MANOR FARM, WALTON ON TRENT

PHASE I GEO-ENVIRONMENTAL ASSESSMENT FOR CDP LTD

Project Ref:
EAL.285.23

Date:
February 2024

Prepared for:
CDP Ltd.
Marshall House
Huddersfield Road
Elland
West Yorkshire
HX5 9BW

Prepared by:		Phil Devitt MRICS *Director*
Date:	February 2024	
Version:	1.0	

Executive Summary

This presents the salient points of the report and should not be referred to in isolation. The conclusions and recommendations presented below are considered reasonable based on the findings of the site investigation. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate Regulatory Authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the subject site.

SUMMARY TABLE: PHASE I GEO-ENVIRONMENTAL ASSESSMENT	
SITE:	Manor Farm, Walton On Trent
CLIENT:	CDP Ltd.
DATE:	February 2024
REFERENCE	EAL.285.23
DEVELOPMENT PROPOSAL:	Conversion of existing farmhouse into 5 dwellings and conversion of barns into 3 dwellings with ancillary storage unit, parking and amenity areas.
HUMAN HEALTH:	Low risk identified – a basic Phase II contaminated land investigation is recommended to further assess this.
CONTROLLED WATERS:	Low risk identified – a basic Phase II contaminated land investigation is recommended to further assess this.
GAS RISK:	No significant risk identified.
RADON GAS:	No significant risk identified.
COMMENTS:	None.

The executive summary given above is an overview of the key findings and conclusions of the report. There may be other information contained in the body of the report which puts into context the findings of the executive summary. No reliance should be placed on the executive summary until the whole report has been read in full.

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Appendix B — Historical OS Maps
Appendix C — Environmental Data Summary

1.0 INTRODUCTION

1.1 PREAMBLE

This Phase I Geo-Environmental Assessment has been produced for CDP Ltd. (hereafter referred to as 'the client') to provide a pre-development contamination and geotechnical assessment of the site known as *Manor Farm, Walton On Trent.*

Site location and boundary plans are included in **Appendix A**.

1.2 PROJECT BRIEF

The brief for the Phase I 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.

1.3 DATA REFERENCES

- Environmental Search Data (Supplied by Emapsite Ltd).
- Historical Ordnance Survey (OS) Mapping (Supplied by Emapsite Ltd).
- British Geological Survey Online Geological Mapping.
- BSI (2020), BS 5930:2015+A1 2020 Code of practice for ground investigations.
- PHE-BGS (2011), Joint Indicative Atlas of Radon in Great Britain.
- Environment Agency, Land Contamination Risk Management, October 2020

1.4 PREVIOUS REPORTS

Erda Associates Ltd. have not been made aware of any previous reports relating to the site by the client.

1.5 LIMITATIONS

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

In the production of this report, Erda Associates Ltd., has relied upon information provided by third parties. Erda Associates Ltd cannot accept responsibility for the reliability and authenticity of this information. Erda Associates Ltd. will not be responsible for any opinions which it has expressed, or conclusions which it has drawn, in reliance upon information which is subsequently proven to be inaccurate.

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 Erda Associates Ltd. Unauthorised third parties rely upon the information contained within this report at their own risk.

1.6 PROPOSED DEVELOPMENT

It is understood that the development proposal for the site comprises the conversion of an existing farmhouse into 5 dwellings and conversion of barns into 3 dwellings with ancillary storage unit, parking and amenity areas. A proposed development plan is included in **Appendix A**, for reference.

2.0 PHASE I DESK STUDY AND SITE OBSERVATIONS

2.1 GEOGRAPHICAL SETTING

The site is located approximately 0.46km to the north of Walton On Trent village centre and 5.30km to the south-west of Burton On Trent town centre. The site is situated within a predominantly rural area and roughly centred at national grid reference SK 2191 1855.

Site location and boundary plans are presented in **Appendix A**.

2.2 SITE DESCRIPTION

The site currently comprises a broadly square shaped parcel of land which extends over 0.64ha. The majority of the site comprises a brick built farm house and brick barns with associated hardstanding. The barns appear to have historically been utilised for cattle. The northern corner of the site appeared to form part of a smallholding that was associated with the former barns. The eastern corner of the site appeared to comprise a former garden and allotment with some outdoor animal pens. The southern corner of the site formed a private garden. The site boundaries generally comprise semi-mature/mature hedgerows interspersed trees and brick walling. Smi-mature and mature trees were noted throughout the gardens in the southern and eastern corner of the site.

The immediate surrounding land uses comprise agricultural fields to the north, south and west. industrial units to the east and south. Another farm and its associated buildings is situated immediately to the east.

No significant visual or olfactory evidence of contamination was observed on site. Selected inspection photographs are included in **Appendix A**, for reference.

Significant Features identified current site use:
Former agricultural use – potential low risk of contamination.

2.3 HISTORICAL REVIEW: SITE DEVELOPMENT

Ordnance Survey maps have been reviewed for the years 1883 – 2024. The OS maps are contained in **Appendix B**, for reference.

The summary below identifies the historical features identified on the historical mapping data considered likely to have the potential to affect the site. All distances are approximate.

Date	Identified On-site Hazard	Identified Off-site Hazard
1883	The site comprises a farm house with associated barns and garden.	The immediate surrounding land use comprises agricultural fields. An adjoining farm is situated immediately to the east of the site.
1901	No significant changes identified.	A small earthwork/borrow pit is recorded approximately 130m to the south-east.
1923	No significant changes identified.	No significant changes identified.
1938	No significant changes identified.	The earthwork 130m to the south-east is no longer recorded.

1955	No significant changes identified.	No significant changes identified.
1963	No significant changes identified.	A sewage works is recorded 175m to the north.
1982	No significant changes identified.	No significant changes identified.
1992	No significant changes identified.	No significant changes identified.
2001	No significant changes identified.	The sewage works 175m to the north is no longer recorded.
2003	No significant changes identified.	No significant changes identified.
2010	No significant changes identified.	No significant changes identified.
2024	No significant changes identified.	No significant changes identified.

Significant Features identified on OS Maps:
On-site hazard: Agricultural use – low risk of contamination (heavy metals, PAHs, asbestos, TPH). Off-site hazard: Sewage Works and former earthwork/borrow pit – no significant risk anticipated due to distance and age.

2.4 ANTICIPATED GEOLOGY

The BGS geological map for this area illustrates;

- Made ground/artificial ground is not recorded to be present either on the site or within 500m of it.
- Superficial Deposits River Terrace deposits comprising sand and gravel are recorded to be present on the northern part of the site. Superficial deposits are not recorded elsewhere on site.
- A solid geology of the Mercia Mudstone Group is recorded to underlie the site. This generally comprises mudstone. Typically, the upper horizon of these deposits will be weathered to cohesive clay where they are near the surface.
- No faults are recorded either on or in close proximity of the site.

Significant Features identified from geological data:
No significant risk identified.

2.5 HYDROGEOLOGY & HYDROLOGY

2.5.1 Hydrogeology

The Superficial River Terrace Deposits are classified by the Environment Agency as a Secondary A Aquifer. These are 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.

Th Mercia Mudstone Group is classified by the Environment Agency as a Secondary B Aquifer. These are predominantly lower permeability layers which may store or yield limited amounts of groundwater due to localised features such as fissures or thin permeable horizons.

There is one groundwater abstraction licence located 489m to the south-west. This relates to dewatering of a quarry extraction. There are no other active groundwater abstraction sites within 1,250m of the site. The site is not located within a groundwater Source Protection Zone (SPZ).

Significant Features identified from hydrogeological data:
Secondary A Aquifer (River Terrace Deposits) – potential receptor.

2.5.2 Hydrology

An unnamed inland river is located approximately 51m to the west.

There are no surface water abstractions recorded within 1,000m of the site.

Significant Features identified from hydrological data:
Unnamed inland river 51m to west – potential receptor.

2.6 MINING

2.6.1 Coal

The site is not recorded to be within a Coal Authority High Risk Development area. Therefore, the risk of Coal Mining Legacy issues is considered to be very low and a Coal Mining Risk Assessment will not be required.

2.6.2 Non-Coal Extraction

No non-coal mineral extraction is recorded either on or in close proximity to the site.

Significant Features identified from mining data:
No significant risk identified.

2.7 POTENTIALLY CONTAMINATIVE LAND USES

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

- There are four historical potentially contaminative land uses recorded within 250m of the site. These relate to the former sewage works and earthwork/borrow pit identified during the historic mapping review. These are not considered to pose a significant risk to the site due to age and distance.
- There is one current potentially contaminative land use recorded within 250m of the site. This relates to a sewage pumping station located 187m to the north. It is not considered to pose a significant risk to the site due to distance.
- There are no historical or active petrol stations within 500m of the site.
- There are no historic or active landfill sites within 500m of the site.
- There are no significant waste exemption activities recorded in close proximity to the site.
- There are no discharge consents to controlled waters recorded within 250m of the site.
- There are no licensed pollutant releases recorded within 250m of the site.
- There are no recorded pollution incidents within 250m of the site.
- There are no active hazardous substance or IPC consents located within 250m of the site.

Significant Features identified from Environmental Data:
No significant features identified.

2.8 RADON GAS ASSESSMENT

The site has been assessed in accordance with the guidelines in "Radon: guidance on protective measures for new buildings" (BR 211 - BRE, 2015).

The site is not recorded to be within a radon affected area as less than 1% of properties are estimated to be affected. Therefore, radon protection measures are not required for new properties that are constructed on site.

Radon Gas Hazard:
No radon protection measures will be required.

3.0 PHASE I CONCEPTUAL MODEL

3.1 SOURCE-PATHWAY-RECEPTOR

The conceptual model for the site considers the development proposal for the conversion of an existing farm house and barns to form 8 residential dwellings with ancillary storage unit, parking and amenity areas along with the preceding information.

The site's former use as an agricultural farm is considered as a possible contaminative source. No significant potentially contaminative historic or current land uses have been identified.

Possible contaminants of concern include Heavy Metals, PAHs, TPH and asbestos fibres.

No significant potential ground gas sources have been identified. Therefore, the risk of ground gas is considered to be very low and no further assessment or investigation is considered to be required.

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, vapours and potential fibres.

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

For the controlled waters environment, the primary receptor is the Secondary A Aquifer (superficial River Terrace deposits) underlying the site. The inland river 51m to the west is also considered to be a potential receptor.

Possible contaminants of concern include Heavy Metals, PAHs and TPH.

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: Conceptual Site Model

HUMAN HEALTH			
Source	**Pathway**	**Receptor**	**Level of Risk/Recommended Action**
Potentially contaminated made ground or natural strata from historical site usage.	Indoor and outdoor inhalation of soil dust, vapours and fibres, the ingestion of, and dermal contact with, potentially contaminated soil and soil dust.	End Users.	Low risk - a Phase II contamination assessment is recommended to further assess this.
		Construction Workers.	
No significant potential sources of contamination identified.	Inhalation of Ground Gases (carbon dioxide and methane).	End Users.	Very low risk – no further assessment or investigation required.
		Construction Workers.	No significant risk anticipated.
Potentially contaminated made ground or natural strata from historical site usage.	Water pipes.	End Users.	Low risk – a Phase II contamination assessment recommended to further assess this.

CONTROLLED WATERS			
Potentially contaminated made ground or natural strata from historical site usage.	Leaching of contaminants and vertical migration to the groundwater.	Secondary A Aquifer (River Terrace deposits).	Low risk – a Phase II assessment recommended to further assess this.
	Leaching of contaminants and lateral migration to surface waters.	Inland river 51m to the west.	Low risk – a Phase II assessment recommended to further assess this.

4.0 RECOMMENDATIONS

A Phase II contamination assessment is recommended to determine more accurately the effect of the identified hazards on the development. At this stage, only a basic assessment is considered to be required such as hand dug sampling in the areas of the agricultural barns. Sampling is not considered to be required in the areas of existing dwellings or gardens as the proposed redevelopment does not constitute a change in use to these areas. At this stage the investigation should comprise:

- A basic shallow ground investigation comprising hand dug sampling to confirm ground conditions and collect soil samples for chemical analysis.
- Chemical analysis of soils for contaminants identified earlier followed by risk assessment so that the risk to human health and controlled waters can be determined.

Following your review of this document, a copy of it should be submitted to the Planning Department of the Local Authority for comment and approval prior to any ground investigation works being undertaken, as this is often a condition of planning.

5.0 CONCLUSION

This Phase I Site Appraisal has shown the site is suitable for the proposed development, assuming compliance with all the recommendations contained within this report.

Appendix A







KEY:

● Approximate Site Location

DO NOT SCALE

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TITLE:

Site Location Plan

PROJECT:

Manor Farm, Walton On Trent

PROJECT No:	DATE:
EAL.285.23	02/2024

SCALE :	DRAWN :	DWG No:
NTS	PD	Figure 1



KEY:

Site Boundary

DO NOT SCALE

Erda Associates ltd

TITLE:

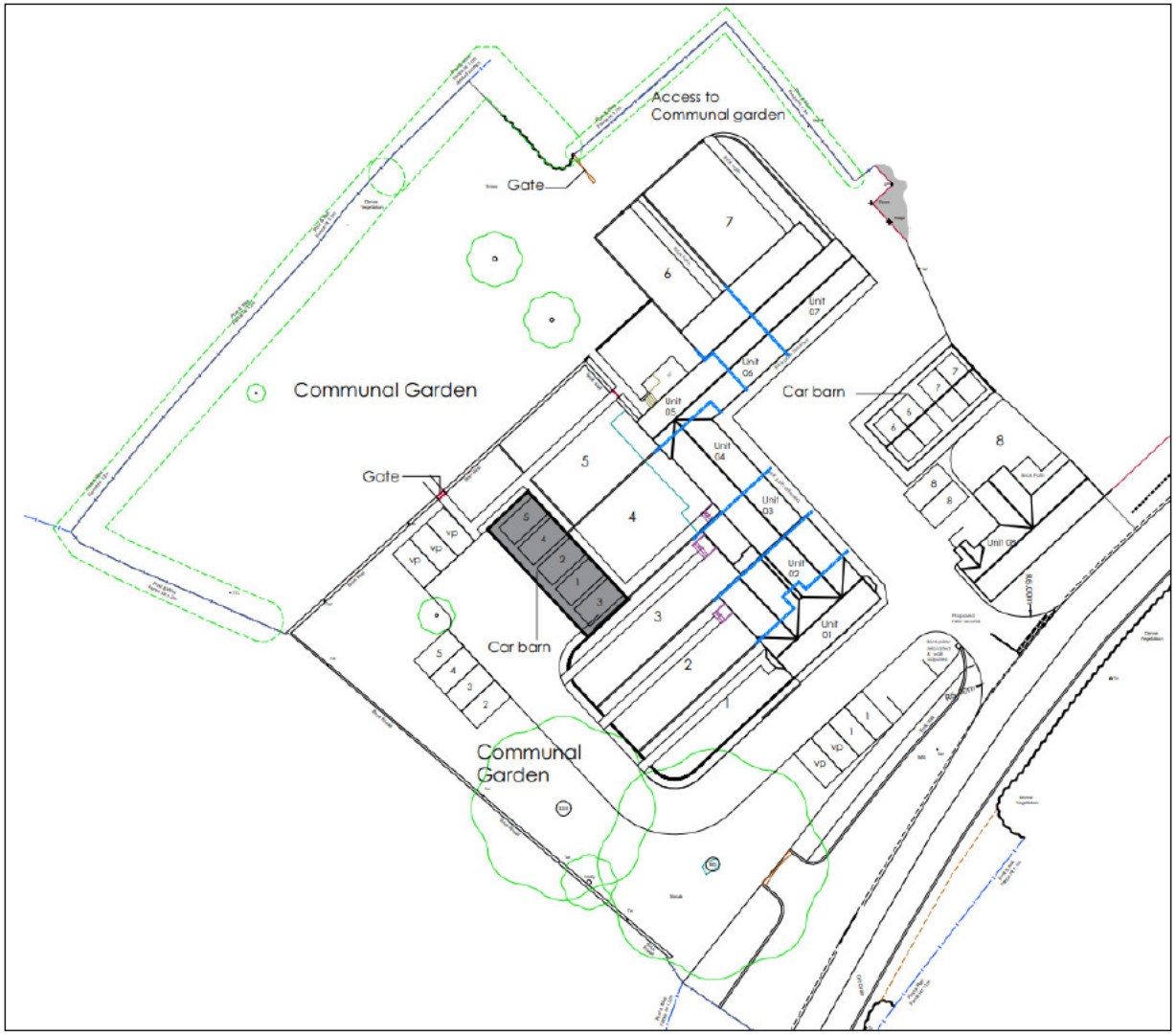
Site Layout

PROJECT:

Manor Farm, Walton On Trent

PROJECT No:	DATE:
EAL.285.23	02/2024

SCALE :	DRAWN :	DWG No:
NTS	PD	Figure 2



KEY:

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TITLE:

Development Proposal

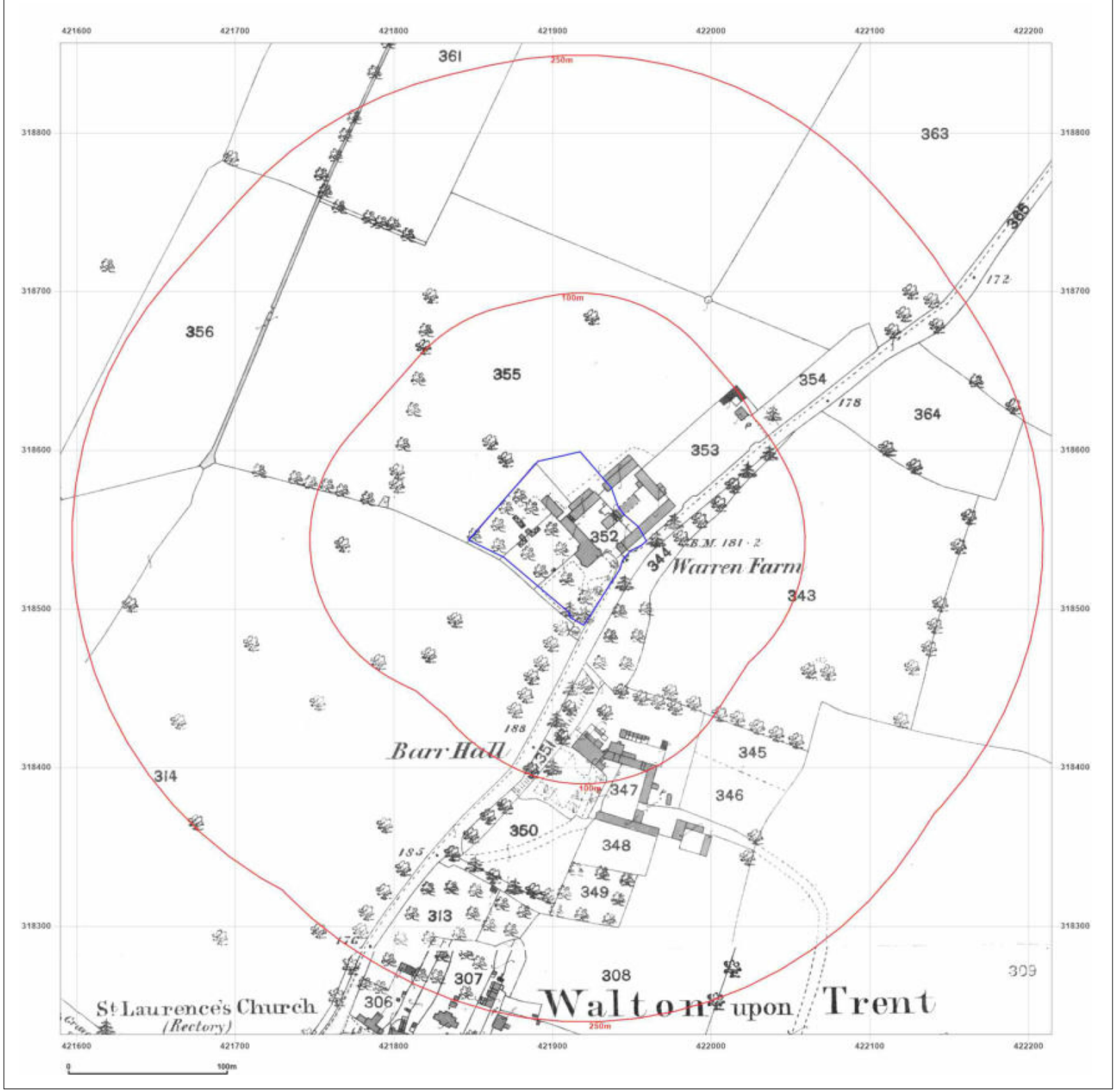
PROJECT:

Manor Farm, Walton On Trent

PROJECT No:	DATE:
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Appendix B



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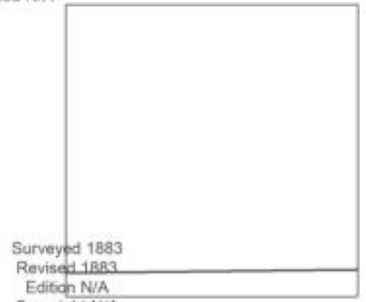
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Walton On Trent, DE12 8NB

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Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1883
Revised 1883
Edition N/A
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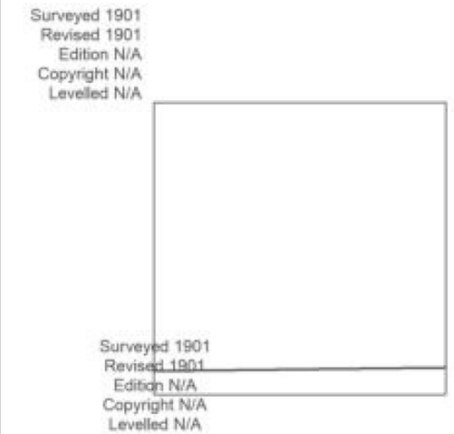
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Walton On Trent, DE12 8NB

