



Phase I Environmental Report

Low Valley Farm, Pitt Street, Barnsley, S73 9PY
For
Harwood Estates

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Phase I Environmental Report

Project:	Low Valley Farm, Pitt Street, Barnsley, S73 9PY
For:	Harwood Estates
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Status:	Revision A
Date:	March 2019
Author:	Steve Rhodes - Director
Reviewer:	Richard Hamilton – Associate Director

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1.0 INTRODUCTION

Background

- 1.1 Enzygo Geoenvironmental Limited has been commissioned to prepare a Phase I Geo-Environmental Report for a site at Low Valley Farm, Pitt Street, Barnsley, S73 9PY.

Proposed Development

- 1.2 The proposed development of the site is for a residential use with associated infrastructure.

Objectives

- 1.3 The objectives of the study are to:
- Site inspection by an experienced environmental consultant;
 - Review historical plans, geology, hydrogeology, site sensitivity, mining records and contaminated land information provided by the local authority in order to complete a Desk Study. A Groundsure report has been obtained, a copy of which is included in Appendix B;
 - Assess the implications of any potential environmental risks, liabilities and development constraints associated with the site in relation to the future use of the site and in relation to off-site receptors; and
 - Provide a factual and interpretative report relating to the desk study.
- 1.4 Provide preliminary geotechnical recommendations in relation to environmental risk, potential remedial options and initial assessment of ground engineering considerations.

Classification

- 1.5 Enzygo Geoenvironmental has utilised the available information, together with our experience to assess the likely risks to development from land quality issues. Definitions of the risk terms used are provided on the following table.

Risk	Description
Negligible	No contamination risk has been identified which is likely to affect development.
Low	No significant contaminated land risks have been encountered affecting development and a low risk that remediation will be required.
Low-Moderate	There are unlikely to be significant contaminated land issue associated with the site which will adversely affect its re-development. However, minor or localised contamination may be present requiring remediation. Remediation should be possible under a discovery strategy and with a call out service.
Moderate	Some potential contaminated land risks have been encountered or identified which may affect re- development. The risks identified are unlikely to affect the entire site or preclude development. Remediation is considered feasible as part of the development process and no further investigation is considered necessary.
Moderate-High	Some potentially significant contaminated land risks have been identified at the property that requires remediation. It is recommended that a separate remedial methodology is prepared supported by a site-specific risk assessment
High	Significant potential contaminated land risks have been identified and remediation is required supported by further intrusive ground investigation, risk assessment and remedial design.

- 1.6 Where adverse risks from ground instability are identified these are discussed within the report.

2.0 SITE SETTING

Site Description

Item	Description
Site Address	Low Valley Farm, Pitt Street, Barnsley, S73 9PY
National Grid Reference	440526,404159

Current Site Description

- 2.1 The following site description has been compiled from the site inspection, together with current maps and aerial photographs. Selected photographs from the site inspection are included in Appendix A.
- 2.2 The site comprises a field which was vegetated with grass and occasional trees.
- 2.3 No evidence of tanks, waste or chemical storage were noted.

Surrounding Area

- 2.4 Land uses surrounding the site are summarised as follows:

Direction	Land Use
South	Pitt Street with residential development beyond.
East	Residential development.
North	Residential development.
West	Field.

- 2.5 No significant contamination risks are identified on or adjacent to the site.

3.0 SITE HISTORY

- 3.1 A review of historical Ordnance Survey maps and information pertinent to the site and within a 250m radius is summarised below:

Potentially Contaminative Historical Land Use		
Map Edition	Site	Surrounding Area
1893	Field.	Pitt Street 0m S. Fields 0m N, E & W. School 0m SE. Residential properties 10m S, 50m SW & 30m SE. Tube works and clay pit 100m SW. Colliery 220m W. Track 80m N.
1906	No significant change.	Old colliery 50m S.
1931	No significant change.	Earthworks 50m SW on former tube works. Allotment Gardens 0m E.
1938	No significant change.	No significant change.
1961	No significant change.	Slag heap 130m SW. Colliery 50m S no longer shown. Earthworks 50m S & SW. Colliery 220m W no longer shown.
1970	No significant change.	Transport depot 20m S. Residential development 0m N.
1976	No significant change.	House 0m SE. Church 0m E. Tip 250m W associated with restoration of former colliery.
1982	No significant change.	No significant change.
1991	No significant change.	No significant change.
1994	No significant change.	No significant change.
2002	No significant change.	No significant change.
2010	No significant change.	No significant change.
2014	No significant change.	No significant change.

- 3.2 Former colliery sites to the south and east of the site, together with a former tube works to the south west appear to have been restored, initially with slag heaps and earthworks to form areas of open space and fields.
- 3.3 There are risks of ground gas associated with the restoration works to the south and west and also risk from coal mining activities which should be assessed as part of any future ground investigation works.
- 3.4 No other significant risks are identified at or near to the site from the historical maps.

4.0 ENVIRONMENTAL SETTING

Ground Conditions

- 4.1 The British Geological Survey (BGS) indicates that the site is underlain by the following geological sequence:

Geological Unit	Type	Description	Aquifer Classification
Drift	None Present.	Not Applicable.	Not Applicable.
Solid	Pennine Middle Coal Measures.	Sandstone and Mudstone.	Secondary A.
	Acton Rock	Sandstone.	

- 4.2 Made Ground is identified 10m south and 300m west of the site associated with restoration of former collieries, as identified from historical maps.
- 4.3 There are no landslips shown near to the site.
- 4.4 Estimated records of background soil chemistry for the site show no exceedance of residential GAC values.
- 4.5 BGS records near to the site show Coal Measures.

Groundwater

- 4.6 Published permeability of the solid geology is high to low associated with fracture flow.
- 4.7 The Ground Sure Report shows that the site is not located within a Source Protection Zone.
- 4.8 There are no licensed groundwater abstractions within 1000m of the site.

Coal Mining

- 4.9 The site is identified as being within a coal mining area and a Coal Authority Report has been obtained, a copy of which is included in Appendix B.
- 4.10 The Coal Authority Report confirms that the site is within an area underlain by 11 coal seams at depths of between 160m and 650m below ground level (bgl) and that any movement should have ceased by now. The site is not identified as being within an area of shallow mine workings. No shafts are identified on or adjacent to the site.

- 4.11 Given the depth to coal seams it is considered that the cover is greater than 10 times seam thickness and so no significant risk from deep coal mining is identified. This is consistent with the conclusion of the Coal Authority Report.

Non Coal Mining and Cavities

- 4.12 A fireclay pit is identified on site. No further information is available but it is likely that this has been infilled.

Ground Workings

- 4.13 There are no active ground workings within 250m of the site.
- 4.14 Historic ground workings identified within 250m of the site associated with historic collieries sites and their restoration.
- 4.15 No new risks are identified from the ground workings.

Hydrology

- 4.16 There are no water courses on site.
- 4.17 There are no surface water courses within 250m of the site.
- 4.18 There are no surface water abstractions within 500m of the site.

Radon Risk Potential

- 4.19 The Groundsure GeoInsight Report indicates that the site is not located within an area where Radon protection measures are required.

Natural Hazards Finding

- 4.20 BGS information presented within the Groundsure Geo Insight report identifies the following ground conditions:

Hazard	Risk Designation (Groundsure)
Mining	No risk identified.
Collapsible Ground	Very Low.
Compressible Ground	Negligible/Very Low.
Ground Dissolution	Negligible.
Landslide	Very Low.
Running Sand	Negligible/Very Low.
Swelling / Shrinking Clay	Negligible/Very Low.

4.21 No significant ground risks are identified.

Sensitive Land Uses

4.22 The site is currently used for fields which are considered to have a high sensitivity.

4.23 Historic England identifies no historical features on the site.

Environmental Sensitivity

4.24 Overall the site is currently considered to be of **Low** sensitivity due to the following:

- The site is underlain by a Secondary A Aquifer;
- There are no abstractions nearby;
- There are no water courses near to the site; and
- Site is not within a Source Protection Zone.

4.25 The sensitivity for end users will be high for proposed residential use.

Industrial Land Uses

4.26 Industrial land uses within 250m of the site are limited to light industrial uses and sub stations. None of the features are close enough to the site to pose a significant risk.

4.27 The Groundsure EnviroInsight Report shows no fuel stations within 250m of the site.

- 4.28 There are no oil or gas pipelines within 250m of the site.
- 4.29 No new significant risks are identified from the register of industrial land uses.

5.0 CONSULTATIONS

Regulatory Database

- 5.1 The following information has been obtained from a commercially available environmental database.

Environmental Permits, Incidents and Registers	0 -250m	250-500m	Details
Site determined as contaminated land	0	0	Not applicable
Authorised industrial processes	0	6	Sewage treatment works 472m SE and not considered a risk.
Registered radioactive substances	0	0	Not applicable.
Enforcements, prohibitions or prosecutions	0	0	Not applicable.
Pollution Incidents	4	1	Nearest is Category 3 (minor) impact to land 321m west and not considered a significant risk.
Consents issued under the Planning (Hazardous Substances) Act 1990	0	0	Not applicable.
Control of Major Accident Hazard (COMAH)/ Notification of Installations Handling Hazardous Substances (NIHHS) sites	0	0	Not applicable.
Records of Licensed Discharge Consents	0	24	Sewage discharges, the nearest being 272m S and not considered a risk.

- 5.2 No significant risks are identified from the regulatory data base.

Landfill Sites and Waste Treatment Sites

- 5.3 There are no current or historic landfills identified 250m of the site.
- 5.4 Waste treatment, transfer and management sites are identified within 250m site, the nearest being 60m south east for a scrap yard. Given the distance this is not considered a significant risk. No other risks are identified.
- 5.5 No risks are identified from waste activities.

6.0 PRELIMINARY CONCEPTUAL MODEL

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
Human Health					
Asbestos, hydrocarbons and metals.	On-site sources.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal construction PPE will address risk under CDM.
			Site Users	Negligible.	Significant contamination unlikely and can be dealt with as part of site development.
Asbestos, hydrocarbons and metals.	Unforeseen Contamination.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal construction PPE will address risk under CDM.
			Site users.	Negligible.	Significant contamination unlikely.
Hydrocarbon and metals.	Migration from off-site sources.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	No significant source identified.
			Site users.		
Ground Gas.	Historic Landfills.	Inhalation & Explosive.	Construction Workers.	Dismissed.	No source identified.
			Site users.		
	Potential Made Ground.		Construction Workers.	Low.	Potential organic matter present in restoration works identified 10m south of the site. Given age the risk of significant ground gas is considered low.
			Site users.		
Groundwater					
Hydrocarbon and metals.	Potential spillage on site.	Vertical Migration.	Groundwater.	Dismissed.	No significant source identified.
Surface Water					
Hydrocarbon and metals.	Potential spillage on site.	Horizontal Migration.	River Network.	Dismissed.	No receptor identified.
Environmental Receptors					
On site contaminants		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No sensitive ecology designation.
		Direct.	Archaeology.	Dismissed.	None present.
		Direct.	Geology.	Dismissed.	None present.
		Phytotoxic.	Woodland.	Dismissed.	No receptor.
		Phytotoxic.	Crops.	Dismissed.	No receptor.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	No source identified.
Building Services					
On site contaminants		Direct.	Historic Buildings.	Dismissed.	No receptors
		Direct.	Proposed Buildings.	Dismissed.	No source identified.
		Permeate into pipework.	Water Pipes.	Dismissed.	No source identified.

6.1 Low risk of ground gas is identified associated with off-site restoration works which is discussed in Section 7. No other significant risks are identified.

7.0 DISCUSSIONS AND RECOMMENDATIONS

Proposed Development

- 7.1 The proposed development is for redevelopment of the site for residential houses with associated infrastructure.

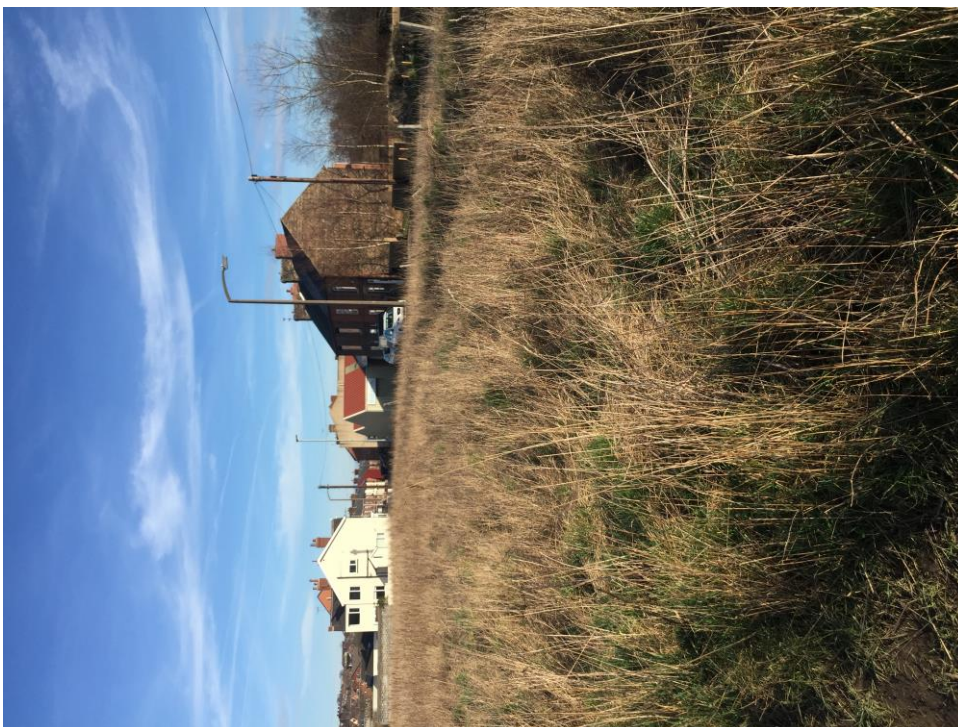
Discussion

- 7.2 There is a low risk of ground gas associated with off-site restoration of former colliery sites. Gas generation potential decreases over time and as such the risk is minimal but cannot be dismissed.
- 7.3 It is recommended that an investigation includes ground gas monitoring and if ground gas is detected it is likely that a gas membrane on the ground floor slab in place a DPM and with provision of passive underfloor venting should be sufficient.
- 7.4 A potential fire clay pit is identified on site which should be further investigated.
- 7.5 Conventional strip foundations should be suitable at the site for 2 storey structures. Should deeper Made Ground be identified associated with infilled fire clay pits deeper foundations or localised use of vibro granular columns may be required.
- 7.6 Based on the ground conditions soakaway drainage is unlikely to be feasible.
- 7.7 If unforeseen contamination is encountered during construction works such as localised spillage an Environmental Consultant will be available on a 'call out' basis to undertake an assessment of risk. If 'unforeseen contamination' is encountered the discover strategy will be to remove the source as it is likely to be very limited in extent and the Local Planning Authority advised.

