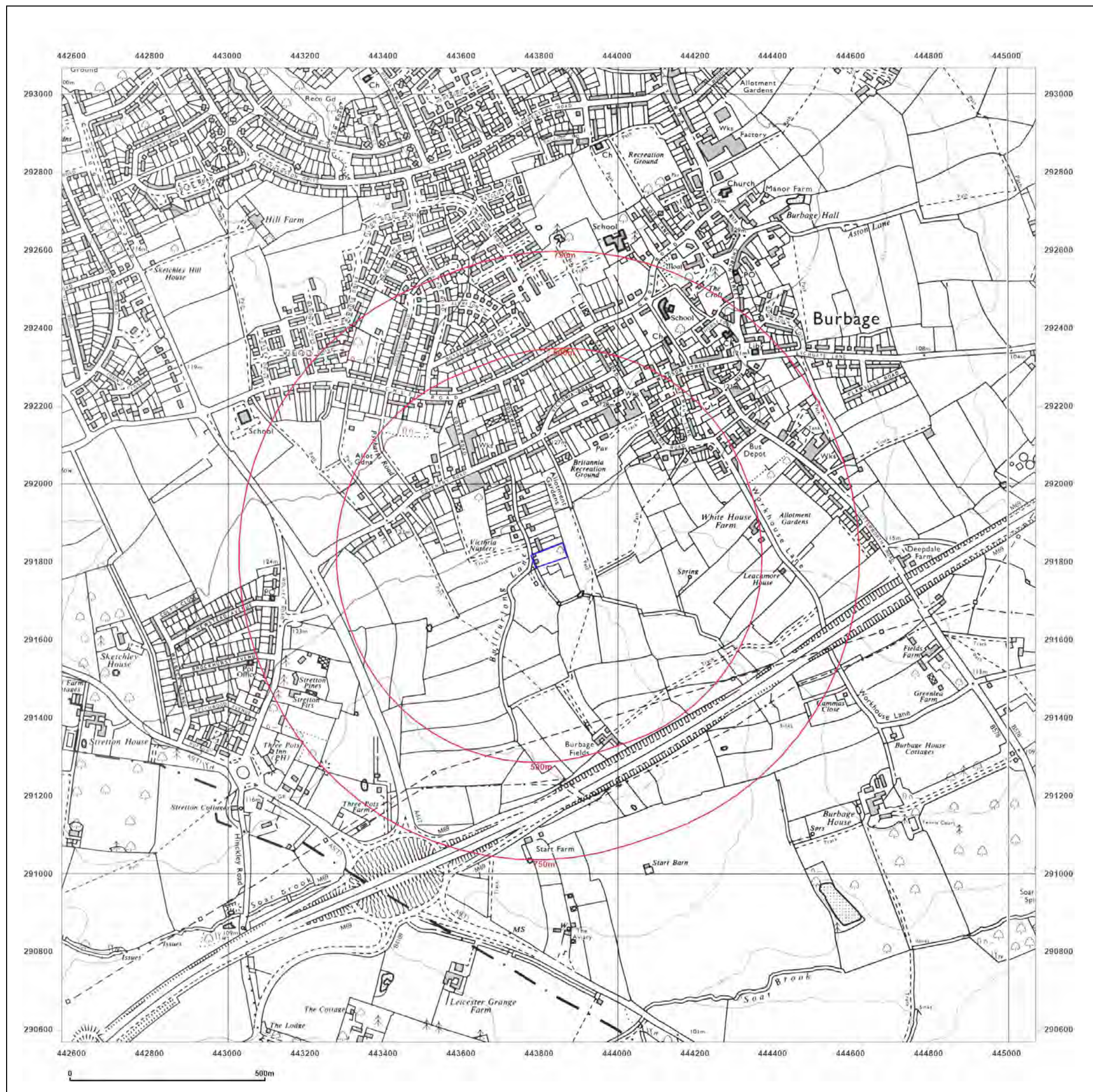
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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

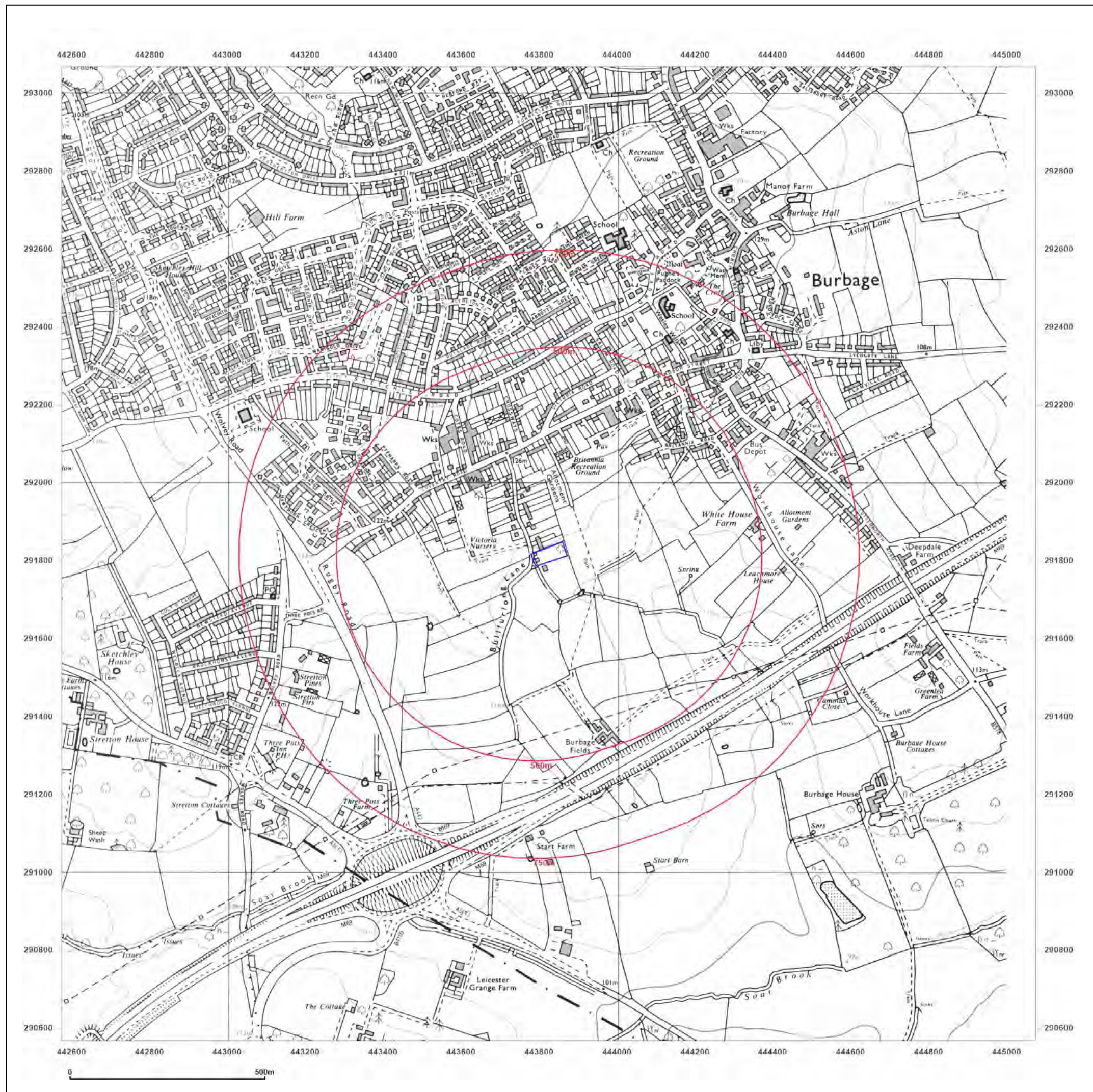
Map Name: National Grid
Map date: 1977-1979
Scale: 1:10,000
Printed at: 1:10,000

Surveyed 1975
Revised 1977
Edition N/A
Copyright 1977
Levelled 1965

Surveyed 1976
Revised 1979
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Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid

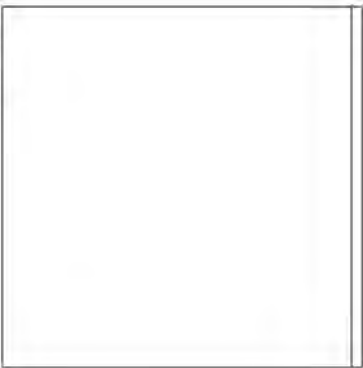
Map date: 1983

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1982
Revised 1983
Edition N/A
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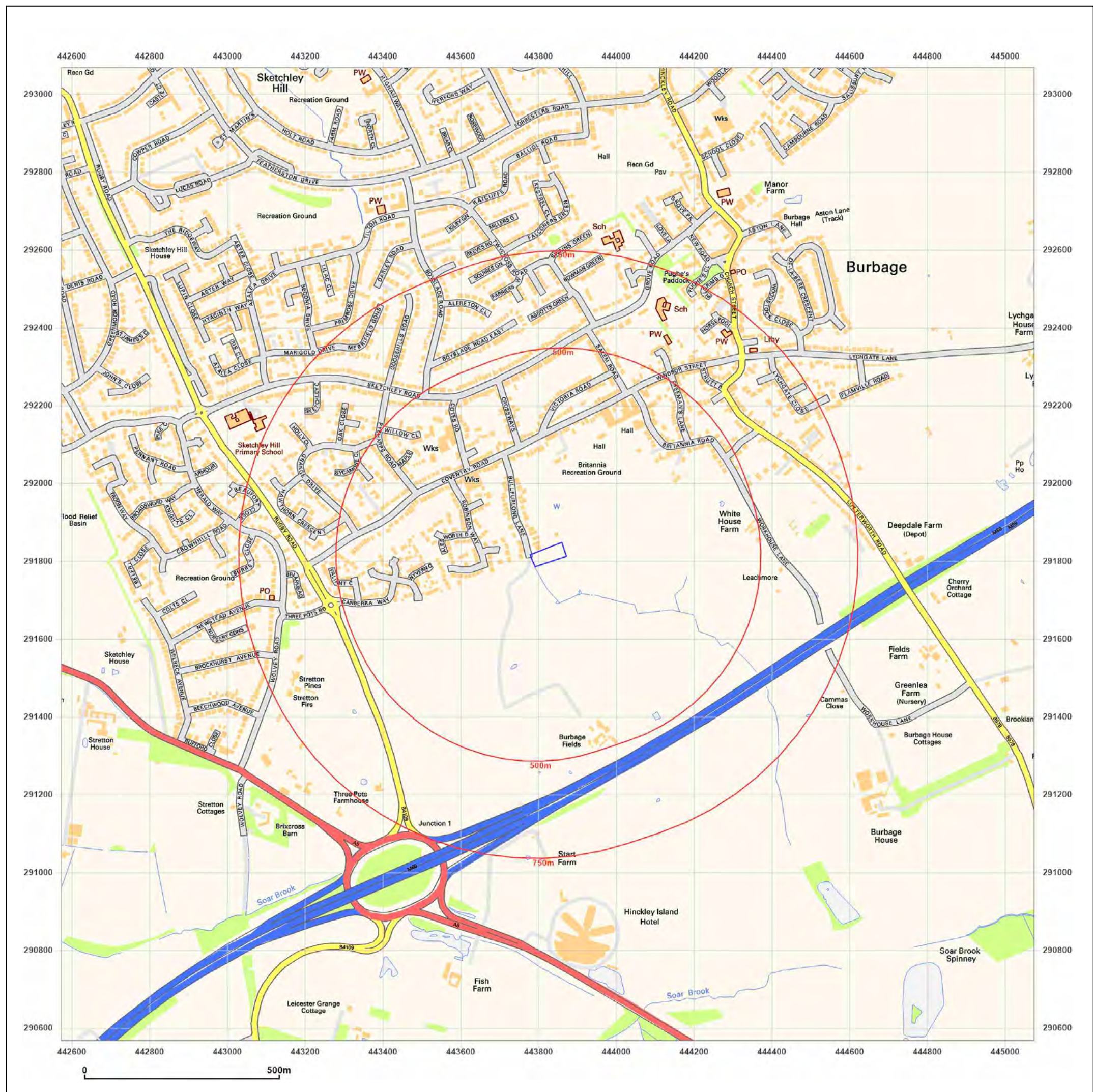


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Site Details:
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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid
Map date: 2010
Scale: 1:10,000
Printed at: 1:10,000



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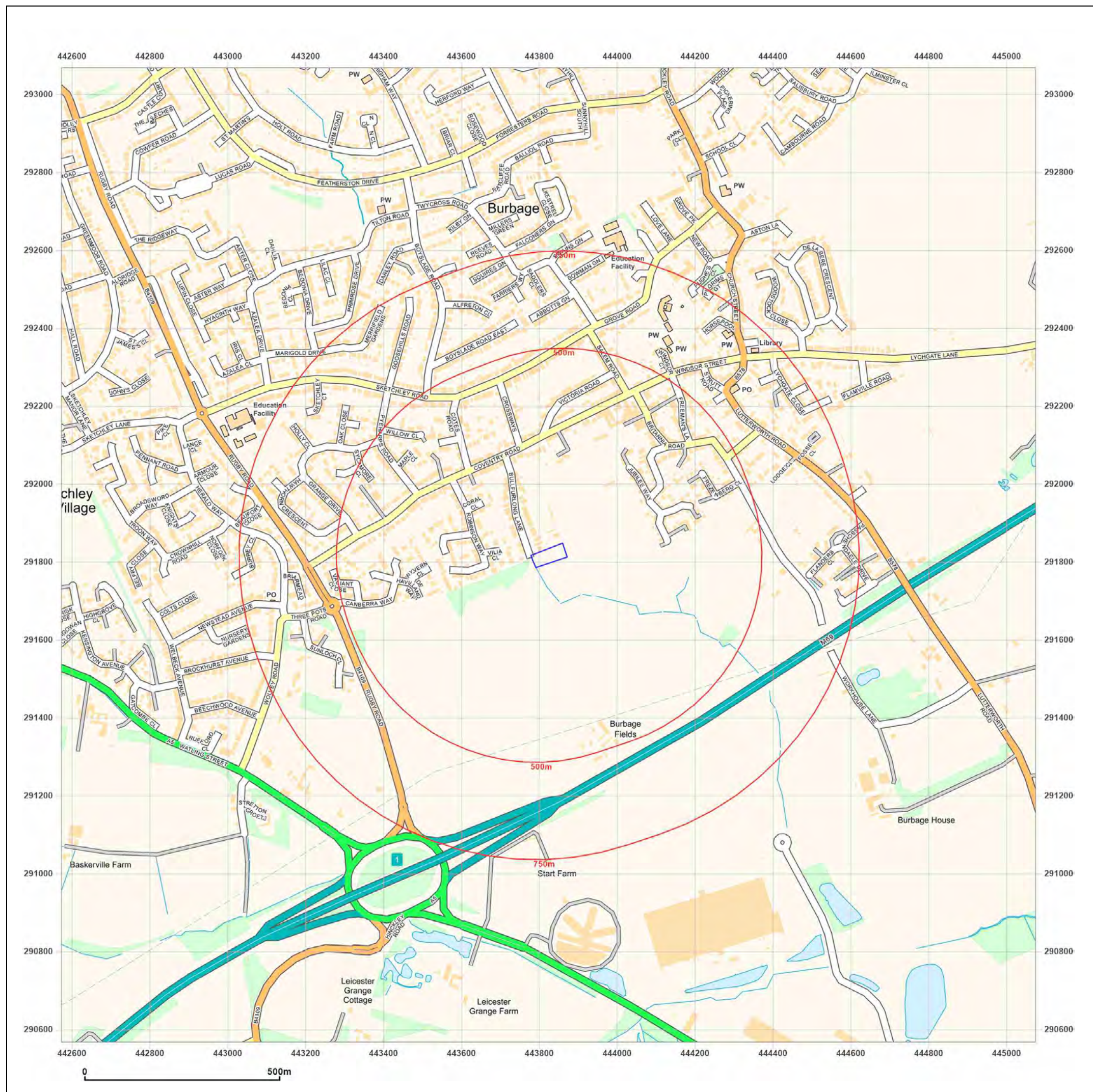