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Map Name: County Series
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Scale: 1:2,500
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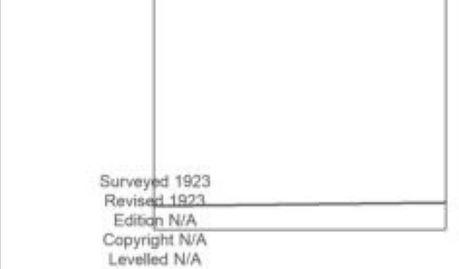
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Map Name: County Series
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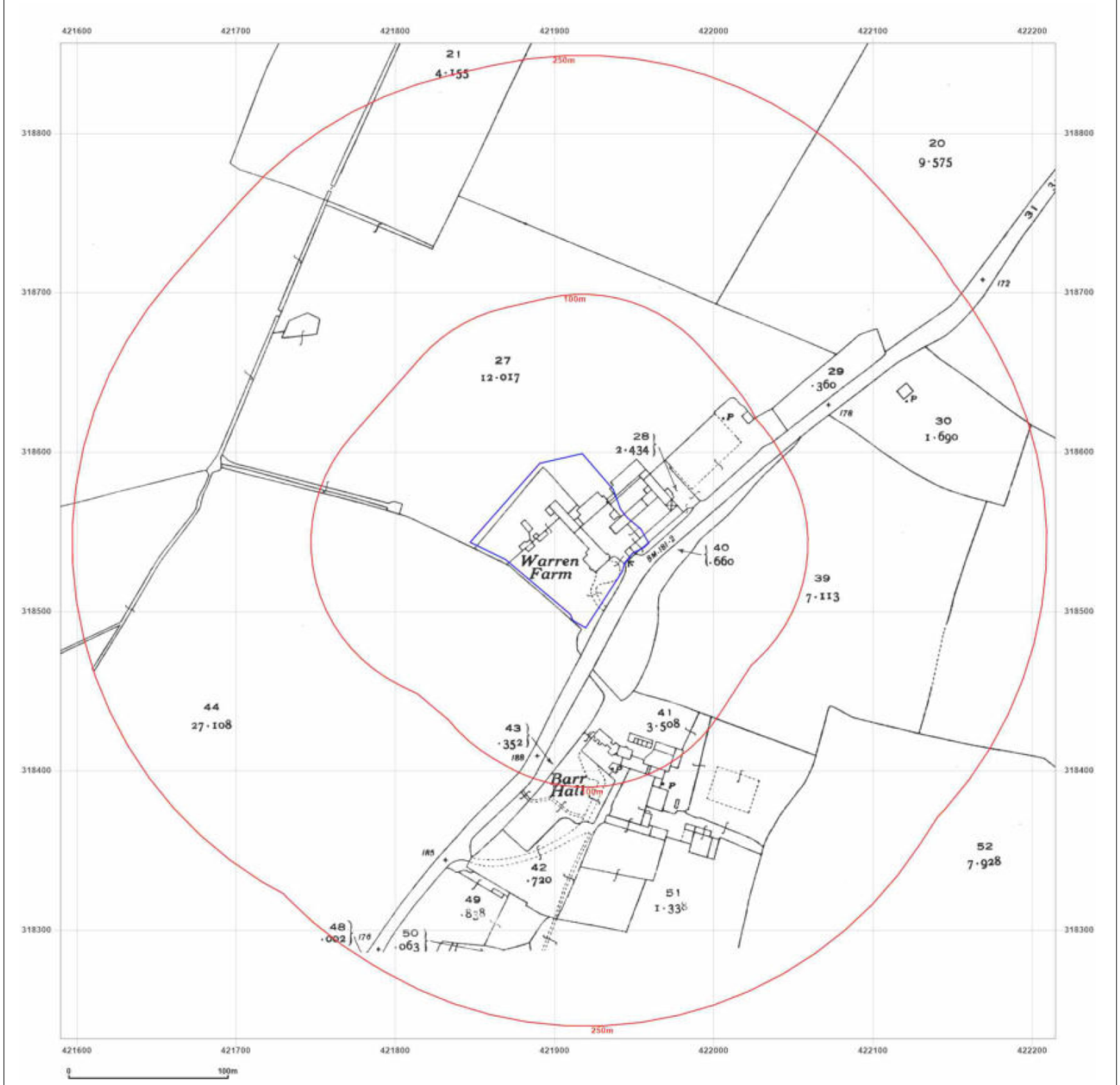
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Revised 1938
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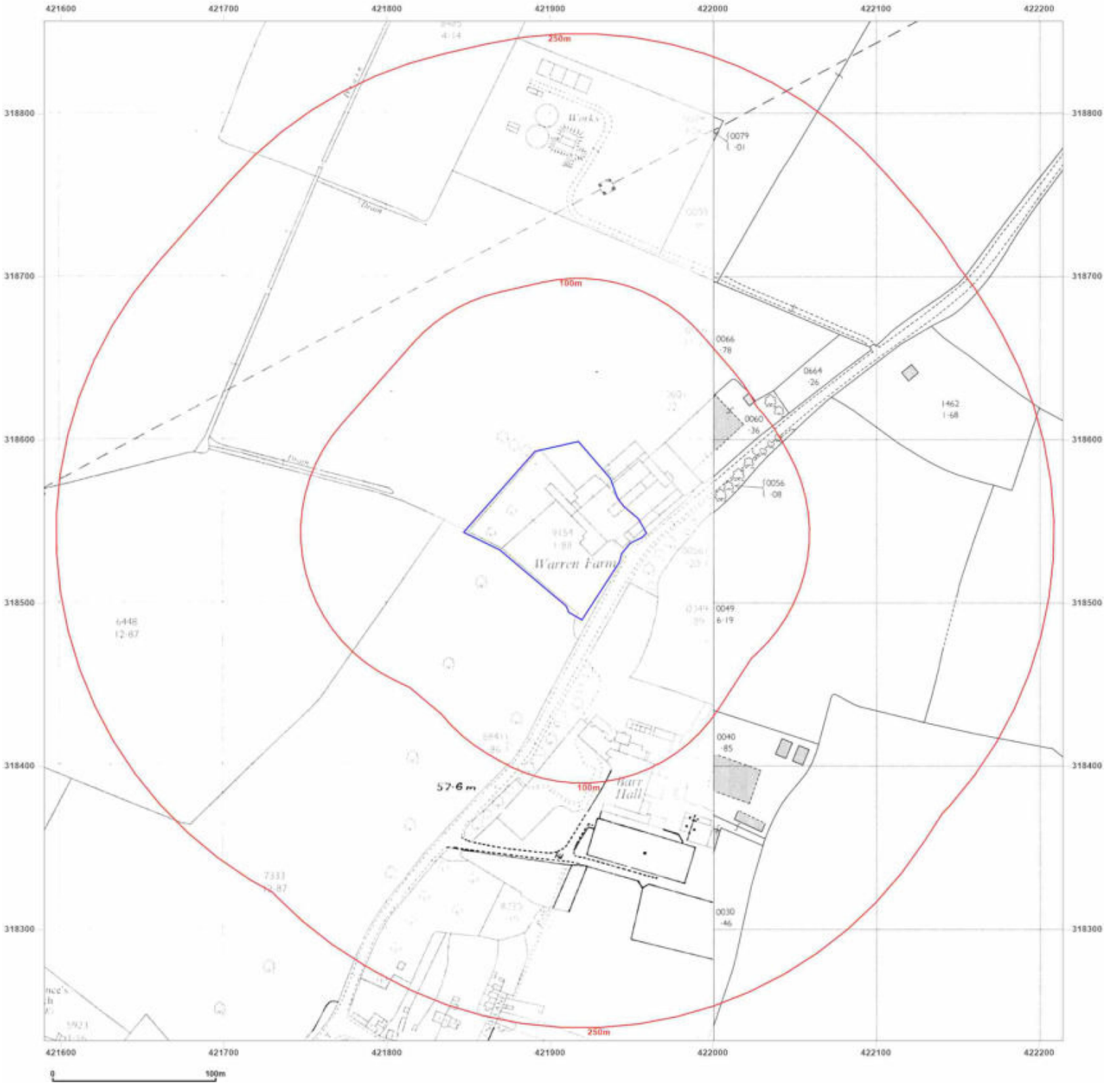
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Scale: 1:2,500

Printed at: 1:2,500

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Revised N/A
Edition N/A
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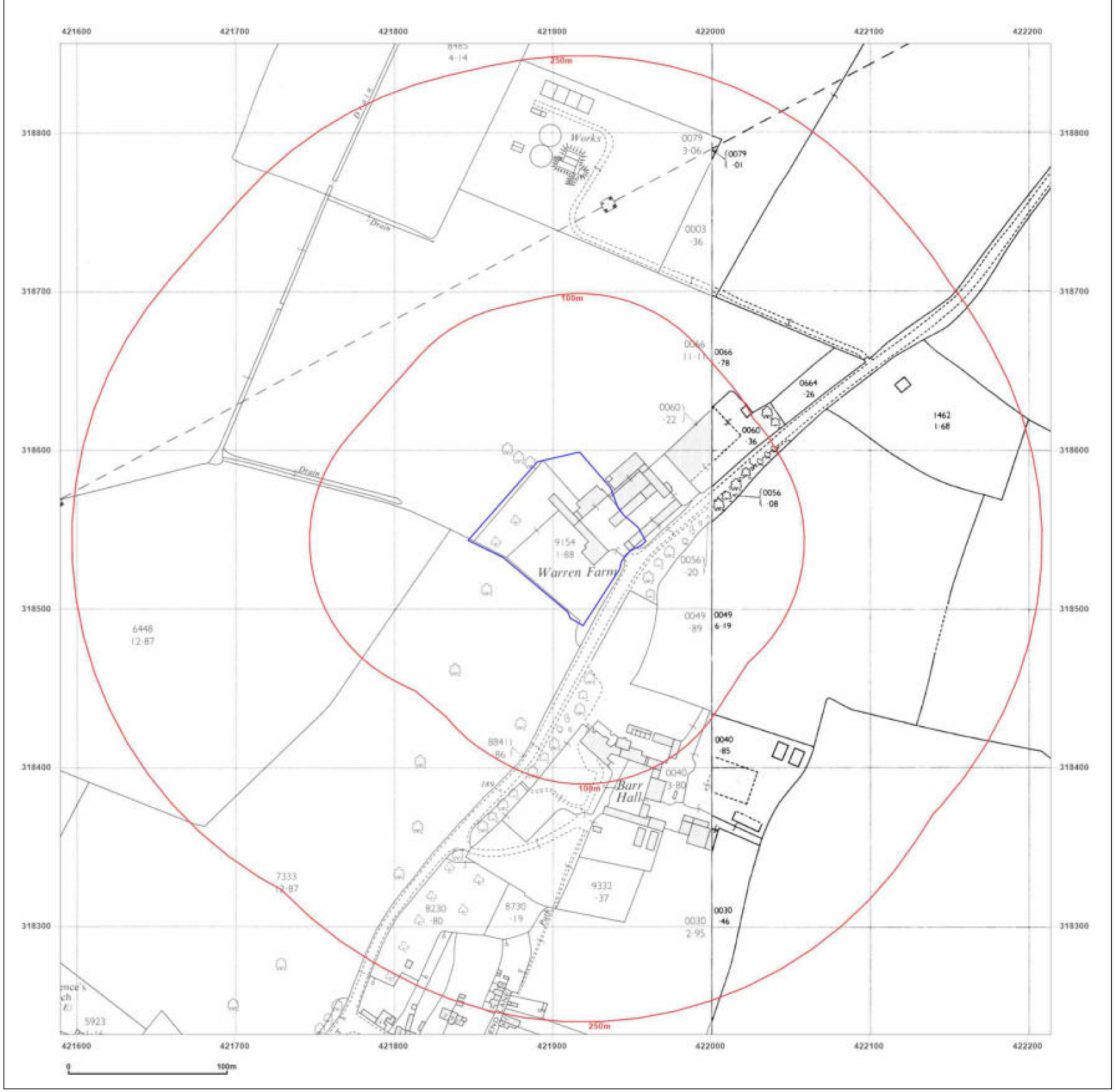
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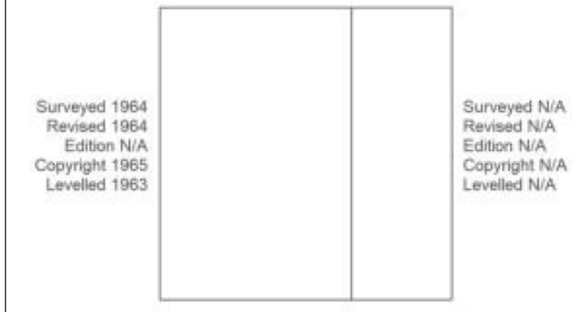
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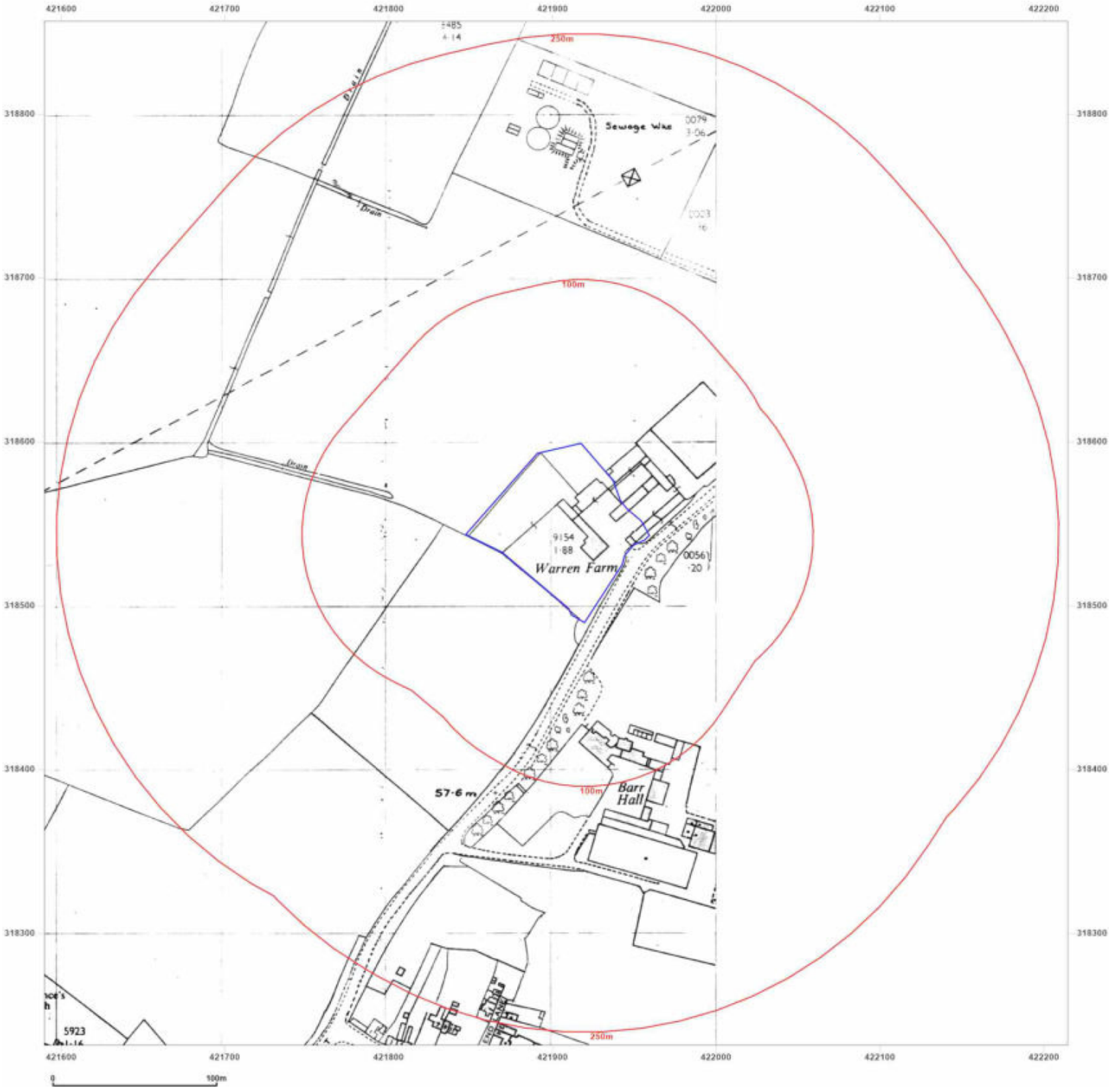
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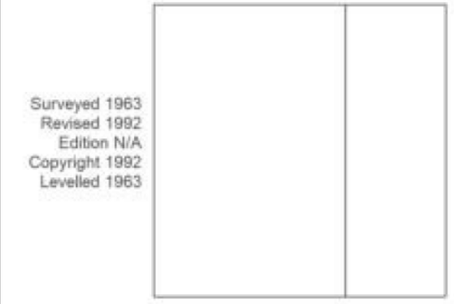
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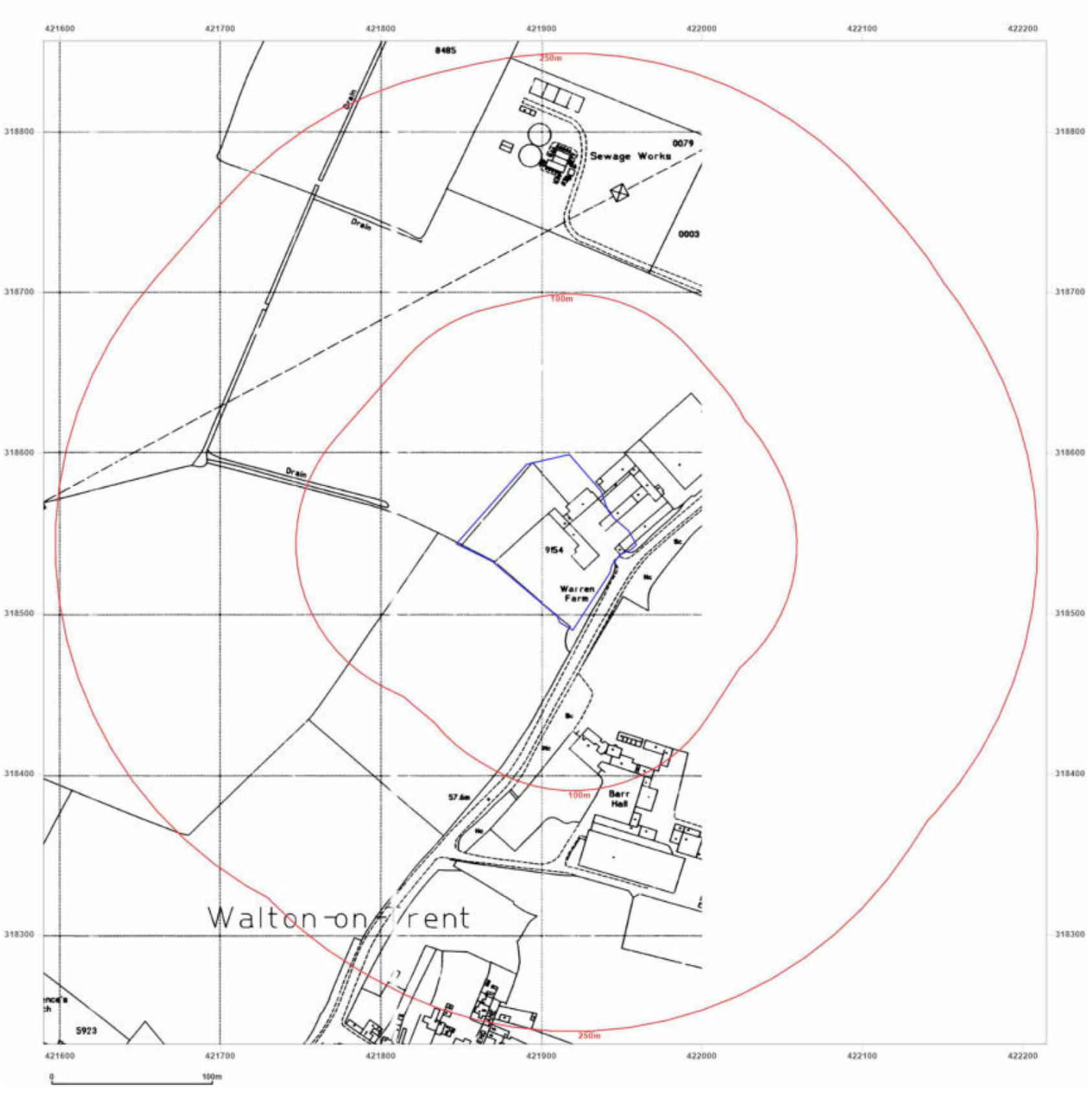
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Printed at: 1:2,500

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Revised N/A
Edition N/A
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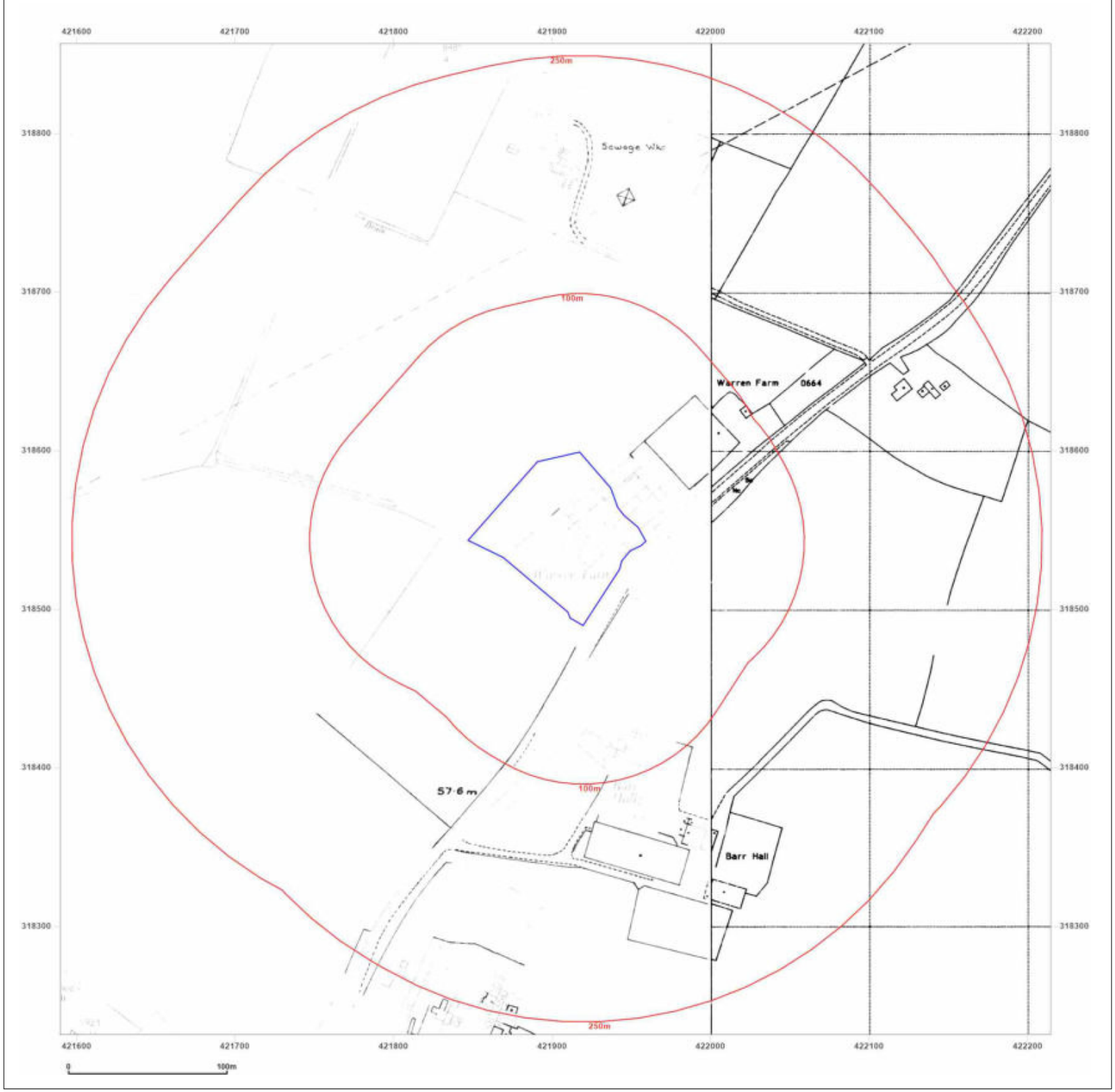
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Revised N/A
Edition N/A
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Levelled N/A

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Levelled N/A

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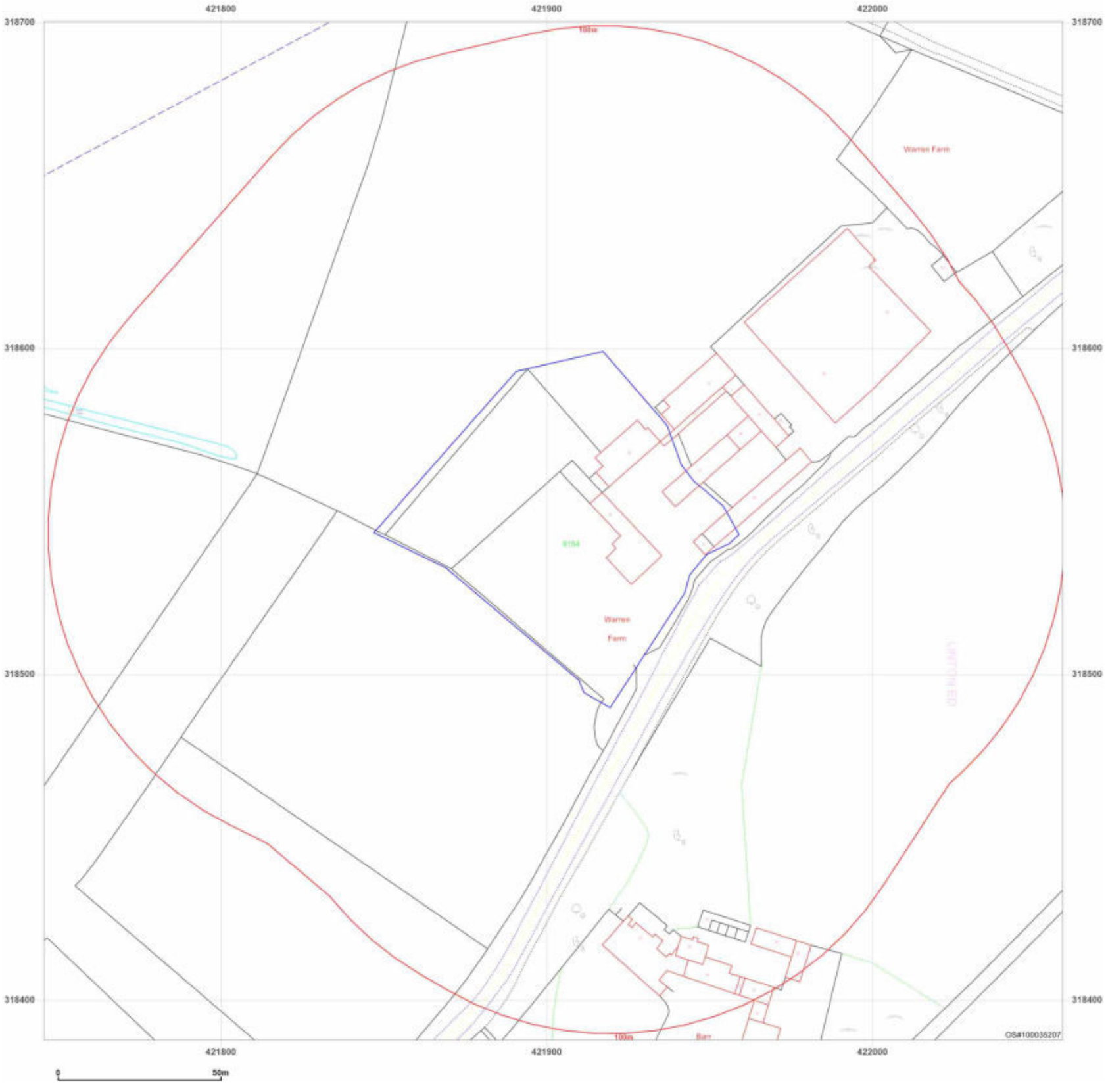
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Site Details:

Manor Farm, Drakelow Road,
Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

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

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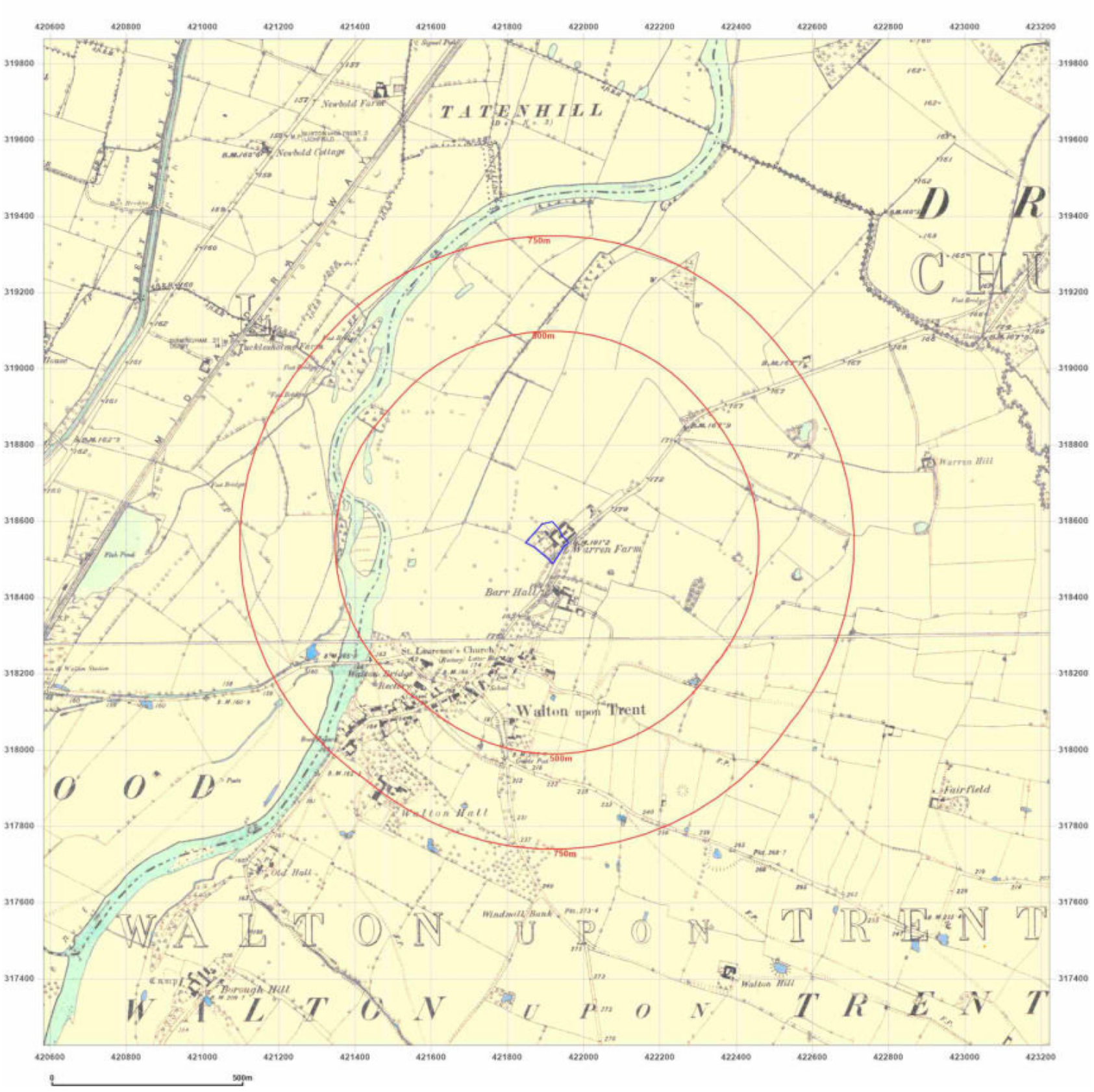
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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

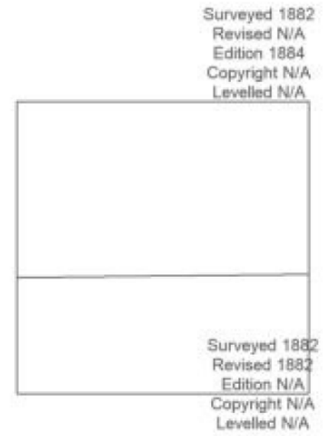
Map Name: County Series

Map date: **1882-1884**

Scale: 1:10,560

Printed at: 1:10,560

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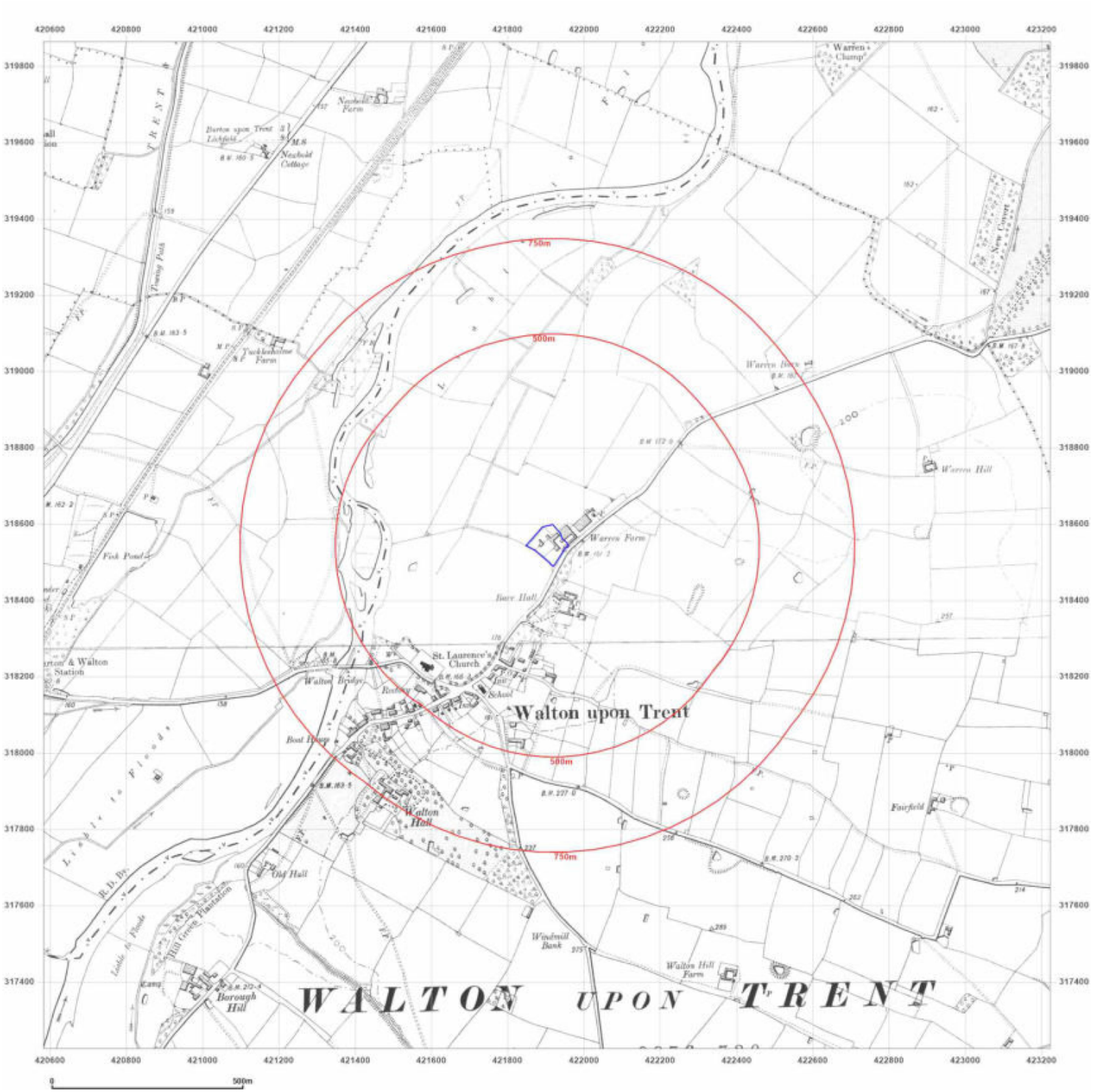
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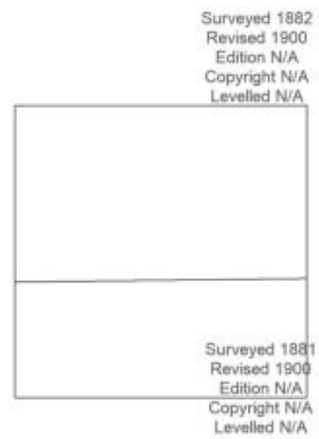
Site Details:

Manor Farm, Drakelow Road,
Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: County Series
Map date: **1900**
Scale: 1:10,560
Printed at: 1:10,560

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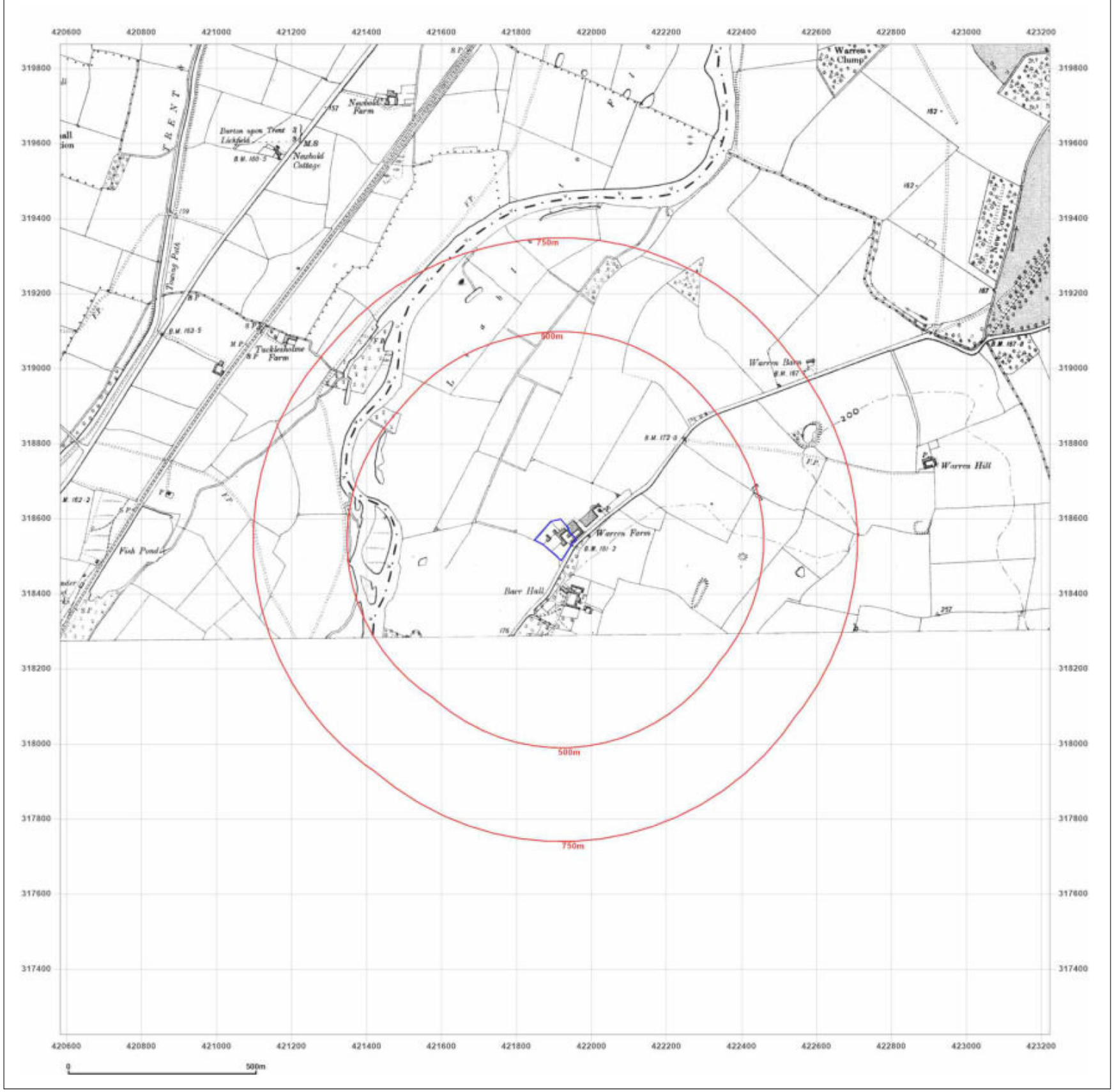
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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: County Series

Map date: **1902**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed N/A
Revised 1900
Edition 1902
Copyright N/A
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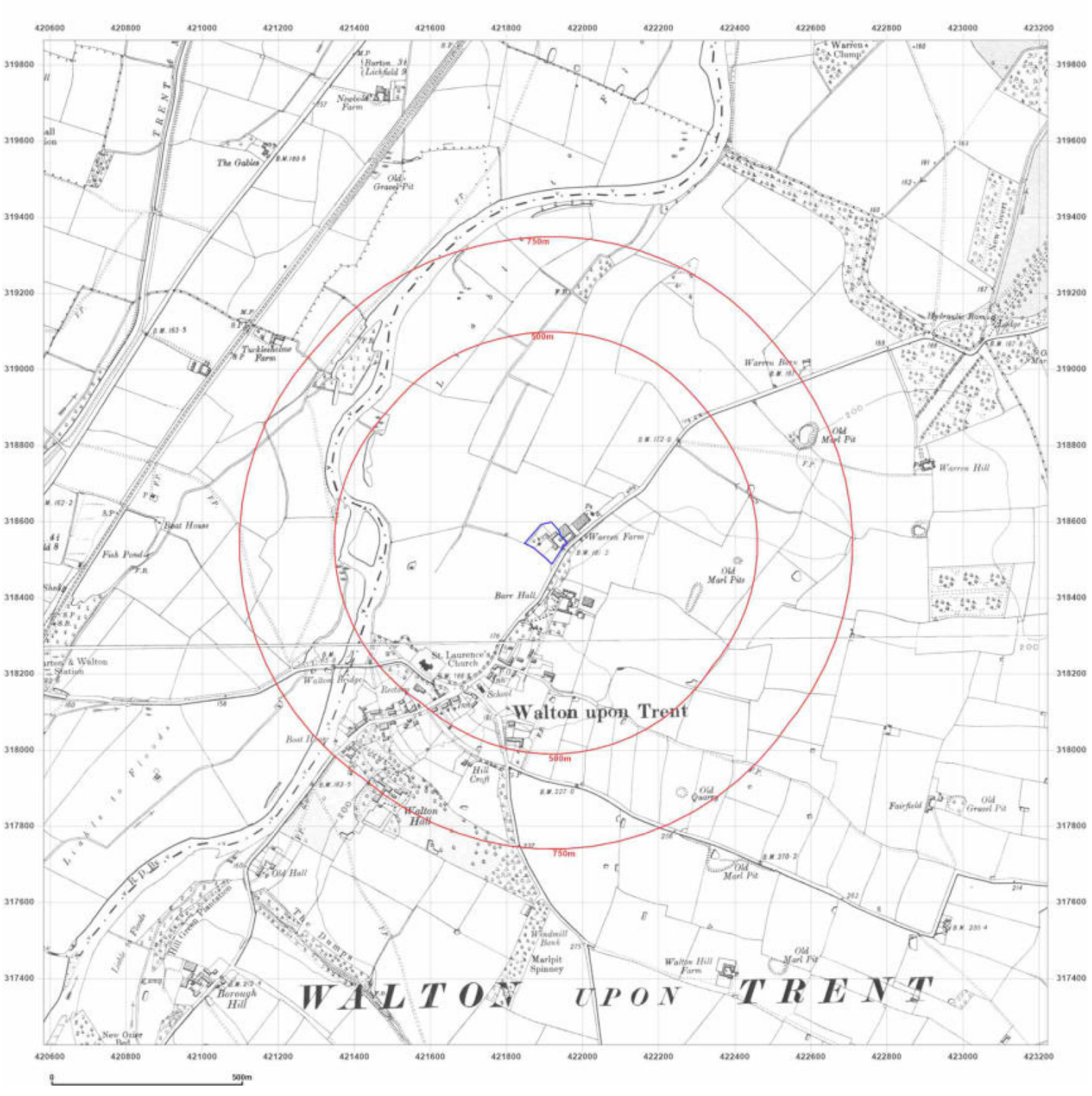
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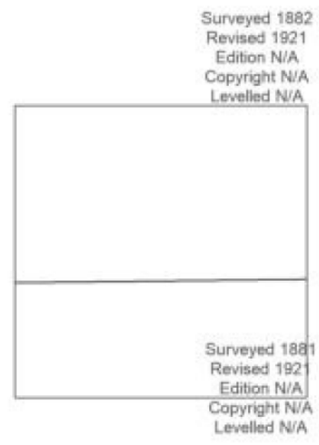
Site Details:

Manor Farm, Drakelow Road,
Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: County Series
Map date: **1921**
Scale: 1:10,560
Printed at: 1:10,560

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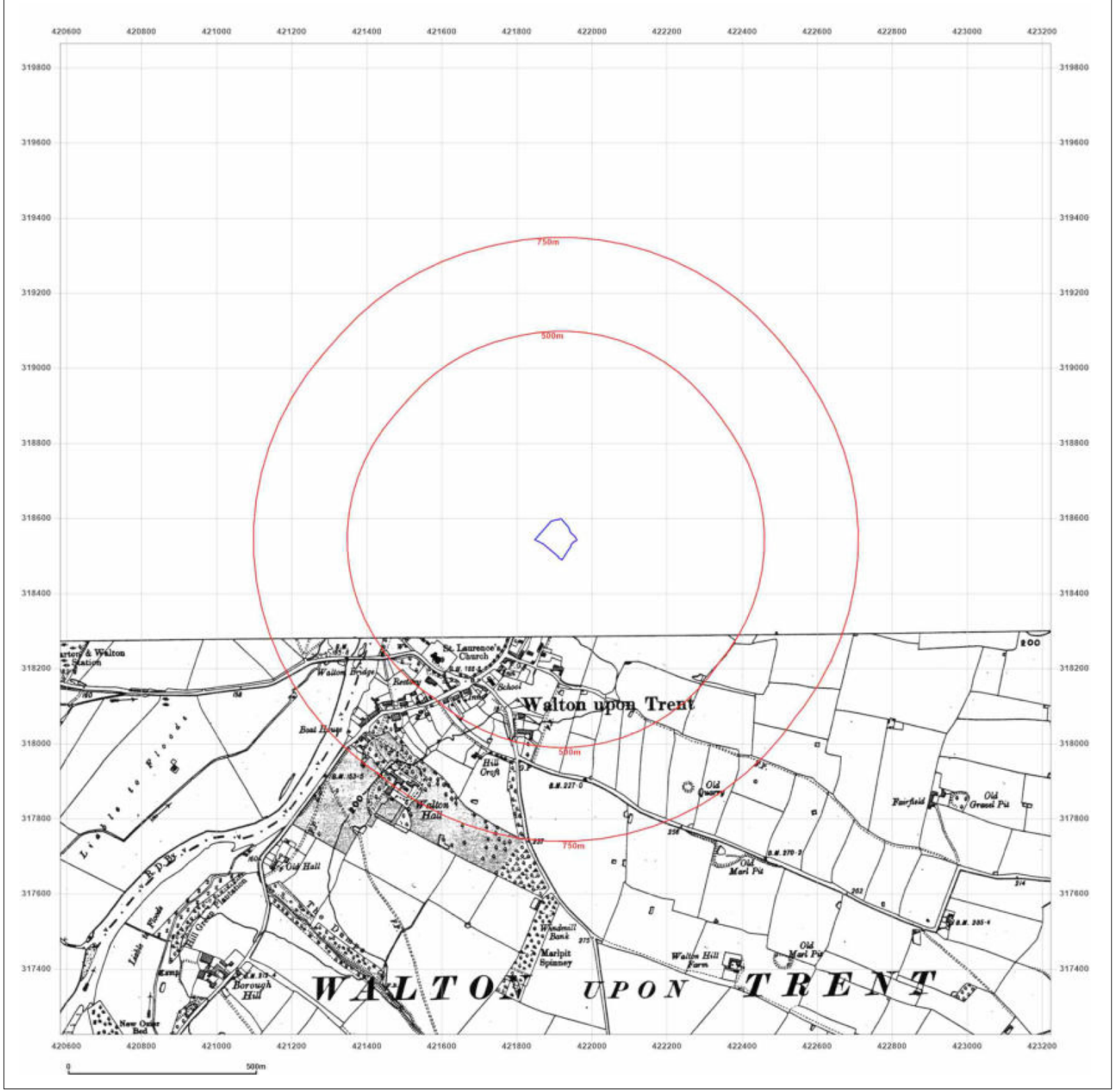
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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: County Series
Map date: **1925**
Scale: 1:10,560
Printed at: 1:10,560

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

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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1882
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: Provisional
Map date: **1955**
Scale: 1:10,560
Printed at: 1:10,560

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

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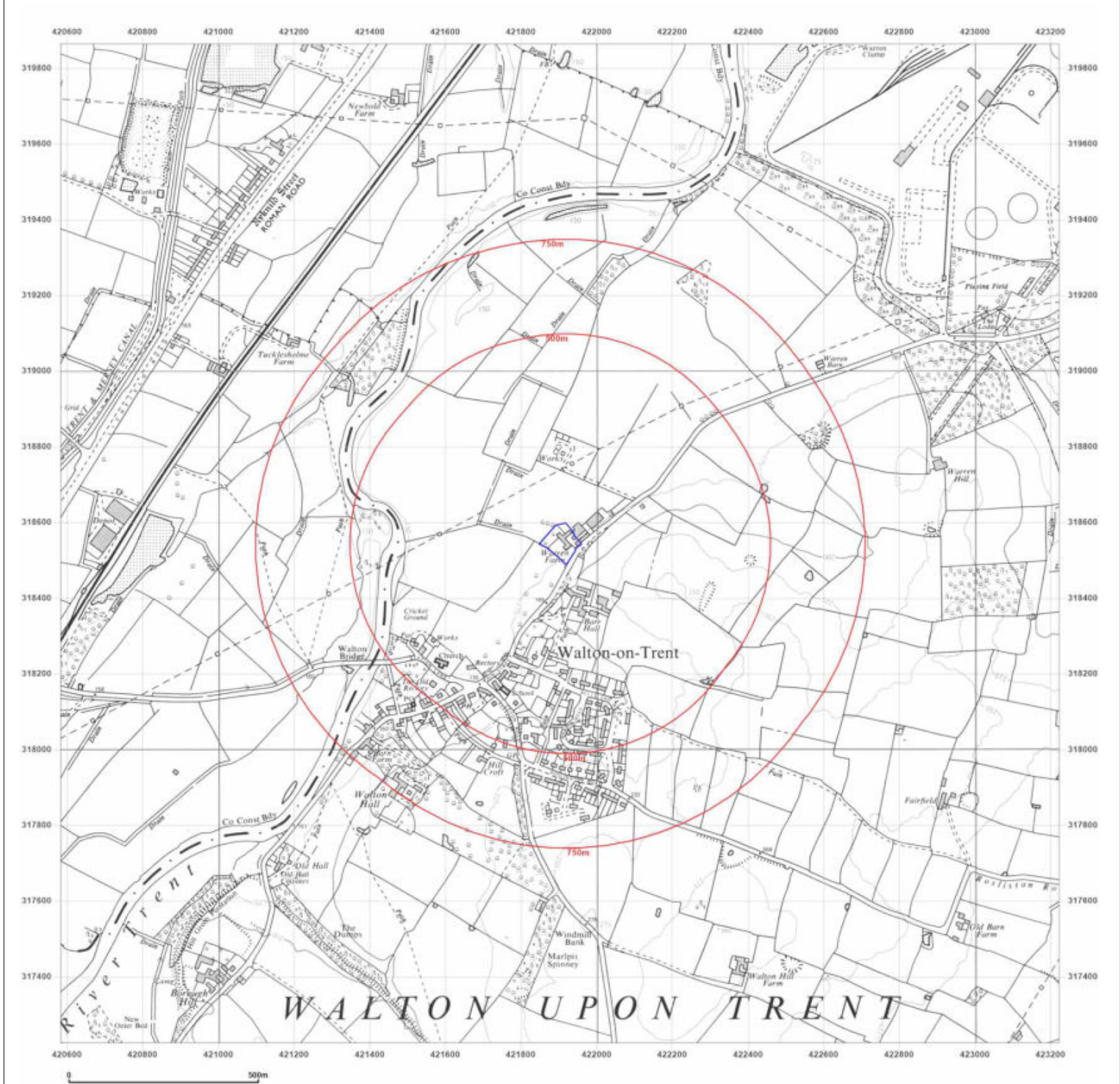
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Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