Recommendations

- 7.8 It is recommended that a ground investigation is undertaken together with ground gas monitoring.

APPENDIX A – PHOTOGRAPHS



APPENDIX B – DESK STUDY INFORMATION

Site Details:

Client Ref: EMS_527470_709397
Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2.500



Surveyed 1893
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Edition 1893
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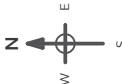
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Grid Ref: 440537, 404162

Map Name: County Series
Map date: 1906
Scale: 1:2,500
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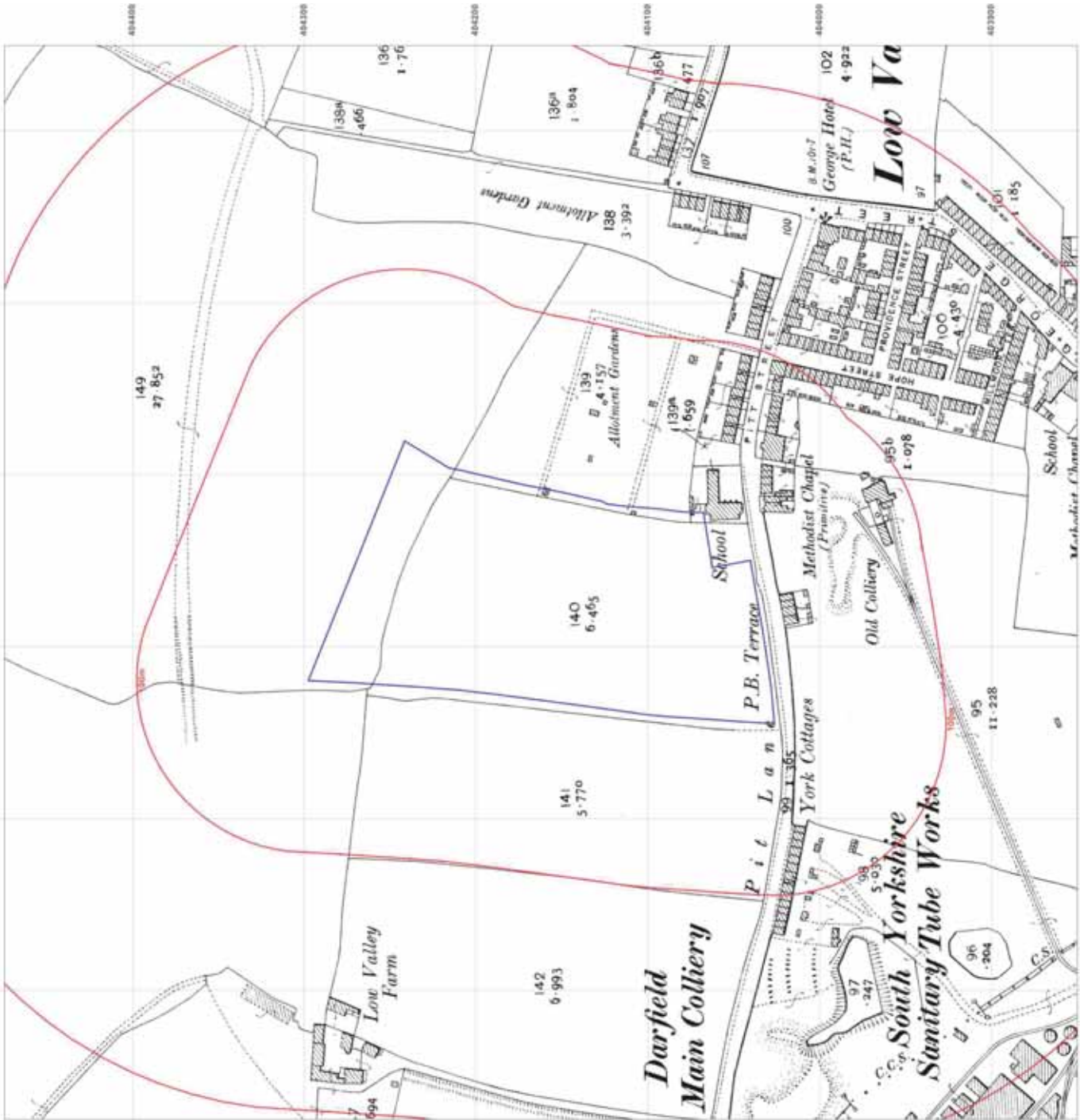


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100m

Site Details:

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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1931

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:	Client Ref: EMS_527470_709397 Report Ref: EMS-527470_709397 Grid Ref: 440537, 404162
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Map Name:	National Grid
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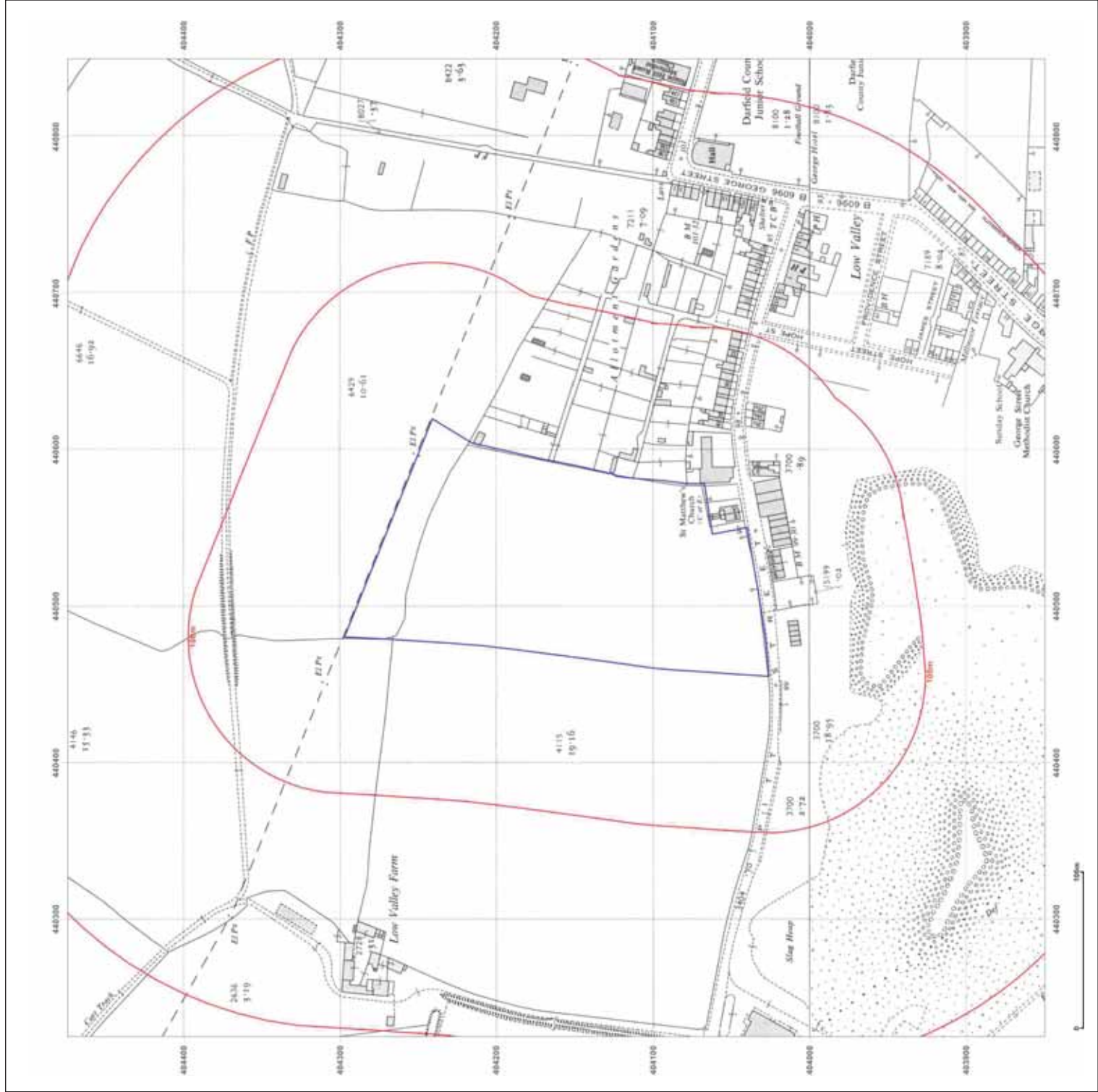
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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1970

Scale: 1:2,500

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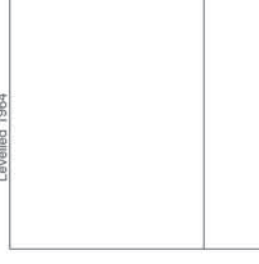
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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1982

Scale: 1:1,250

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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1991-1993

Scale: 1:1,250

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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1993-1994

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

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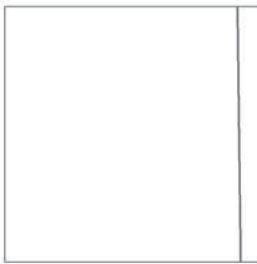
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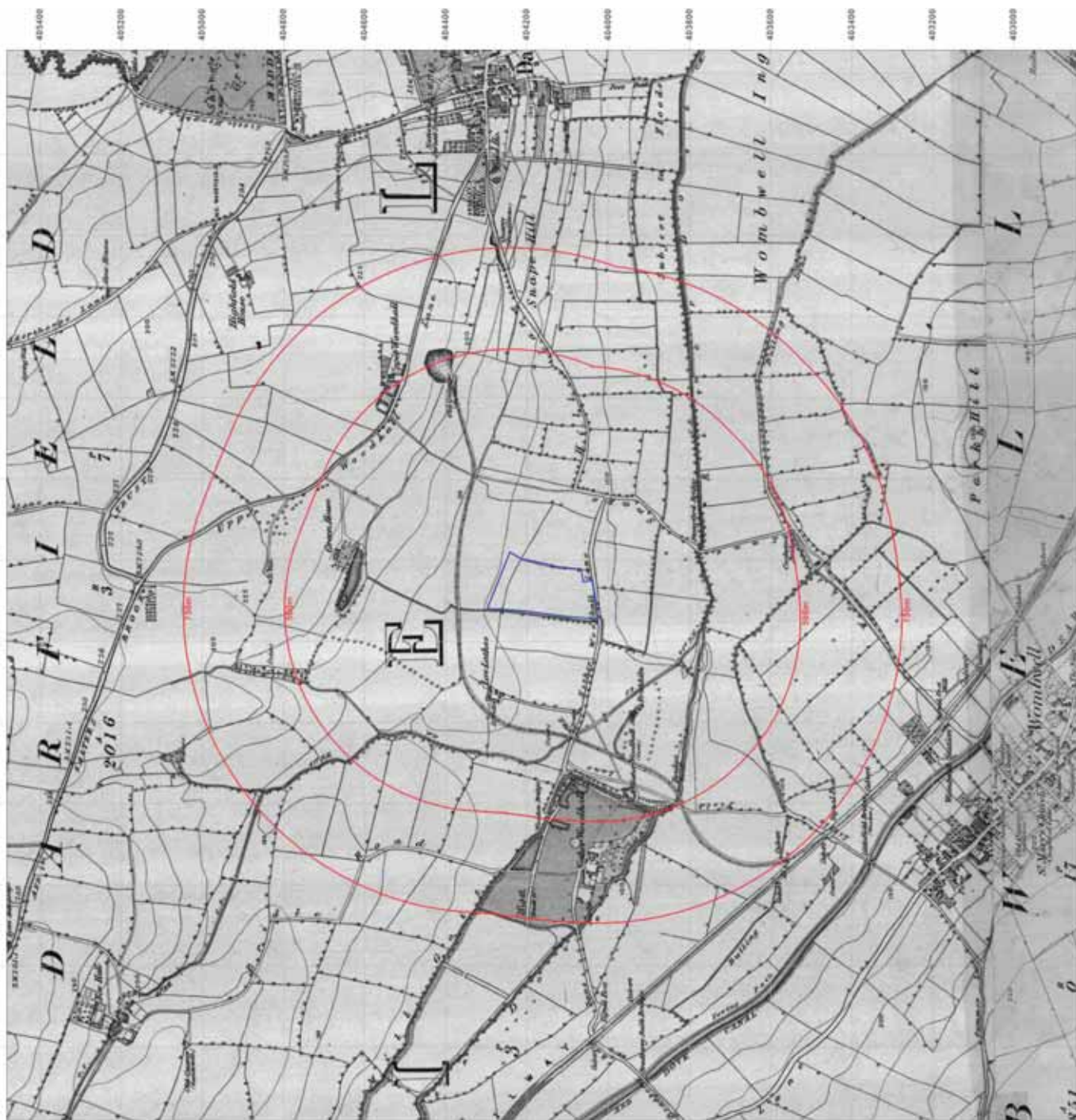
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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1894