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Client Ref: EMS_954843_1185804
Report Ref: EMS-954843_1213353
Grid Ref: 443824, 291818

Map Name: National Grid

Map date: 2024

Scale: 1:10,000

Printed at: 1:10,000



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APPENDIX C



unspecified

Order Details

Date: 01/07/2024
Your ref: EMS_954843_1185804
Our Ref: EMS-954843_1213354

Site Details

Location: 443825 291817
Area: 0.31 ha
Authority: [Hinckley and Bosworth Borough Council](#) ↗



[Summary of findings](#)

[p. 2 >](#)

[Aerial image](#)

[p. 9 >](#)

[OS MasterMap site plan](#)

[p.14 >](#)

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	2	3	17	-
16 >	1.2 >	Historical tanks >	0	0	2	7	-
17 >	1.3 >	Historical energy features >	0	0	0	3	-
18	1.4	Historical petrol stations	0	0	0	0	-
18 >	1.5 >	Historical garages >	0	0	0	7	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	5	4	23	-
21 >	2.2 >	Historical tanks >	0	0	3	10	-
22 >	2.3 >	Historical energy features >	0	0	0	6	-
22	2.4	Historical petrol stations	0	0	0	0	-
22 >	2.5 >	Historical garages >	0	0	0	8	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
24	3.1	Active or recent landfill	0	0	0	0	-
24	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
25	3.6	Licensed waste sites	0	0	0	0	-
25	3.7	Waste exemptions	0	0	0	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
26	4.1	Recent industrial land uses	0	0	0	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-



27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29 >	4.13 >	Licensed Discharges to controlled waters >	0	3	0	0	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
30	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
32 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
34 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
35 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
36	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
36	5.5	Groundwater vulnerability- local information	None (within 0m)				
37 >	5.6 >	Groundwater abstractions >	0	0	0	1	10
40 >	5.7 >	Surface water abstractions >	0	0	0	0	3
41	5.8	Potable abstractions	0	0	0	0	0
41	5.9	Source Protection Zones	0	0	0	0	-
41	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
42 >	6.1 >	Water Network (OS MasterMap) >	0	1	12	-	-



44 >	6.2 >	Surface water features >	0	1	3	-	-
44 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
44 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
45 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
46	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
46	7.2	Historical Flood Events	0	0	0	-	-
46	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
47	7.5	Flood Storage Areas	0	0	0	-	-
48	7.6	Flood Zone 2	None (within 50m)				
48	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
49	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
50 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
51	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
52	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
52	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
52	10.4	Special Protection Areas (SPA)	0	0	0	0	0
52	10.5	National Nature Reserves (NNR)	0	0	0	0	0
53	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
53 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	1
53	10.8	Biosphere Reserves	0	0	0	0	0
53	10.9	Forest Parks	0	0	0	0	0
54	10.10	Marine Conservation Zones	0	0	0	0	0
54 >	10.11 >	Green Belt >	0	0	0	0	1
54	10.12	Proposed Ramsar sites	0	0	0	0	0



54	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
55	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
55	10.15	Nitrate Sensitive Areas	0	0	0	0	0
55 >	10.16 >	Nitrate Vulnerable Zones >	1	0	2	0	2
56 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
57	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
58	11.1	World Heritage Sites	0	0	0	-	-
58	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
58	11.3	National Parks	0	0	0	-	-
58	11.4	Listed Buildings	0	0	0	-	-
59	11.5	Conservation Areas	0	0	0	-	-
59	11.6	Scheduled Ancient Monuments	0	0	0	-	-
59	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
60 >	12.1 >	Agricultural Land Classification >	Grade 2 (within 250m)				
61	12.2	Open Access Land	0	0	0	-	-
62	12.3	Tree Felling Licences	0	0	0	-	-
62	12.4	Environmental Stewardship Schemes	0	0	0	-	-
62	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
63 >	13.1 >	Priority Habitat Inventory >	0	1	0	-	-
64	13.2	Habitat Networks	0	0	0	-	-
64	13.3	Open Mosaic Habitat	0	0	0	-	-
64	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
65 >	14.1 >	10k Availability >	Identified (within 500m)				
66	14.2	Artificial and made ground (10k)	0	0	0	0	-
67 >	14.3 >	Superficial geology (10k) >	1	1	1	2	-



68	14.4	Landslip (10k)	0	0	0	0	-
69 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
70	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
71 >	15.1 >	50k Availability >	Identified (within 500m)				
72	15.2	Artificial and made ground (50k)	0	0	0	0	-
72	15.3	Artificial ground permeability (50k)	0	0	-	-	-
73 >	15.4 >	Superficial geology (50k) >	1	0	2	2	-
74 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
74	15.6	Landslip (50k)	0	0	0	0	-
74	15.7	Landslip permeability (50k)	None (within 50m)				
75 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
76 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
76	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
77	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence >					
78 >	17.1 >	Shrink swell clays >	Low (within 50m)				
79 >	17.2 >	Running sands >	Very low (within 50m)				
80 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
81 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
82 >	17.5 >	Landslides >	Very low (within 50m)				
83 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
85	18.1	BritPits	0	0	0	0	-
86 >	18.2 >	Surface ground workings >	0	1	3	-	-
86	18.3	Underground workings	0	0	0	0	0
86	18.4	Underground mining extents	0	0	0	0	-
86	18.5	Historical Mineral Planning Areas	0	0	0	0	-



87	18.6	Non-coal mining	0	0	0	0	0
87	18.7	JPB mining areas	None (within 0m)				
87	18.8	The Coal Authority non-coal mining	0	0	0	0	-
87	18.9	Researched mining	0	0	0	0	-
88	18.10	Mining record office plans	0	0	0	0	-
88	18.11	BGS mine plans	0	0	0	0	-
88	18.12	Coal mining	None (within 0m)				
88	18.13	Brine areas	None (within 0m)				
88	18.14	Gypsum areas	None (within 0m)				
89	18.15	Tin mining	None (within 0m)				
89	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
90	19.1	Natural cavities	0	0	0	0	-
90	19.2	Mining cavities	0	0	0	0	0
90	19.3	Reported recent incidents	0	0	0	0	-
90	19.4	Historical incidents	0	0	0	0	-
91	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
92 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
94 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	0	-	-	-
94	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
94	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
95	22.1	Underground railways (London)	0	0	0	-	-
95	22.2	Underground railways (Non-London)	0	0	0	-	-
95	22.3	Railway tunnels	0	0	0	-	-
95	22.4	Historical railway and tunnel features	0	0	0	-	-
95	22.5	Royal Mail tunnels	0	0	0	-	-



96	22.6	Historical railways	0	0	0	-	-
96	22.7	Railways	0	0	0	-	-
96	22.8	Crossrail 1	0	0	0	0	-
96	22.9	Crossrail 2	0	0	0	0	-
96	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 16/04/2020

Site Area: 0.31ha



Recent site history - 2017 aerial photograph



Capture Date: 22/09/2017

Site Area: 0.31ha



Recent site history - 2010 aerial photograph



Capture Date: 03/06/2010

Site Area: 0.31ha



Recent site history - 2008 aerial photograph



Capture Date: 20/09/2008

Site Area: 0.31ha



Recent site history - 1999 aerial photograph



Capture Date: 05/10/1999

Site Area: 0.31ha



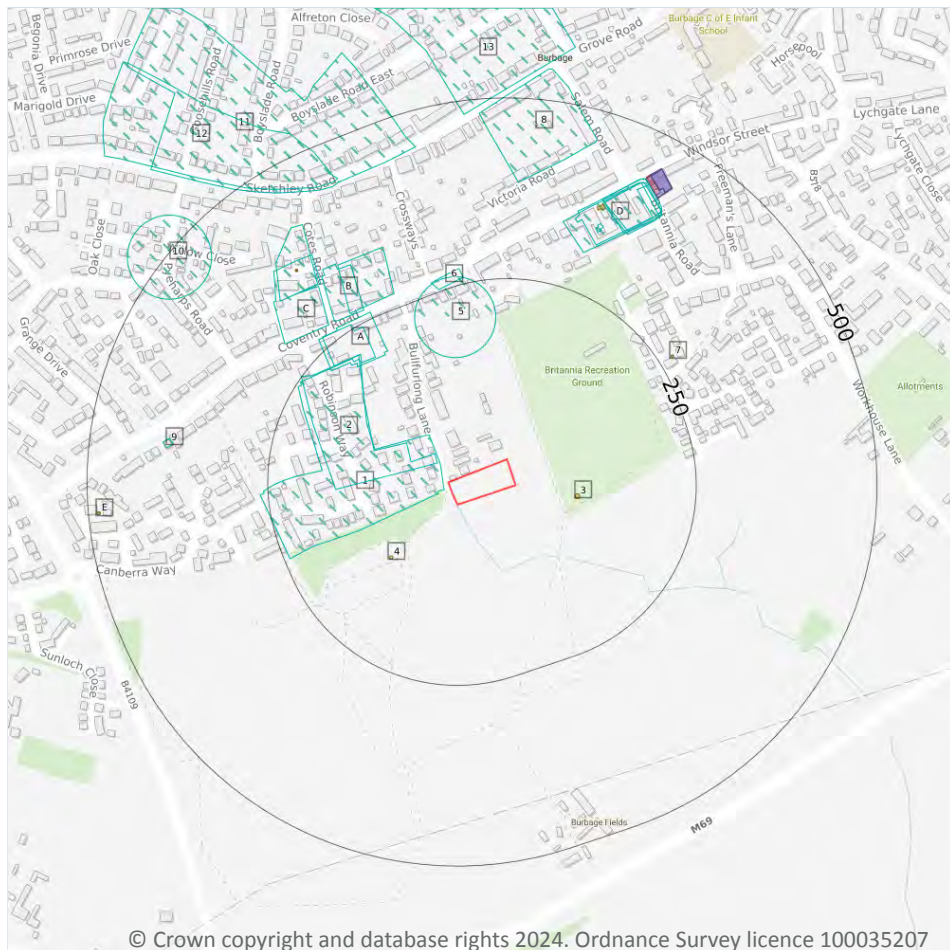
OS MasterMap site plan



Site Area: 0.31ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

22

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
1	8m W	Nursery	1938 - 1950	1855617



ID	Location	Land use	Dates present	Group ID
2	31m NW	Nursery	1968 - 1983	1835674
5	153m N	Unspecified Pit	1901	1779055
A	197m NW	Hosiery Manufactory	1938 - 1950	1851495
A	200m NW	Unspecified Works	1983	1794846
6	253m N	Unspecified Pits	1886	1805053
B	265m NW	Unspecified Factory	1923	1806452
B	269m NW	Unspecified Works	1977 - 1983	1811892
C	273m NW	Unspecified Factory	1938 - 1950	1876631
D	305m NE	Hosiery Manufactory	1950	1840912
D	321m NE	Hosiery Manufactory	1938	1831577
C	328m NW	Unspecified Works	1983	1794845
D	338m NE	Unspecified Tanks	1938 - 1950	1840843
D	352m NE	Unspecified Works	1977 - 1983	1854207
D	353m NE	Hosiery Manufactory	1923	1843518
D	358m NE	Hosiery Manufactory	1901	1820177
8	384m N	Nursery	1886	1793122
9	384m W	Unspecified Tank	1968 - 1983	1847594
10	438m NW	Nursery	1901	1793121
11	439m NW	Nursery	1923	1863366
12	445m NW	Nursery	1886	1810800
13	481m N	Nursery	1901	1793027

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

9

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



Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
3	83m E	Unspecified Tank	1938	298511
4	115m SW	Unspecified Tank	1904 - 1918	305296
7	268m NE	Unspecified Tank	1904 - 1918	304545
C	359m NW	Unspecified Tank	1995	309545
C	359m NW	Unspecified Tank	1995	308651
C	359m NW	Unspecified Tank	1986	312408
D	367m NE	Tanks	1938	294227
E	483m W	Unspecified Tank	1904 - 1918	302938
E	483m W	Unspecified Tank	1938	311867

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

3

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
D	420m NE	Electricity Substation	1990	195462
D	424m NE	Electricity Substation	1997	196692
D	430m NE	Electricity Substation	1967 - 1988	198838

This data is sourced from Ordnance Survey / Groundsure.



1.4 Historical petrol stations

Records within 500m**0**

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m**7**

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
D	417m NE	Garage	1990	66651
D	418m NE	Garage	1988	66907
D	428m NE	Garage	1997	61835
D	428m NE	Garage	1964	62505
D	428m NE	Garage	1988	63538
D	429m NE	Garage	1958	63398
D	429m NE	Garage	1967 - 1973	64052

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

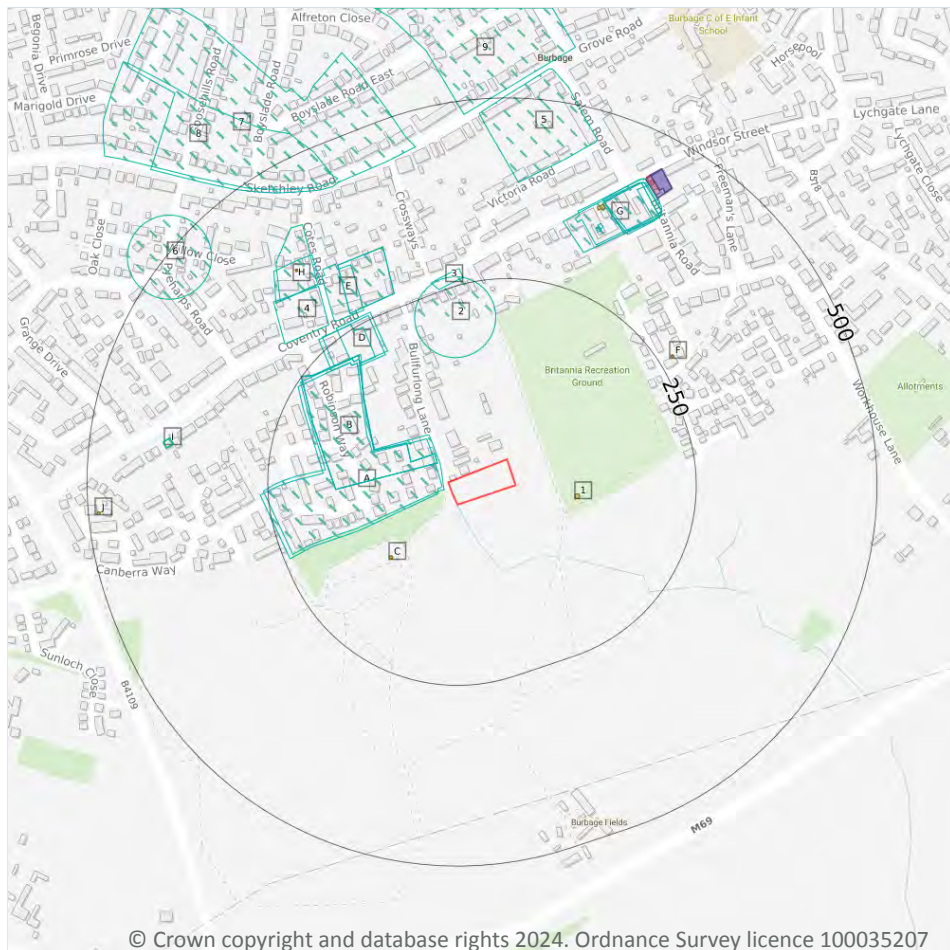
Records within 500m**0**

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

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



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

32

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

Features are displayed on the Past land use - un-grouped map on [page 19](#) >

ID	Location	Land Use	Date	Group ID
A	8m W	Nursery	1938	1855617
A	10m W	Nursery	1950	1855617
B	31m NW	Nursery	1977	1835674