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
Copyright N/A
Levelled N/A

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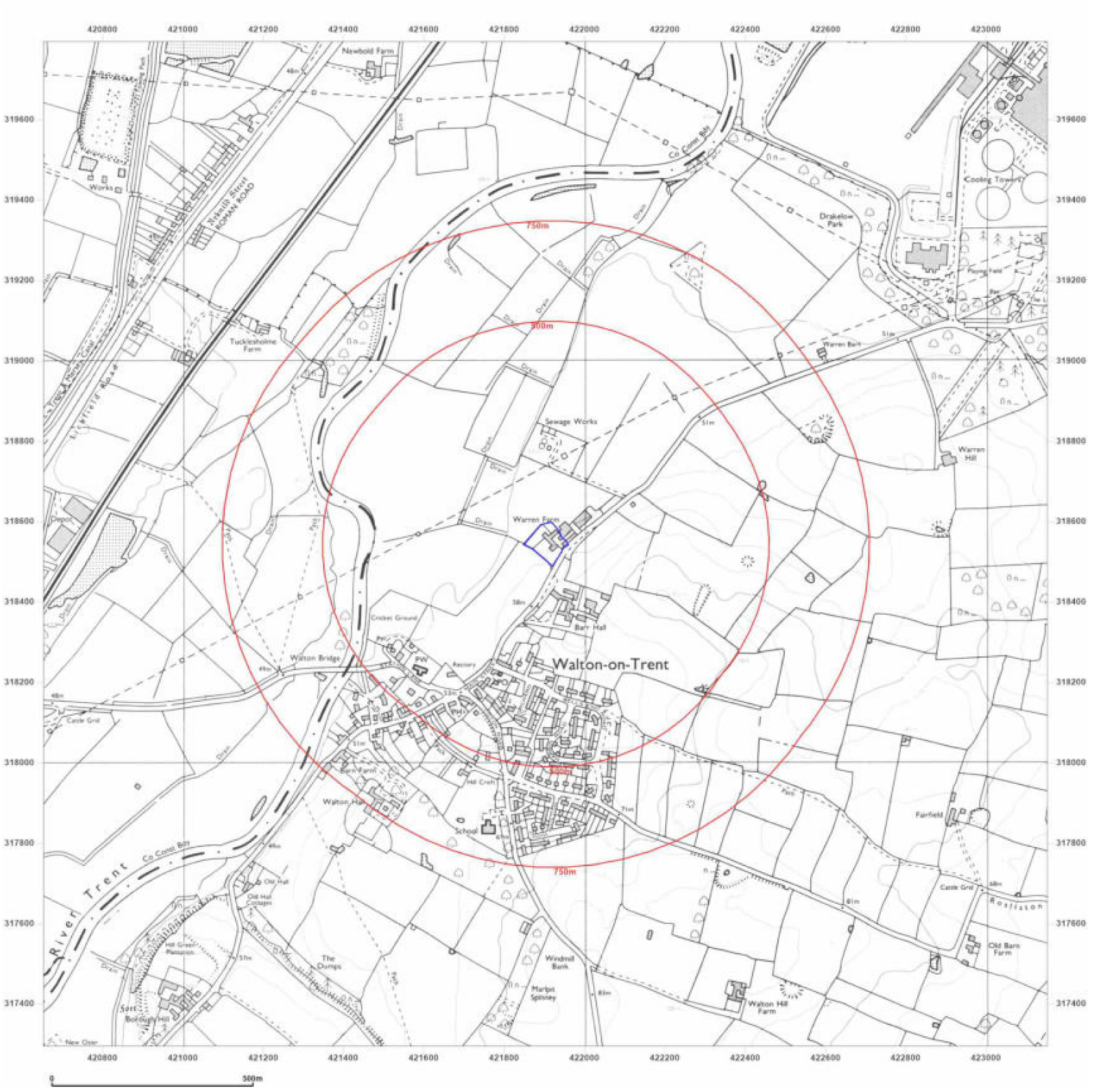
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Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: National Grid

Map date: **1992**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1964
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

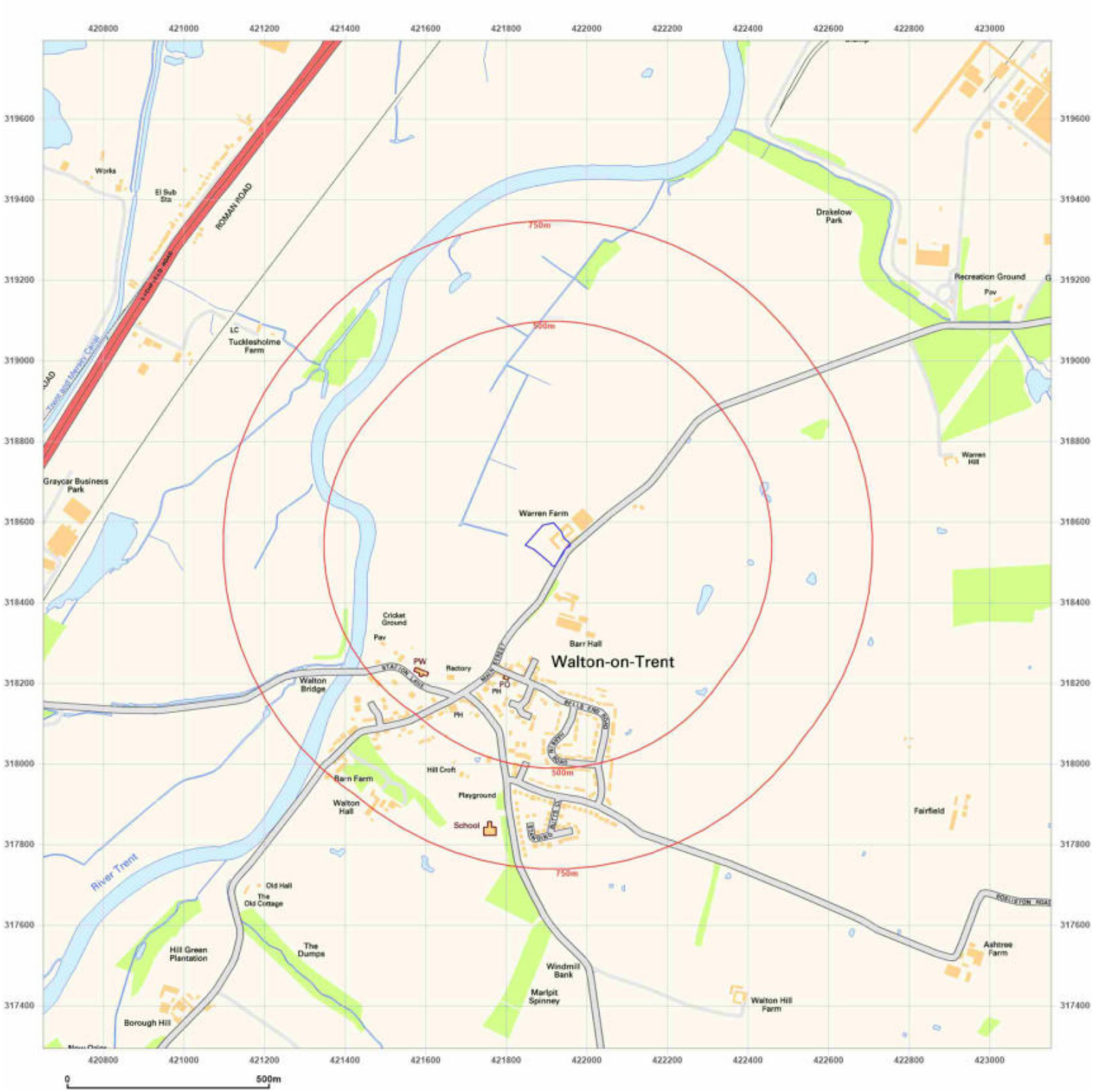
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Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: National Grid
Map date: 2001
Scale: 1:10,000
Printed at: 1:10,000

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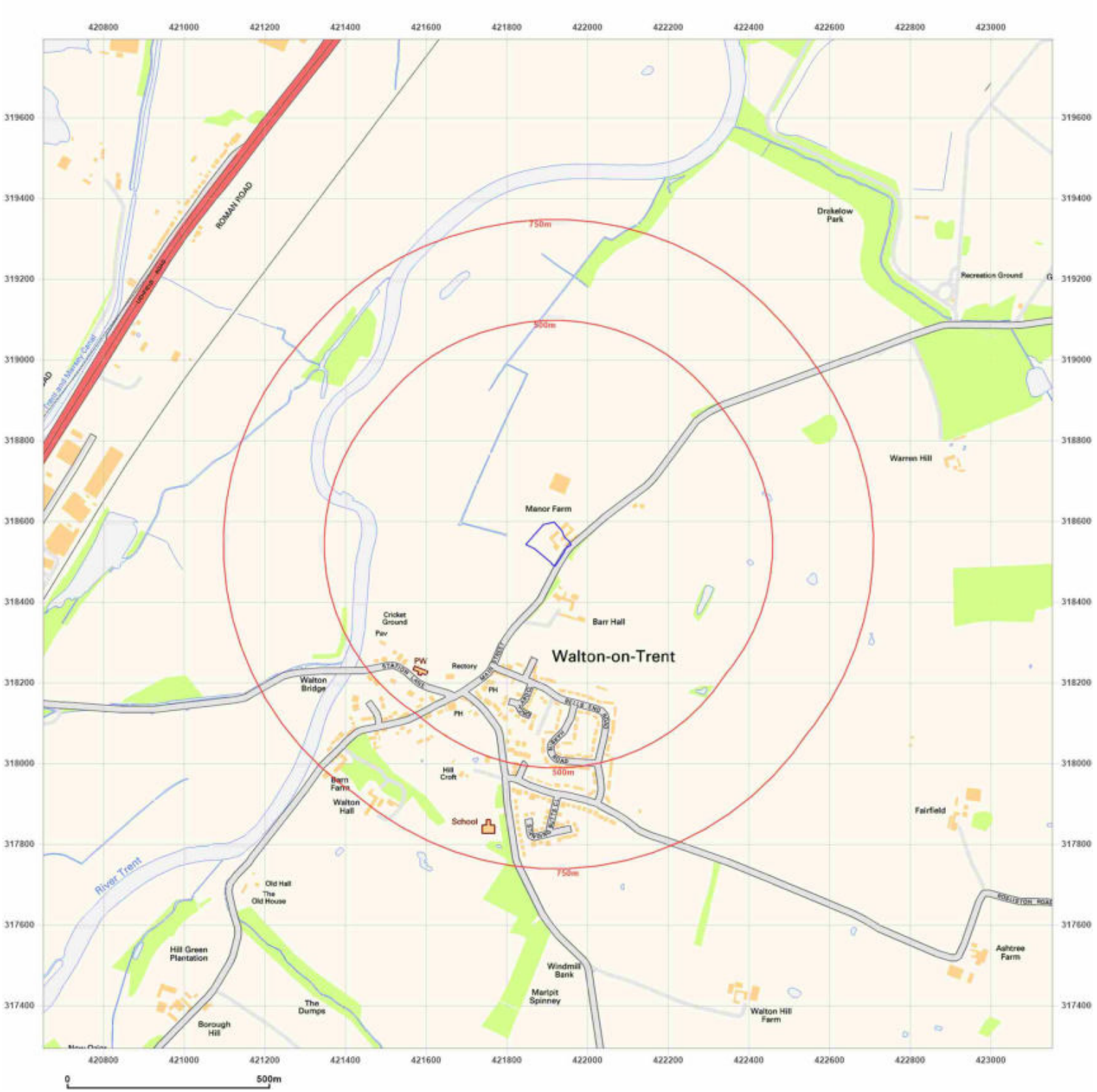
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Site Details:

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Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

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

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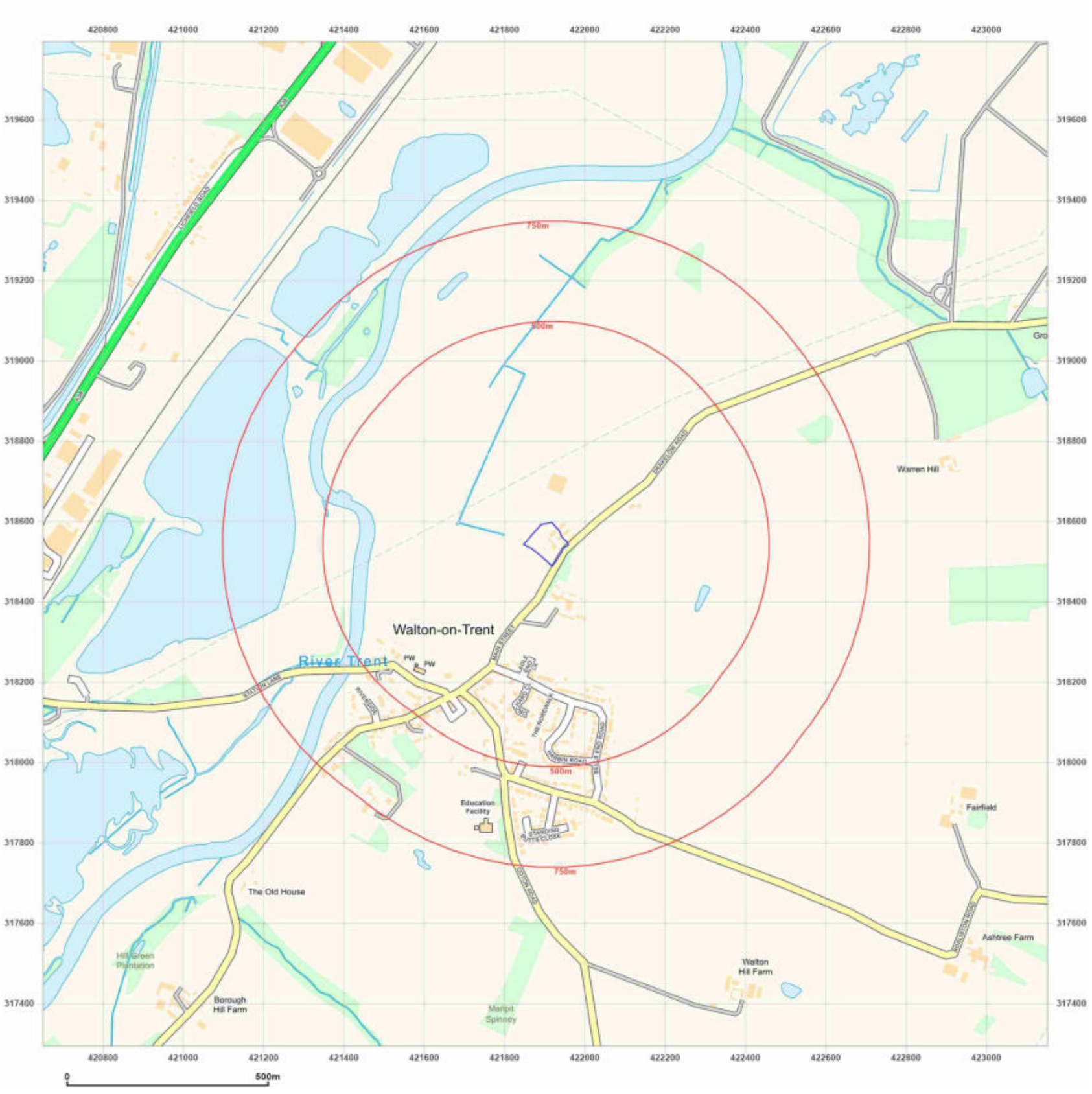
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Site Details:

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Walton On Trent, DE12 8NB

Client Ref: EMS_925483_1147854
Report Ref: EMS-925483_1178909
Grid Ref: 421902, 318544

Map Name: National Grid
Map date: **2024**
Scale: 1:10,000
Printed at: 1:10,000

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Appendix C

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Manor Farm, Drakelow Road, Walton On Trent, DE12 8NB

Order Details

Date: 15/02/2024

Your ref: EMS_925483_1147854

Our Ref: EMS-925483_1178910

Site Details

Location: 421906 318548

Area: 0.64 ha

Authority: South Derbyshire District Council ↗



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Summary of findings p. 2 >

Aerial image p. 9 >

OS MasterMap site plan p.14 >

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

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	4	14	-
16 >	1.2 >	Historical tanks >	0	0	2	1	-
17 >	1.3 >	Historical energy features >	0	0	0	1	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
18	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
19 >	2.1 >	Historical industrial land uses >	0	0	5	19	-
20 >	2.2 >	Historical tanks >	0	0	4	2	-
21 >	2.3 >	Historical energy features >	0	0	0	2	-
21	2.4	Historical petrol stations	0	0	0	0	-
22	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
24	3.5	Historical waste sites	0	0	0	0	-
24	3.6	Licensed waste sites	0	0	0	0	-
24 >	3.7 >	Waste exemptions >	0	0	0	2	-
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	2	-	-
27	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	-
28	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	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29 >	4.13 >	Licensed Discharges to controlled waters >	0	0	0	1	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	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	2	-
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)				
36 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
37	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
37	5.5	Groundwater vulnerability- local information	None (within 0m)				
38 >	5.6 >	Groundwater abstractions >	0	0	0	1	22
44 >	5.7 >	Surface water abstractions >	0	0	0	0	5
45	5.8	Potable abstractions	0	0	0	0	0
46	5.9	Source Protection Zones	0	0	0	0	-
46	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
47 >	6.1 >	Water Network (OS MasterMap) >	0	0	5	-	-

48 >	6.2 >	Surface water features >	0	0	2	-	-
48 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
49 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
49 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
50	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
50	7.2	Historical Flood Events	0	0	0	-	-
50	7.3	Flood Defences	0	0	0	-	-
51	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
51	7.5	Flood Storage Areas	0	0	0	-	-
52 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
53	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
54 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding >	
56 >	9.1 >	Groundwater flooding >	Low (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
57	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
58	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
58	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
58	10.4	Special Protection Areas (SPA)	0	0	0	0	0
58	10.5	National Nature Reserves (NNR)	0	0	0	0	0
59 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
59 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	3
59	10.8	Biosphere Reserves	0	0	0	0	0
60	10.9	Forest Parks	0	0	0	0	0
60	10.10	Marine Conservation Zones	0	0	0	0	0
60	10.11	Green Belt	0	0	0	0	0
60	10.12	Proposed Ramsar sites	0	0	0	0	0

60	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
61	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
61	10.15	Nitrate Sensitive Areas	0	0	0	0	0
61 >	10.16 >	Nitrate Vulnerable Zones >	1	0	0	0	0
62 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
63	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
64	11.1	World Heritage Sites	0	0	0	-	-
65	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
65	11.3	National Parks	0	0	0	-	-
65 >	11.4 >	Listed Buildings >	0	0	1	-	-
66 >	11.5 >	Conservation Areas >	1	0	0	-	-
66	11.6	Scheduled Ancient Monuments	0	0	0	-	-
66	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
67 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
68	12.2	Open Access Land	0	0	0	-	-
68	12.3	Tree Felling Licences	0	0	0	-	-
68	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
70 >	13.1 >	Priority Habitat Inventory >	0	0	4	-	-
71	13.2	Habitat Networks	0	0	0	-	-
71	13.3	Open Mosaic Habitat	0	0	0	-	-
71	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
72 >	14.1 >	10k Availability >	Identified (within 500m)				
73	14.2	Artificial and made ground (10k)	0	0	0	0	-
74	14.3	Superficial geology (10k)	0	0	0	0	-

74	14.4	Landslip (10k)	0	0	0	0	-
75	14.5	Bedrock geology (10k)	0	0	0	0	-
75	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
76 >	15.1 >	**50k Availability** >	Identified (within 500m)				
77	15.2	Artificial and made ground (50k)	0	0	0	0	-
77	15.3	Artificial ground permeability (50k)	0	0	-	-	-
78 >	15.4 >	**Superficial geology (50k)** >	1	0	2	0	-
79 >	15.5 >	**Superficial permeability (50k)** >	Identified (within 50m)				
79	15.6	Landslip (50k)	0	0	0	0	-
79	15.7	Landslip permeability (50k)	None (within 50m)				
80 >	15.8 >	**Bedrock geology (50k)** >	1	1	1	1	-
81 >	15.9 >	**Bedrock permeability (50k)** >	Identified (within 50m)				
81	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
82 >	16.1 >	**BGS Boreholes** >	1	1	8	-	-
Page	Section	**Natural ground subsidence** >					
84 >	17.1 >	**Shrink swell clays** >	Very low (within 50m)				
85 >	17.2 >	**Running sands** >	Very low (within 50m)				
87 >	17.3 >	**Compressible deposits** >	Negligible (within 50m)				
88 >	17.4 >	**Collapsible deposits** >	Very low (within 50m)				
89 >	17.5 >	**Landslides** >	Low (within 50m)				
91 >	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
93 >	18.1 >	**BritPits** >	0	0	0	3	-
94 >	18.2 >	**Surface ground workings** >	0	0	2	-	-
95	18.3	Underground workings	0	0	0	0	0
95	18.4	Underground mining extents	0	0	0	0	-
95	18.5	Historical Mineral Planning Areas	0	0	0	0	-

95	18.6	Non-coal mining	0	0	0	0	0
95 >	18.7 >	JPB mining areas >	Identified (within 0m)				
96	18.8	The Coal Authority non-coal mining	0	0	0	0	-
96	18.9	Researched mining	0	0	0	0	-
96	18.10	Mining record office plans	0	0	0	0	-
97	18.11	BGS mine plans	0	0	0	0	-
97 >	18.12 >	Coal mining >	Identified (within 0m)				
97	18.13	Brine areas	None (within 0m)				
97	18.14	Gypsum areas	None (within 0m)				
97	18.15	Tin mining	None (within 0m)				
98	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
99	19.1	Natural cavities	0	0	0	0	-
99	19.2	Mining cavities	0	0	0	0	0
99	19.3	Reported recent incidents	0	0	0	0	-
99	19.4	Historical incidents	0	0	0	0	-
100	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
101 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
103 >	21.1 >	BGS Estimated Background Soil Chemistry >	3	2	-	-	-
103	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
103	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
104	22.1	Underground railways (London)	0	0	0	-	-
104	22.2	Underground railways (Non-London)	0	0	0	-	-
104	22.3	Railway tunnels	0	0	0	-	-
104	22.4	Historical railway and tunnel features	0	0	0	-	-
104	22.5	Royal Mail tunnels	0	0	0	-	-

105	22.6	Historical railways	0	0	0	-	-
105	22.7	Railways	0	0	0	-	-
105	22.8	Crossrail 1	0	0	0	0	-
105	22.9	Crossrail 2	0	0	0	0	-
105	22.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 10/07/2022