Scale: 1:10,560

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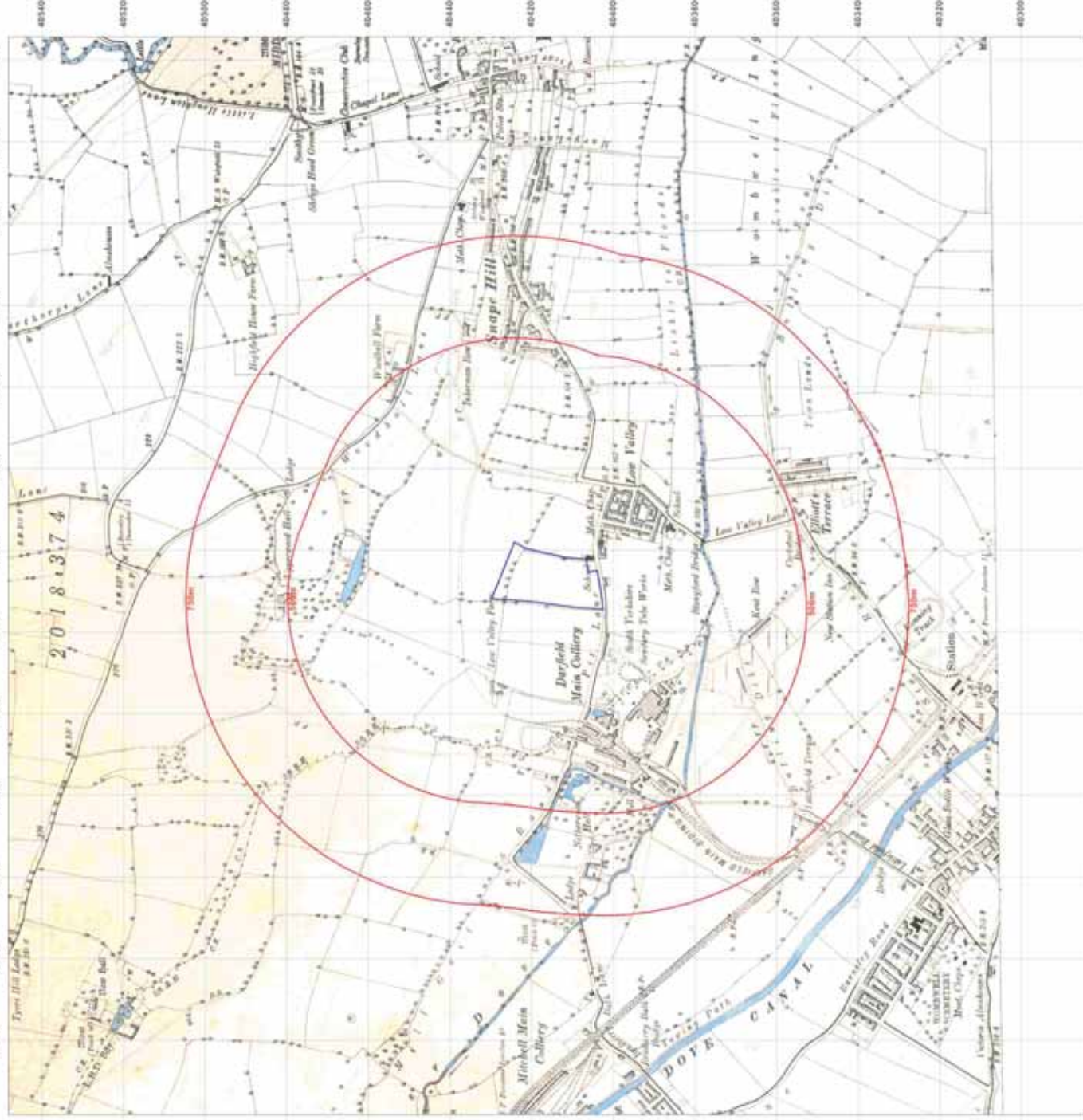
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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1901-1904

Scale: 1:10,560

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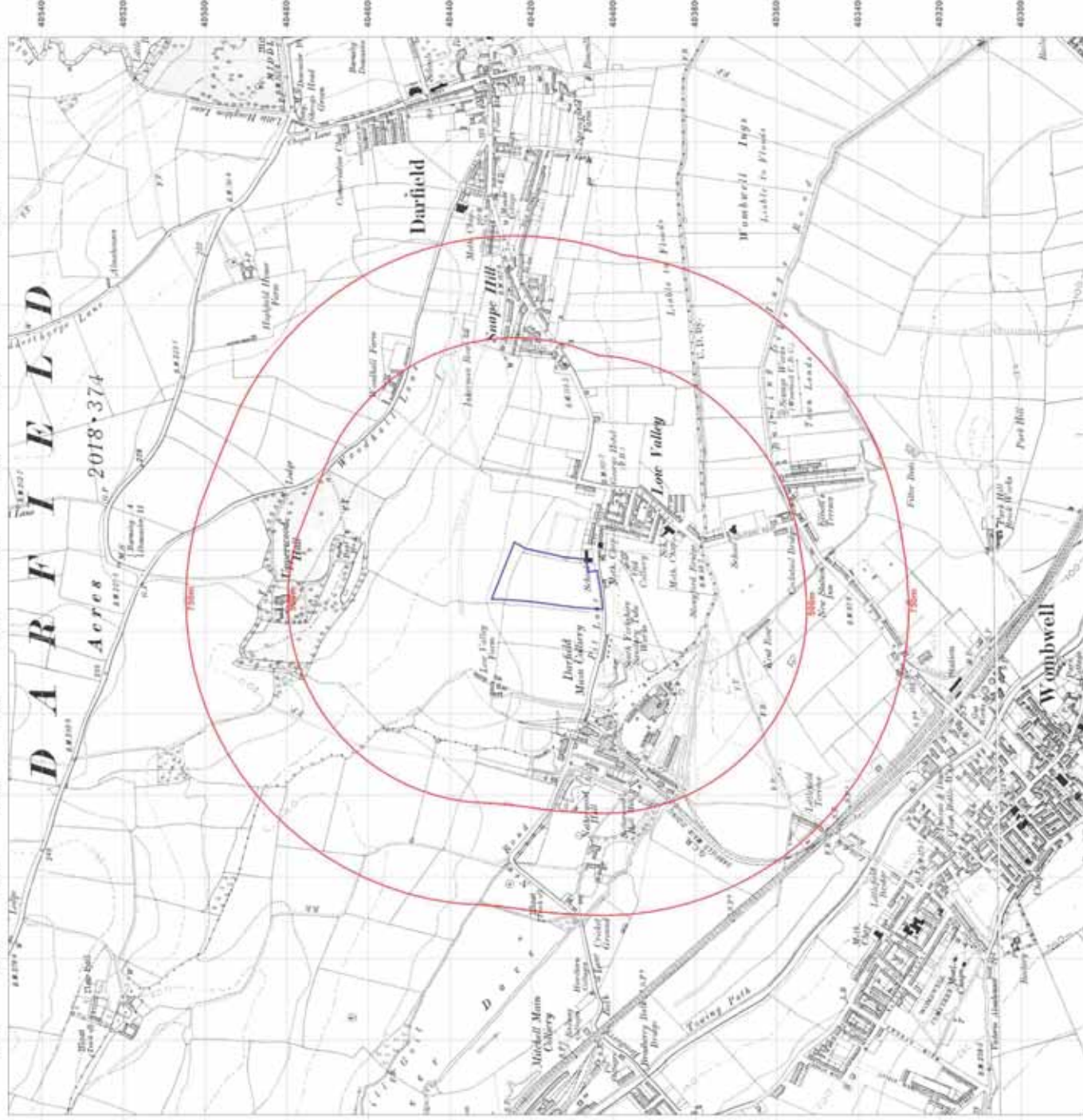
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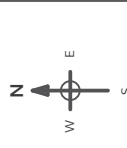
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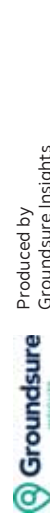
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Surveyed 1851	Surveyed 1850
Revised 1929	Revised 1929
Edition 1931	Edition 1929
Copyright N/A	Copyright N/A
Levelled N/A	Levelled 1915



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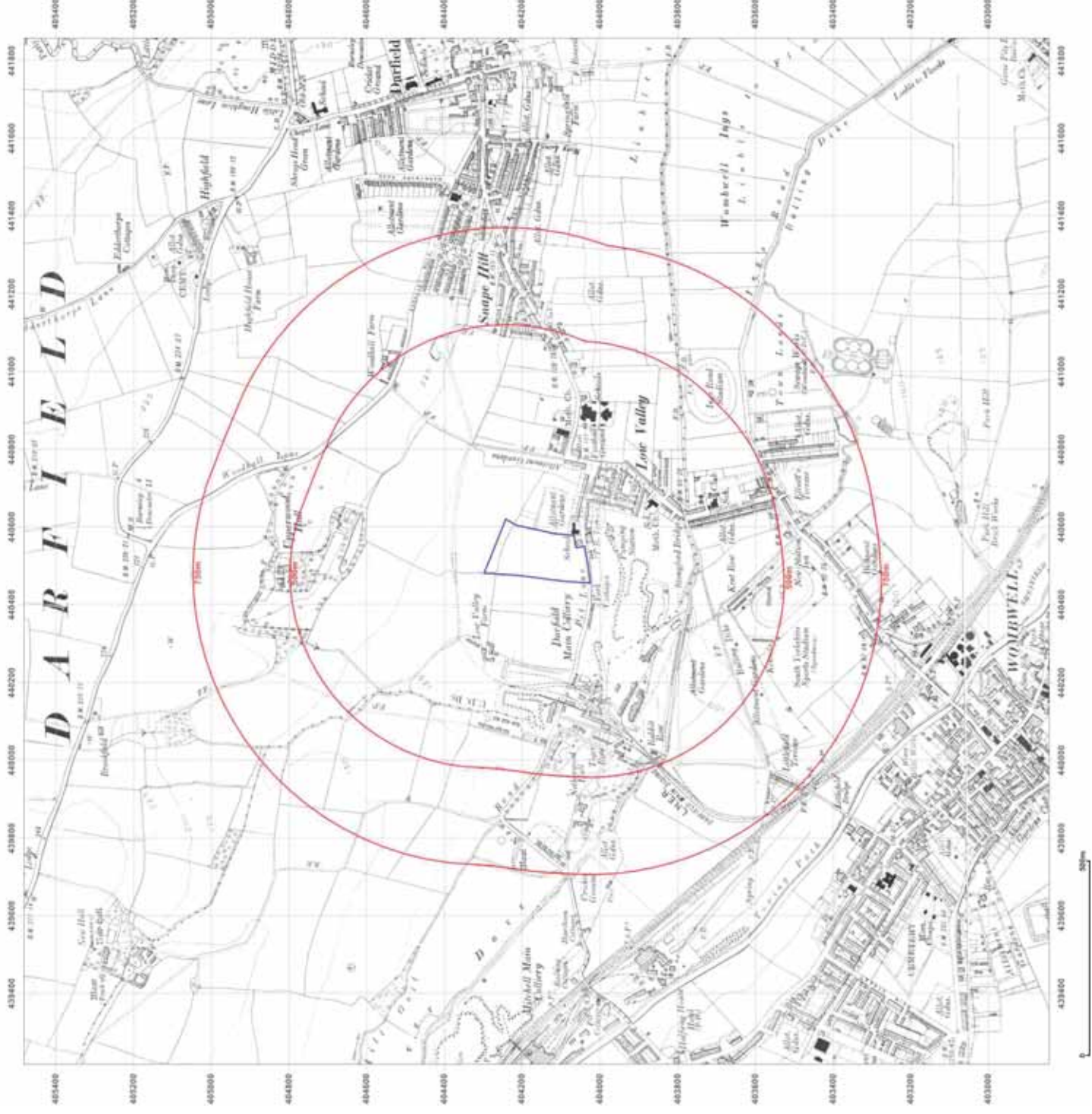
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Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
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Surveyed 1850
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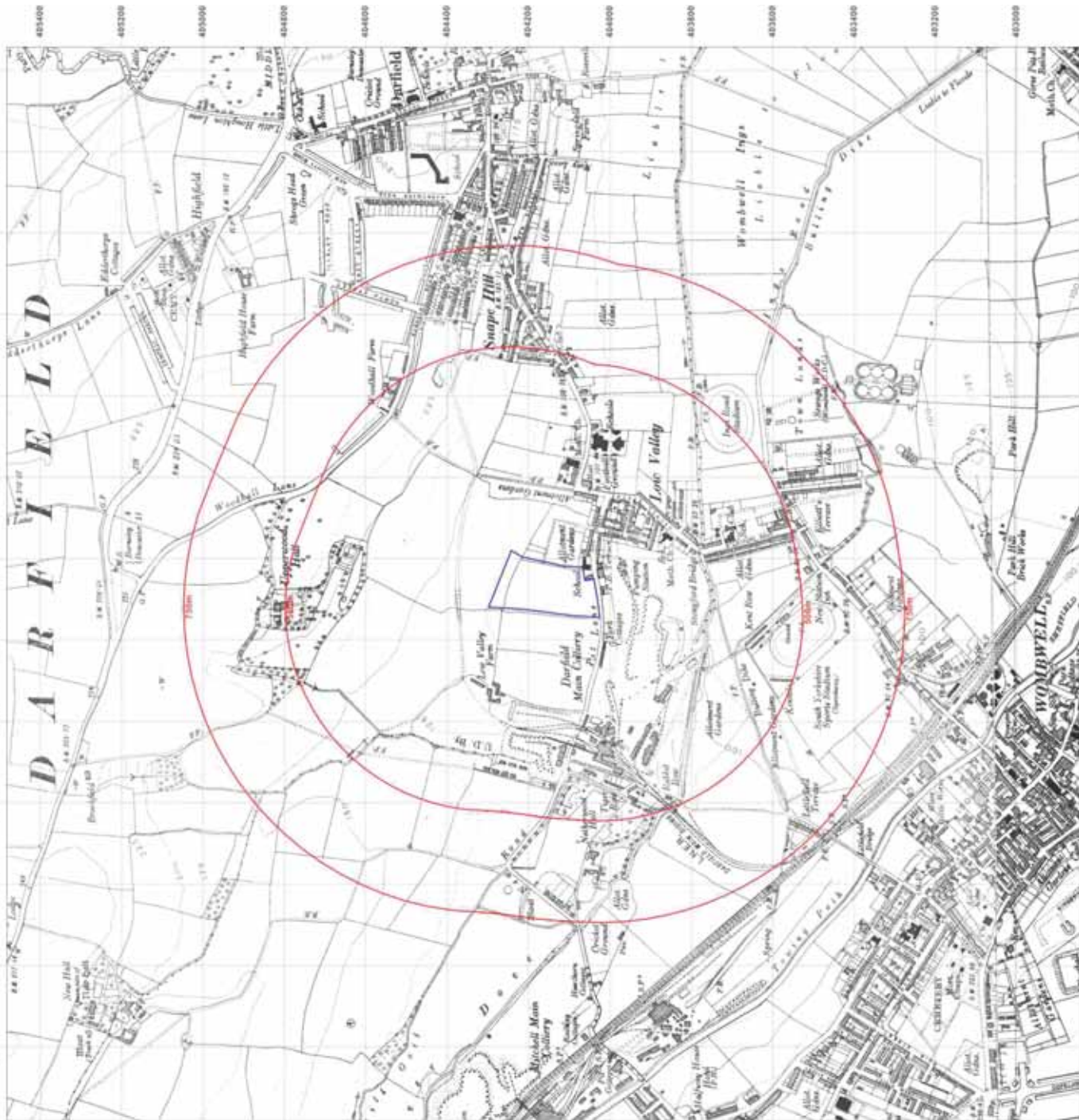