ID	Location	Land Use	Date	Group ID
B	31m NW	Nursery	1983	1835674
B	31m NW	Nursery	1968	1835674
2	153m N	Unspecified Pit	1901	1779055
D	197m NW	Hosiery Manufactory	1950	1851495
D	200m NW	Hosiery Manufactory	1938	1851495
D	200m NW	Unspecified Works	1983	1794846
3	253m N	Unspecified Pits	1886	1805053
E	265m NW	Unspecified Factory	1923	1806452
E	269m NW	Unspecified Works	1977	1811892
E	269m NW	Unspecified Works	1983	1811892
4	273m NW	Unspecified Factory	1950	1876631
G	305m NE	Hosiery Manufactory	1950	1840912
G	321m NE	Hosiery Manufactory	1938	1831577
H	327m NW	Unspecified Factory	1938	1876631
H	328m NW	Unspecified Works	1983	1794845
G	338m NE	Unspecified Tanks	1950	1840843
G	344m NE	Unspecified Tanks	1938	1840843
G	352m NE	Unspecified Works	1977	1854207
G	352m NE	Unspecified Works	1983	1854207
G	353m NE	Hosiery Manufactory	1923	1843518
G	358m NE	Hosiery Manufactory	1901	1820177
5	384m N	Nursery	1886	1793122
I	384m W	Unspecified Tank	1977	1847594
I	384m W	Unspecified Tank	1983	1847594
I	384m W	Unspecified Tank	1968	1847594
6	438m NW	Nursery	1901	1793121
7	439m NW	Nursery	1923	1863366
8	445m NW	Nursery	1886	1810800



ID	Location	Land Use	Date	Group ID
9	481m N	Nursery	1901	1793027

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	13
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Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 19 >](#)

ID	Location	Land Use	Date	Group ID
1	83m E	Unspecified Tank	1938	298511
C	115m SW	Unspecified Tank	1904	305296
C	115m SW	Unspecified Tank	1918	305296
F	268m NE	Unspecified Tank	1904	304545
F	268m NE	Unspecified Tank	1918	304545
H	359m NW	Unspecified Tank	1995	309545
H	359m NW	Unspecified Tank	1995	308651
H	359m NW	Unspecified Tank	1986	312408
H	359m NW	Unspecified Tank	1986	312408
G	367m NE	Tanks	1938	294227
J	483m W	Unspecified Tank	1904	302938
J	483m W	Unspecified Tank	1918	302938
J	483m W	Unspecified Tank	1938	311867

This data is sourced from Ordnance Survey / Groundsure.



2.3 Historical energy features

Records within 500m

6

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

Features are displayed on the Past land use - un-grouped map on [page 19 >](#)

ID	Location	Land Use	Date	Group ID
G	420m NE	Electricity Substation	1990	195462
G	424m NE	Electricity Substation	1997	196692
G	430m NE	Electricity Substation	1988	198838
G	430m NE	Electricity Substation	1988	198838
G	430m NE	Electricity Substation	1973	198838
G	430m NE	Electricity Substation	1967	198838

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

8

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

Features are displayed on the Past land use - un-grouped map on [page 19 >](#)

ID	Location	Land Use	Date	Group ID
G	417m NE	Garage	1990	66651
G	418m NE	Garage	1988	66907



ID	Location	Land Use	Date	Group ID
G	428m NE	Garage	1997	61835
G	428m NE	Garage	1988	63538
G	428m NE	Garage	1964	62505
G	429m NE	Garage	1967	64052
G	429m NE	Garage	1973	64052
G	429m NE	Garage	1958	63398

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

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

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

3.5 Historical waste sites

Records within 500m

0

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

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



3.6 Licensed waste sites

Records within 500m	0
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

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

3.7 Waste exemptions

Records within 500m	0
---------------------	---

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

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m

0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.



4.3 Electricity cables

Records within 500m**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.



4.8 Hazardous substance storage/usage

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m**0**

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

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

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

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m**0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

3

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

Features are displayed on the Current industrial land use map on [page 26 >](#)

ID	Location	Address	Details	
A	On site	BULLFURLONG LANE CSO, BULLFURLONG LANE, BURBAGE, HINCKLEY, LEICESTERSHIRE, LE10 2HQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: T/50/45424/O Permit Version: 2 Receiving Water: TRIBUTARY OF SOAR BROOK	Status: VARIED UNDER EPR 2010 Issue date: 21/11/2017 Effective Date: 21/11/2017 Revocation Date: 30/03/2018
A	On site	BULLFURLONG LANE CSO, BULLFURLONG LANE, BURBAGE, HINCKLEY, LEICESTERSHIRE, LE10 2HQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: T/50/45424/O Permit Version: 3 Receiving Water: TRIBUTARY OF SOAR BROOK	Status: VARIED UNDER EPR 2010 Issue date: 21/11/2017 Effective Date: 31/03/2018 Revocation Date: -
A	12m SW	BULLFURLONG LANE CSO, BULLFURLONG LANE, BURBAGE, HINCKLEY, LEICESTERSHIRE, LE10 2HQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: T/50/45424/O Permit Version: 1 Receiving Water: TRIB OF RIVER SOAR	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 10/01/2001 Effective Date: 10/01/2001 Revocation Date: 20/11/2017

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.15 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.17 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m**0**

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

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

4.19 Pollution inventory substances

Records within 500m**0**

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

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



4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

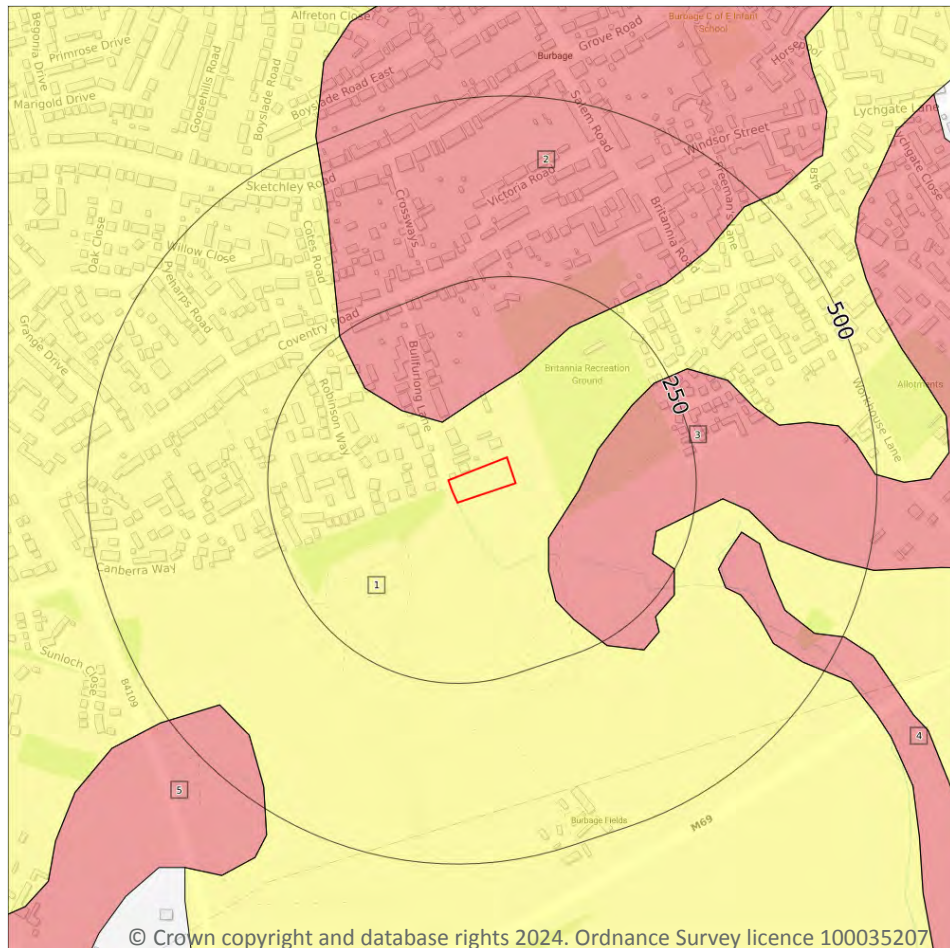
0

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

5

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 32](#) >

ID	Location	Designation	Description
1	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	78m 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

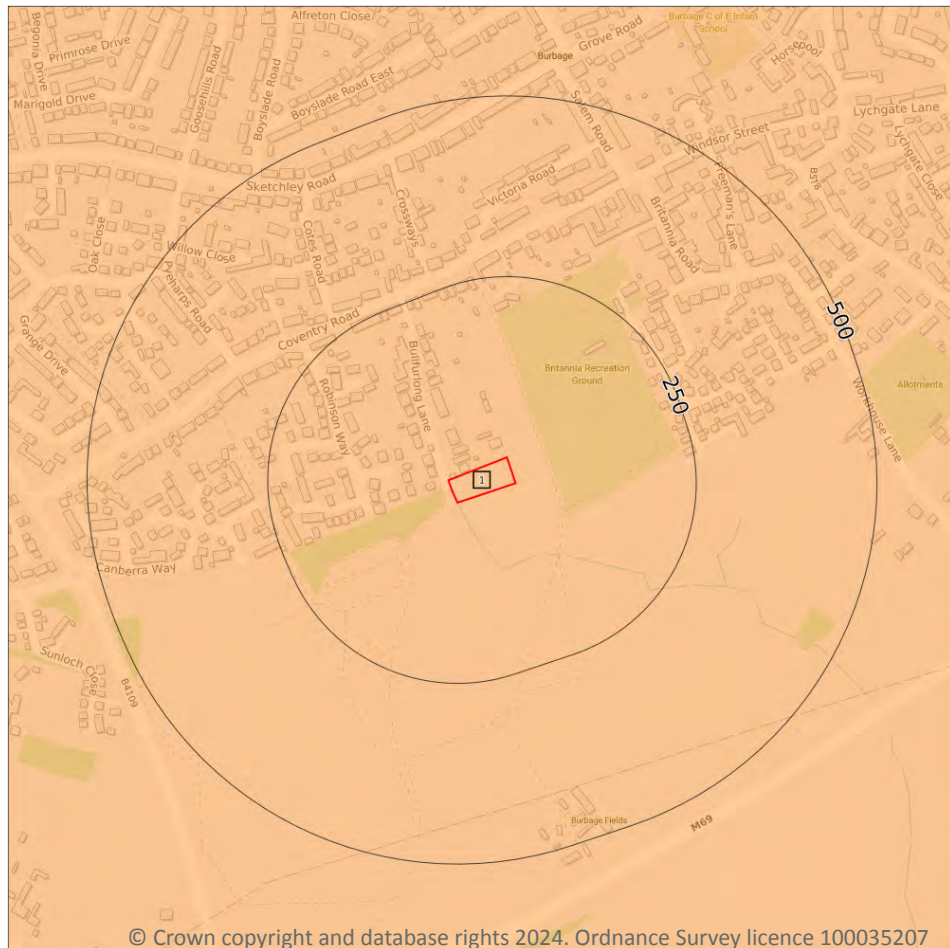


ID	Location	Designation	Description
3	79m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	305m E	Secondary 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
5	431m 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

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

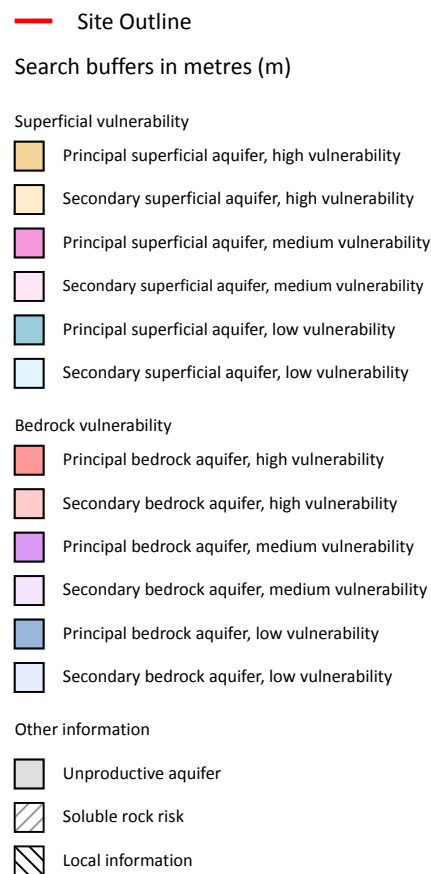
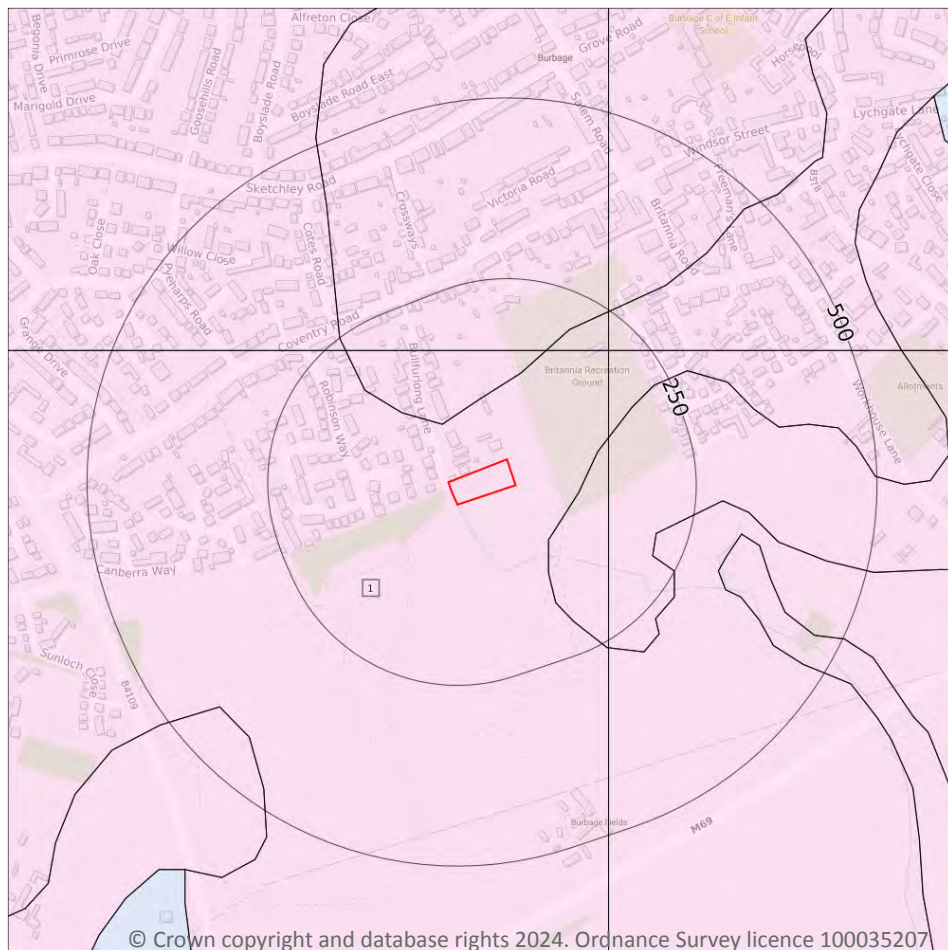
Features are displayed on the Bedrock aquifer map on [page 34](#) >