Site Area: 0.64ha

Recent site history - 2019 aerial photograph



Capture Date: 20/04/2019

Site Area: 0.64ha

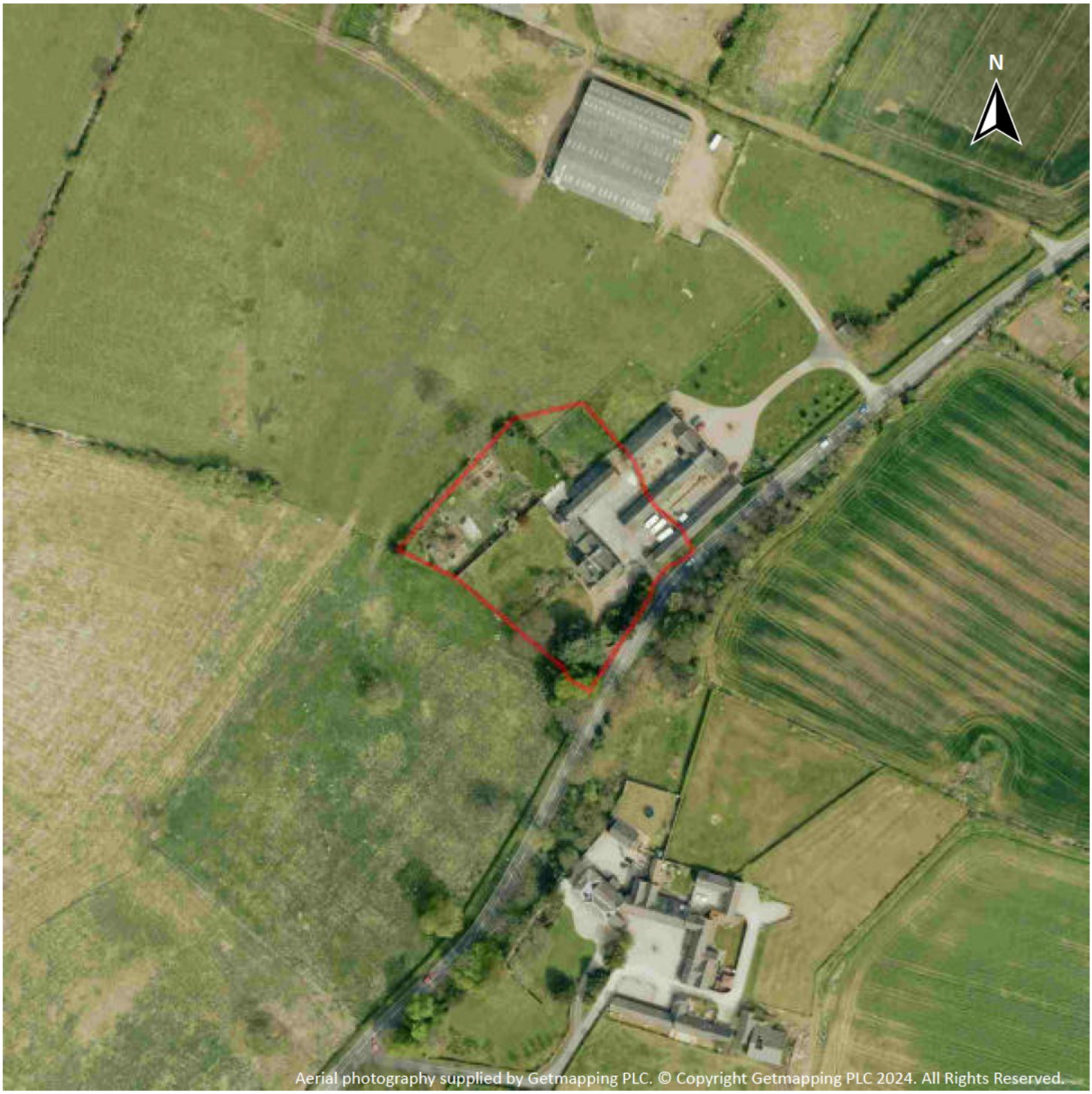
Recent site history - 2015 aerial photograph



Capture Date: 12/08/2015

Site Area: 0.64ha

Recent site history - 2010 aerial photograph

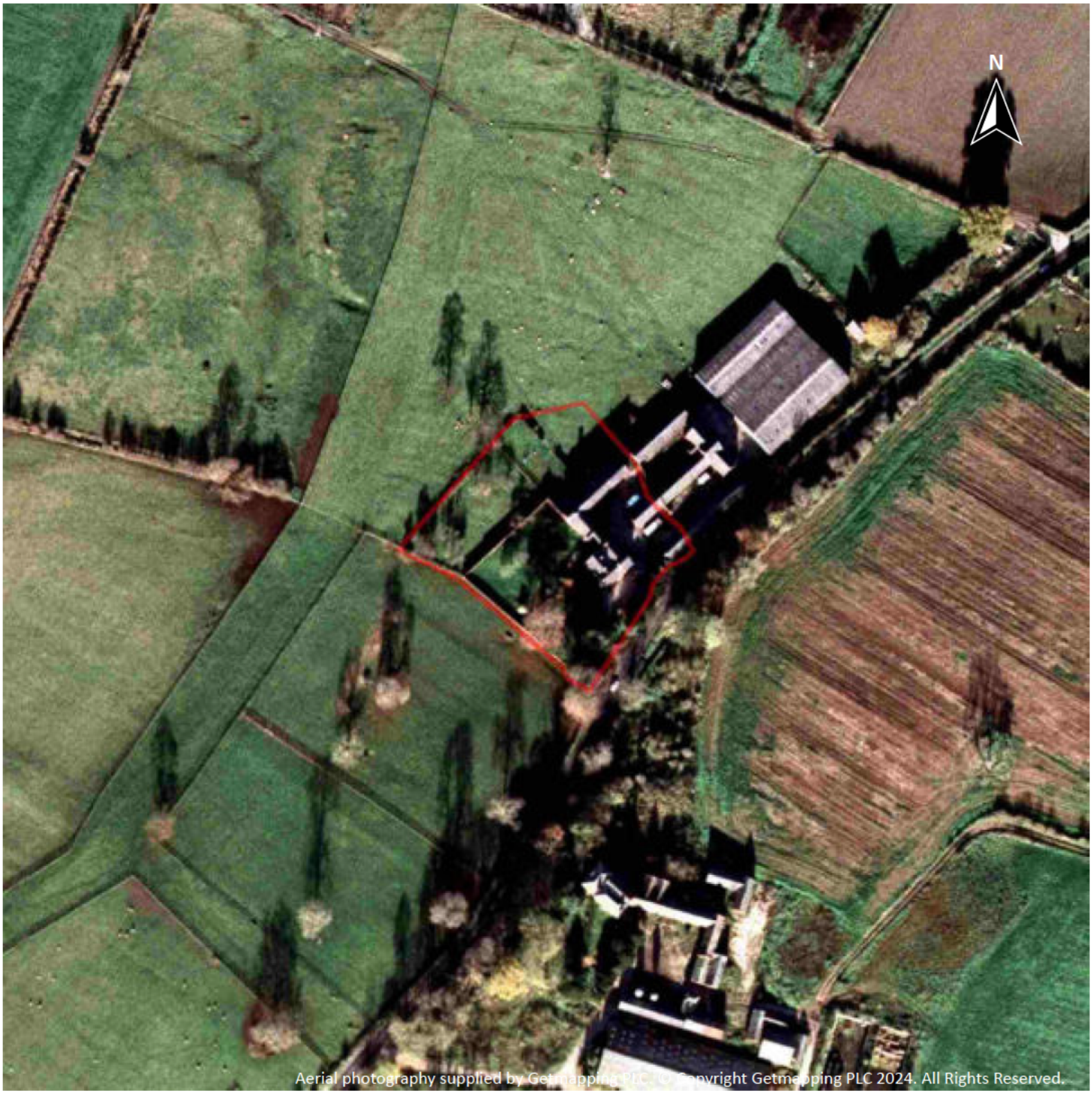


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Capture Date: 24/04/2010

Site Area: 0.64ha

Recent site history - 1999 aerial photograph



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Capture Date: 17/11/1999

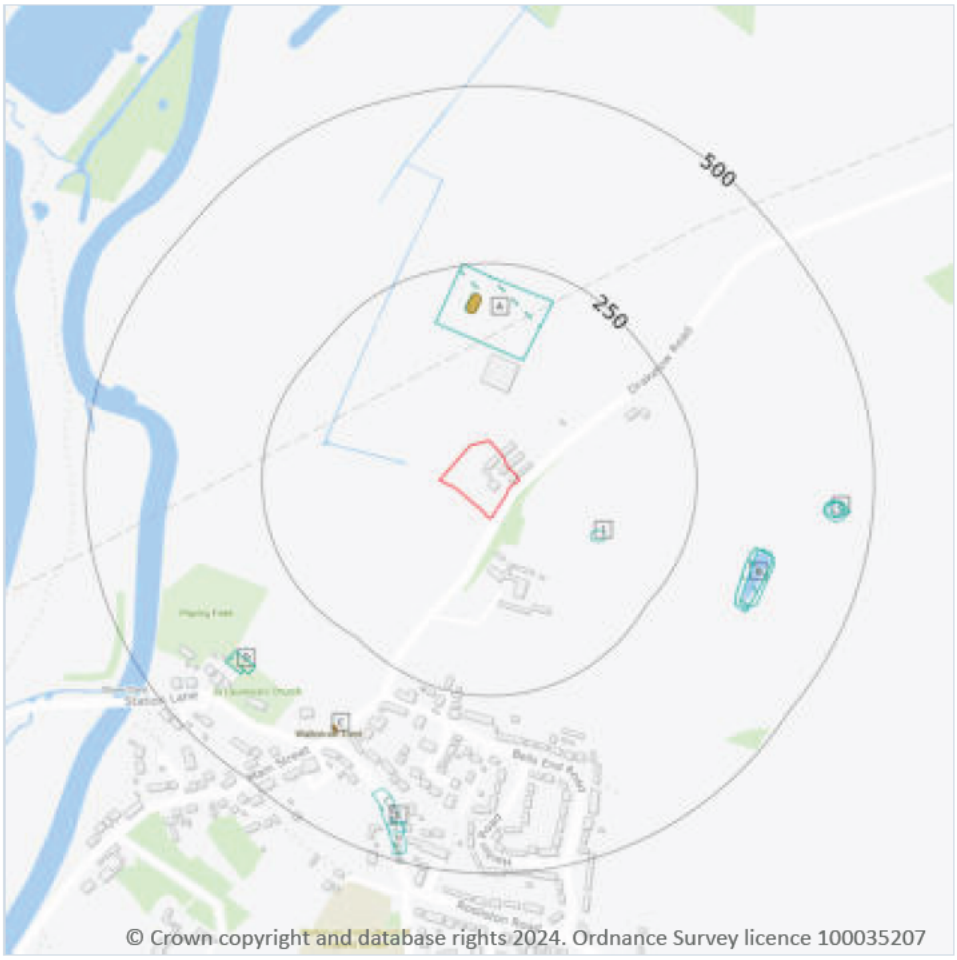
Site Area: 0.64ha

OS MasterMap site plan



Site Area: 0.64ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	18

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
A	123m N	Sewage Works	1992	1577426

ID	Location	Land use	Dates present	Group ID
A	123m N	Unspecified Works	1968	1598173
1	126m SE	Unspecified Pit	1884	1608029
A	182m N	Unspecified Tanks	1968 - 1992	1651950
B	340m E	Unspecified Pit	1884 - 1900	1695124
B	340m E	Old Marl Pits	1921	1697931
B	340m E	Unspecified Pit	1938	1728121
B	350m E	Unspecified Pit	1968 - 1992	1681388
B	350m E	Old Marl Pits	1949	1739965
D	369m SW	Unspecified Commercial/Industrial	1992	1562676
D	369m SW	Unspecified Works	1968	1598167
E	409m S	Cuttings	1882	1682012
F	430m E	Unspecified Pit	1968 - 1992	1712445
F	433m E	Unspecified Pit	1884 - 1900	1618504
F	433m E	Old Marl Pits	1921	1701383
F	433m E	Unspecified Pit	1938	1740582
F	438m E	Old Marl Pits	1949	1643579
E	445m S	Cuttings	1900 - 1921	1705288

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	3

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

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

ID	Location	Land use	Dates present	Group ID
A	181m N	Tanks	1964	277566

ID	Location	Land use	Dates present	Group ID
A	182m N	Tanks	1963 - 1992	279487
C	365m SW	Gas Compound	1992	267735

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	1

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

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

ID	Location	Land use	Dates present	Group ID
C	365m SW	Gas Compound	1992	161936

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

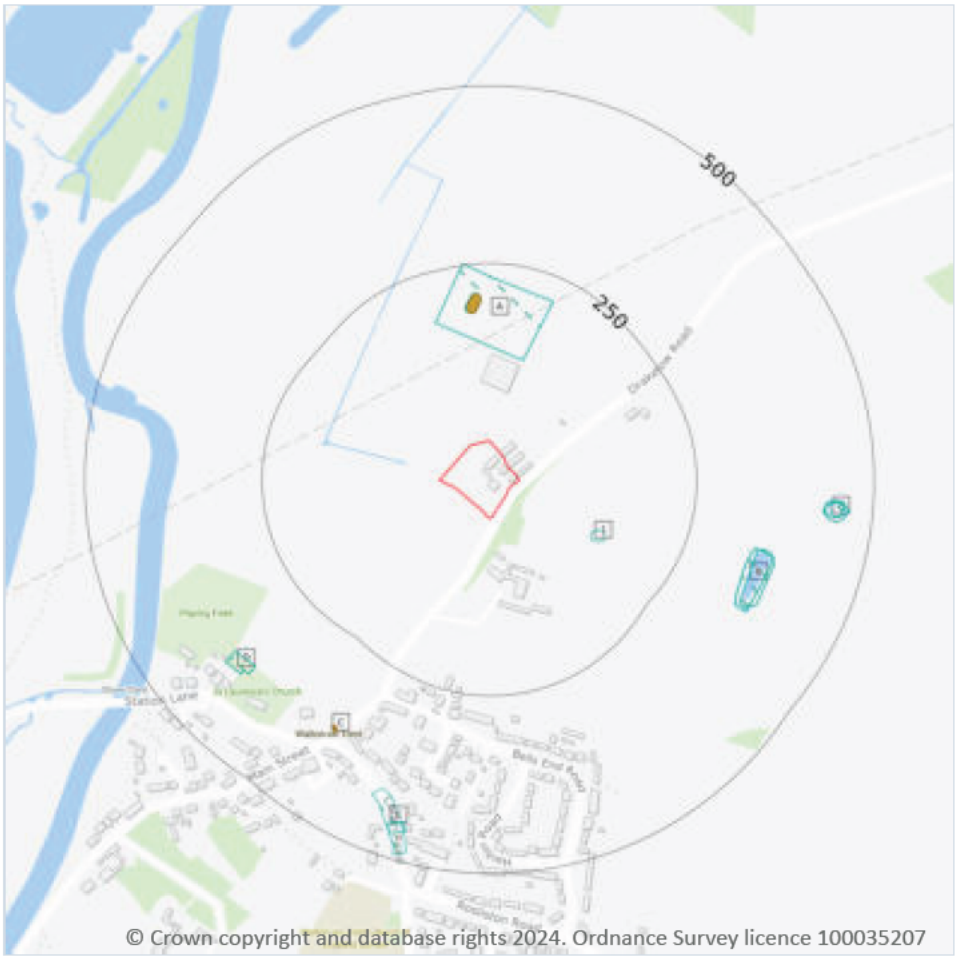
1.6 Historical military land

Records within 500m	0

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	24

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	123m N	Sewage Works	1992	1577426
A	123m N	Unspecified Works	1968	1598173
1	126m SE	Unspecified Pit	1884	1608029

ID	Location	Land Use	Date	Group ID
A	182m N	Unspecified Tanks	1992	1651950
A	182m N	Unspecified Tanks	1968	1651950
B	340m E	Unspecified Pit	1938	1728121
B	340m E	Unspecified Pit	1900	1695124
B	340m E	Old Marl Pits	1921	1697931
B	340m E	Unspecified Pit	1884	1695124
B	350m E	Unspecified Pit	1992	1681388
B	350m E	Unspecified Pit	1968	1681388
B	350m E	Old Marl Pits	1949	1739965
D	369m SW	Unspecified Commercial/Industrial	1992	1562676
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E	409m S	Cuttings	1882	1682012
F	430m E	Unspecified Pit	1992	1712445
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F	433m E	Old Marl Pits	1921	1701383
F	433m E	Unspecified Pit	1884	1618504
F	438m E	Old Marl Pits	1949	1643579
E	445m S	Cuttings	1921	1705288
E	445m S	Cuttings	1900	1705288

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	6

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
A	181m N	Tanks	1964	277566
A	182m N	Tanks	1963	279487
A	182m N	Tanks	1992	279487
A	182m N	Tanks	1992	279487
C	365m SW	Gas Compound	1992	267735
C	365m SW	Gas Compound	1992	267735

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	2

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
C	365m SW	Gas Compound	1992	161936
C	365m SW	Gas Compound	1992	161936

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	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

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	2

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

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

ID	Location	Site	Reference	Category	Sub-Category	Description
A	414m SW	SILSDEN, COTON ROAD, WALTON-ON-TRENT, SWADLINCOTE, DE12 8NL	WEX294055	Using waste exemption	Not on a Farm	Use of waste in construction

ID	Location	Site	Reference	Category	Sub-Category	Description
A	414m SW	SILSDEN, COTON ROAD, WALTON-ON-TRENT, SWADLINCOTE, DE12 8NL	WEX287622	Disposing of waste exemption	Not on a farm	Burning waste in the open

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	2

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 26 >

ID	Location	Company	Address	Activity	Category
1	165m N	Pylon	Derbyshire, DE12	Electrical Features	Infrastructure and Facilities
2	187m N	Sewage Pumping Station	Derbyshire, DE12	Waste Storage, Processing and Disposal	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Address	Details	
A	375m W	PS R/O ST LAURENCE'S CHURCH, WALTON ON TRENT, DERBYSHIRE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: T/24/02074/O Permit Version: 1 Receiving Water: RIVER TRENT (NON-TIDAL)	Status: SURRENDERED UNDER EPR 2010 Issue date: 08/11/1967 Effective Date: 08/11/1967 Revocation Date: 01/08/2016

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	2

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

Features are displayed on the Current industrial land use map on **page 26 >**

ID	Location	Details	
A	375m W	Incident Date: 12/08/2001 Incident Identification: 23675 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
A	375m W	Incident Date: 12/08/2001 Incident Identification: 23675 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

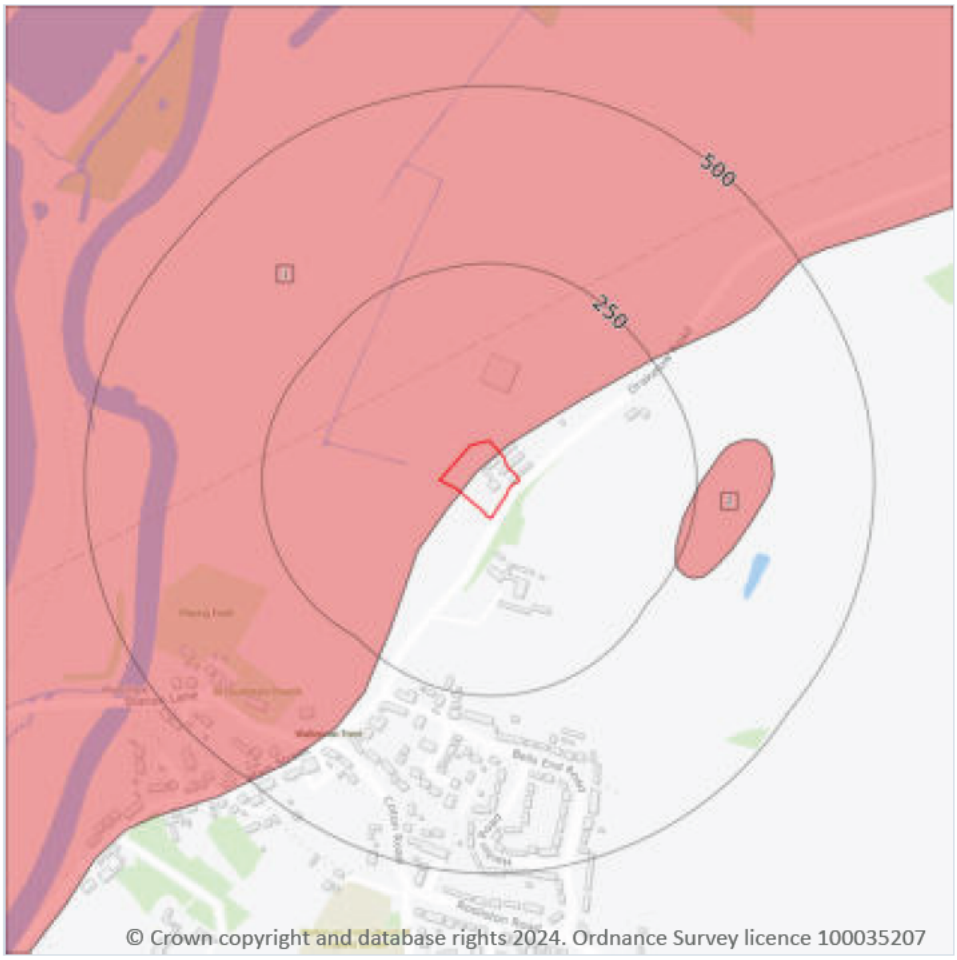
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	2

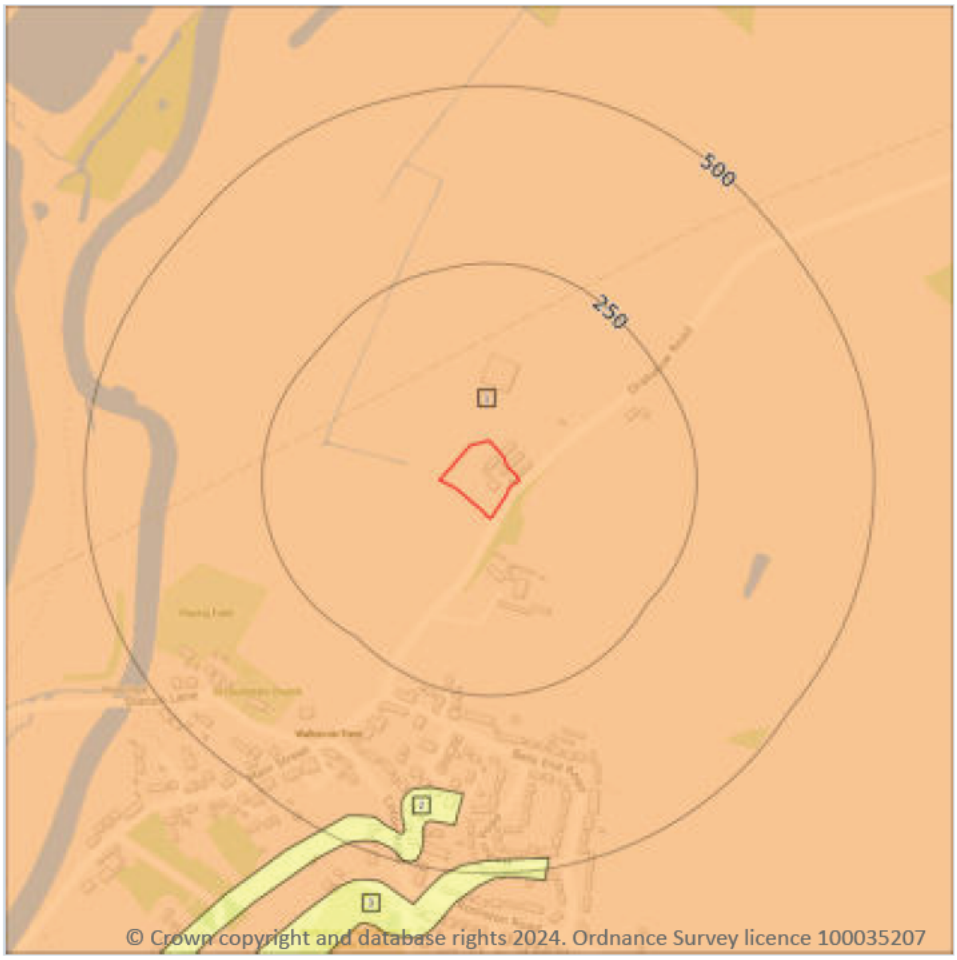
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on page 32 >

ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	237m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	3

Aquifer status of groundwater held within bedrock geology.