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Grid Ref: 440537, 404162

Map Name: County Series

Map date: 1948

Scale: 1:10,560

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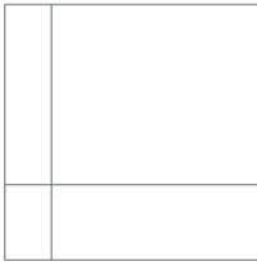
Site Details:

Client Ref: EMS-527470_709397
Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: Provisional
Map date: 1951-1955
Scale: 1:10,560
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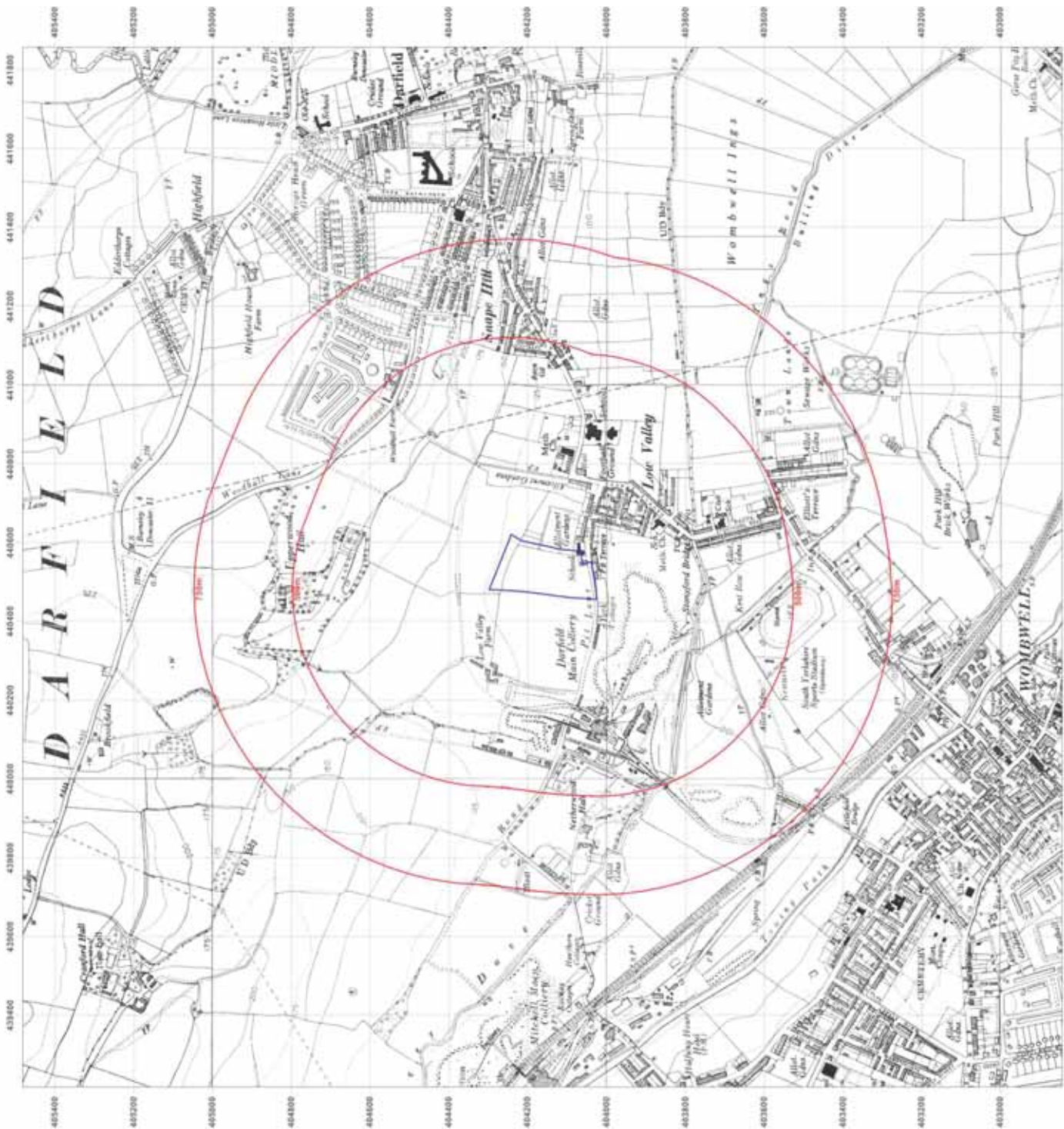


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Map Name: Provisional

Map date: 1966-1967

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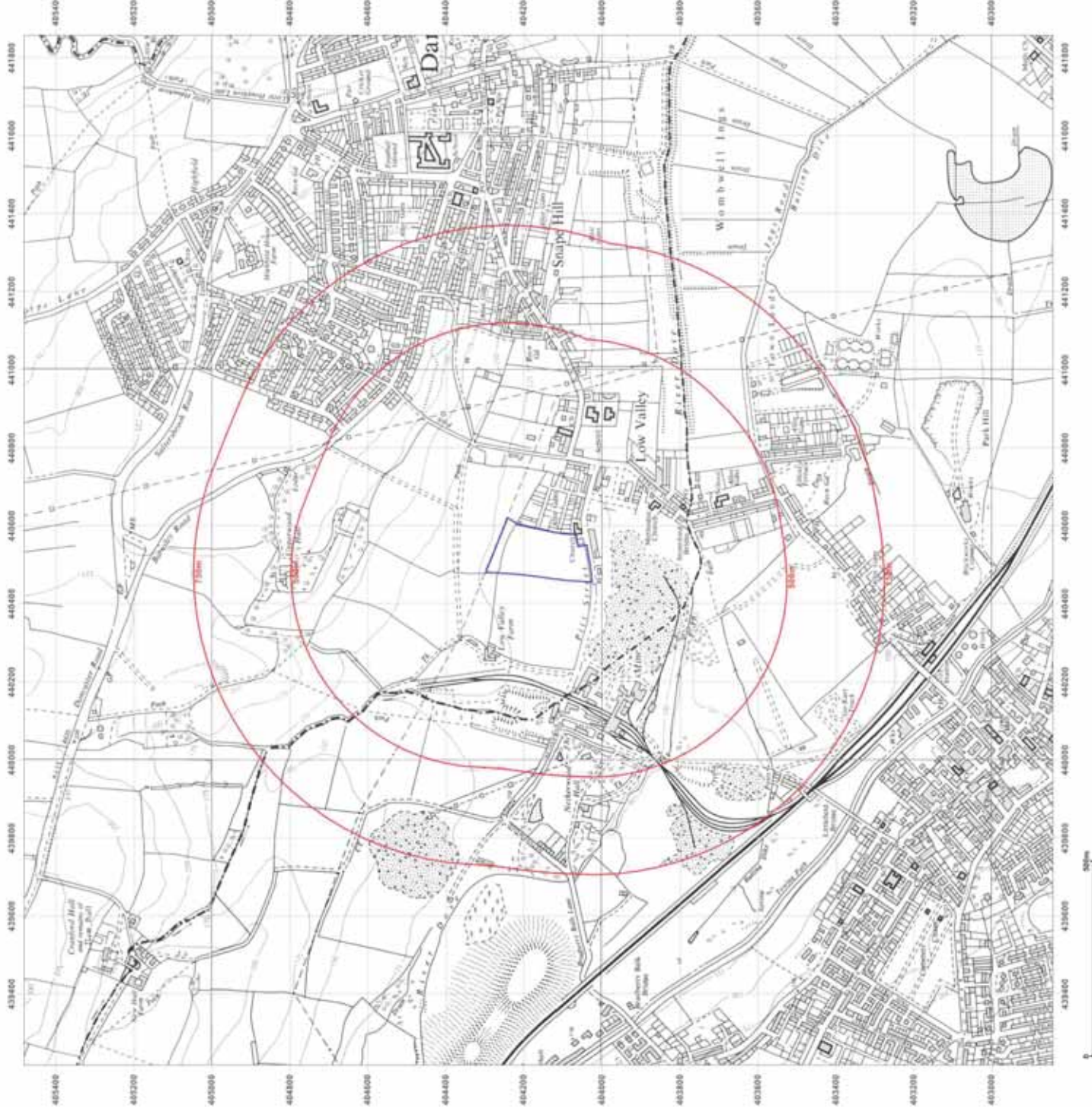


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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1974-1977

Scale: 1:10,000

Printed at: 1:10,000



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Edition N/A
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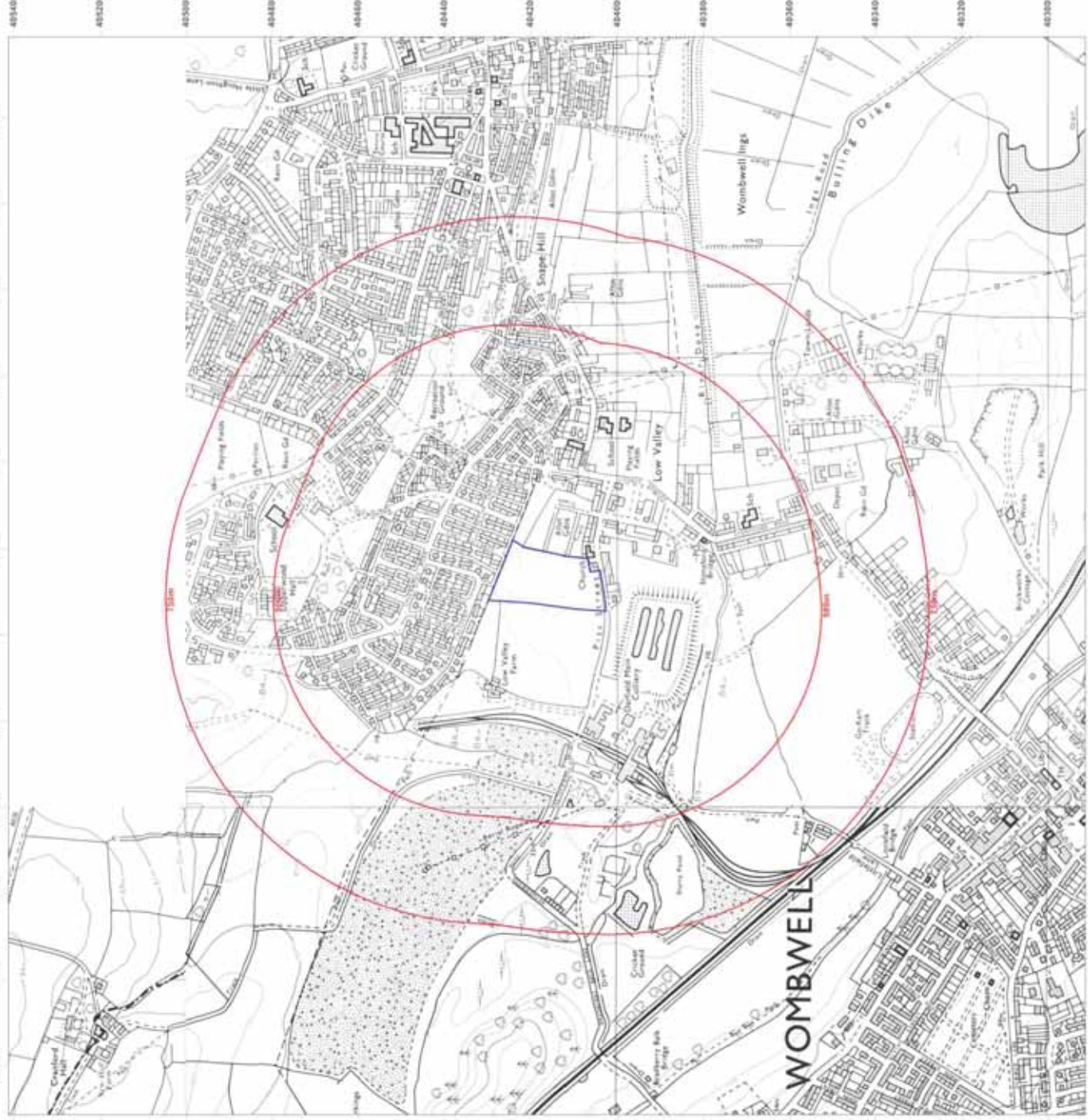