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

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on [page 35 >](#)



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40-70% Dilution value: <300mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

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

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

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

5.5 Groundwater vulnerability- local information

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

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

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

Abstractions and Source Protection Zones



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

5.6 Groundwater abstractions

Records within 2000m

11

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 37 >](#)



ID	Location	Details	
1	437m E	Status: Historical Licence No: 03/28/50/0120 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: 88 LUTTERWORTH ROAD - WELL (1) Data Type: Point Name: JUDKINS Easting: 444300 Northing: 291900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
2	528m E	Status: Historical Licence No: 03/28/50/0120 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: 88 LUTTERWORTH ROAD - WELL (2) Data Type: Point Name: JUDKINS Easting: 444400 Northing: 291800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
3	535m E	Status: Historical Licence No: 03/28/50/0120 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: 88 LUTTERWORTH ROAD - WELL (3) Data Type: Point Name: JUDKINS Easting: 444400 Northing: 291900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/07/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	828m E	Status: Historical Licence No: 03/28/50/0058 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: DEEPDALE FARM - WELL (1) Data Type: Point Name: MOORE Easting: 444700 Northing: 291800	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	980m E	Status: Historical Licence No: 03/28/50/0119 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: GREENLEA FARM - BOREHOLE Data Type: Point Name: PK & J PATERSON Easting: 444800 Northing: 291500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/11/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -



ID	Location	Details	
-	1016m SE	Status: Historical Licence No: 03/28/50/0119 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: GREENLEA FARM - WELL Data Type: Point Name: PK & J PATERSON Easting: 444800 Northing: 291400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 23/11/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1171m E	Status: Historical Licence No: 03/28/50/0058 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: DEEPDALE FARM - WELL (2) Data Type: Point Name: MOORE Easting: 445000 Northing: 291500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2000 Version End Date: -
-	1211m S	Status: Active Licence No: MD/028/0050/003 Details: Spray Irrigation - Storage Direct Source: Groundwater Midlands Region Point: WELLPOINT 4 AT COPSTON LODGE FARM, WOLVEY Data Type: Point Name: P A Wright & Sons Limited Easting: 444052 Northing: 290604	Annual Volume (m ³): 34560 Max Daily Volume (m ³): 192 Original Application No: NPS/WR/007701 Original Start Date: 22/05/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/12/2018 Version End Date: -
-	1212m S	Status: Active Licence No: MD/028/0050/003 Details: Spray Irrigation - Storage Direct Source: Groundwater Midlands Region Point: WELLPOINT 3 AT COPSTON LODGE FARM, WOLVEY Data Type: Point Name: P A Wright & Sons Limited Easting: 444053 Northing: 290603	Annual Volume (m ³): 34560 Max Daily Volume (m ³): 192 Original Application No: NPS/WR/007701 Original Start Date: 22/05/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/12/2018 Version End Date: -
-	1213m S	Status: Active Licence No: MD/028/0050/003 Details: Spray Irrigation - Storage Direct Source: Groundwater Midlands Region Point: WELLPOINT 2 AT COPSTON LODGE FARM, WOLVEY Data Type: Point Name: P A Wright & Sons Limited Easting: 444055 Northing: 290602	Annual Volume (m ³): 34560 Max Daily Volume (m ³): 192 Original Application No: NPS/WR/007701 Original Start Date: 22/05/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/12/2018 Version End Date: -



ID	Location	Details	
-	1215m S	Status: Active Licence No: MD/028/0050/003 Details: Spray Irrigation - Storage Direct Source: Groundwater Midlands Region Point: WELLPOINT 1 AT COPSTON LODGE FARM, WOLVEY Data Type: Point Name: P A Wright & Sons Limited Easting: 444057 Northing: 290601	Annual Volume (m ³): 34560 Max Daily Volume (m ³): 192 Original Application No: NPS/WR/007701 Original Start Date: 22/05/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/12/2018 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

3

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 37 >](#)

ID	Location	Details	
-	1498m SE	Status: Active Licence No: 03/28/50/0128 Details: Spray Irrigation - Storage Direct Source: Surface Water Midlands Region Point: BURBAGE HOUSE FARM - TRIB OF SOAR BROOK Data Type: Point Name: BURBAGE FARMS Easting: 444750 Northing: 290600	Annual Volume (m ³): 45461 Max Daily Volume (m ³): 1559 Original Application No: - Original Start Date: 09/01/1989 Expiry Date: - Issue No: 100 Version Start Date: 03/12/2018 Version End Date: -
-	1674m NW	Status: Historical Licence No: 03/28/19/0043 Details: Process Water Direct Source: Surface Water Midlands Region Point: RICHARD ROBERTS HOLDINGS LTD - TRIB OF SKETCHLEY BROOK Data Type: Point Name: RICHARD ROBERTS HOLDINGS LTD Easting: 443000 Northing: 293300	Annual Volume (m ³): 83105.4 Max Daily Volume (m ³): 280.94 Original Application No: - Original Start Date: 10/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/10/1978 Version End Date: -



ID	Location	Details	
-	1810m NW	Status: Historical Licence No: 03/28/19/0042 Details: Laundry Use Direct Source: Surface Water Midlands Region Point: SKETCHLEY LTD - SKETCHLEY BROOK Data Type: Point Name: JOHNSON TEXTILE SERVICES LTD Easting: 442500 Northing: 293100	Annual Volume (m ³): 772820 Max Daily Volume (m ³): 10910.4 Original Application No: - Original Start Date: 02/02/1971 Expiry Date: - Issue No: 101 Version Start Date: 22/06/2000 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

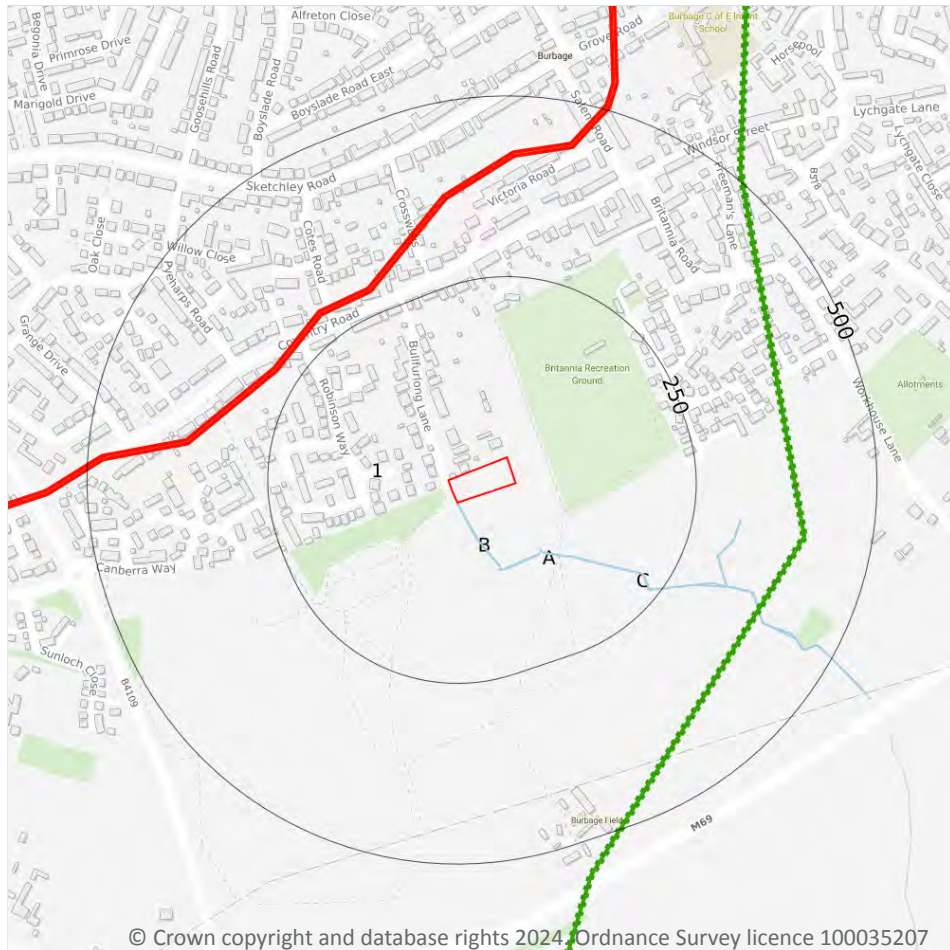
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

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

6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

13

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

Features are displayed on the Hydrology map on [page 42 >](#)

ID	Location	Type of water feature	Ground level	Permanence	Name
B	1m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
A	94m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	101m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	101m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	102m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	103m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	103m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	106m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	106m S	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	117m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	119m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	122m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
C	124m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

4

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

Features are displayed on the Hydrology map on [page 42 >](#)

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on [page 42 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River	Soar Brook from Source to Soar	GB104028042590	Soar River	Soar

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

6.4 WFD Surface water bodies

Records identified

1

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

Features are displayed on the Hydrology map on [page 42 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1606m NE	River	Soar Brook from Source to Soar	GB104028042590 ↗	Poor	Fail	Poor	2019



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

6.5 WFD Groundwater bodies

Records on site

1

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

Features are displayed on the Hydrology map on [page 42](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Tame Anker Mease - Secondary Combined	GB40402G990800 ↗	Good	Good	Good	2019

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m**0**

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

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

7.2 Historical Flood Events

Records within 250m**0**

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

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

7.3 Flood Defences

Records within 250m**0**

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

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

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

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



— Site Outline
Search buffers in metres (m)

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

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

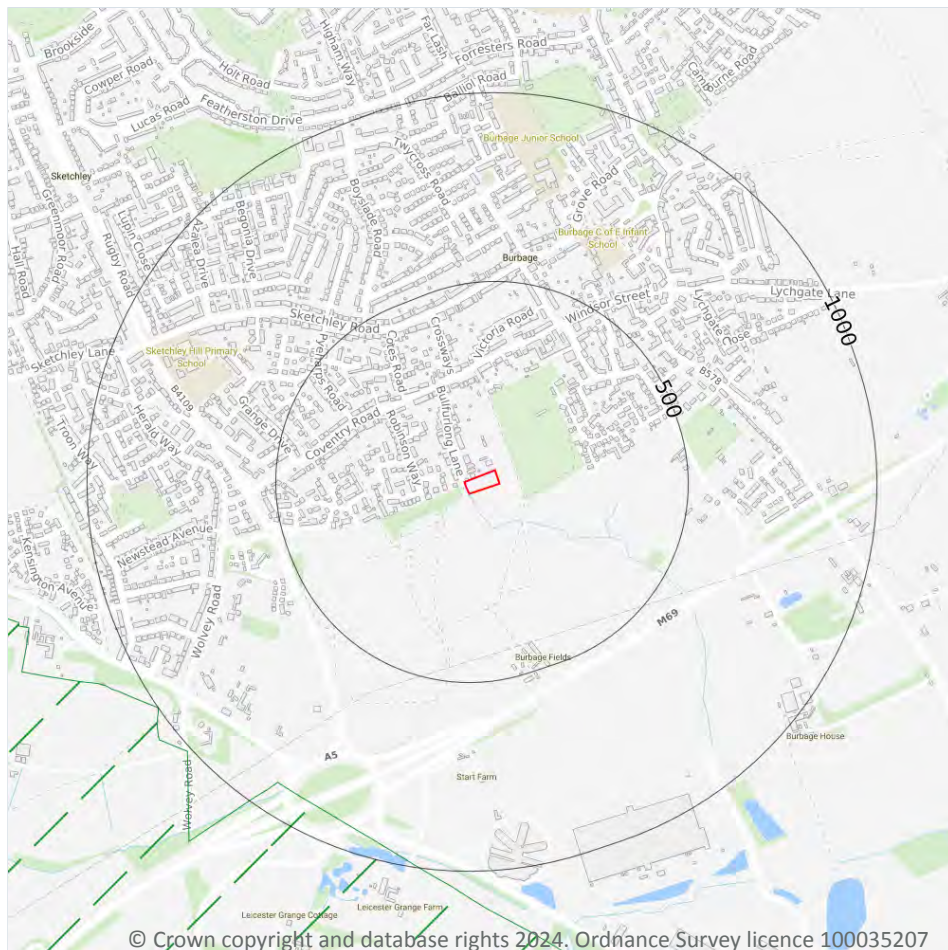
Low

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

Features are displayed on the Groundwater flooding map on [page 50](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



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

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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



10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m**0**

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

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

10.7 Designated Ancient Woodland

Records within 2000m**1**

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

Features are displayed on the Environmental designations map on [page 51 >](#)

ID	Location	Name	Woodland Type
-	1521m S	Unknown	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m**0**

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

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

10.9 Forest Parks

Records within 2000m**0**

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 51](#) >

ID	Location	Name	Local Authority name
1	917m SW	Birmingham	Rugby

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

5

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

Location	Name	Type	NVZ ID	Status
On site	SOAR R NVZ	Surface Water	309	Existing
154m NW	River Trent (source to confluence with Derwent)	Surface Water	308	Existing
221m E	SOAR R NVZ	Surface Water	309	Existing
691m N	River Trent (source to confluence with Derwent)	Surface Water	308	Existing
1019m N	SOAR R NVZ	Surface Water	309	Existing

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



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10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on [page 56 >](#)

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t. Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
----------------------	---

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

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

11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

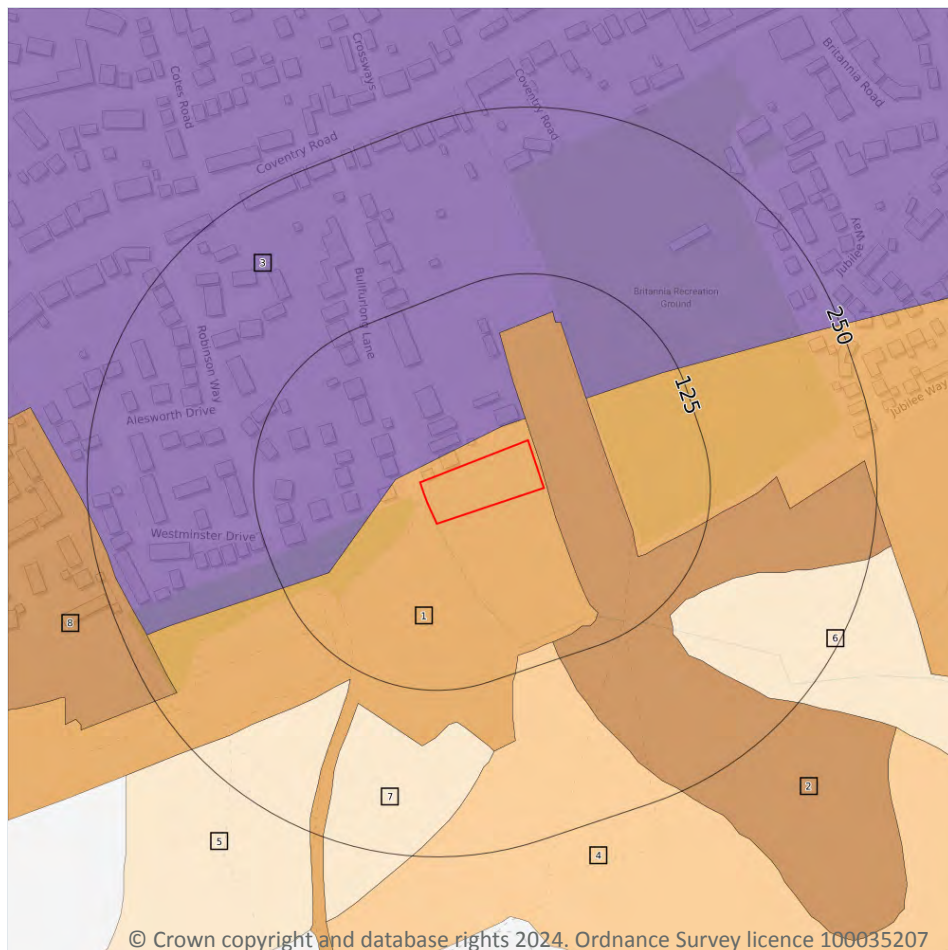
0

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

8

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

Features are displayed on the Agricultural designations map on [page 60](#) >

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



ID	Location	Classification	Description
2	2m E	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
3	10m W	Urban	-
4	112m S	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
5	134m SW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
6	135m SE	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
7	147m SW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
8	232m SW	Grade 2	Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

This data is sourced from Natural England.