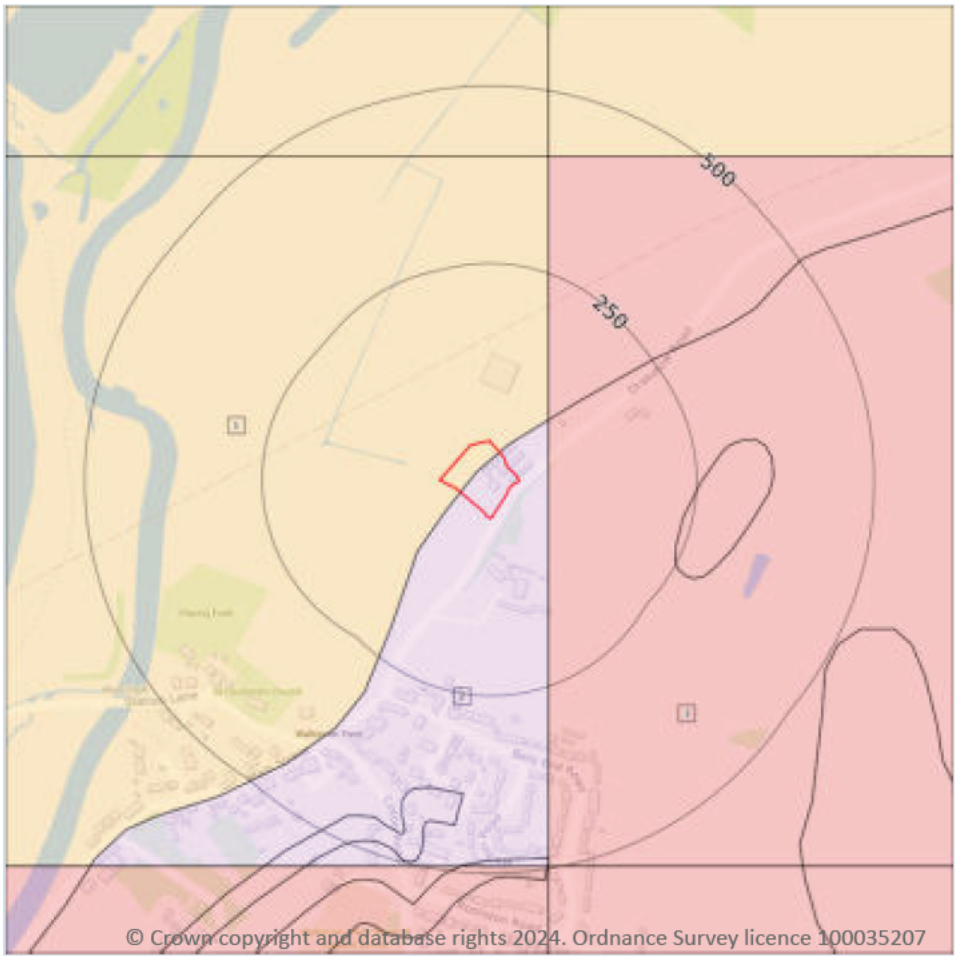
Features are displayed on the Bedrock aquifer map on page 34 >

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 permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers**
2	388m S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Location	Designation	Description
3	481m S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

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

Bedrock vulnerability

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

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	3

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 36 >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: <300mm/year**	**Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: >90% Recharge potential: Medium**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	**On site**	**Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: <300mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: >90% Recharge potential: Medium**	**Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures**
3	41m E	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: <40% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

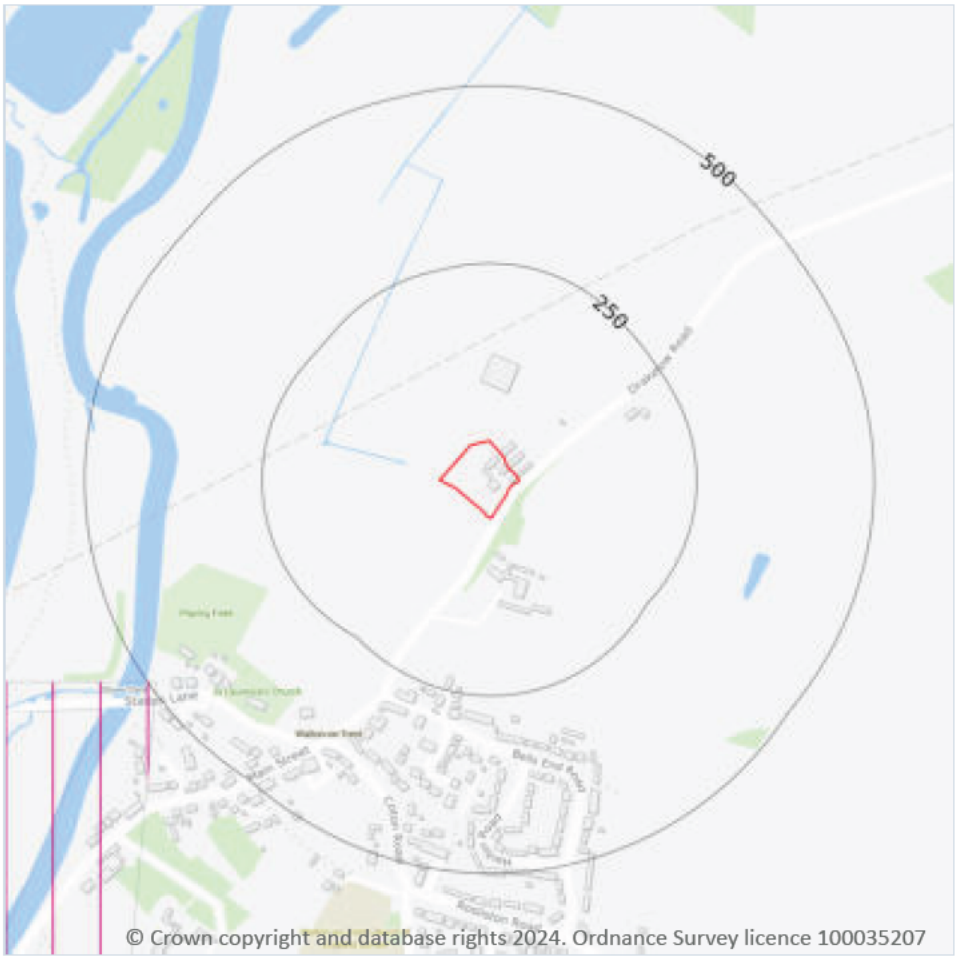
5.5 Groundwater vulnerability- local information

Records on site	0

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

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- 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	23

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 38 >

ID	Location	Details	
1	489m SW	Status: Active Licence No: MD/028/0007/013 Details: Dewatering Direct Source: Groundwater Midlands Region Point: AREA AT BARTON QUARRY, STAFFORDSHIRE Data Type: Poly4 Name: HANSON QUARRY PRODUCTS EUROPE LTD Easting: 421448 Northing: 318260	Annual Volume (m^3): 7082870 Max Daily Volume (m^3): 35424 Original Application No: - Original Start Date: 16/09/2022 Expiry Date: 31/03/2038 Issue No: 2 Version Start Date: 23/06/2023 Version End Date: -
2	573m SW	Status: Historical Licence No: MD/028/0007/013 Details: Dewatering Direct Source: Groundwater Midlands Region Point: BARTON QUARRY Data Type: Poly4 Name: HANSON QUARRY PRODUCTS EUROPE LTD Easting: 420516 Northing: 318182	Annual Volume (m^3): 7082870 Max Daily Volume (m^3): 35424 Original Application No: NPS/NA/000721 Original Start Date: 16/09/2022 Expiry Date: 31/03/2038 Issue No: 1 Version Start Date: 16/09/2022 Version End Date: -
-	1161m SE	Status: Historical Licence No: 03/28/24/0099 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: FAIRFIELDS FARM - BOREHOLE Data Type: Point Name: S E AVERY & SON Easting: 422920 Northing: 317890	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/07/1992 Expiry Date: - Issue No: 100 Version Start Date: 15/07/1992 Version End Date: -
-	1208m W	Status: Historical Licence No: 03/28/24/0118 Details: Non-Evaporative Cooling Direct Source: Groundwater Midlands Region Point: STATFOLD SEED OIL DEVELOPMENTS-BOREHOLE Data Type: Point Name: STATFOLD SEED OIL DEVELOPMENTS LIMITED Easting: 420640 Northing: 318480	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 08/12/2003 Version End Date: -
-	1254m NW	Status: Active Licence No: MD/028/0024/009 Details: Dewatering Direct Source: Groundwater Midlands Region Point: LAGOON AT NEWBOLD QUARRY NORTH Data Type: Poly4 Name: Aggregate Industries UK Limited Easting: 419887 Northing: 321719	Annual Volume (m^3): 7884000 Max Daily Volume (m^3): 21600 Original Application No: NPS/NA/001081 Original Start Date: 30/08/2022 Expiry Date: 31/03/2038 Issue No: 1 Version Start Date: 30/08/2022 Version End Date: -

ID	Location	Details	
-	1337m W	Status: Active Licence No: MD/028/0024/010 Details: Dewatering Direct Source: Groundwater Midlands Region Point: LAGOON AT NEWBOLD QUARRY SOUTH Data Type: Poly4 Name: Aggregate Industries UK Limited Easting: 419212 Northing: 319420	Annual Volume (m^3): 2246400 Max Daily Volume (m^3): 8640 Original Application No: NPS/NA/001083 Original Start Date: 30/08/2022 Expiry Date: 31/03/2038 Issue No: 1 Version Start Date: 30/08/2022 Version End Date: -
-	1493m NW	Status: Historical Licence No: 03/28/24/0043 Details: Mineral Washing Direct Source: Groundwater Midlands Region Point: NEWBOLD GRAVEL PIT Data Type: Point Name: DOUGLAS CONCRETE & AGGREGATES LTD. Easting: 420700 Northing: 319500	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 09/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/02/1966 Version End Date: -
-	1504m NW	Status: Active Licence No: 03/28/24/0043 Details: General Washing/Process Washing Direct Source: Groundwater Midlands Region Point: NEWBOLD QUARRY, BARTON-UNDER-NEEDWOOD - LAGOON Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 420720 Northing: 319540	Annual Volume (m^3): 3960251 Max Daily Volume (m^3): 21721 Original Application No: NPS/WR/033178 Original Start Date: 09/02/1966 Expiry Date: - Issue No: 108 Version Start Date: 07/07/2020 Version End Date: -
-	1504m NW	Status: Active Licence No: 03/28/24/0043 Details: Mineral Washing Direct Source: Groundwater Midlands Region Point: NEWBOLD QUARRY, BARTON-UNDER-NEEDWOOD - LAGOON Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 420720 Northing: 319540	Annual Volume (m^3): 3960251 Max Daily Volume (m^3): 21721 Original Application No: NPS/WR/033178 Original Start Date: 09/02/1966 Expiry Date: - Issue No: 108 Version Start Date: 07/07/2020 Version End Date: -

ID	Location	Details	
-	1504m NW	Status: Historical Licence No: 03/28/24/0043 Details: General Use Relating To Secondary Category (Very Low Loss) Direct Source: Groundwater Midlands Region Point: NEWBOLD QUARRY, BARTON-UNDER-NEEDWOOD - LAGOON Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 420720 Northing: 319540	Annual Volume (m^3): - Max Daily Volume (m^3): 44542.6 Original Application No: - Original Start Date: 09/02/1966 Expiry Date: - Issue No: 105 Version Start Date: 12/12/2015 Version End Date: -
-	1504m NW	Status: Historical Licence No: 03/28/24/0043 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Groundwater Midlands Region Point: NEWBOLD QUARRY, BARTON-UNDER-NEEDWOOD - LAGOON Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 420720 Northing: 319540	Annual Volume (m^3): - Max Daily Volume (m^3): 44542.6 Original Application No: - Original Start Date: 09/02/1966 Expiry Date: - Issue No: 105 Version Start Date: 12/12/2015 Version End Date: -
-	1612m NW	Status: Active Licence No: 03/28/24/0107/1 Details: Dust Suppression Direct Source: Groundwater Midlands Region Point: WELL 'A' AT LICHFIELD RD, BRANSTON Data Type: Point Name: Marley Limited Easting: 421120 Northing: 320010	Annual Volume (m^3): 35250 Max Daily Volume (m^3): 101 Original Application No: NPS/WR/030103 Original Start Date: 01/04/2005 Expiry Date: - Issue No: 4 Version Start Date: 02/01/2019 Version End Date: -
-	1612m NW	Status: Active Licence No: 03/28/24/0107/1 Details: Process Water Direct Source: Groundwater Midlands Region Point: WELL 'A' AT LICHFIELD RD, BRANSTON Data Type: Point Name: Marley Limited Easting: 421120 Northing: 320010	Annual Volume (m^3): 35250 Max Daily Volume (m^3): 101 Original Application No: NPS/WR/030103 Original Start Date: 01/04/2005 Expiry Date: - Issue No: 4 Version Start Date: 02/01/2019 Version End Date: -

ID	Location	Details	
-	1612m NW	Status: Historical Licence No: 03/28/24/0107 Details: Dust suppression Direct Source: Groundwater Midlands Region Point: WELL AT BRANSTON SITE Data Type: Point Name: MARLEY BUILDING MATERIALS LIMITED Easting: 421120 Northing: 320010	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 30/09/1997 Expiry Date: - Issue No: 101 Version Start Date: 08/12/2003 Version End Date: -
-	1612m NW	Status: Historical Licence No: 03/28/24/0107 Details: Dust suppression Direct Source: Groundwater Midlands Region Point: WELL AT BRANSTON SITE Data Type: Point Name: MARLEY BUILDING MATERIALS LIMITED Easting: 421120 Northing: 320010	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 30/09/1997 Expiry Date: - Issue No: 101 Version Start Date: 08/12/2003 Version End Date: -
-	1612m NW	Status: Historical Licence No: 03/28/24/0107/1 Details: Dust Suppression Direct Source: Groundwater Midlands Region Point: WELL AT BRANSTON SITE Data Type: Point Name: MARLEY ETERNIT LIMITED Easting: 421120 Northing: 320010	Annual Volume (m^3): 35125 Max Daily Volume (m^3): 101 Original Application No: - Original Start Date: 01/04/2005 Expiry Date: - Issue No: 2 Version Start Date: 04/07/2005 Version End Date: -
-	1612m NW	Status: Historical Licence No: 03/28/24/0107/1 Details: Dust Suppression Direct Source: Groundwater Midlands Region Point: WELL AT BRANSTON SITE Data Type: Point Name: MARLEY ETERNIT LIMITED Easting: 421120 Northing: 320010	Annual Volume (m^3): 35125 Max Daily Volume (m^3): 101 Original Application No: - Original Start Date: 01/04/2005 Expiry Date: - Issue No: 2 Version Start Date: 04/07/2005 Version End Date: -
-	1751m N	Status: Active Licence No: 03/28/24/0107/1 Details: Process Water Direct Source: Groundwater Midlands Region Point: WELL 'B' AT MARLEY BUILDING MATERIALS, BRANSTON Data Type: Point Name: Marley Limited Easting: 421420 Northing: 320280	Annual Volume (m^3): 35250 Max Daily Volume (m^3): 101 Original Application No: NPS/WR/030103 Original Start Date: 01/04/2005 Expiry Date: - Issue No: 4 Version Start Date: 02/01/2019 Version End Date: -

ID	Location	Details	
-	1751m N	Status: Active Licence No: 03/28/24/0107/1 Details: Dust Suppression Direct Source: Groundwater Midlands Region Point: WELL 'B' AT MARLEY BUILDING MATERIALS, BRANSTON Data Type: Point Name: Marley Limited Easting: 421420 Northing: 320280	Annual Volume (m^3): 35250 Max Daily Volume (m^3): 101 Original Application No: NPS/WR/030103 Original Start Date: 01/04/2005 Expiry Date: - Issue No: 4 Version Start Date: 02/01/2019 Version End Date: -
-	1751m N	Status: Historical Licence No: 03/28/24/0117 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Groundwater Midlands Region Point: MARLEY BUILDING MATERIALS, BRANSTON - WELL Data Type: Point Name: MARLEY BUILDING MATERIALS LIMITED Easting: 421420 Northing: 320280	Annual Volume (m^3): 35000 Max Daily Volume (m^3): 96 Original Application No: - Original Start Date: 08/12/2003 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 08/12/2003 Version End Date: -
-	1751m N	Status: Historical Licence No: 03/28/24/0107/1 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Groundwater Midlands Region Point: MARLEY BUILDING MATERIALS, BRANSTON - WELL Data Type: Point Name: MARLEY ETERNIT LIMITED Easting: 421420 Northing: 320280	Annual Volume (m^3): 35125 Max Daily Volume (m^3): 101 Original Application No: - Original Start Date: 01/04/2005 Expiry Date: - Issue No: 2 Version Start Date: 04/07/2005 Version End Date: -
-	1818m S	Status: Historical Licence No: 03/28/24/0021 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: CATTON HALL - WELL Data Type: Point Name: CATTON FARMS Easting: 421600 Northing: 316700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 10/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 30/07/1993 Version End Date: -

ID	Location	Details	
-	1903m NW	Status: Active Licence No: 03/28/24/0043 Details: Dust Suppression Direct Source: Groundwater Midlands Region Point: POINT 'B' AT NEWBOLD QUARRY Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 420270 Northing: 319610	Annual Volume (m^3): 3960251 Max Daily Volume (m^3): 21721 Original Application No: NPS/WR/033178 Original Start Date: 09/02/1966 Expiry Date: - Issue No: 108 Version Start Date: 07/07/2020 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	5

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 38 >

ID	Location	Details	
-	1044m NE	Status: Historical Licence No: MD/028/0024/001 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: LAND AT DRAKELOW Data Type: Point Name: BJB FARMING LIMITED Easting: 422350 Northing: 319550	Annual Volume (m^3): 30681 Max Daily Volume (m^3): 1300 Original Application No: - Original Start Date: 30/04/2009 Expiry Date: 31/03/2026 Issue No: 1 Version Start Date: 01/04/2019 Version End Date: -
-	1573m N	Status: Historical Licence No: 03/28/24/0108 Details: Process Water Direct Source: Surface Water Midlands Region Point: DRAKELOW POWER STATION - RIVER TRENT Data Type: Point Name: E ON UK PLC Easting: 422390 Northing: 320100	Annual Volume (m^3): 25000000 Max Daily Volume (m^3): 872832 Original Application No: - Original Start Date: 24/12/1997 Expiry Date: - Issue No: 103 Version Start Date: 05/07/2004 Version End Date: -

ID	Location	Details	
-	1881m SW	Status: Historical Licence No: 03/28/07/0067 Details: Transfer Between Sources (Pre Water Act 2003) Direct Source: Surface Water Midlands Region Point: BLAKENHALL PARK - RIVER TRENT/OLD RIVER TRENT REACH 2 Data Type: Line Name: MERCER FARMING LTD Easting: 420340 Northing: 315600	Annual Volume (m^3): 48000 Max Daily Volume (m^3): 2800 Original Application No: - Original Start Date: 22/01/1991 Expiry Date: - Issue No: 100 Version Start Date: 22/01/1991 Version End Date: -
-	1881m SW	Status: Historical Licence No: 03/28/07/0067 Details: Spray Irrigation - Direct Direct Source: Surface Water Midlands Region Point: BLAKENHALL PARK - RIVER TRENT/OLD RIVER TRENT REACH 2 Data Type: Line Name: MERCER FARMING LTD Easting: 420340 Northing: 315600	Annual Volume (m^3): 48000 Max Daily Volume (m^3): 2800 Original Application No: - Original Start Date: 22/01/1991 Expiry Date: - Issue No: 100 Version Start Date: 22/01/1991 Version End Date: -
-	1992m N	Status: Active Licence No: MD/028/0024/011 Details: Make-Up Or Top Up Water Direct Source: Surface Water Midlands Region Point: POINT A AT DUNSTALL BROOK Data Type: Point Name: AGGREGATE INDUSTRIES UK LIMITED Easting: 421180 Northing: 320454	Annual Volume (m^3): 138000 Max Daily Volume (m^3): 8640 Original Application No: NPS/WR/032578 Original Start Date: 17/06/2022 Expiry Date: 31/03/2038 Issue No: 1 Version Start Date: 17/06/2022 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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

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

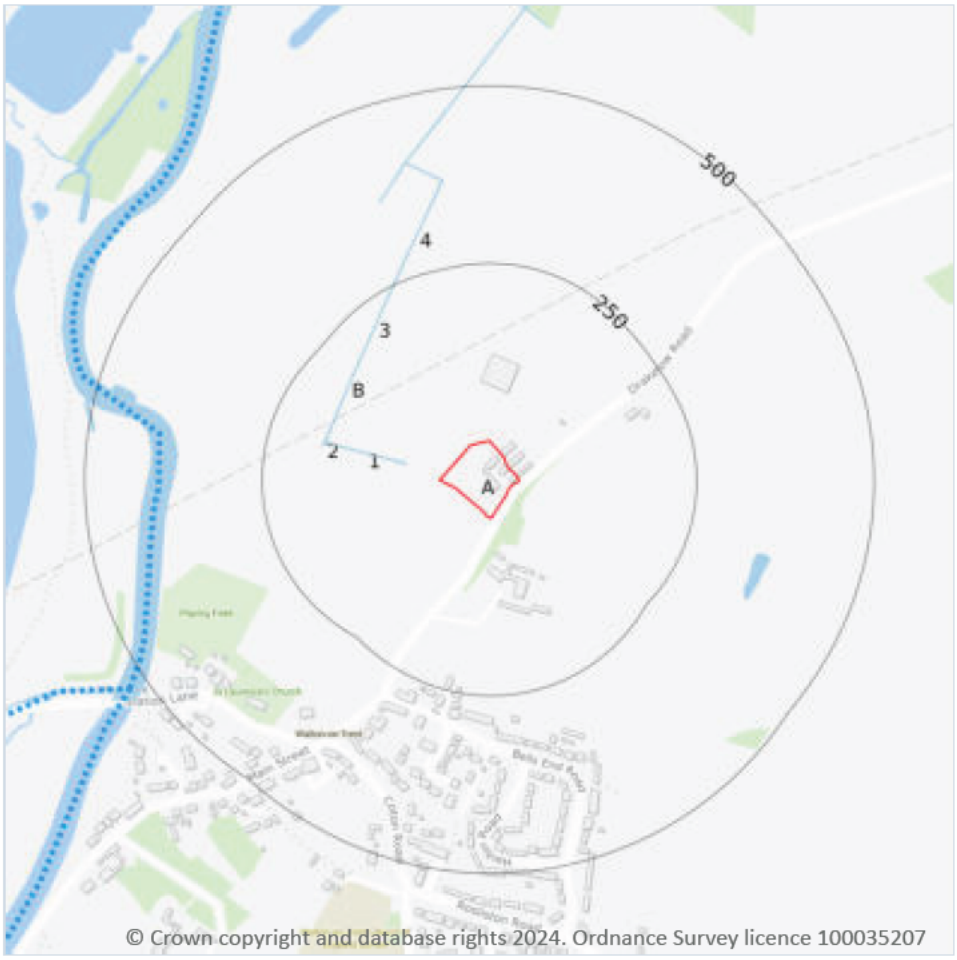
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	5

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 47 >

ID	Location	Type of water feature	Ground level	Permanence	Name
1	51m W	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
2	168m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	168m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	217m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
4	219m NW	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	2

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 47 >

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 47 >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Trent - R Tame to R Dove**	**GB104028047180**	**Trent - Tame to Dove Rivers**	**Tame Anker and Mease**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on page 47 >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
8	396m W	River	Trent - R Tame to R Dove	GB104028047180 ↗	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 47 >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**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



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on page 50 >

Location	Type
47m W	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

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

Features are displayed on the Surface water flooding map on page 54 >

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 56 >

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Local Nature Reserves (LNR)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	1

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

Features are displayed on the Environmental designations map on page 57 >

ID	Location	Name	Data source
-	1902m N	Branston Water Park	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	3

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 57 >

ID	Location	Name	Woodland Type
-	1683m S	Walton Wood	Ancient Replanted Woodland
-	1797m E	Grove Wood	Ancient & Semi-Natural Woodland
-	1918m E	Grove Wood	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	0

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

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

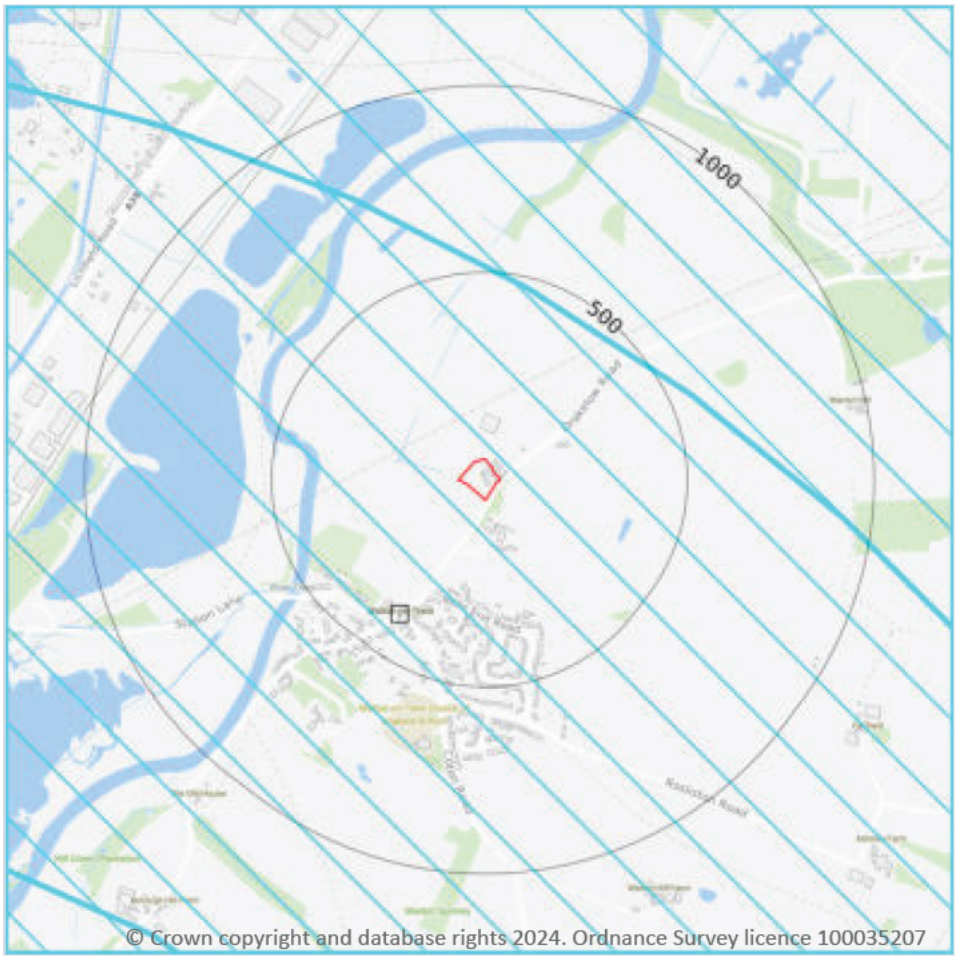
Records within 2000m	1

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

Location	Name	Type	NVZ ID	Status
On site	**River Trent (source to confluence with Derwent)**	**Surface Water**	**308**	**Existing**

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

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

Not recorded

Favourable

Unfavourable - Recovering

Unfavourable - No change

Unfavourable - Declining

Partially destroyed

Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

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

Features are displayed on the SSSI Impact Zones and Units map on page 62 >

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, 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.**

This data is sourced from Natural England.