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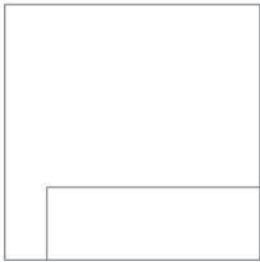
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Site Details:

Client Ref: EMS_527470_709397
Report Ref: EMS-527470_709397
Grid Ref: 440537, 404162

Map Name: National Grid
Map date: 1987
Scale: 1:10,000
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Surveyed 1986
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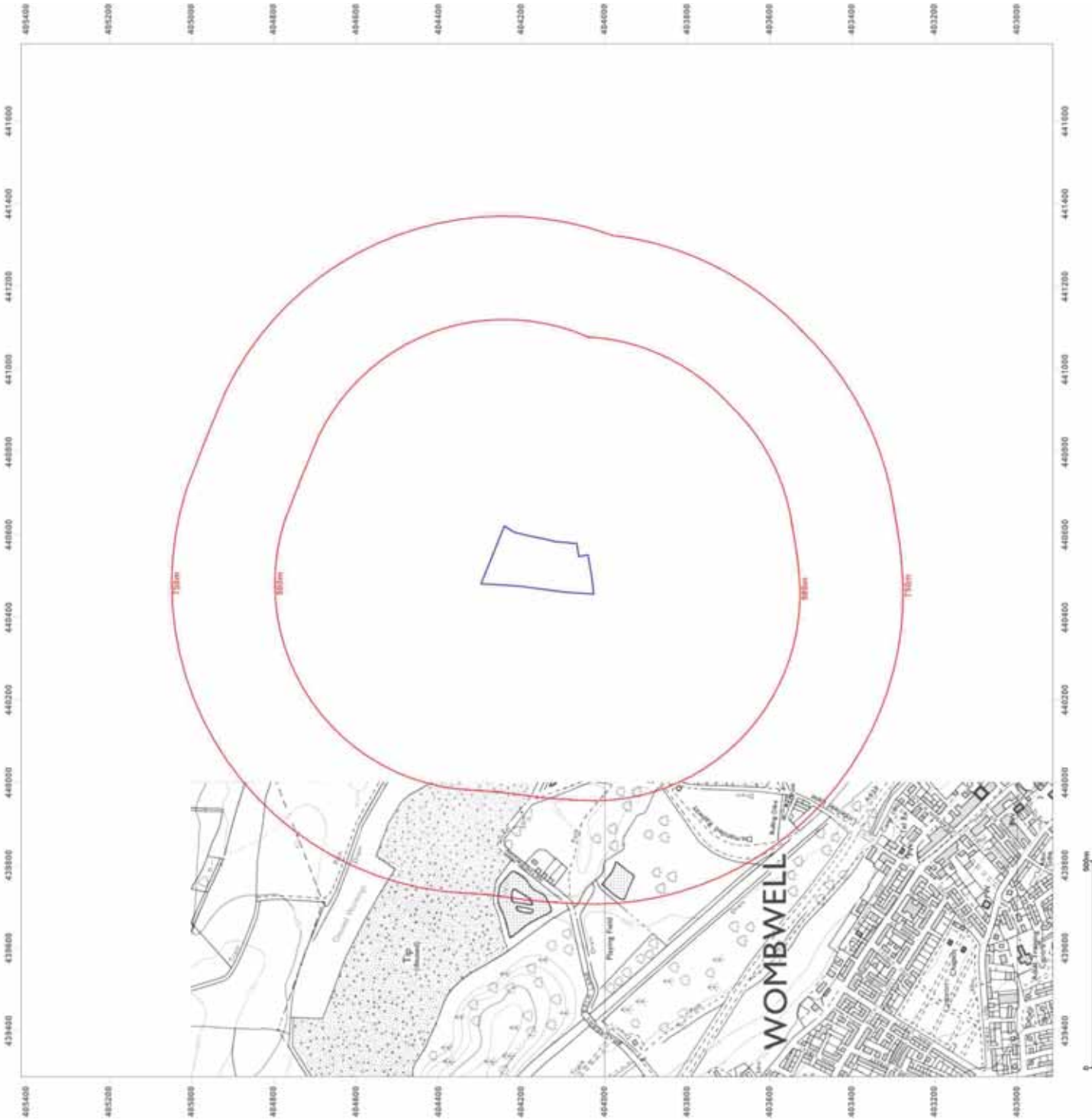


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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 1987-1992

Scale: 1:10,000

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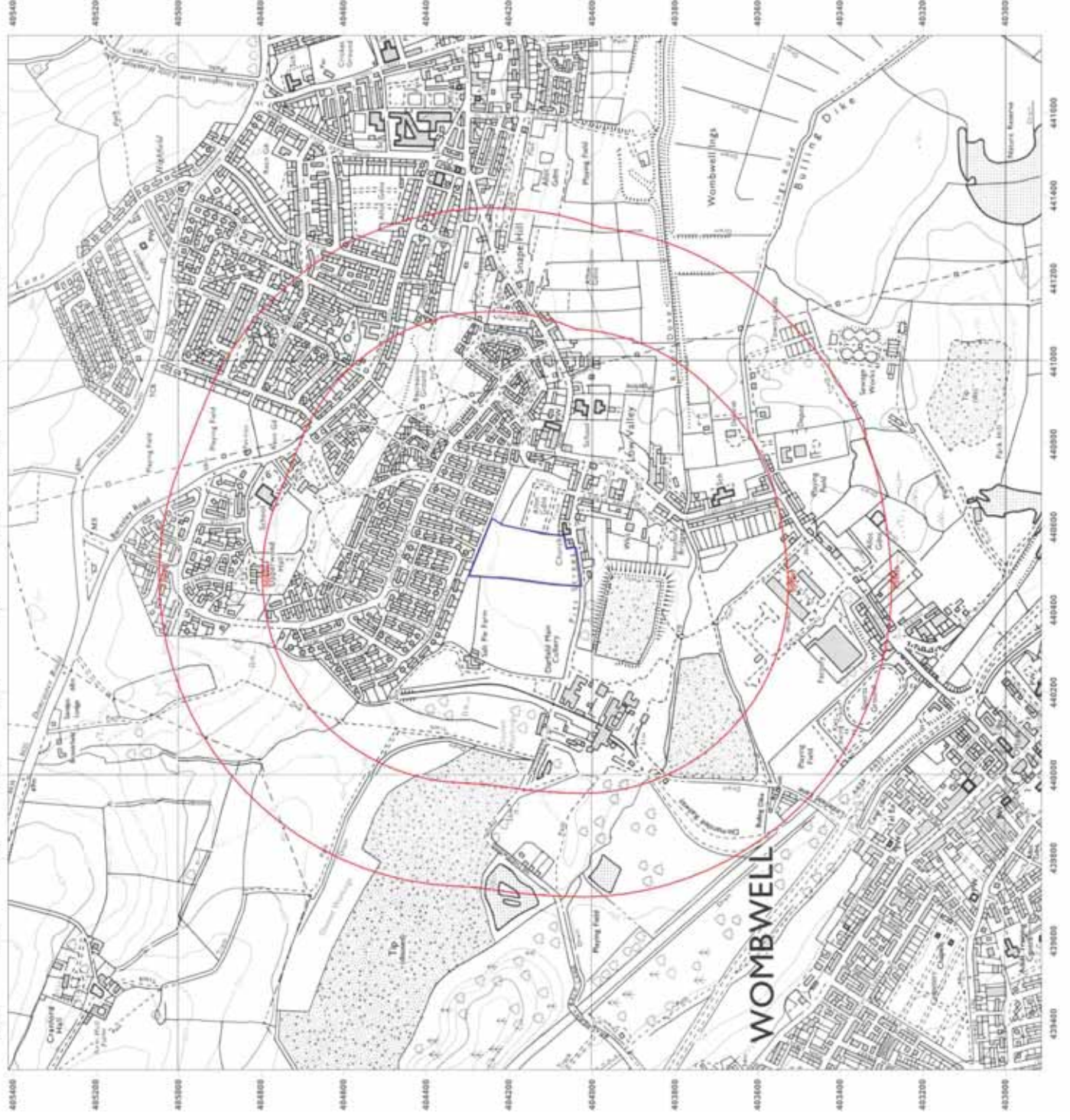


Surveyed 1981
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Site Details:

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Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

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2002



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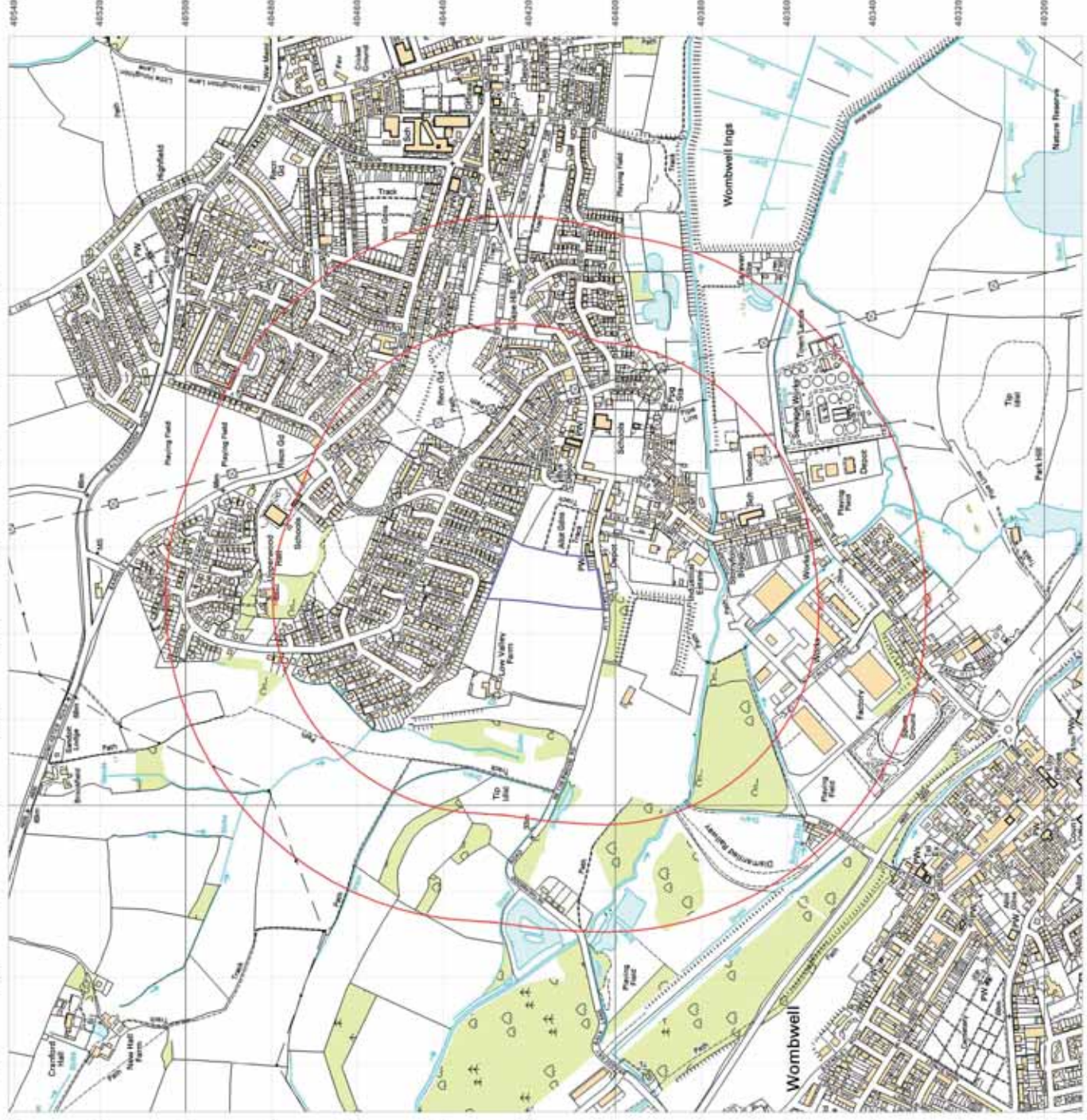


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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

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2010



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Site Details:

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Grid Ref: 440537, 404162

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



2014



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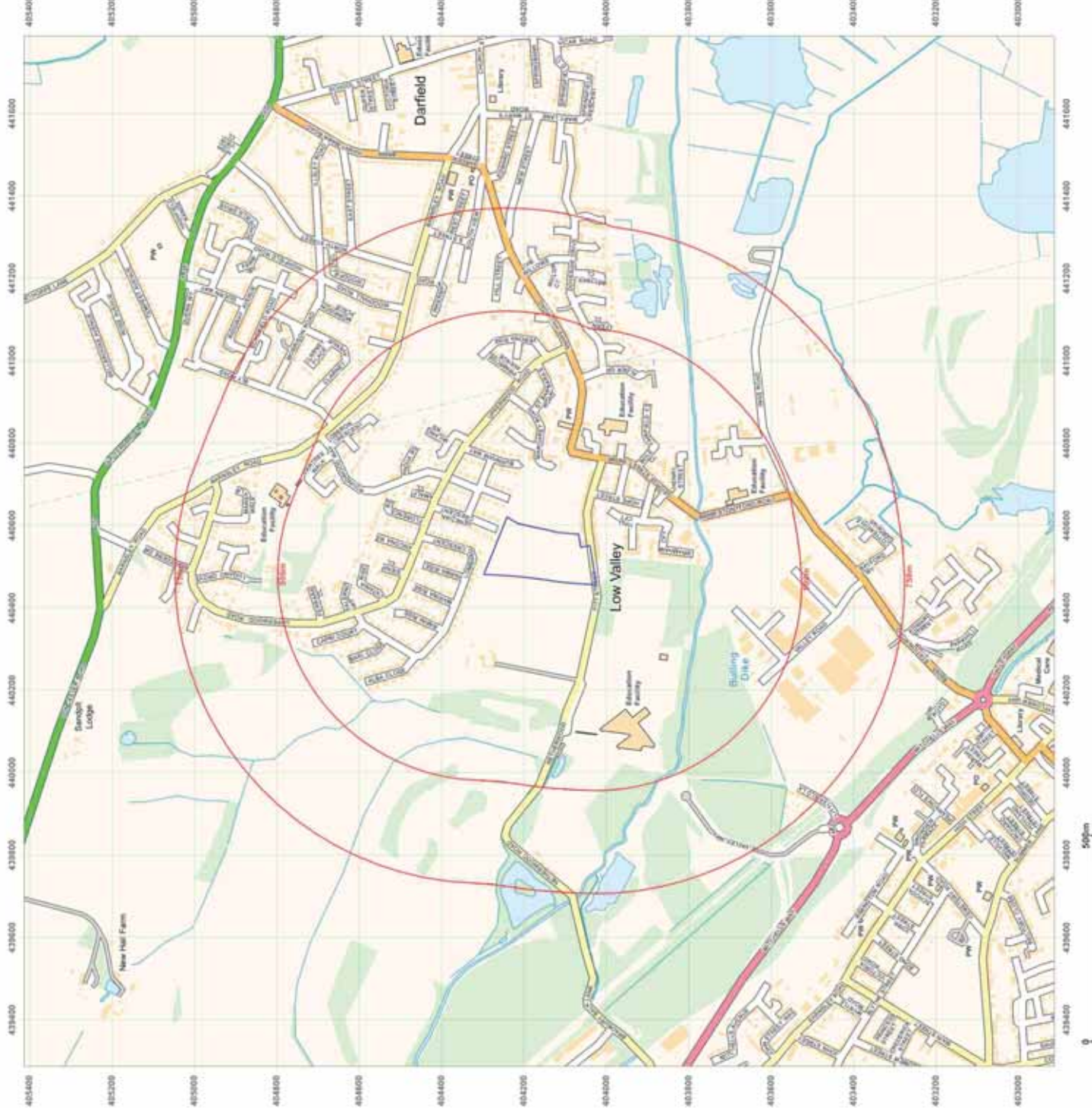
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The Coal
Authority

CON29M Non-Residential Mining Report

PITT STREET
DARFIELD
BARNSELEY
S73 8AR

Date of enquiry:	13 March 2019
Date enquiry received:	13 March 2019
Issue date:	13 March 2019
Our reference:	51002048284001
Your reference:	CRM.1122.003



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

ENZYGO LTD

Enquiry address

PITT STREET
DARFIELD
BARNESLEY
S73 8AR



Approximate position of property

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	Yes
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 11 seams of coal at 160m to 650m depth, and last worked in 1988.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is in an area where notices to withdraw support were given in 1946, 1978 and 1983.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. This report is prepared in accordance with the Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

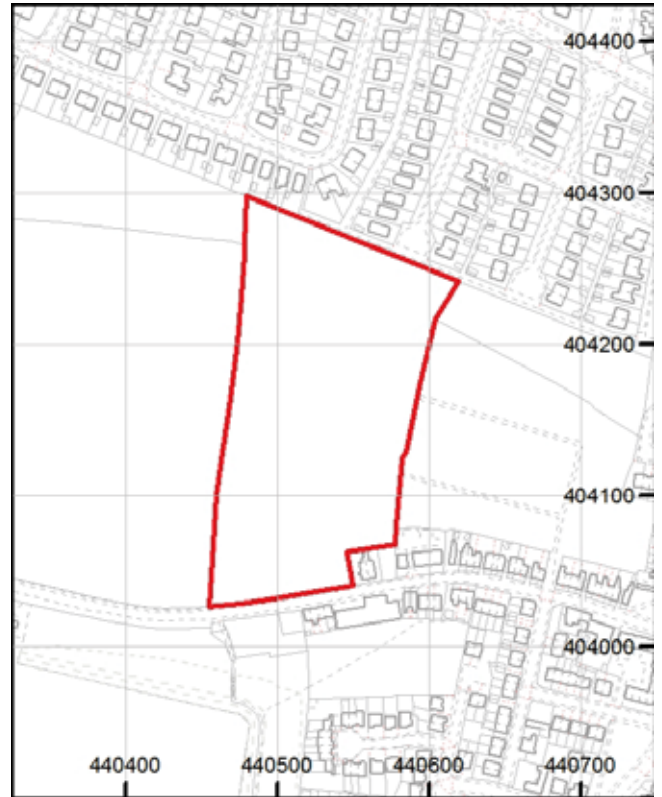
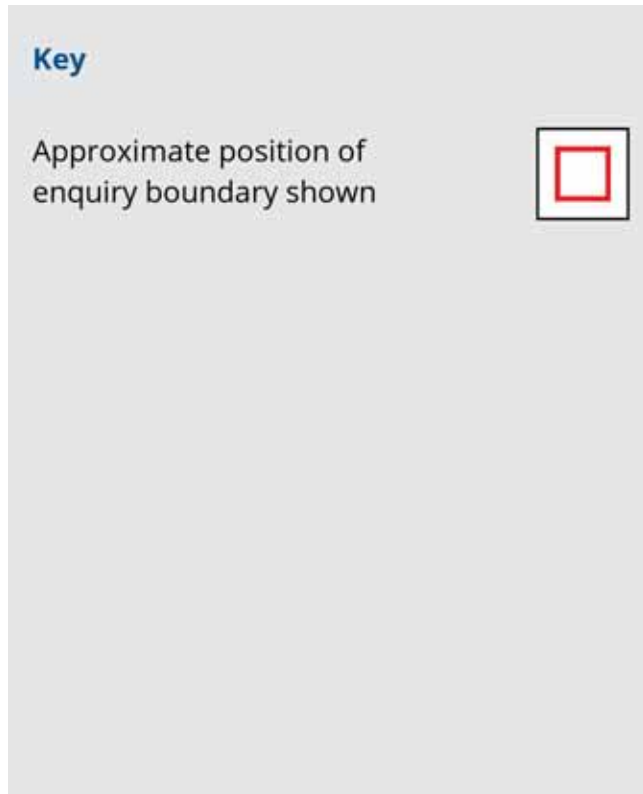
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Enquiry boundary



How to contact us

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+44 (0)1623 637 000 (International)

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NG18 4RG

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Kshire Resional Laboratory

Report No: 17313

Seam Studies Report No:- 6073

Nat.Grid Ref: E 440211 N 404094

Barnsley

Date Received: 14-JUN-85

HOUGHTON MAIN, SILKSTONE LINK ROAD-1995m INBYE

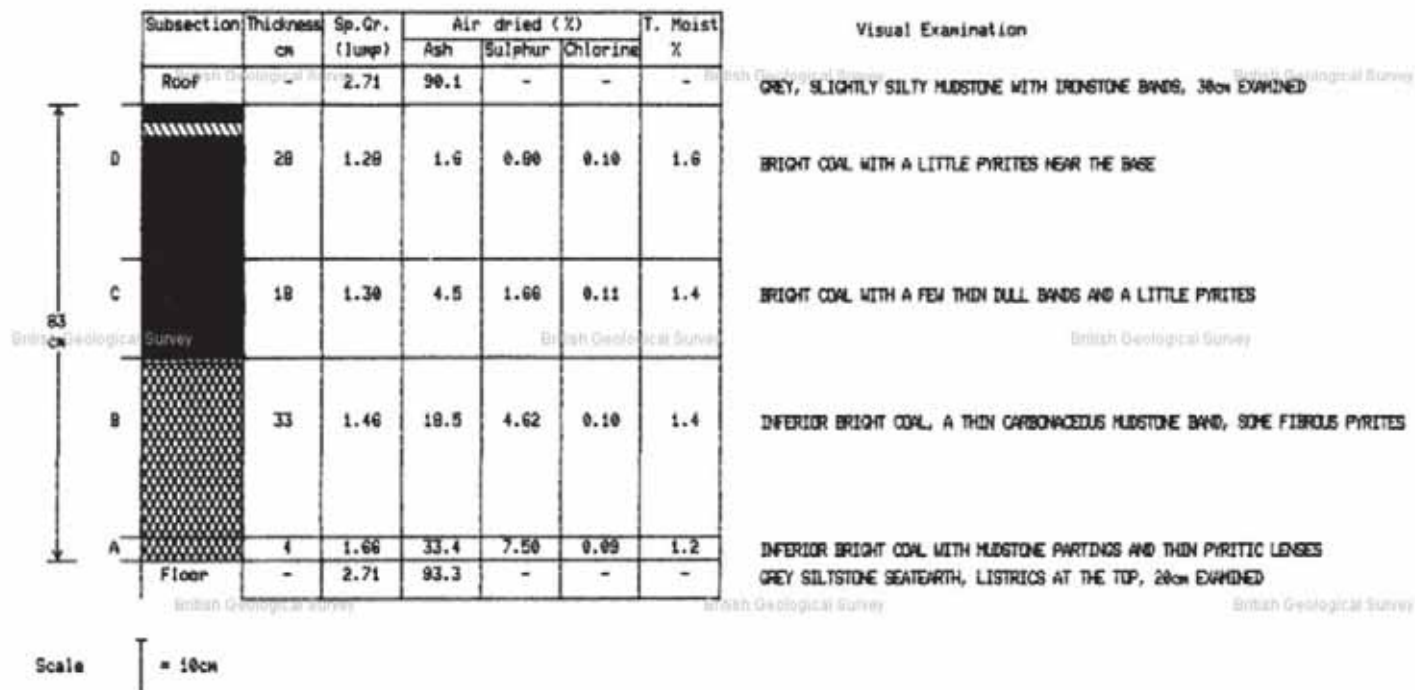
SE40SW/8K

Depth below O.D. 607.200m

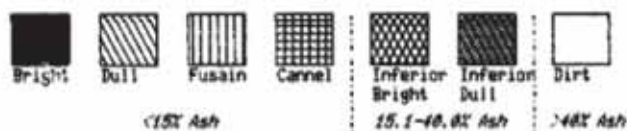
SILKSTONE

08.170,760

Cover 637.400m



A-D	83	1.37	11.2	2.98	0.10	1.5	Whole seam
C,D	46	1.29	2.7	1.14	0.10	1.5	Clean coal



Washability of a Sample of the Whole Seam, A-D, 83cm thick						
	Floats at		Middlings	Sinks at		Whole
Sp. Gr.	1.4	1.6	1.4-1.6	1.4	1.6	-
Wt. %	77.6	89.7	12.1	22.4	10.3	100.0
Ash %	3.0	5.3	20.4	34.8	51.8	10.1
Sulphur	1.6	2.2	6.2	7.1	8.1	2.8



EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Report Reference: EMS-527470_709398

Your Reference: EMS_527470_709398

Report Date 15 Feb 2019

Report Delivery Email - pdf
Method:

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Address: ,

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

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

Yours faithfully,

emapsite customer services team

Enc.
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Date: 15 Feb 2019
Reference: EMS-527470_709398
Client: EmapSite

NW N NE



SW S SE

Aerial Photograph Capture date: 07-Jun-2013
Grid Reference: 440526,404159
Site Size: 2.8917ha

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Overview of Findings

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

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

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

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

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

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	1	11	29	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	2	4	0	2
4.3 Current Ground Workings	0	0	1	6	2

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	2	4	0	2
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	1	0	0	2	7
5.5 Non-Coal Mining Cavities	1	0	0	1	0
5.5 Natural Cavities	0	0	0	0	0

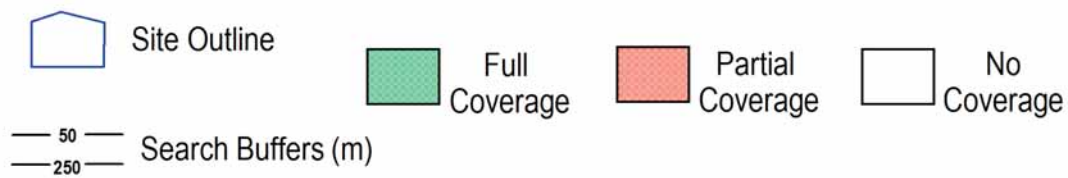
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Very Low				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	1	2		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	4	4	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	16	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	455.0	Some deposits are mapped	Full	Full	Some deposits are mapped
3	703.0	Some deposits are mapped	Full	Full	No coverage
4	851.0	Some deposits are mapped	Full	Full	No coverage