12.2 Open Access Land

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

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

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



12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations



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- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

1

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

Features are displayed on the Habitat designations map on [page 63](#) >

ID	Location	Main Habitat	Other habitats
1	9m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m**0**

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m**0**

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m**0**

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 65](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SP49SW

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

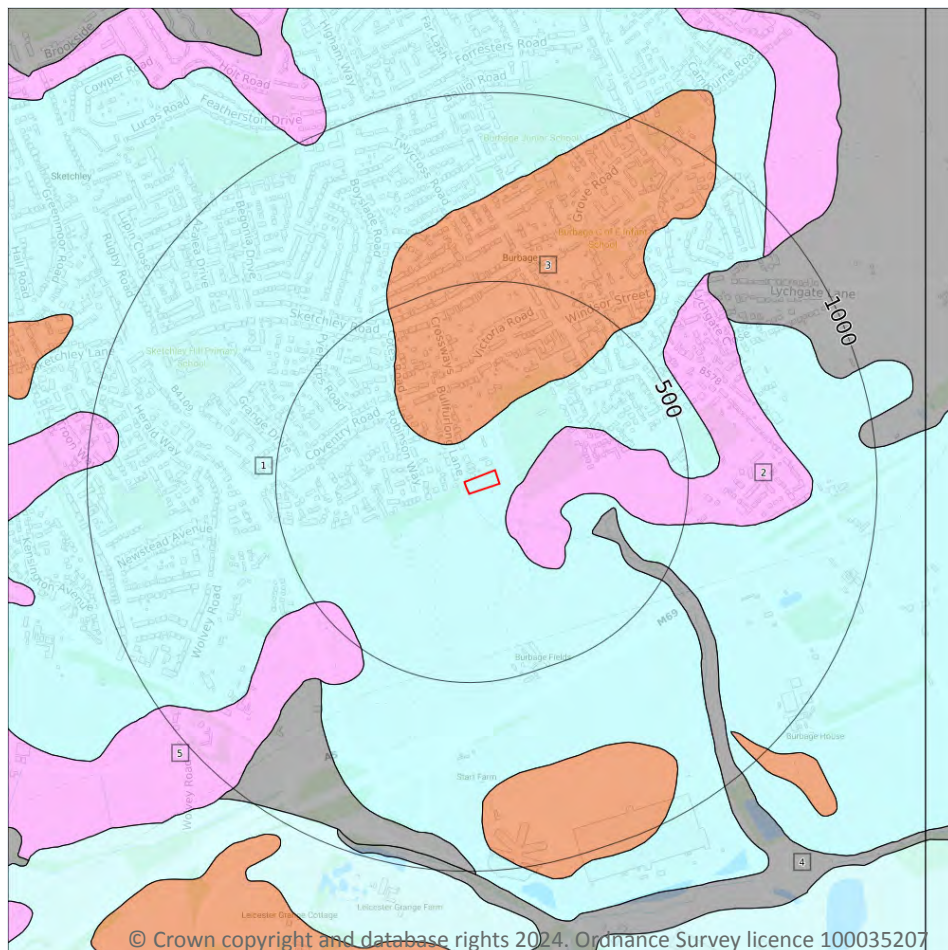
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 67](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	ODT-DMTN	Oadby Member - Diamicton	Diamicton
2	43m E	WOSG-XSV	Wolston Sand And Gravel - Sand And Gravel	Sand And Gravel
3	103m NW	DMG-XSV	Dunsmore Gravel - Sand And Gravel	Sand And Gravel



ID	Location	LEX Code	Description	Rock description
4	276m SE	ALV-XSWCV	Alluvium - Sand With Clay And Gravel	Sand With Clay And Gravel [unlithified Deposits Coding Scheme - Extended]
5	457m SW	WOSG-XSV	Wolston Sand And Gravel - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 69](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian Age - Early Triassic Epoch

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

□ Geological map tile

15.1 50k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 71](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	EW169_coventry_v4

This data is sourced from the British Geological Survey.



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

15.2 Artificial and made ground (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

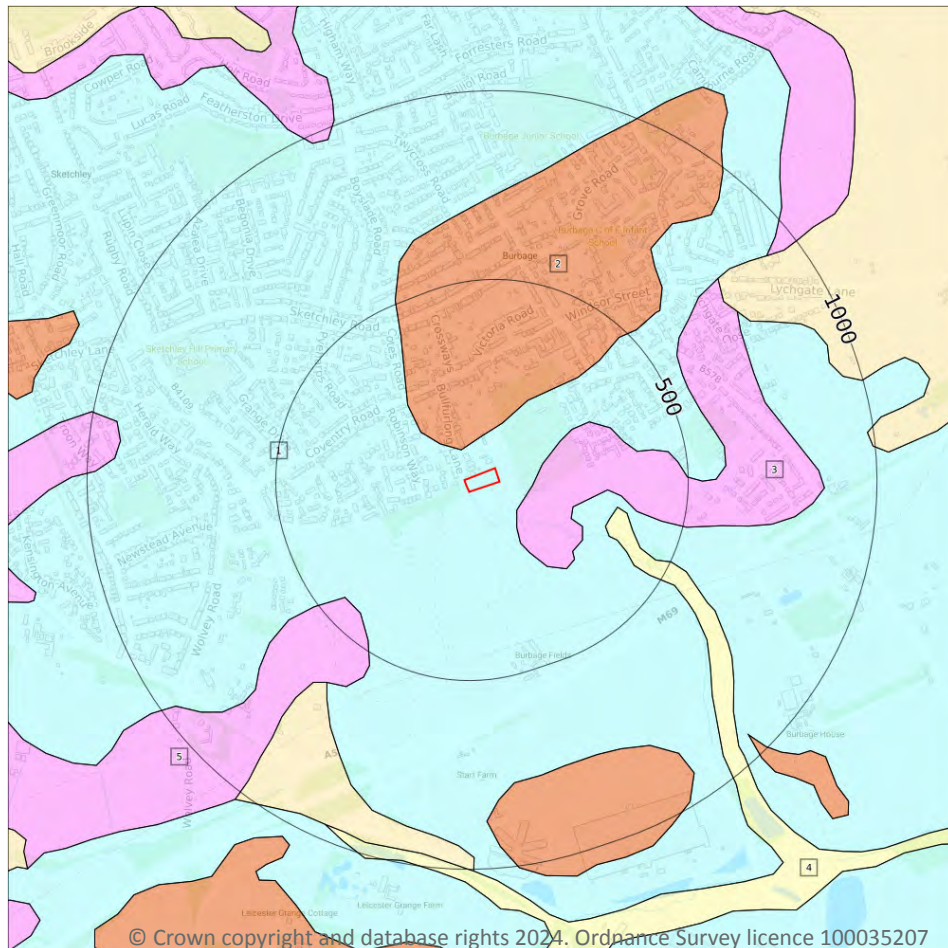
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

5

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 73](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	ODT-DMTN	OADBY MEMBER	DIAMICTON
2	78m NW	DMG-XSV	DUNSMORE GRAVEL	SAND AND GRAVEL
3	79m E	WOSG-XSV	WOLSTON SAND AND GRAVEL	SAND AND GRAVEL
4	305m E	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
5	431m SW	WOSG-XSV	WOLSTON SAND AND GRAVEL	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1
---------------------------	----------

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Moderate	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
----------------------------	----------

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m	0
---------------------------	----------

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 75 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	MERCIA MUDSTONE GROUP - MUDSTONE	-

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m**1**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m**0**

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

This data is sourced from the British Geological Survey.



16 Boreholes

16.1 BGS Boreholes

Records within 250m

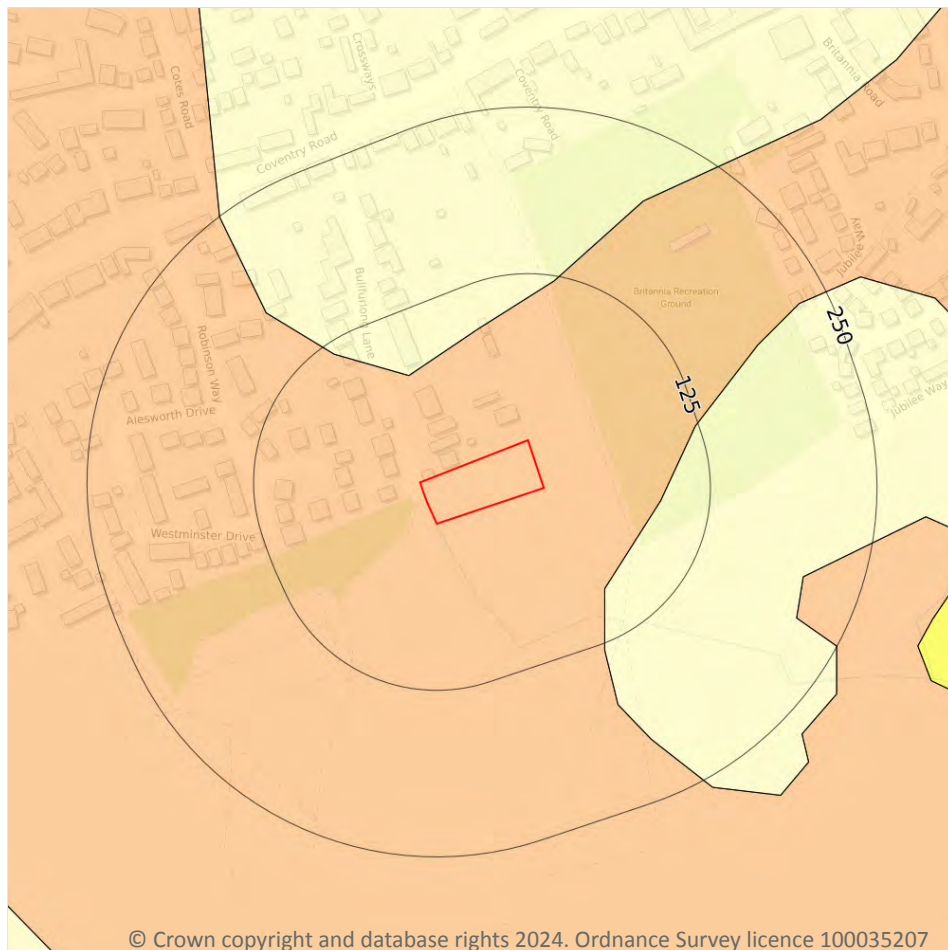
0

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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

1

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

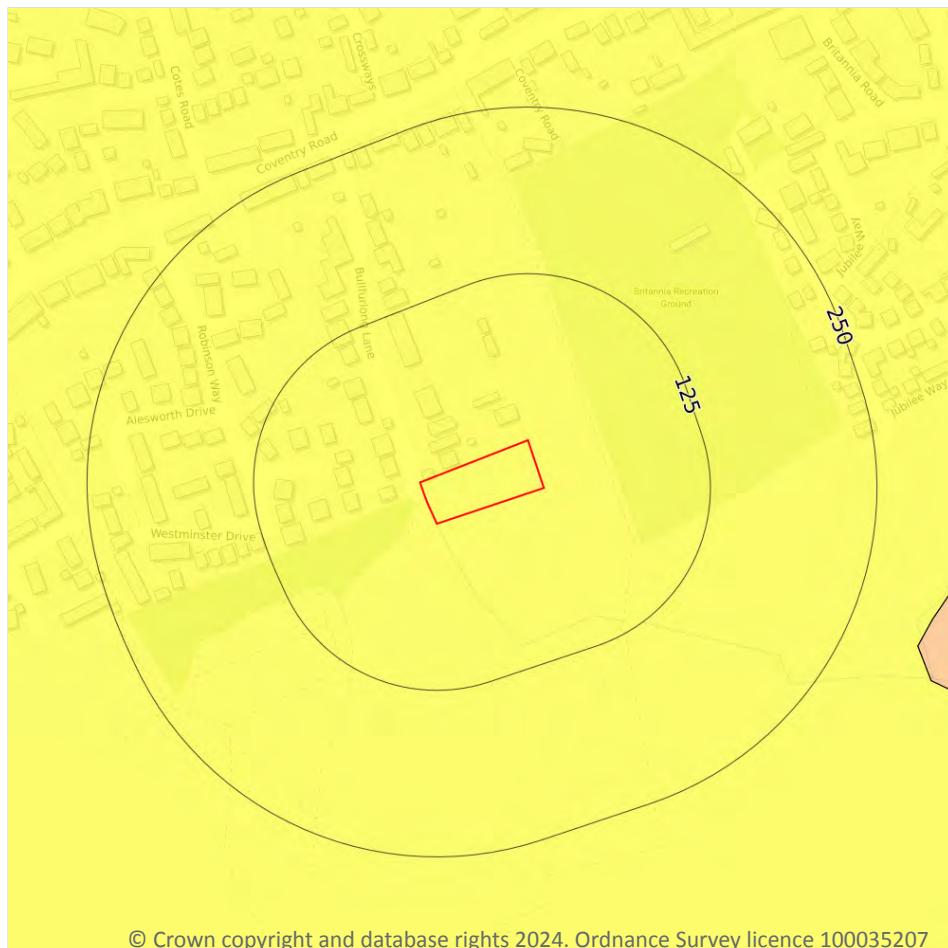
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 78 >](#)