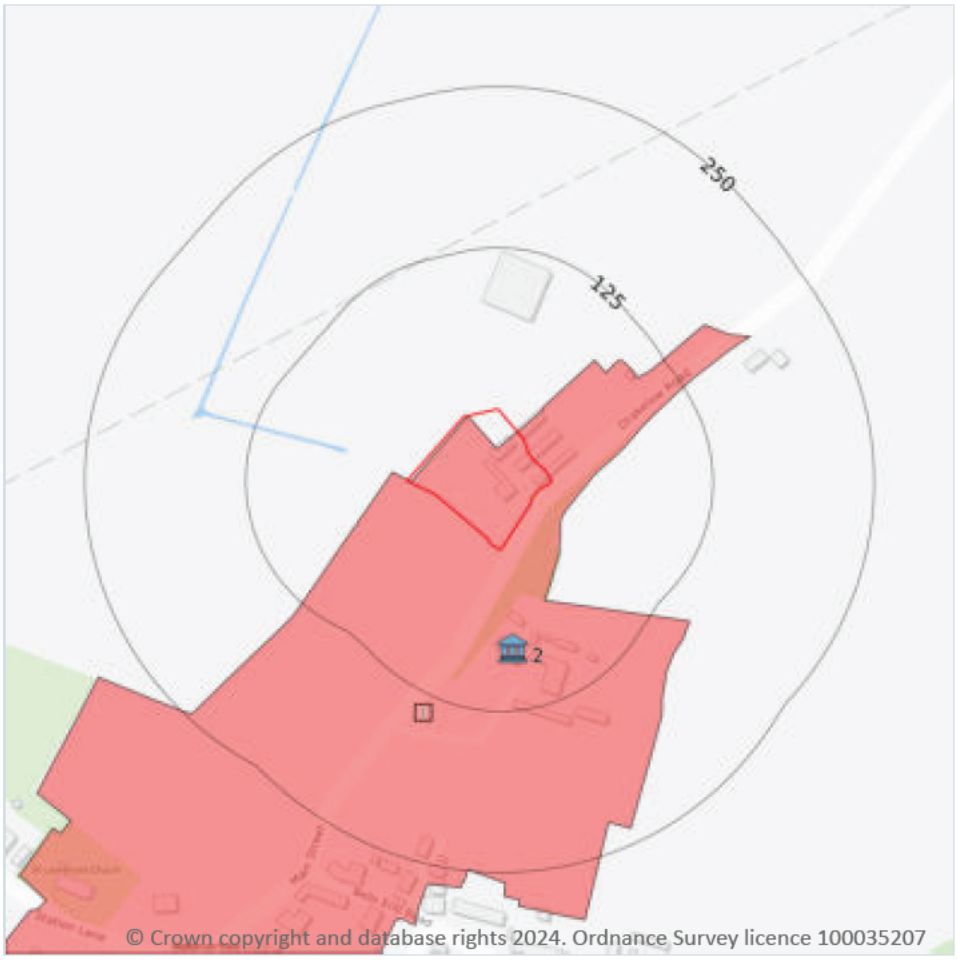
10.18 SSSI Units

Records within 2000m	0

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on **page 64 >**

ID	Location	Name	Grade	Reference Number	Listed date
2	76m S	Barr Hall And Attached Farm Buildings	II	1096426	19/01/1967

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

11.5 Conservation Areas

Records within 250m	1

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

Features are displayed on the Visual and cultural designations map on page 64 >

ID	Location	Name	District	Date of designation
1	On site	Walton on Trent	South Derbyshire	16/01/1992

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.

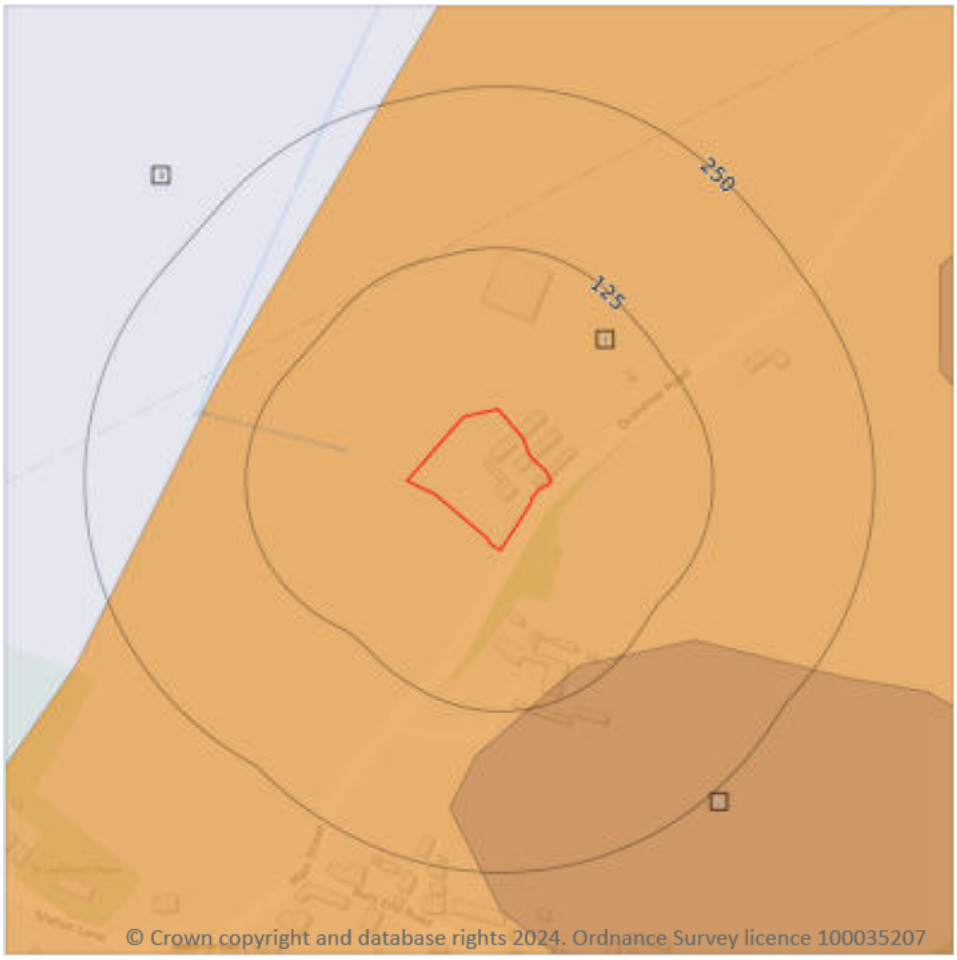
11.7 Registered Parks and Gardens

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	3

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 67 >

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	108m SE	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	165m W	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

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.

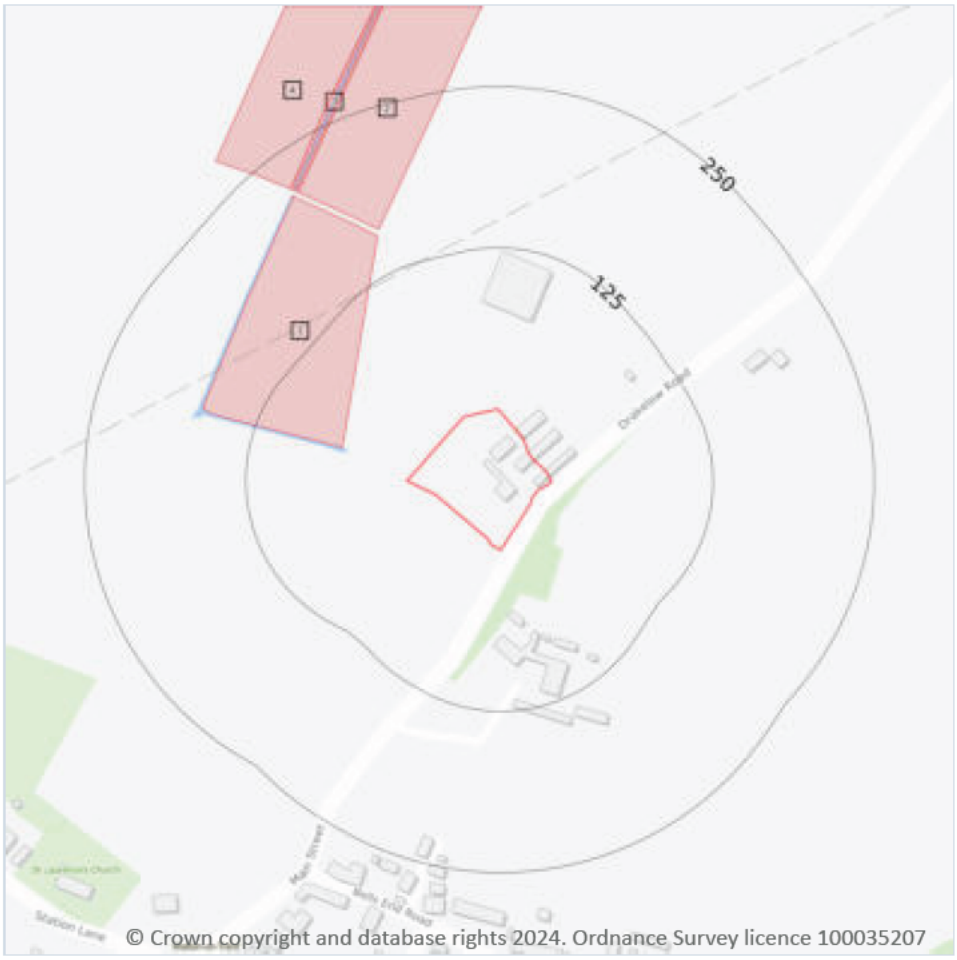
12.5 Countryside Stewardship Schemes

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



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

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

13.1 Priority Habitat Inventory

Records within 250m	4

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

Features are displayed on the Habitat designations map on page 70 >

ID	Location	Main Habitat	Other habitats
1	56m W	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
2	160m NW	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
3	216m NW	Coastal and floodplain grazing marsh	Main habitat: CFPGM (INV > 50%)
4	222m NW	Coastal and floodplain grazing marsh	Main habitat: CFPGM (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 72 >

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

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

14.3 Superficial geology (10k)

Records within 500m	0

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.

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

14.5 Bedrock geology (10k)

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

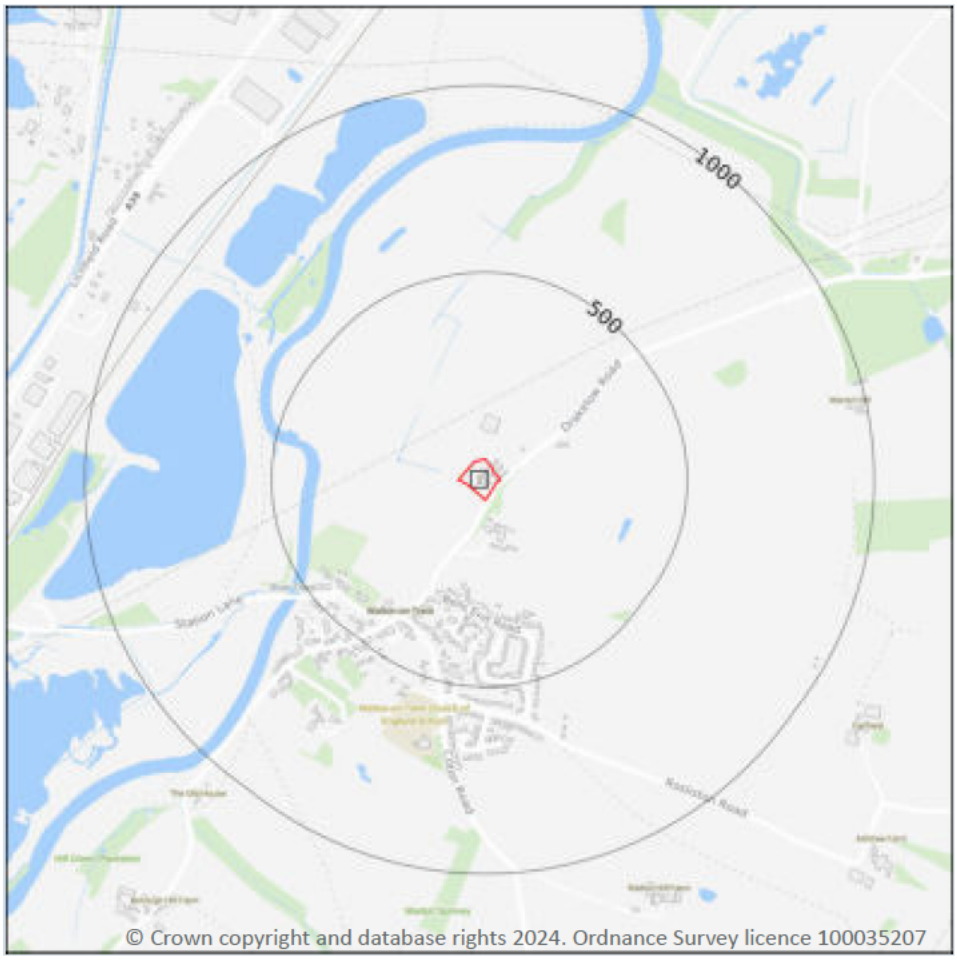
14.6 Bedrock faults and other linear features (10k)

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 76 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW140_burton_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.

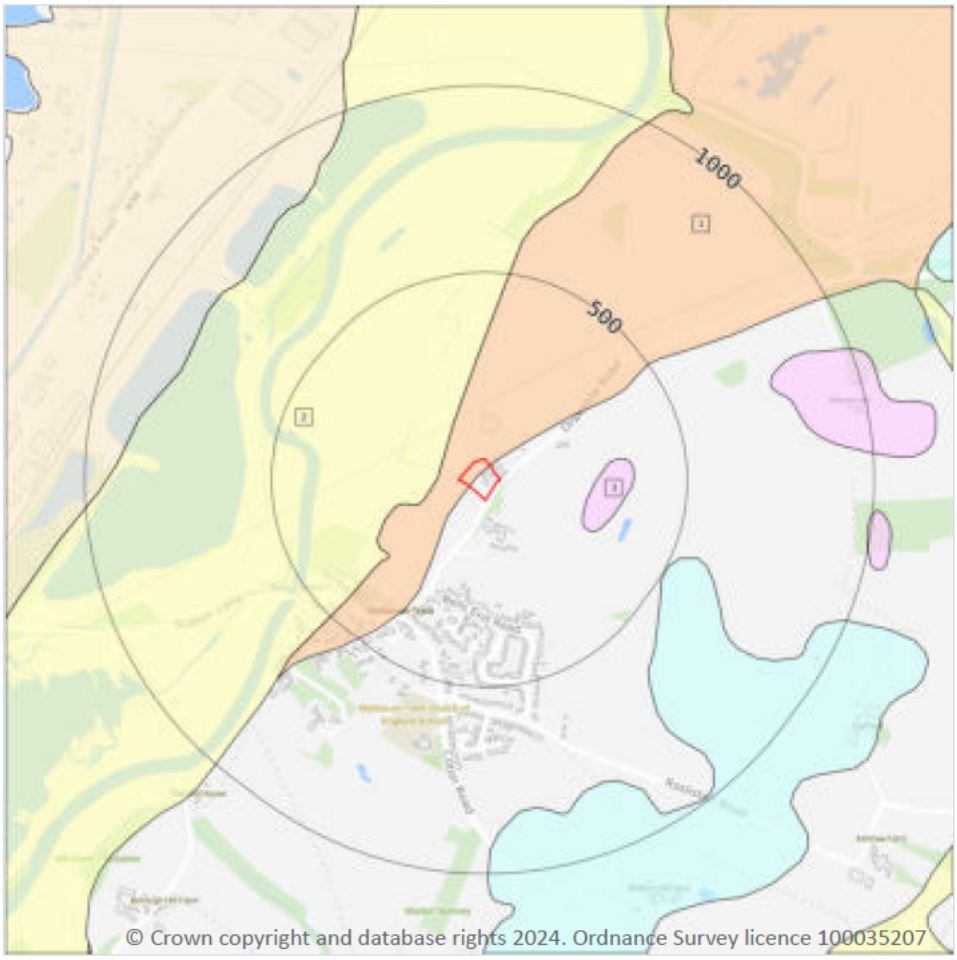
15.3 Artificial ground permeability (50k)

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 **3**

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 78 >

ID	Location	LEX Code	Description	Rock description
1	**On site**	**RTD1-XSV**	**RIVER TERRACE DEPOSITS, 1**	**SAND AND GRAVEL**
2	55m W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	237m E	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Very High**	**High**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

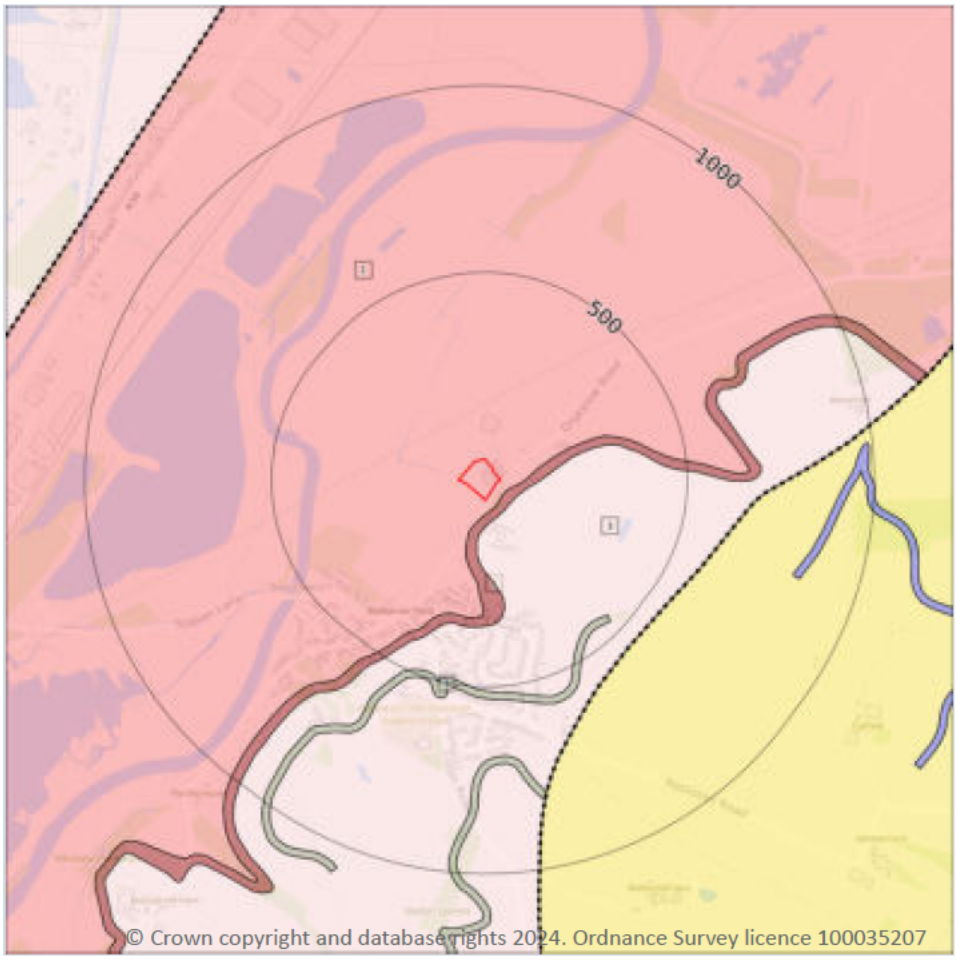
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m **4**

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 80 >

ID	Location	LEX Code	Description	Rock age
1	**On site**	**MMG-MDST**	**MERCIA MUDSTONE GROUP - MUDSTONE**	**-**
2	31m SE	COT-SDST	COTGRAVE SANDSTONE MEMBER - SANDSTONE	CARNIAN
3	54m SE	EDW-MDST	EDWALTON MEMBER - MUDSTONE	CARNIAN

ID	Location	LEX Code	Description	Rock age
4	432m SE	GUN-SLST	GUNTHORPE MEMBER - SILTSTONE	ANISIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2

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**
31m SE	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

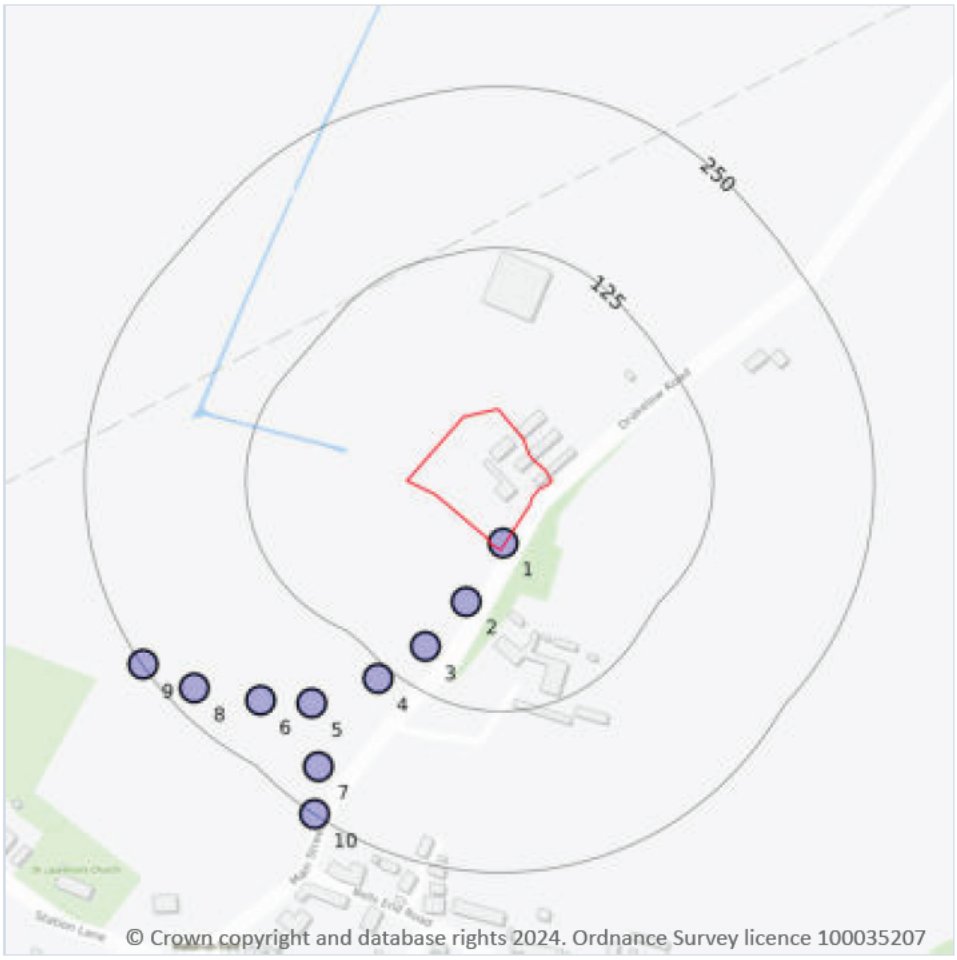
15.10 Bedrock faults and other linear features (50k)

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



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	10

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.