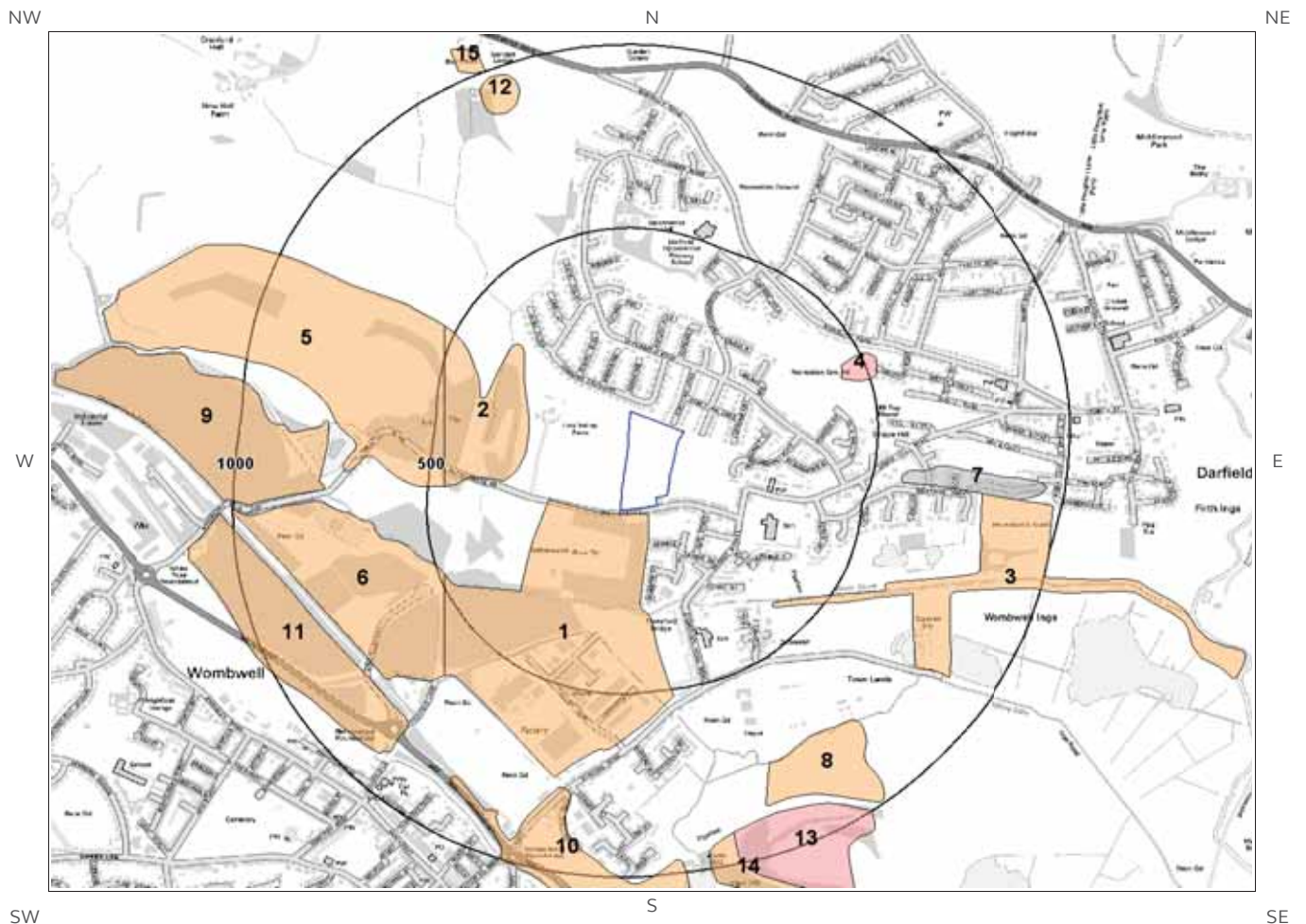
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

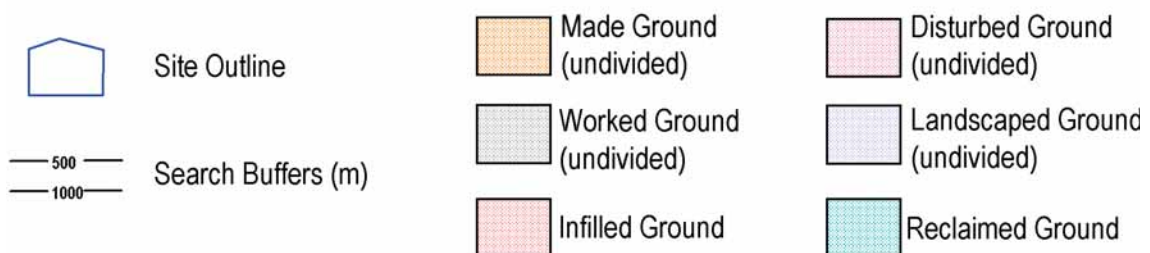
1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

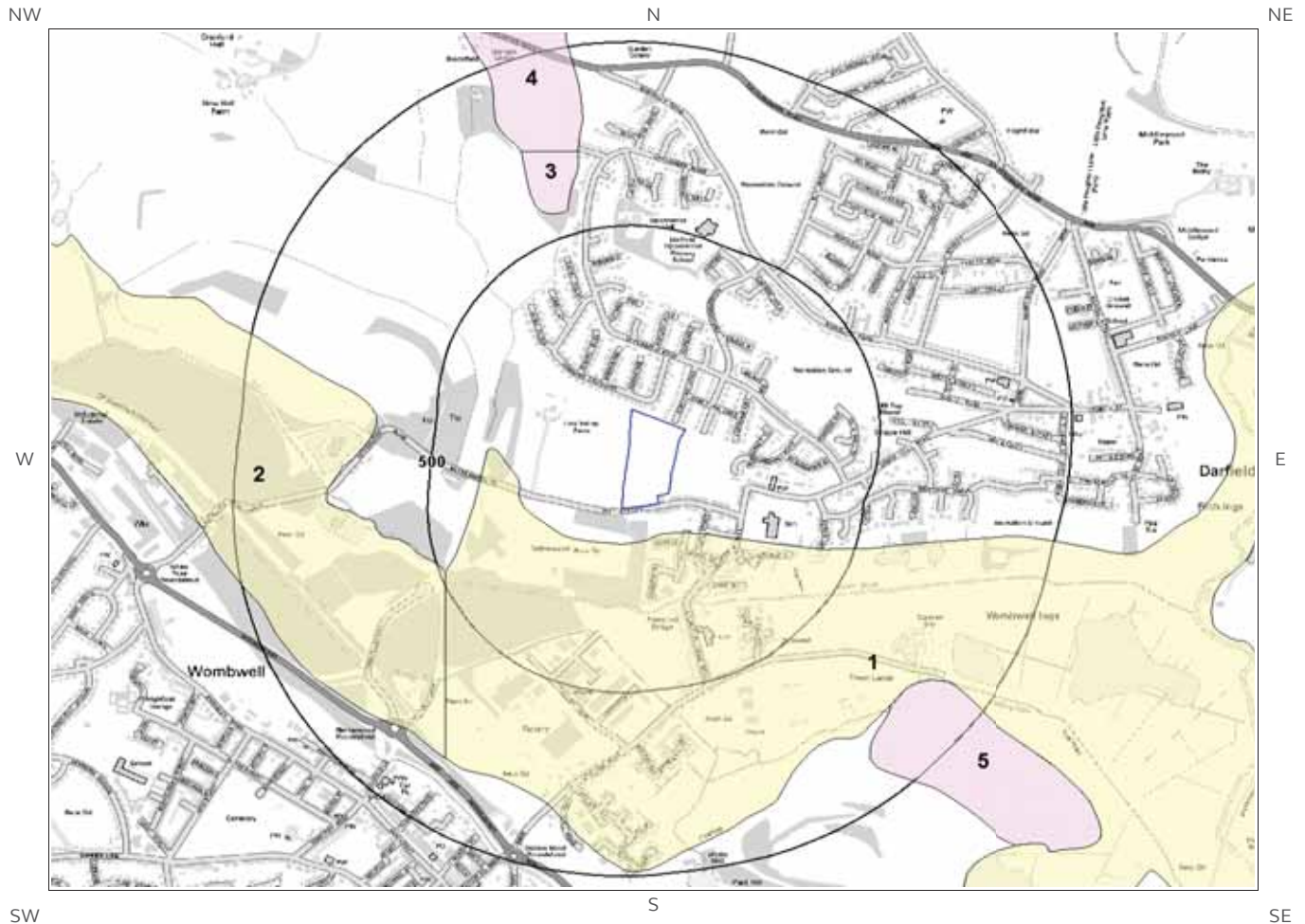
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	8.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	258.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	398.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	430.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	458.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	486.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	82.0	S	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt
2	486.0	W	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

1.2.2 Landslip

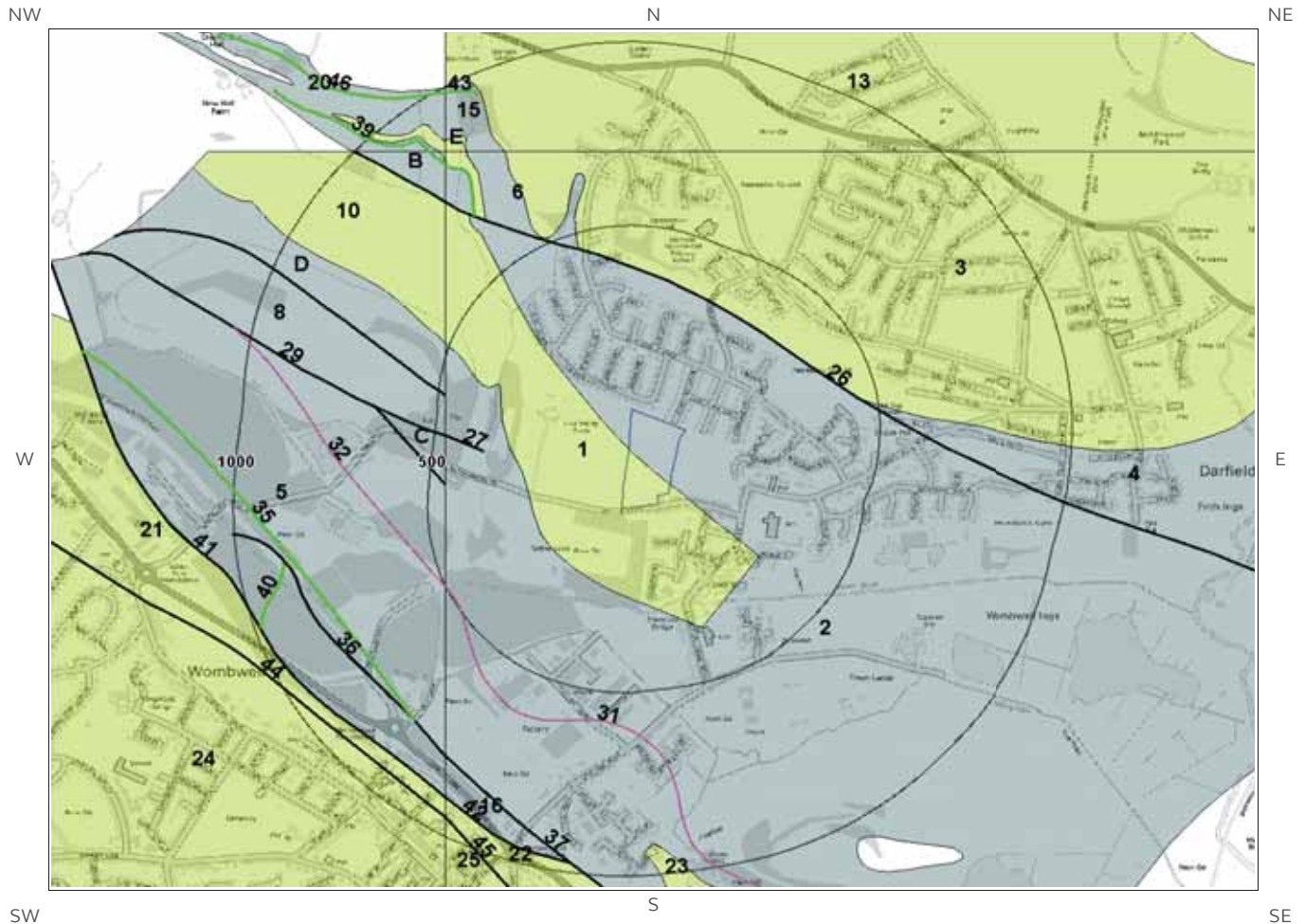
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

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

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	ACR-SDST	Ackton Rock - Sandstone	Bolsovian Sub-age
2	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
3	328.0	NE	MXR-SDST	Mexborough Rock - Sandstone	Bolsovian Sub-age
4	450.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	455.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6	456.0	N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7C	458.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
8	473.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9D	481.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

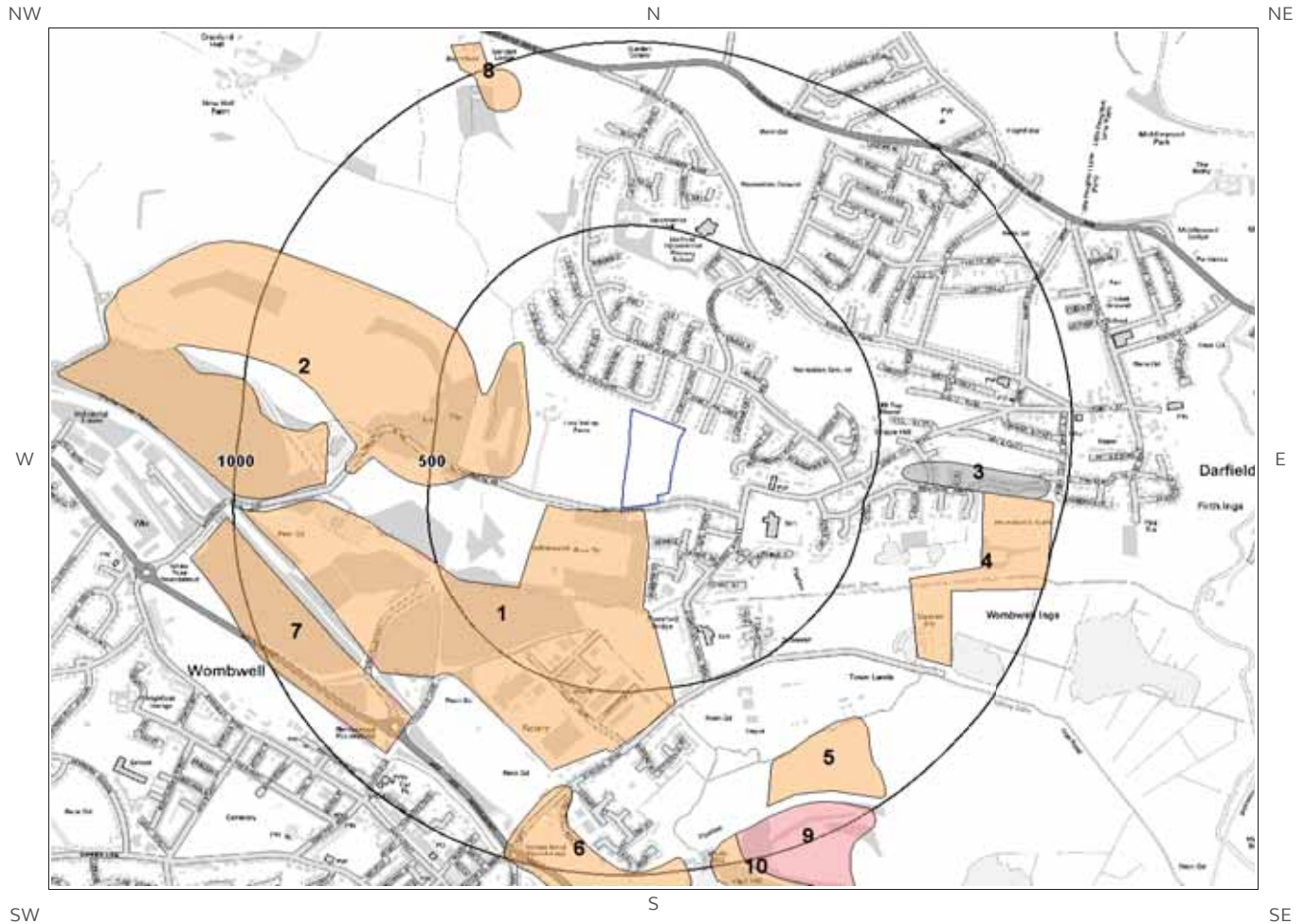
ID	Distance (m)	Direction	Category Description	Feature Description
26	328.0	NE	FAULT	Normal fault, inferred
27	369.0	W	FAULT	Normal fault, inferred
28C	458.0	W	FAULT	Normal fault, inferred
29	473.0	W	FAULT	Normal fault, inferred
30D	481.0	W	FAULT	Normal fault, inferred
31	496.0	SW	FOSSIL_HORIZON	Fossil horizon, marine band