Location	Hazard rating	Details
On site	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

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17.2 Running sands

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Running sands map on [page 79 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

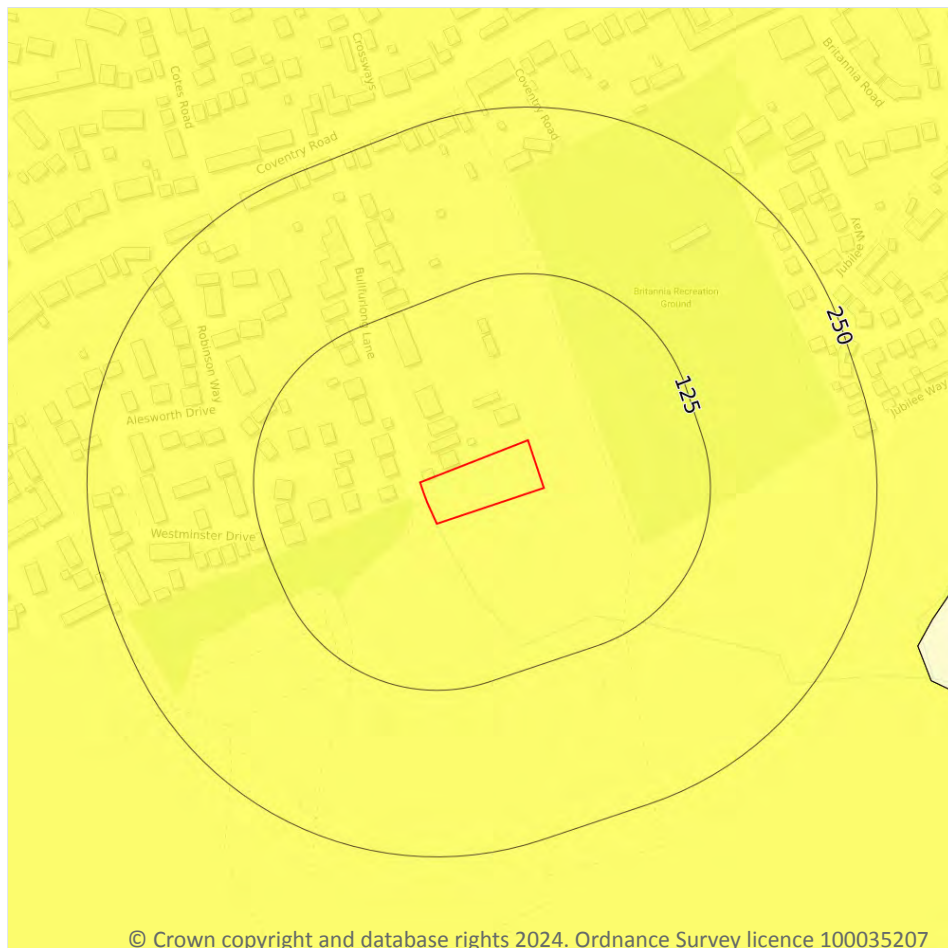
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 80](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

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17.4 Collapsible deposits

Records within 50m

1

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

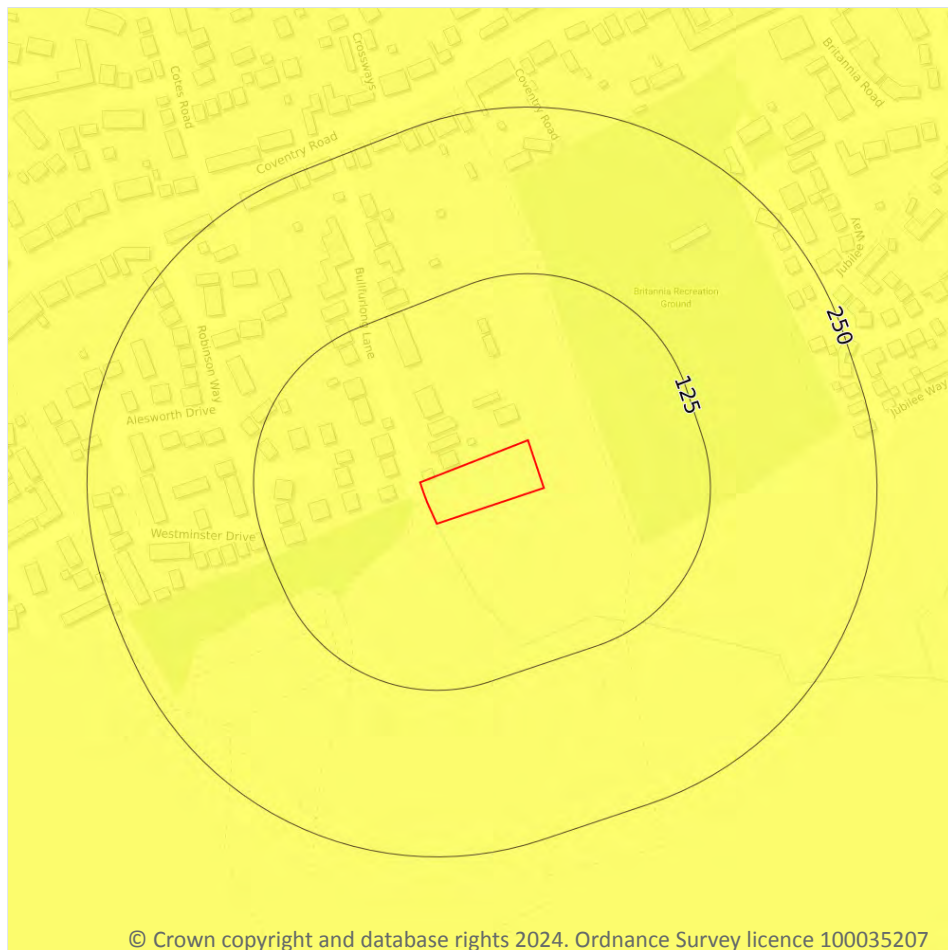
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 81 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

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17.5 Landslides

Records within 50m

1

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

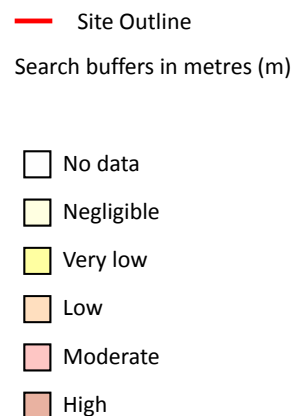
Features are displayed on the Natural ground subsidence - Landslides map on [page 82](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 83](#)

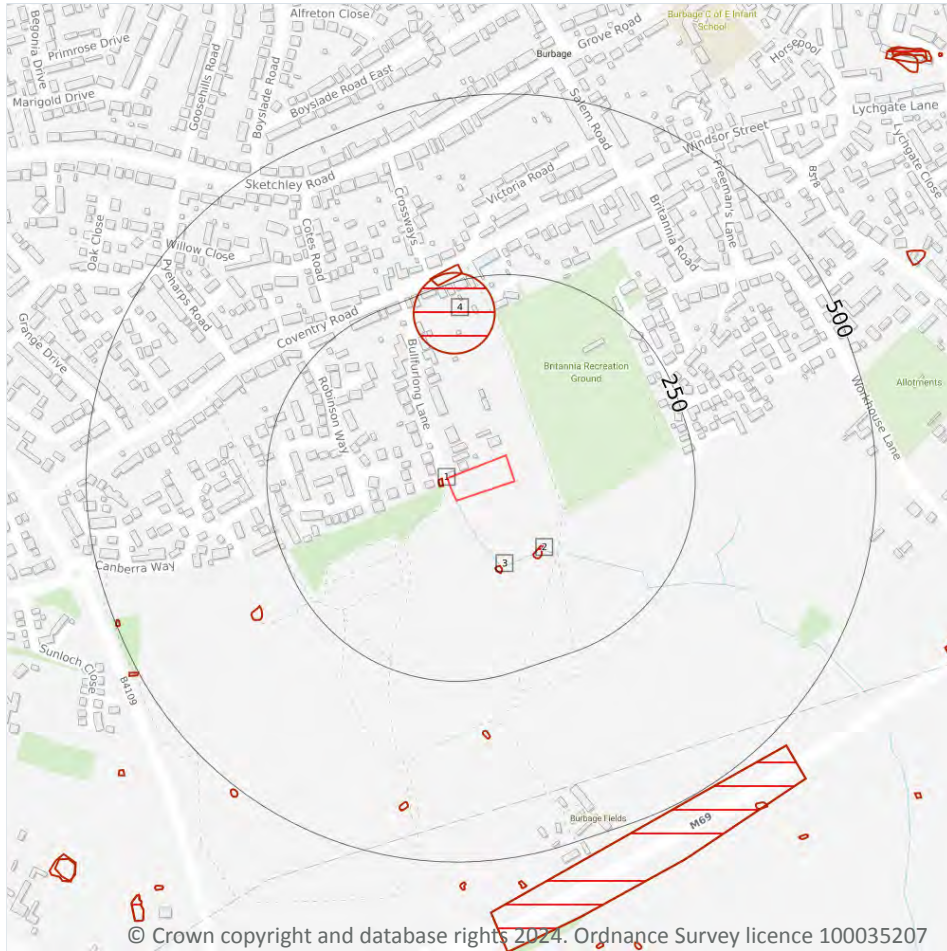
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- ▭ Surface ground workings
- ▭ Underground workings
- ▭ Underground mining extents
- ▭ Historical mineral planning areas
- ▭ TCA non-coal mining
- Non Coal Mining
 - ▭ Sporadic underground mining of restricted extent possible
 - ▭ Localised small scale underground mining possible
 - ▭ Small scale mining possible
 - ▭ Underground mining known or likely within or in close proximity
 - ▭ Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

4

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

Features are displayed on the Mining and ground workings map on [page 85 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
1	8m W	Pond	1938	1:10560
2	96m SE	Pond	1938	1:10560
3	104m S	Pond	1938	1:10560
4	153m N	Unspecified Pit	1901	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

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

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**0**

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.



18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

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

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

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



This data is sourced from Groundsure.

19.5 National karst database

Records within 500m

0

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

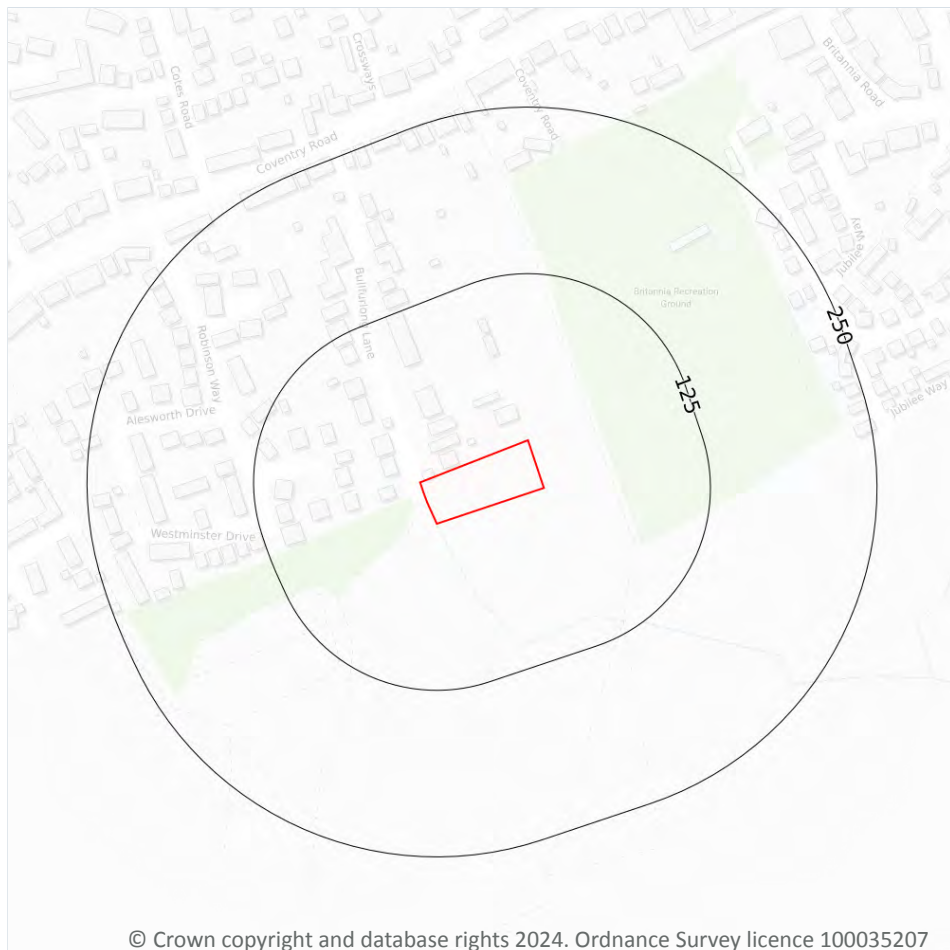
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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

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

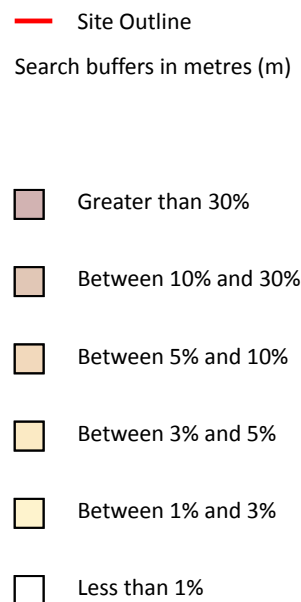
This data is sourced from the British Geological Survey.