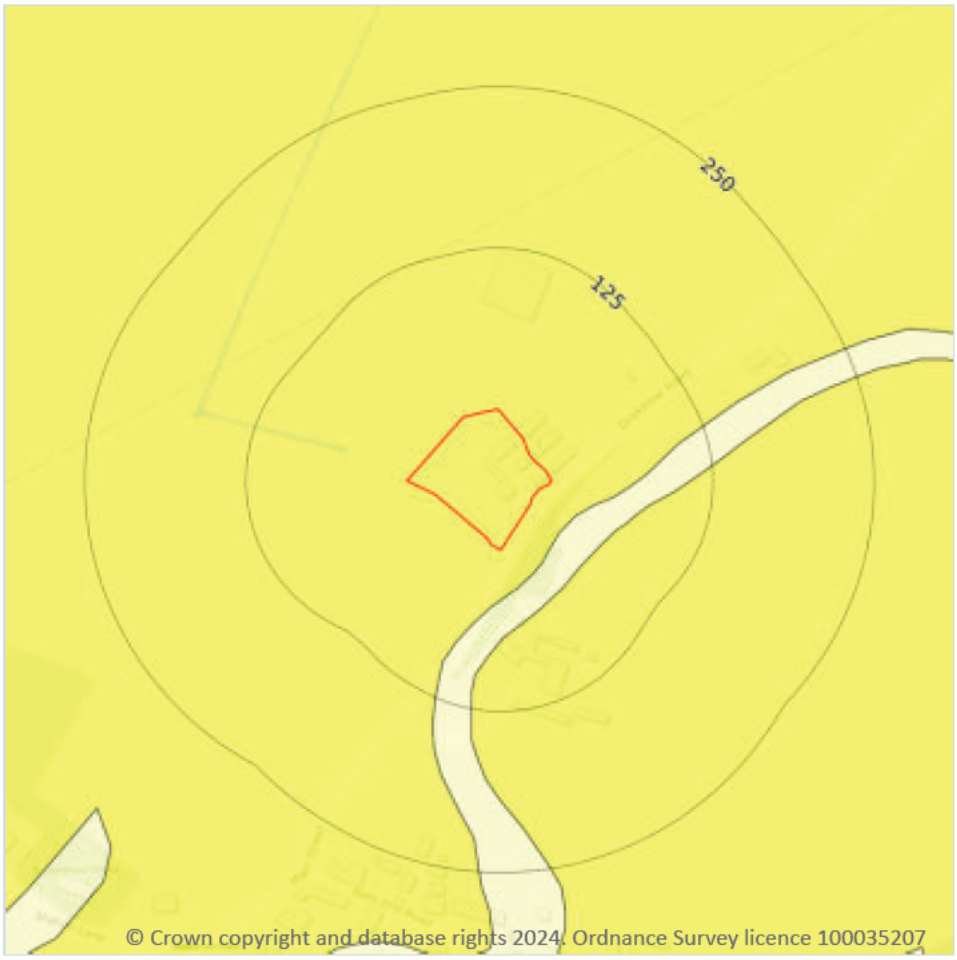
Features are displayed on the Boreholes map on page 82 >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**421921 318495**	**WALTON ON TRENT BYPASS TP28**	**3.0**	**N**	**15987532**
2	48m S	421893 318450	WALTON ON TRENT BYPASS TP27	3.1	N	15987531

ID	Location	Grid reference	Name	Length	Confidential	Web link
3	94m S	421861 318415	WALTON ON TRENT BYPASS TP26	3.0	N	15987530 ↗
4	136m SW	421824 318390	WALTON ON TRENT BYPASS TP25	2.0	N	15987528 ↗
5	185m SW	421773 318371	WALTON ON TRENT BYPASS TP24	3.0	N	15987526 ↗
6	205m SW	421733 318373	WALTON ON TRENT BYPASS TP23	3.3	N	15987524 ↗
7	218m SW	421778 318322	WALTON ON TRENT BYPASS TP29	3.15	N	15987533 ↗
8	230m SW	421682 318383	WALTON ON TRENT BYPASS TP22	3.3	N	15987522 ↗
9	250m SW	421642 318401	WALTON ON TRENT BYPASS TP21	3.4	N	15987520 ↗
10	250m SW	421775 318285	WALTON ON TRENT BYPASS TP30	2.5	N	15987534 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

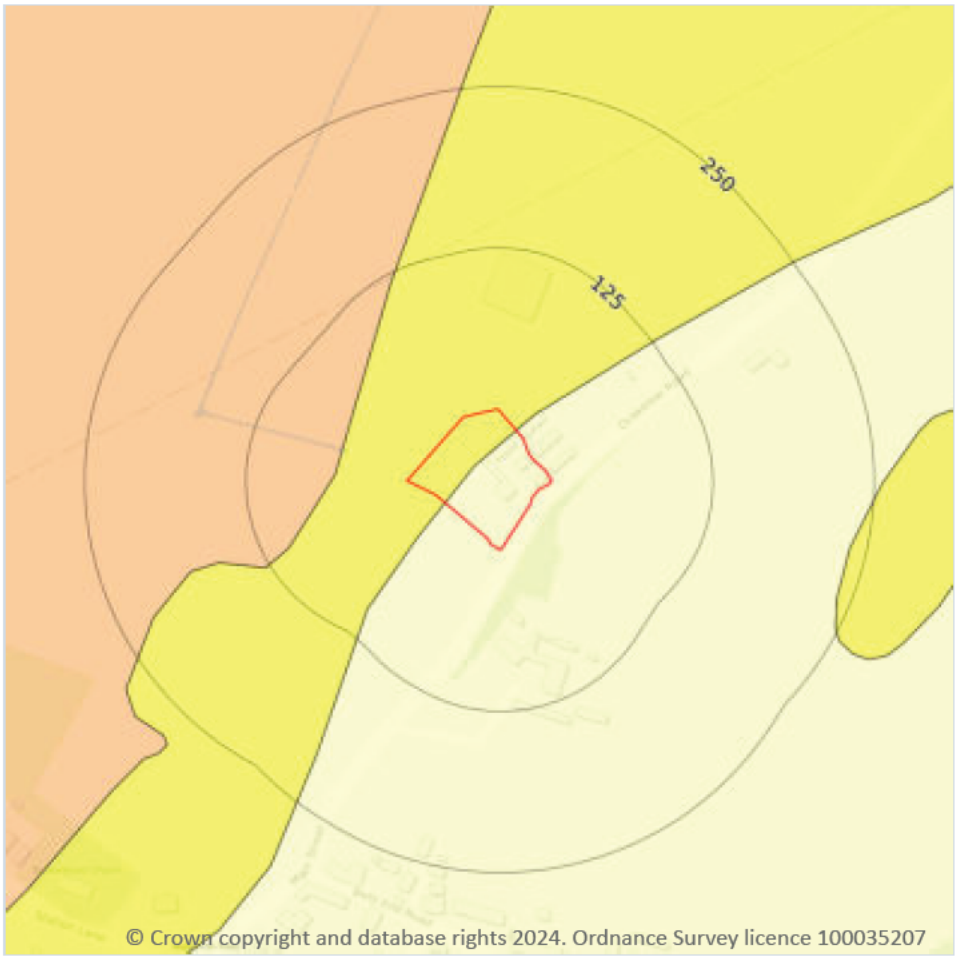
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 84 >

Location	Hazard rating	Details
On site	**Very low**	**Ground conditions predominantly low plasticity.**
31m SE	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	2

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.

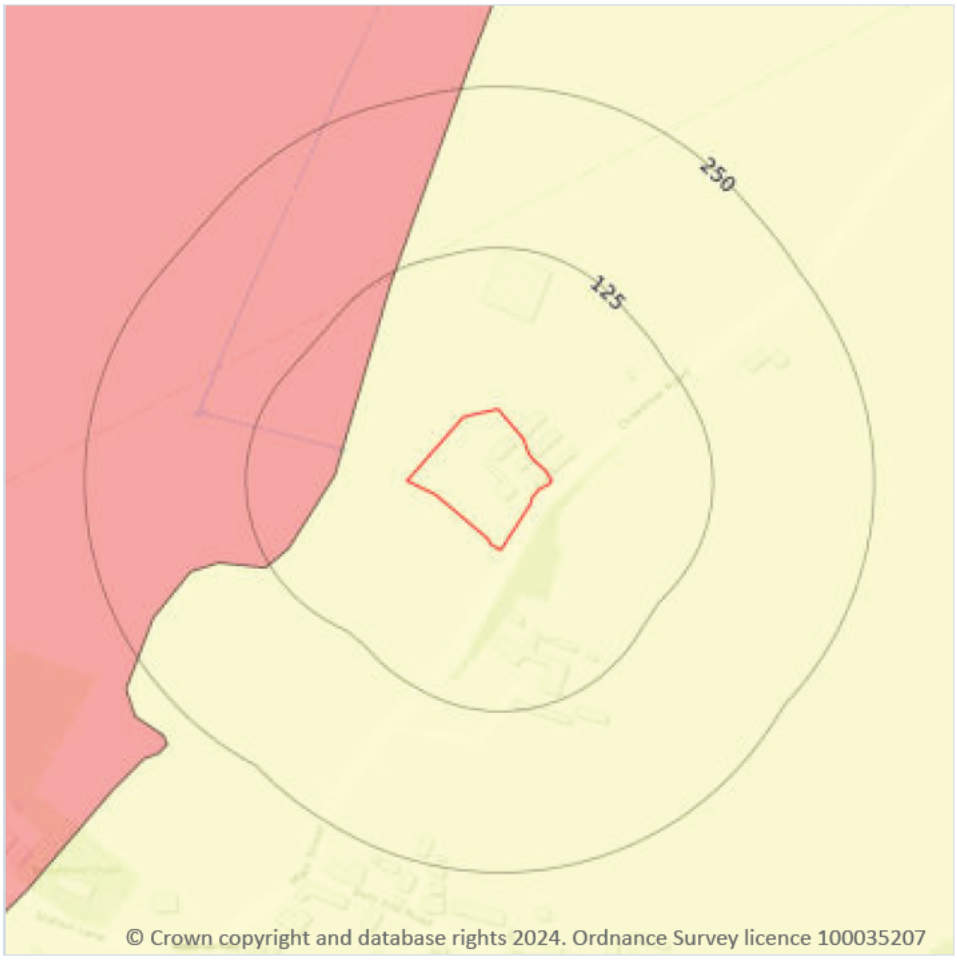
Features are displayed on the Natural ground subsidence - Running sands map on page 85 >

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

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

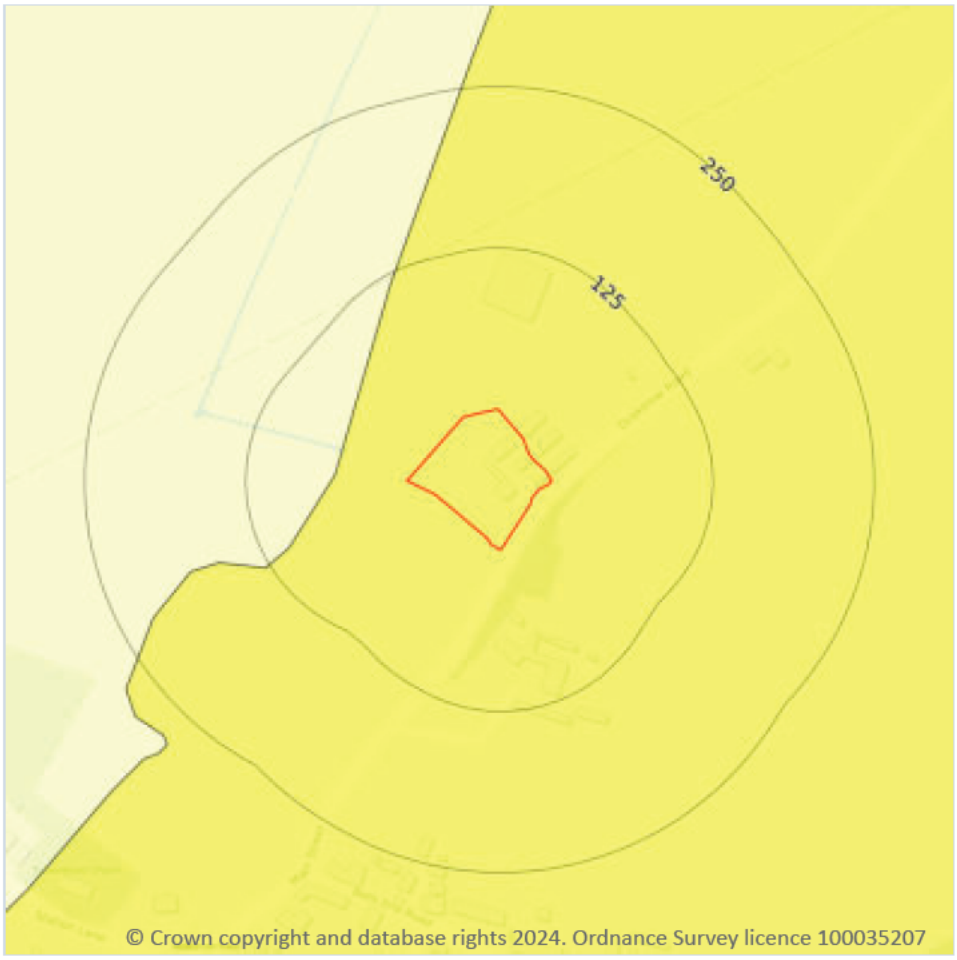
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 87 >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

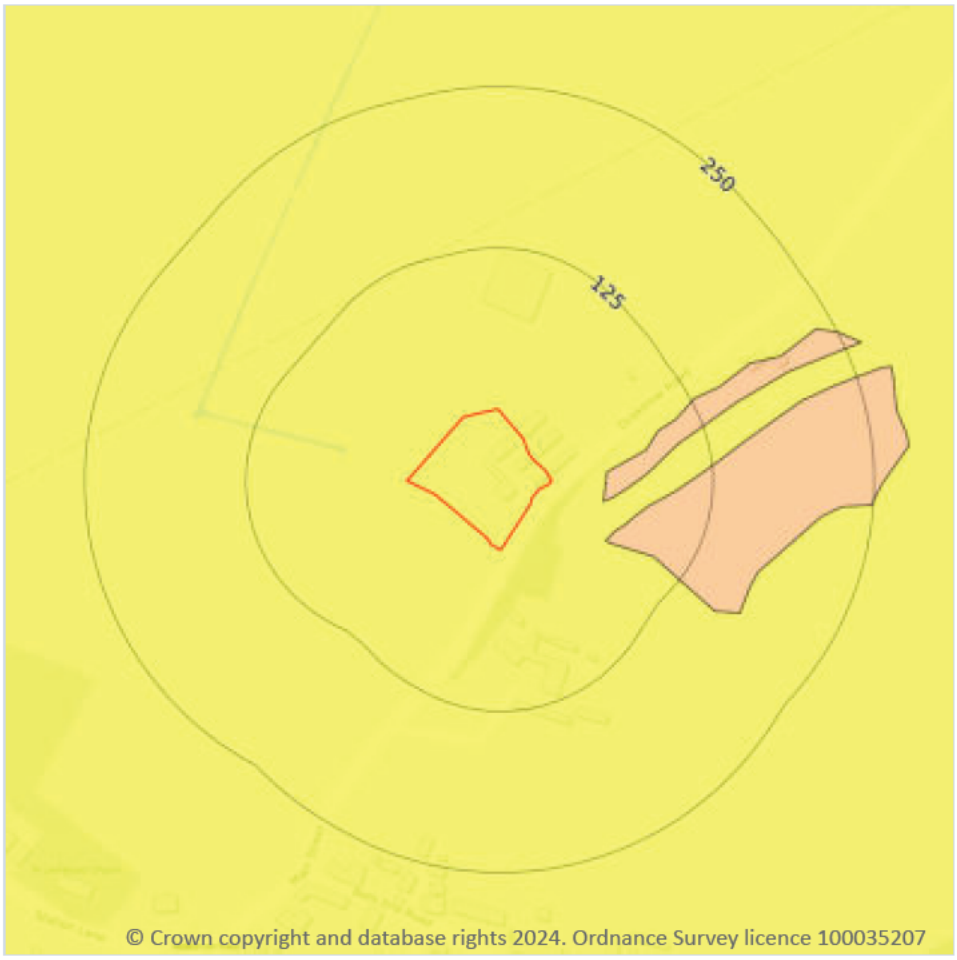
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 88 >

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	2

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

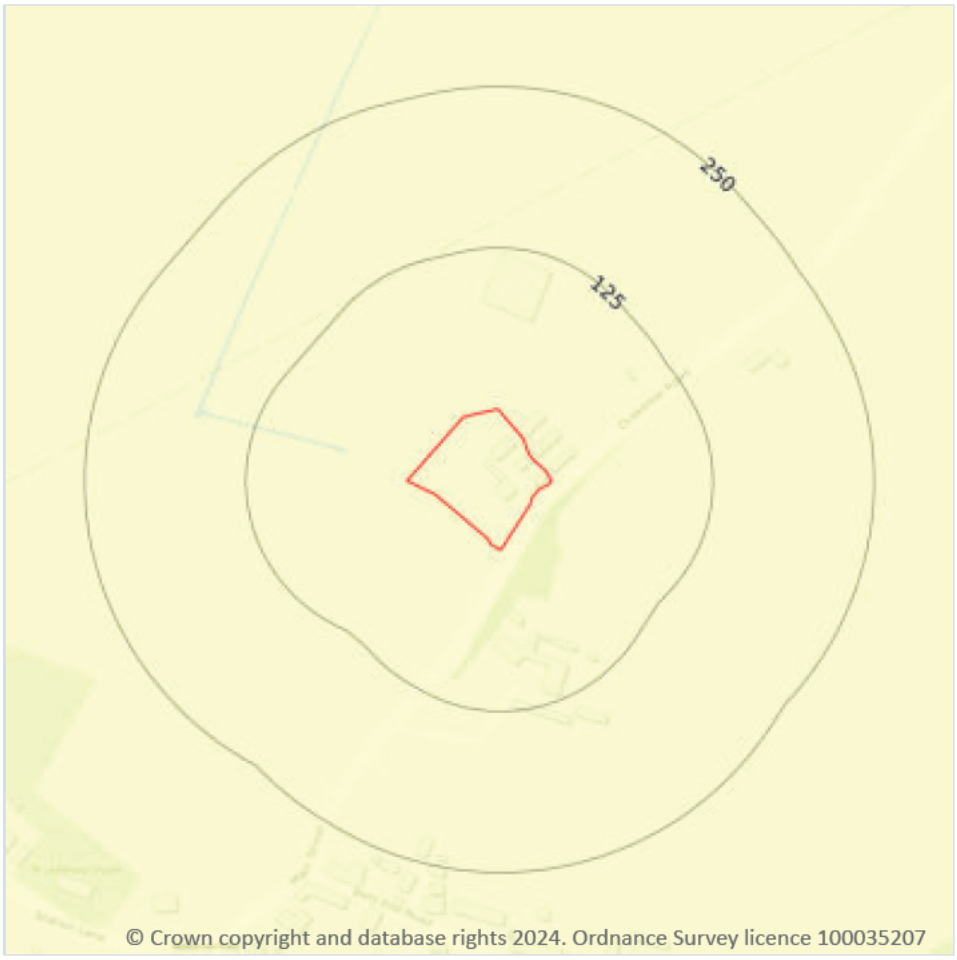
Features are displayed on the Natural ground subsidence - Landslides map on page 89 >

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

Location	Hazard rating	Details
42m E	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

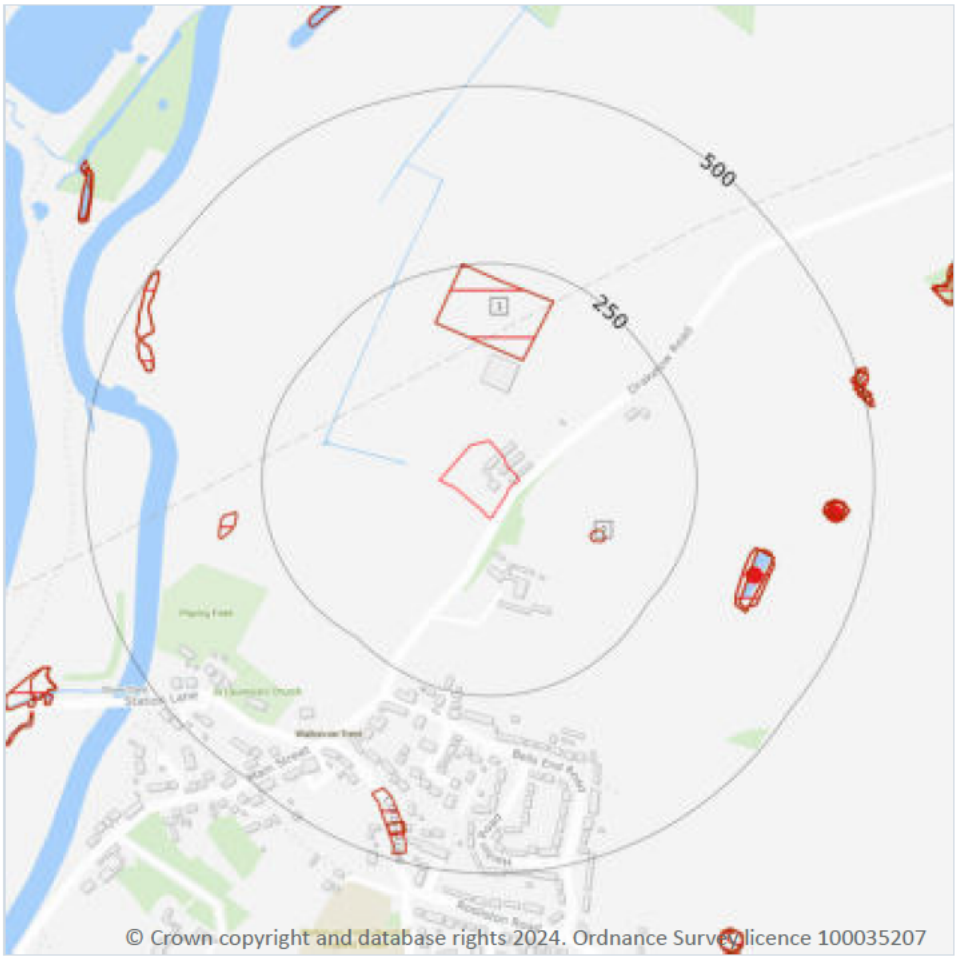
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on page 91 >

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	3

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

Features are displayed on the Mining and ground workings map on page 93 >

ID	Location	Details	Description
A	356m E	Name: Warren Hill Address: Walton on Trent, BURTON UPON TRENT, Derbyshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
A	356m E	Name: Walton Wood Address: Walton on Trent, SWADLINCOTE, Derbyshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
C	446m E	Name: Warren Hill Address: Walton on Trent, BURTON UPON TRENT, Derbyshire Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	2

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 93 >

ID	Location	Land Use	Year of mapping	Mapping scale
1	123m N	Sewage Works	1992	1:10000
2	126m SE	Unspecified Pit	1884	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	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	1

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

Location	Details
On site	**In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk ↗.**

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	1

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

Location	Details
On site	**The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.**

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

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

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

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

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

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

20.1 Radon

Records on site	1

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

Features are displayed on the Radon map on page 101 >

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	5

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**40 - 60 mg/kg**	**15 - 30 mg/kg**
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**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**20 - 40 mg/kg**	**15 mg/kg**
34m SW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
41m E	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 km^2).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

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

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

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