20 Radon



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20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 92](#) >

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

1

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m**0**

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m**0**

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m**0**

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m**0**

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m**0**

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



This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



APPENDIX D





Chartered Environmental Surveyors &
Environmental Consultants
Scotland Farm, Ockbrook, Derby DE72 3RX
Telephone. 01332 661987

Site
Bullfurlong Lane, Burbage

Number
WS1

Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Resolute Retail		Job Number IV.64.24	
		Location		Dates 24/06/2024		Project Contractor Regional Drilling Ltd		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	E1				(0.30) 0.30	Silty TOPSOIL.		
						Firm brown silty CLAY.		
1.00-1.45 1.00	SPT N=11 D1		1,1/2,2,3,4		(1.20)			
					1.50	Very firm brown CLAY.		
2.00-2.45	SPT N=28		2,4/5,7,7,9		(1.50)			
3.00-3.45 3.00	SPT N=50 D2		7,8/11,13,15,11		3.00	Complete at 3.00m		

Remarks No visual or olfactory contamination. No groundwater encountered.	Scale (approx)	Logged By
	1:50	ER
	Figure No. IV.64.24.WS1	



Chartered Environmental Surveyors &
Environmental Consultants
Scotland Farm, Ockbrook, Derby DE72 3RX
Telephone. 01332 661987

Site
Bullfurlong Lane, Burbage

Number
WS2

Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Resolute Retail		Job Number IV.64.24	
		Location		Dates 24/06/2024		Project Contractor Regional Drilling Ltd		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	E1				(0.30) 0.30	Silty TOPSOIL.		
						Soft silty brown CLAY.		
1.00-1.45 1.00	SPT N=9 D1		1,2/2,2,2,3		(0.90) 1.20			
						Very firm brown CLAY.		
2.00-2.45	SPT N=23		3,3/4,5,6,8		(1.80)			
3.00-3.45 3.00	SPT N=50 D2		7,8/12,14,16,8		3.00	Complete at 3.00m		

Remarks No visual or olfactory contamination. No groundwater encountered.	Scale (approx)	Logged By
	1:50	ER
	Figure No. IV.64.24.WS2	



Chartered Environmental Surveyors &
Environmental Consultants
Scotland Farm, Ockbrook, Derby DE72 3RX
Telephone. 01332 661987

Site
Bullfurlong Lane, Burbage

Number
WS3

Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Resolute Retail		Job Number IV.64.24	
		Location		Dates 24/06/2024		Project Contractor Regional Drilling Ltd		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.40	E1				(0.30) 0.30	Silty TOPSOIL.		
1.00-1.45	SPT N=15		2,3/3,4,4,4		(1.70)	Very firm silty brown CLAY.		
1.50	D1							
2.00-2.45	SPT N=50		7,9/13,15,15,7		2.00	Complete at 2.00m		

Remarks No visual or olfactory constamination. No geoundwater encountered.	Scale (approx)	Logged By
	1:50	ER
	Figure No. IV.64.24.WS3	

Excavation Method Drive-in Windowless Sampler	Dimensions	Ground Level (mOD)	Client Resolute Retail	Job Number IV.64.24
	Location	Dates 24/06/2024	Project Contractor Regional Drilling Ltd	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	E1				(0.40) 0.40	Silty TOPSOIL.		
1.00-1.45 1.00	SPT N=11 D1		1,2/3,3,3,2		(1.10) 1.50 (0.20) 1.70	Firm bown sandy CLAY.		
2.00-2.45	SPT N=17		3,3/3,4,4,6		(1.30)	Pocket of SAND.		
3.00-3.45 3.00	SPT N=50 D2		7,9/12,14,15,9		3.00	Firm sandy brown CLAY.		
						Complete at 3.00m		

Remarks No groundwater encountered. No visual or olfactory contamination.	Scale (approx)	Logged By
	1:50	ER
	Figure No. IV.64.24.WS4	

		Chartered Environmental Surveyors & Environmental Consultants Scotland Farm, Ockbrook, Derby DE72 3RX Telephone. 01332 661987				Site Bullfurlong Lane, Burbage		Number WS5	
Excavation Method Drive-in Windowless Sampler		Dimensions		Ground Level (mOD)		Client Resolute Retail		Job Number IV.64.24	
		Location		Dates 24/06/2024		Project Contractor Regional Drilling Ltd		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.30	E1				(0.40) 0.40	Silty TOPSOIL.			
1.00-1.45 1.00	SPT N=11 D1		1,2/3,3,3,2		(1.10)	Firm bown sandy CLAY.			
					(1.10)				
					1.50 (0.20) 1.70	Pocket of SAND.			
2.00-2.45	SPT N=16		3,3/3,4,4,5		(1.30)	Firm sandy brown CLAY.			
2.70	D2								
3.00-3.45	SPT N=50		7,9/12,14,15,9		3.00	Complete at 3.00m			
Remarks No groundwater encountered. No visual or olfactory contamination.							Scale (approx)		Logged By
							1:50		ER
							Figure No. IV.64.24.WS5		

APPENDIX E





Ellis Robinson
Ivy House Environmental Ltd
Linden
Potter Street
Spondon
Derby
DE21 7LH

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

DETS Report No: 24-07168

Site Reference: Bullfurlong Lane, Burbage

Project / Job Ref: IV.64.24

Order No: None Supplied

Sample Receipt Date: 26/06/2024

Sample Scheduled Date: 26/06/2024

Report Issue Number: 1

Reporting Date: 02/07/2024

Authorised by:

A handwritten signature in black ink, appearing to read "S. Knight".

Steve Knight
Customer Support Manager

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

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



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 24-07168	~ Date Sampled	24/06/24	24/06/24	24/06/24	24/06/24	24/06/24
Ivy House Environmental Ltd	~ Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~ Site Reference: Bullfurlong Lane, Burbage	~ TP / BH No	WS01	WS02	WS03	WS04	WS05
~ Project / Job Ref: IV.64.24	~ Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~ Order No: None Supplied	~ Depth (m)	0.30	0.20	0.40	0.30	0.30
Reporting Date: 02/07/2024	DETS Sample No	723251	723252	723253	723254	723255

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	6.1	5.9	5.8	6.0	6.2
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	326	258	276	232	< 200
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.03	0.03	0.03	0.02	< 0.02
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	13	< 10	< 10	< 10	< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	2.6	3.1	2.8	2.7	2.3
Arsenic (As)	mg/kg	< 2	MCERTS	11	9	13	9	10
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	14	13	18	13	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	16	15	18	16	14
Lead (Pb)	mg/kg	< 3	MCERTS	43	37	41	40	29
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	9	10	11	9	9
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	25	21	22	19	18
Zinc (Zn)	mg/kg	< 3	MCERTS	64	83	70	76	58

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 24-07168	~ Date Sampled	24/06/24	24/06/24	24/06/24	24/06/24	
Ivy House Environmental Ltd	~ Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~ Site Reference: Bullfurlong Lane, Burbage	~ TP / BH No	WS01	WS02	WS04	WS05	
~ Project / Job Ref: IV.64.24	~ Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~ Order No: None Supplied	~ Depth (m)	3.00	3.00	3.00	3.00	
Reporting Date: 02/07/2024	DETS Sample No	723256	723257	723258	723259	

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)
Asbestos Screen ^(S)	N/a	N/a	ISO17025				
pH	pH Units	N/a	MCERTS	7.8	7.8	7.2	7.4
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS				
Total Sulphate as SO ₄	%	< 0.02	MCERTS				
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	24	11	11	< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.02	0.01	0.01	< 0.01
Organic Matter (SOM)	%	< 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	MCERTS				
Nickel (Ni)	mg/kg	< 3	MCERTS				
Selenium (Se)	mg/kg	< 2	MCERTS				
Vanadium (V)	mg/kg	< 1	MCERTS				
Zinc (Zn)	mg/kg	< 3	MCERTS				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-07168	~ Date Sampled	24/06/24	24/06/24	24/06/24	24/06/24	24/06/24
Ivy House Environmental Ltd	~ Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~ Site Reference: Bullfurlong Lane, Burbage	~ TP / BH No	WS01	WS02	WS03	WS04	WS05
~ Project / Job Ref: IV.64.24	~ Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~ Order No: None Supplied	~ Depth (m)	0.30	0.20	0.40	0.30	0.30
Reporting Date: 02/07/2024	DETS Sample No	723251	723252	723253	723254	723255

Determinand	Unit	RL	Accreditation	(n)				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.15	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.15	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.12	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.17	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 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	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.11	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

~ Sample details provided by customer and can affect the validity of results

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 24-07168
Ivy House Environmental Ltd
~Site Reference: Bullfurlong Lane, Burbage
~Project / Job Ref: IV.64.24
~Order No: None Supplied
Reporting Date: 02/07/2024

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
723251	WS01	None Supplied	0.30	7.6	Brown clay with vegetation
723252	WS02	None Supplied	0.20	10.1	Brown sandy clay with vegetation
723253	WS03	None Supplied	0.40	8.7	Brown sandy clay with vegetation
723254	WS04	None Supplied	0.30	8.4	Brown sandy clay with vegetation
723255	WS05	None Supplied	0.30	7.2	Brown sandy clay with vegetation
723256	WS01	None Supplied	3.00	11.5	Brown clay with vegetation
723257	WS02	None Supplied	3.00	11.6	Light brown clay with vegetation
723258	WS04	None Supplied	3.00	14.8	Light brown sandy clay with vegetation
723259	WS05	None Supplied	3.00	13.7	Light brown clay with vegetation

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

Insufficient Sample ^{I/S}

Unsuitable Sample ^{U/S}

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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-07168

Ivy House Environmental Ltd

~Site Reference: Bullfurlong Lane, Burbage

~Project / Job Ref: IV.64.24

~Order No: None Supplied

Reporting Date: 02/07/2024

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 diphénylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	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 (all: 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 (all: 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

~Sample details provided by customer and can affect the validity of results



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List of HWOL Acronyms and Operators	
DETS Report No:	24-07168
Ivy House Environmental Ltd	
~Site Reference:	Bullfurlong Lane, Burbage
~Project / Job Ref:	IV.64.24
~Order No:	None Supplied
Reporting Date:	02/07/2024

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH 2D Total but with humics mathematically subtracted
#2	EH 2D Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS Total or EH CU+HS Total
~	Sample details provided by customer and can affect the validity of results

Det - Acronym

APPENDIX F



Kiwa CMT



Client: Ivy House Environmental Limited
Linden
Potter Street
Spondon
Derby
DE21 7LH

Date: 10th July 2024

Lab Ref: 72545

Originator: Richard Sutton

Order Ref: IV.64.24

Site: Bullfurlong Lane, Burbage

Samples:

4No. samples weighing approximately 1kg each were delivered to Kiwa CMT on 28th June 2024. Sampling certificates were not provided.

Requirements:

Determine the Plasticity Index and Water Content of 4No. samples in accordance with **BS EN ISO 17892-12:2018** and **BS EN ISO 17892-1:2014 + A1:2022** respectively.

Results:

The individual result sheet may be viewed on page 2 of this report and the results relate only to the items tested.

Kiwa CMT

Author: L Anaz
Technical Administrator

Checked and Approved by: R. Cartlidge
Department Head

Certificate of Analysis for Plasticity Index & Water Content

Client: Ivy House Environmental Ltd

Site: Bullfurlong Lane
Burbage
IV.64.24

Lab Ref: 72545

Date of Test: 9th July 2024

Test Methods: BS EN ISO 17892-12:2018 +A2:2022 - Liquid Limit/Plastic Limit/Plasticity Index - Fall Cone Method
BS EN ISO 17892-1:2014 +A1:2022 - Water Content

Results:

Sample Ref ^A	Material Description	LL Cone Data			LL (%)	PL (%)	PI (%)	% Retained on 425µm	Modified PI (%) [*]	Soil Classification	WC (%)
		Cone Pen	Water %	Factor ¹							
72545/WS01 @1.0m	Reddish Brown Mottled Grey Sandy Clay	16.8 17.0	31.9 32.1	1.057	34	14	20	2	20	CIL	19.9
72545/WS02 @1.0m	Orange Brown Very Sandy Clay	17.8 17.8	28.2 28.5	1.0398	29	13	16	7	15	CIL	20.3
72545/WS03 @1.5m	Brown Slightly Sandy Slightly Gravelly Clay	21.1 20.9	35.5 35.9	0.984	35	15	20	16	17	CIL/CIM	13.9
72545/WS05 @1.0m	Orange Brown Mottled Black Very Sandy Slightly Gravelly Clay	19.0 19.2	32.2 32.1	1.0162	33	17	16	31	11	CIL	17.8

The samples tested were disturbed and in their natural condition.

Results relate only to the samples tested and as received.

LL Test method - Fall Cone / One Point / Cone Spec 80g / 30 degrees

* Modified plasticity index relates to BRE Digest 240 that is not included in the UKAS schedule for this Laboratory.

LL = Liquid Limit

PL = Plastic Limit

PI = Plasticity Index

WC = Water Content

¹ BS EN 1377-2:1990 table 1

Kiwa CMT



Signed: D. Newton
Laboratory Supervisor



0529

APPENDIX G



GENERIC ASSESSMENT CRITERIA

SHEET 1	SOIL - INORGANIC GAC
SHEET 2	SOIL ORGANIC & INORGANIC GAC (1 - 6% SOM)
SHEET 3	UK DRINKING WATER STANDARDS (UKDWS)
SHEET 4	ENVIRONMENTAL QUALITY STANDARDS (EQS)
SHEET 5	WHO TPHCWG STANDARDS (Water)
SHEET 6	WATER PIPE INSTALLATION STANDARDS (WRAS)

Generic Assessment Criteria					
Land Use Scenario					
Contaminants	Residential With Produce	Residential Without Produce	POS (Resi)	Commercial	Source
Arsenic	37	40	79	635	S4UL
Cadmium	11	85	120	230	
Chromium VI	6	6	8	34	
Chromium III	910	910	1500	8840	
Copper	2400	7100	12000	71700	
Lead	200	310	630	2300	
Mercury, elemental	1	1	16	83	
Mercury, inorganic	40	56	120	3640	
Mercury, methyl	11	15	40	409	
Nickel	180	180	230	980	
Vanadium	410	1200	2000	9000	
Zinc	3700	40000	81000	730000	
Selenium	250	430	1100	13000	
Asbestos Fibre	>0.001%	>0.001%	>0.001%	>0.001%	LOD

Note:

All figures are in mg/kg
 LQM/CIEH/S4UL Adopted.
 Soil type chosen is sandy loam, pH 7
 LOD - Limit of Detection



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Generic Assessment Criteria														
Contaminants	Land Use Scenario												Source	
	Residential With Produce			Residential Without Produce			POS (Resi)			Commercial				
	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM		
Arsenic			37			40			79			635	S4UL	
Cadmium			11			85			120			190	S4UL	
Chromium VI			6			6			8			33	S4UL	
Chromium III			910			910			1500			8600	S4UL	
Copper			2400			7100			12000			68000	S4UL	
Mercury, elemental			1			1			16			58 ^(25.9)	S4UL	
Mercury, inorganic			40			56			120			3640	S4UL	
Mercury, methyl			11			15			40			407	S4UL	
Nickel			180			180			230			980	S4UL	
Vanadium			410			1200			2000			9000	S4UL	
Zinc			3700			4000		81000	81000			73000	S4UL	
Selenium			250			430		1100	1100			12000	S4UL	
Benzene*	0.087		0.37	0.38		1.4		72		27	47		S4UL	
Ethylbenzene*	47	0.17	260	86	0.7	440	24000	24000	25000	570 ⁽⁵¹⁸⁾	13, 000 ⁽¹²²⁰⁾	27, 000 ⁽²⁸⁴⁰⁾	S4UL	
Phenol	280	0.50	1100	750	1300	2300	760 ⁽¹¹⁰⁰⁰⁾	1500 ⁽¹⁵⁰⁰⁰⁾	3200 ⁽³⁷⁰⁰⁰⁾	760 ⁽³¹⁰⁰⁰⁾	1500 ⁽⁵⁰⁰⁰⁰⁾	3200 ⁽³⁷⁰⁰⁰⁾	S4UL	
*Toluene	130	0.29	660	880	1900	3900	56000	56000	56000	56000 ⁽⁸⁶⁹⁾	110, 000 ⁽¹³⁵⁰⁾	180, 000 ⁽⁴³⁶⁰⁾	S4UL	
*Xylene, o	60	0.14	330	88	210	480	41000	42000	43000	6600 ⁽⁴⁷⁸⁾	15000 ⁽¹¹²⁰⁾	33000 ⁽¹³⁵⁰⁾	S4UL	
*Xylene, m	59	0.14	320	82	190	450	41000	42000	43000	6200 ⁽⁶²⁵⁾	14000 ⁽¹⁴⁷⁰⁾	31000 ⁽¹³⁵⁰⁾	S4UL	
*Xylene, p	56	0.13	310	79	180	430	41000	42000	43000	5900 ⁽⁵⁷⁶⁾	14000 ⁽¹³⁵⁰⁾	30000 ⁽¹³⁵⁰⁾	S4UL	
Benzo(a)pyrene*	2.20		3	3	3	3	5.7	5.7	5.7	35	35	36	S4UL	
Dibenzo(a,h)anthracene*	0.24		0.3	0.3	0.3	0.3	0.57	0.57	0.58	4	4	4	S4UL	
Acenaphthene*	210		510	3000	4700	6000	15000	1500	1500	84, 000	97000	100, 000	S4UL	
Acenaphthylene*	170		420	2900	4600	6000	15000	1500	1500	83, 000	97, 000	100000	S4UL	
Anthracene*	2400		5400	11000	31000	37000	74000	74000	74000	52, 000	54, 000	54, 000	S4UL	
Benzo(a)anthracene*	7.2		11	11	14	15	29	29	29	170, 000	170, 000	180, 000	S4UL	
Benzo(b)fluoranthene*	2.6		3.3	4	4	4	7.1	7.2	7.2	44	44	45	S4UL	
Benzo(g,h,i)perylene	320		340	360	360	360	640	640	640	3900	4000	4000	S4UL	
Benzo(k)fluoranthene*	77		93	110	110	110	190	190	190	1200	1200	1200	S4UL	
Chrysene*	15		22	30	31	32	57	57	57	350	350	350	S4UL	
Fluoranthene*	280		560	890	1500	1600	3100	3100	3100	23000	23000	23000	S4UL	
Fluorene*	170		400	860	2800	3800	4500	9900	9900	63000 ^(30.9)	68, 000	71, 000	S4UL	
Indeno(1,2,3-c,d)pyrene*	27		36	41	45	46	82	82	82	500	510	510	S4UL	
Phenathrene*	95		220	440	1300	1500	3100	3100	3100	22, 000	22, 000	23, 000	S4UL	
Pyrene*	620		1200	2000	3700	3800	7400	7400	7400	54, 000	54K	54, 000	S4UL	
Napthalene*	2.3		5.6	13	2	6	13	4900	4900	460 ⁽¹⁸³⁾	190 ^(78.4)	1110 ⁽⁴³²⁾	S4UL	
Aliphatic C5 - C6*	42		78	160	42	78	160	570 ⁽³⁰⁴⁾	590, 000	600, 000	3200 ⁽³⁰⁴⁾	5900 ⁽⁵⁵⁸⁾	12000 ⁽¹¹⁵⁰⁾	S4UL
Aliphatic C6 - C8	100		230	530	100	230	530	600, 000	610, 000	620, 000	7800 ⁽¹⁴⁴⁾	17000 ⁽²²²⁾	40K ⁽⁷³⁶⁾	S4UL
Aliphatic C8 - C10	27		65	27	65	150	13000	13000	13000	2000 ⁽⁷⁸⁾	4.8K ⁽¹⁹⁰⁾	11K ⁽⁴⁵¹⁾	S4UL	
Aliphatic C10 - C12	130 ⁽⁴⁸⁾		330 ⁽¹¹⁸⁾	760 ⁽²⁸²⁾	130 ⁽⁶⁸⁾	330 ⁽¹¹⁸⁾	770 ⁽²⁸³⁾	13000	13000	13000	9700 ⁽⁴⁸⁾	23K ⁽¹¹⁸⁾	47000 ⁽²⁸⁸⁾	S4UL
Aliphatic C12 - C16	1100 ⁽²⁴⁾		2400 ⁽⁶⁹⁾	4300 ⁽¹⁴²⁾	1100 ⁽²⁴⁾	2400 ⁽⁶⁹⁾	4400 ⁽¹⁴²⁾	13000	13000	13000	59K ⁽²⁴⁾	90000 ⁽¹⁴²⁾		S4UL
Aliphatic C16 - C35	65000 ^(8.48)		92, 000 ⁽²¹⁾	110000	65000 ^(8.48)	92000 ⁽²¹⁾	1100 ⁽²⁴⁾	250000	250, 000	250, 000	1600000	1700000	1800000	S4UL
Aliphatic C35 - C44	65000 ^(8.48)		92, 000 ⁽²¹⁾	110000	65000 ^(8.48)	92000 ⁽²¹⁾	110000	250, 000	250, 000	250, 000	1600000	1700000	1800000	S4UL
Aromatic C5 - C7 (benzene)	70		140	300	370	690	1400	56, 000	56, 000	56, 000	26000 ⁽¹²²⁰⁾	46000 ⁽²²⁶⁰⁰⁾	86000 ⁽⁴⁷¹⁰⁾	S4UL
Aromatic C7 - C8 (toluene)	130		290	660	860	1800	3900	56, 000	56, 000	56, 000	56000 ⁽⁸⁶⁹⁾	110000 ⁽⁵³²⁰⁾	180000 ⁽⁴³⁶⁰⁾	S4UL
Aromatic C8 - C10	34		83	190	47	110	270	5000	5000	5000	3500 ⁽⁶¹³⁾	8100 ⁽¹⁵⁰⁰⁾	17000 ⁽²⁵⁸⁰⁾	S4UL
Aromatic C10 - C12	74		180	380	250	590	1200	5000	5000	5000	16000 ⁽³⁶⁴⁾	280000 ⁽⁸⁹⁹⁾	34000 ⁽²¹⁵⁰⁾	S4UL
Aromatic C12 - C16	140		330	660	1800	2300 ⁽⁴¹⁹⁾	2500	5100	5100	36, 000 ⁽¹⁴⁶⁹⁾	37, 000	38, 000	38, 000	S4UL
Aromatic C16 - C21	260		540	930	1900	1900	3800	3800	3800	28, 000	28, 000	28, 000	28, 000	S4UL
Aromatic C21 - C35	1100		1500	1700	1900	1900	3800	3800	3800	28, 000	28, 000	28, 000	28, 000	S4UL
Aromatic C35 - C44	1100		1500	1700	1900	1900	3800	3800	3800	28, 000	28, 000	28, 000	28, 000	S4UL

Note:
All figures are in mg/kg
LOM/CIEH/S4UL Adopted.
Soil type chosen is sandy loam, pH 7
All inorganic determinands calculated using 6% SOM
^(SOL) Solubility Saturation Limit
^(vap) vapour Saturation Limit



UK Drinking Water Standards (UKDWS)		
Parameter	Concentration	Units
Acrylamide	0.1	µg/l
Aluminium	200	µgAl/l
Ammonium	0.5	mgNH ₄ /l
Antimony	5	µgSb/l
Arsenic	10	µgAs/l
Benzene	1	µg/l
Benzo(a)pyrene	0.01	µg/l
Boron	1	mgB/l
Bromate	10	µgBrO ₃ /l
Cadmium	5	µgCd/l
Chromium	50	µgCr/l
Chloride (i)	250	mgCl/l
Conductivity (i)	2500	µS/cm at 20°C
Copper(ii)	2	mgCu/l
Cyanide	50	µgCN/l
1, 2 dichloroethane	3	µg/l
Epichlorohydrin	0.1	µg/l
Fluoride	1.5	mgF/l
Hydrogen ion	6.5 - 9.5	pH value
Iron	200	µgFe/l
Lead (ii)	10	µgPb/l
Manganese	50	µgMn/l
Mercury	1	µgHg/l
Mineral Oil (TPH) (x)	10	µg/l
Nickel (ii)	20	µgNi/l
Nitrate (iii)	50	mgNO ₃ /l
Nitrite (iii)	0.5	mgNO ₂ /l
Phenol	0.5	µg/l
Polycyclic aromatic hydrocarbons (vii)	0.1	µg/l
Selenium	10	µgSe/l
Sodium	200	mgNa/l
Sulphate (i)	250	mgSO ₄ /l
Tetrachloroethene and Trichloroethene (viii)	10	µg/l
Tetrachloromethane	3	µg/l
Trihalomethanes: Total (x)	100	µg/l
Vinyl chloride	0.5	µg/l
Zinc	5000	µg/l

Pesticides (iv, v)		
Aldrin	0.03	µg/l
Dieldrin	0.03	µg/l
Heptachlor	0.03	µg/l
Heptachlor epoxide	0.03	µg/l
other pesticides	0.1	µg/l
Pesticides: Total (vi)	0.5	µg/l

Notes:

i) The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water. This is controlled by product specification.

ii) New level for Lead has been in force since 25/12/2013. See also regulation 6(6)

iii) See also regulation 4(2)(d)

iv) See the definition of "pesticides and related products" in regulation 2

v) The parametric value applies to each individual pesticide.

vi) "Pesticides: Total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.

vii) The specified compounds are:

- benzo(b)fluoranthene

- benzo(k)fluoranthene

- benzo(ghi)perylene

- indeno(1,2,3-cd)pyrene.

viii) The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

ix) The specified compounds are:

- chloroform

- bromoform

- dibromochloromethane

- bromodichloromethane.

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

x) Revoked

References for UKDWS and EQS

Drinking Water Inspectorate Advice for consumers leaflet. DWS, Jan 2010
 Thames Water Drinking Water Standards. TW website, accessed May 2016
 Technical Guidance Manual for Licensing Discharges to Water. Annex G Environmental Quality Standards (EQS) List, Scottish Environmental Protection Agency, October 2004
 Hydrogeological Risk Assessment for Landfills, Appendix B: Selected Water Quality Standards, Environment Agency, 2003
 Petroleum Products in Drinking-water, Background document for development of WHO Guidelines for Drinking-water Quality, WHO (WHO/SDE/WSH/05.08/123)
 Water Supply (Water Quality) Regulations 1989 (SI 1989/1147) (as amended)
 Water Supply (Water Quality) Regulations 2000 (SI 2000/3184) (as amended).
 Directive 2008/105/EC

Environmental Quality Standards (EQS) Groundwater Thresholds for List 1 & 2 Substances

Table 1: Environmental Quality Standards (EQS) for List 1 Dangerous Substances	
Substance	All Freshwater EQS (ug/l)
Mercury	1
Cadmium	5
Hexachlorocyclohexane	0.02
Carbon tetrachloride	12
Total DDT	0.025
pp DDT	0.01
Pentachlorophenol	0.4
Dieldrin	see total
Isodrin	see total
Aldrin	see total
Endrin	see total
Total 'Drins	0.01
Hexachlorobenzene	0.01
Hexachlorobutadiene	0.1
Chloroform	2.5
1,2-dichloroethane	10
Trichlorethylene	10
Perchlorethylene	10
Trichlorobenzene	0.4

Table 2a: Environmental Quality Standards (EQS) for List 2 Dangerous Substances					
Substance	EQS Type	All Freshwater EQS (ug/l)	Substance	EQS Type	All Freshwater EQS (ug/l)
1,1,1-Trichloroethane	Annual average	100	Fenitrothion	Annual average	0.01
1,1,2-Trichloroethane	Annual average	400	Flucifuron	95 percentile	1
2,4-D (ester)	Annual average	1	Iron (dissolved)	Annual average	1000
2,4-D (non-ester)	Annual average	40	Lead (dissolved)	Annual average	Hardness related (see table 2b for details)
2,4-Dichlorophenol	Annual average	20	Linuron	Annual average	2
2-Chlorophenol	Annual average	50	Malathion	Annual average	0.01
4-Chloro-3-methyl-phenol	Annual average	40	Mecoprop	Annual average	20
Arsenic (dissolved)	Annual average	50	Mevinphos	Maximum concentration	0.02
Atrazine & Simazine	Annual average	2	Naphthalene	Annual average	10
Azinphos-methyl	Annual average	0.01	Nickel (dissolved)	Annual average	Hardness related (see table 2b for details)
Bentazone	Annual average	500	Omethoate	Annual average	0.01
Benzene	Annual average	10	PCSDs	95th percentile	0.05
Biphenyl	Annual average	25	Permethrin	95th percentile	0.01
Boron (dissolved)	Annual average	2000	pH	95th percentile	6 - 9
Chloronitroluenes	Annual average	10	Sulcofuron	95th percentile	25
Chromium (dissolved)	Annual average	Hardness related (see table 2b for details)	Toluene	Annual average	50
Copper (dissolved)	Annual average	Hardness related (see table 2b for details)	Triazaphos	Annual average	0.005
Cyfluthrin	95th percentile	0.001	Tributyltin	Maximum concentration	0.02
Demeton	Annual average	0.5	Trifluralin	Annual average	0.1
Dichlorvos	Annual average	0.001	Triphenyltin	Maximum concentration	0.02
Dichlorvos	Maximum concentration	-	Vanadium (dissolved)	Annual average	Hardness related (see table 2b for details)
Dimethoate	Annual average	1	Xylene (m and p, o)	Annual average	30
Endosulphan	Annual average	0.003	Zinc (total)	Annual average	Hardness related (see table 2b for details)
Ammonia (as NH3)		15			

Table 2b: Environmental Quality Standards (EQS) for hardness related List 2 dangerous substances

Substance	EQS type	EQS (ug/l) for Hardness bands (mg/l CaCO3)					
		0-50	>50-100	>100-150	>150-200	>200-250	>250
Freshwaters, suitable for all fishlife							
Copper (dissolved)	Annual average	0.5	3	3	3	8	12
Nickel (dissolved)	Annual average	8	20	20	40	40	40
Vanadium (dissolved)	Annual average	20	20	20	20	60	60
Chromium (dissolved)	Annual average	2	10	10	20	20	20
Lead (dissolved)	Annual average	4	10	10	20	20	20
Zinc (total)	Annual average	8	15	15	50	50	50

TPHCWG WATER VALUES

<u>TPHCWG Fraction</u>	<u>Assessment Value (µg/l)</u>	
Aliphatic > C5 – C6	15,000	
Aliphatic > C6 – C8	15,000	
Aliphatic > C8 – C10	300	
Aliphatic > C10 – C12	300	
Aliphatic > C12 – C16	300	
Aliphatic > C16 – C21	300	
Aliphatic > C21 – C34	300	
Aromatic > C5 - C7 *	10	Assumed to be 100% Benzene
Aromatic > C7 - C8	700	Assumed to be 100% Toluene
Aromatic > C8 - C10	300 / 500	Assumed to be either: Ethylbenzene (300) or Xylenes (500)
Aromatic > C10 – C12	90	
Aromatic > C12 – C16	90	
Aromatic > C16 – C21	90	
Aromatic > C21 – C25	90	

Contaminant Thresholds for Subsurface Water Pipes

Contaminant	Material selection Threshold Level (mg/kg dried soil)
Corrosion	
Sulphate (SO ₄)	2000
Sulphur (S)	5000
Sulphide (S)	250
pH	<pH5, >pH8
Toxic Substances	
Antimony (Sb)	10
Arsenic (As)	10*
Cadmium (Cd)	3
Chromium (hexavalent) (Cr)	25
Chromium (total)	600
Cyanide (free) (Cn)	25*
Cyanide (complexed) (Cn)	250*
Lead (Pb)	500
Mercury (Hg)	1
Selenium (Se)	3
Thiocyanate (SCN)	50
Organic Contaminants	
Coal Tar	50
Cyclohexane extractable	50
Phenol	5
Poly Aromatic Hydrocarbons	50
Toluene extractable	50
TPH DRO (diesel, kerosene)	100
Petrol	10
Mineral oils	1000

* It is not recommended that water pipes should be laid in sites where these substances are identified or suspected

Ref: Water Regulations Advisory Scheme (WRAS) (No. 9-04-03 Issue 1)