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

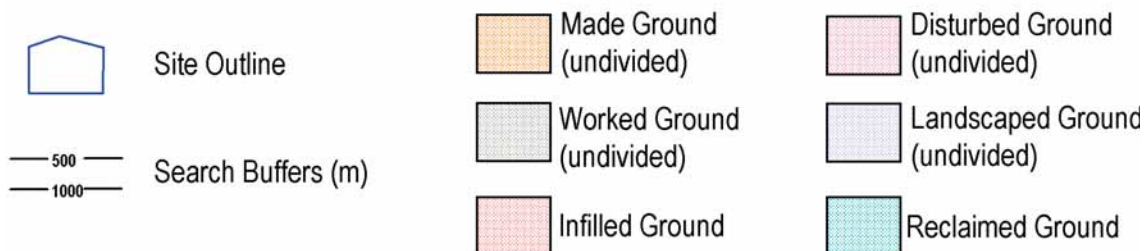
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 087

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	6.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	258.0	W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
6.0	S	Mixed	Very High	Low

The map displays the Wombwell area with three numbered regions: Region 1 (blue) is a small rectangular area in the center; Region 2 (pink) is a larger area to the north; Region 3 (pink) is a large area to the south. Two concentric circles are centered on a point in Region 1, with radii of 500m and 1000m. The map includes various street names, landmarks like Wombwell Park and Darfield, and a compass rose indicating North (N), South (S), East (E), and West (W).

Site Outline

Search Buffers (m)

500

1000

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	83.0	S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

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

Database searched and no data found.

2.2.3 Landslip

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

Database searched and no data found.

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

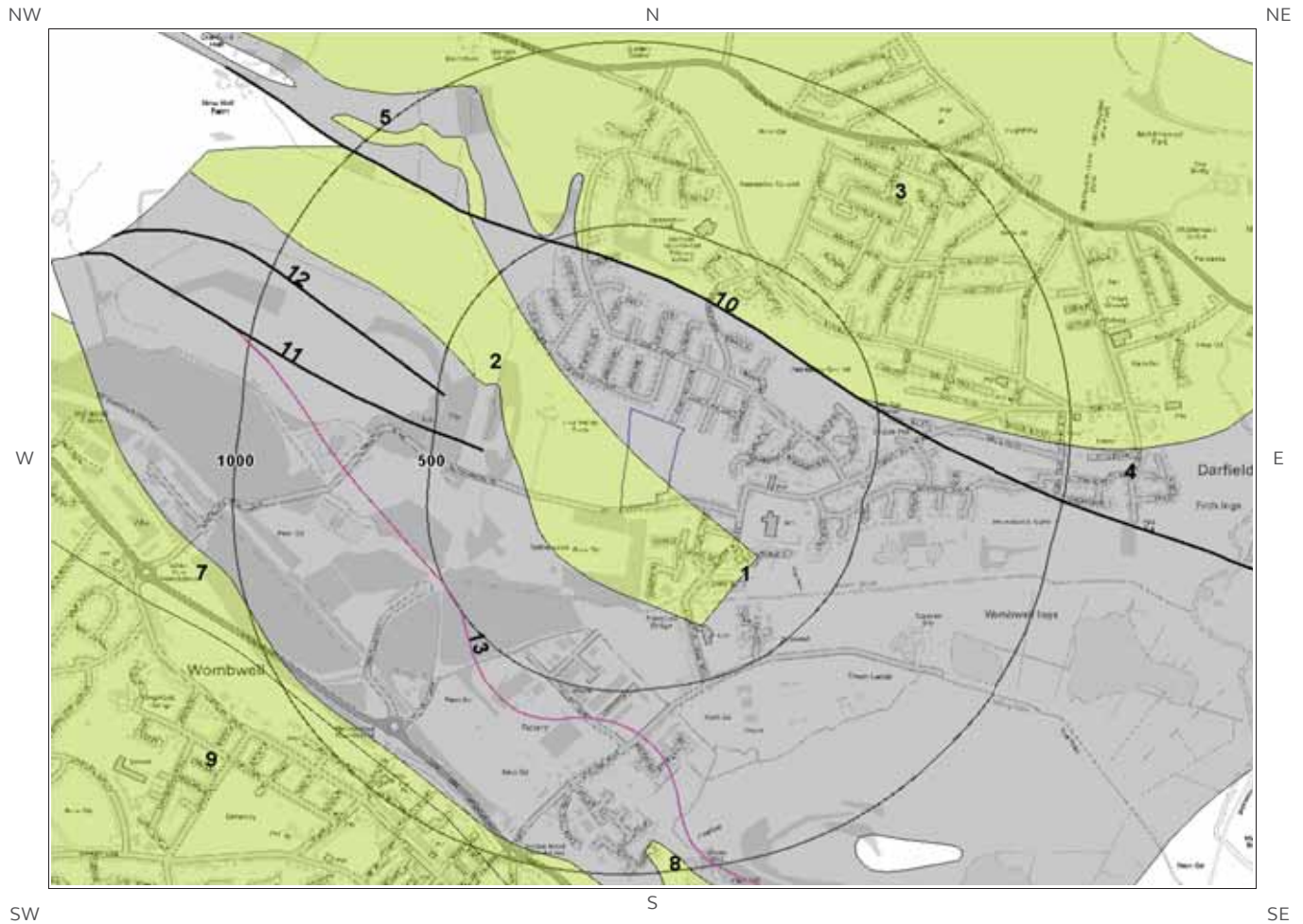
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

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

Database searched and no data found.

2.3 Bedrock and linear features map (1:50,000 scale)



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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 087

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	0.0	On Site	ACR-SDST	ACKTON ROCK - SANDSTONE	WESTPHALIAN
3	328.0	NE	MXR-SDST	MEXBOROUGH ROCK - SANDSTONE	WESTPHALIAN
4	450.0	E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	456.0	N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	High	Moderate

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
10	328.0	NE	FAULT	Fault, inferred
11	369.0	W	FAULT	Fault, inferred
12	481.0	W	FAULT	Fault, inferred
13	496.0	SW	FOSSIL_HORIZON	Marine band

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

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

3 Radon Data

3.1 Radon Affected Areas

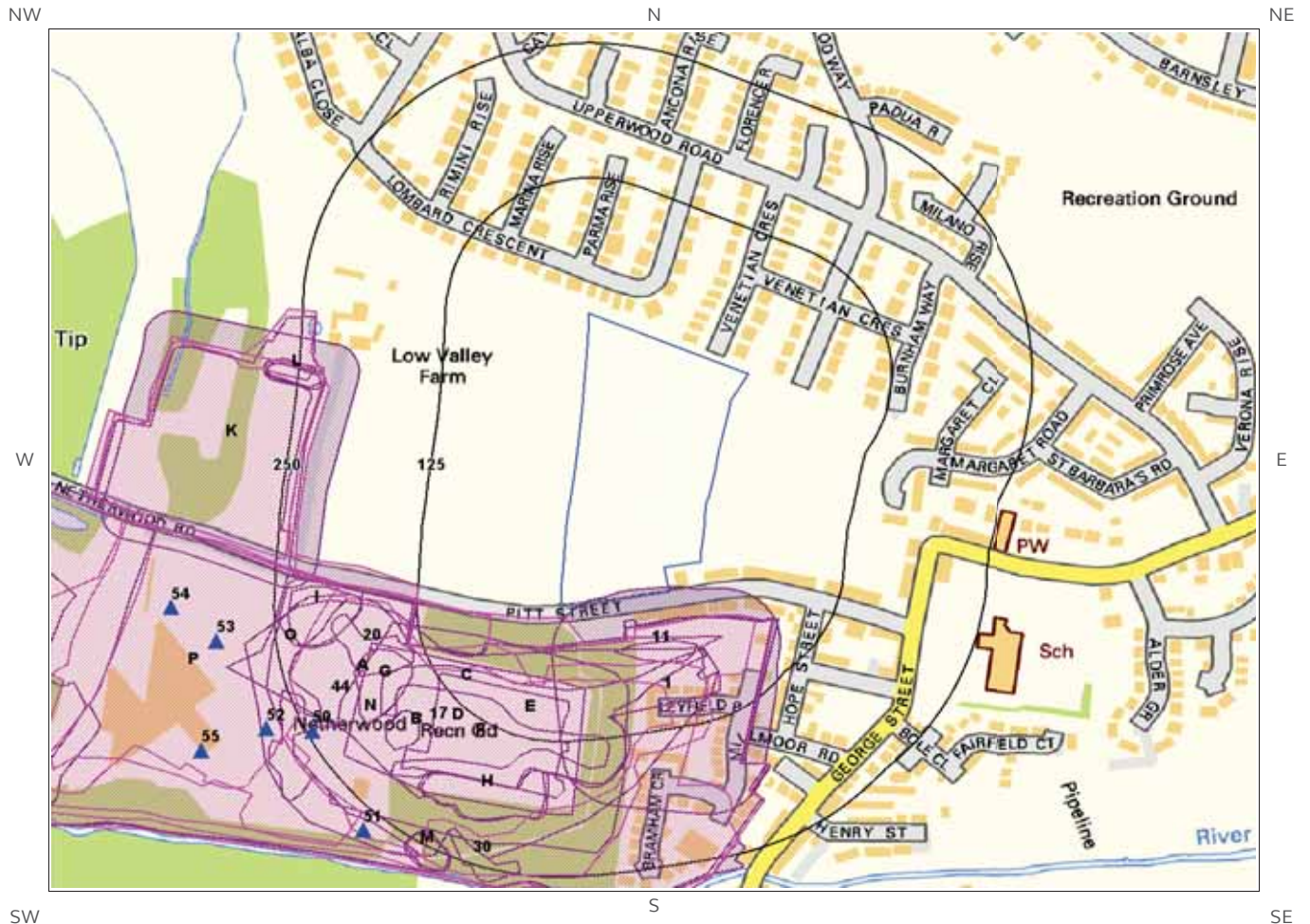
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

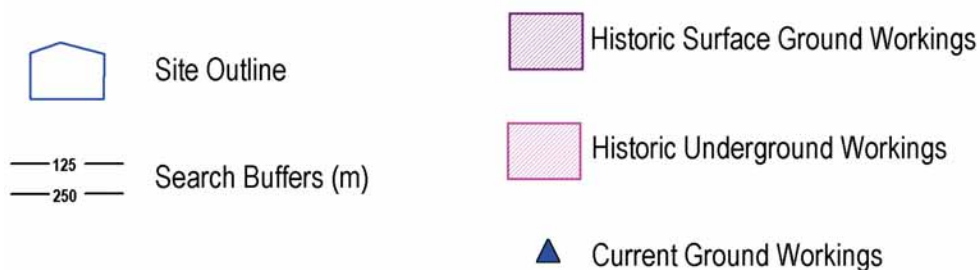
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	440548 403940	Old Colliery	1904
2N	10.0	S	440313 403939	Colliery	1977
3A	20.0	S	440304 404021	Colliery	1938
4A	20.0	S	440304 404021	Colliery	1931
5B	26.0	S	440320 403924	Colliery	1938
6B	26.0	S	440320 403924	Colliery	1938
7G	28.0	S	440313 404008	Colliery	1948
8C	35.0	S	440380 403957	Refuse Heap	1938
9C	35.0	S	440380 403957	Refuse Heap	1938
10D	41.0	S	440386 403913	Refuse Heap	1948
11	43.0	S	440538 403985	Refuse Heap	1904
12D	45.0	S	440368 403905	Unspecified Ground Workings	1977
13F	54.0	S	440399 403905	Refuse Heap	1967
14E	60.0	S	440441 403918	Refuse Heap	1931
15E	60.0	S	440441 403918	Refuse Heap	1938
16D	68.0	S	440371 403913	Refuse Heap	1988
17	68.0	S	440376 403916	Refuse Heap	1951
18O	68.0	S	440276 404048	Colliery	1951
19F	84.0	S	440390 403907	Ponds	1977
20	134.0	W	440291 403991	Pond	1904
21G	140.0	W	440300 403952	Unspecified Pit	1890

ID	Distance (m)	Direction	NGR	Use	Date
22H	151.0	S	440387 403853	Pond	1938
23H	153.0	S	440390 403852	Pond	1938
24H	153.0	S	440390 403852	Pond	1931
25B	160.0	SW	440317 403912	Pond	1904
26I	173.0	W	440245 404021	Refuse Heap	1904
27I	174.0	W	440249 404018	Refuse Heap	1890
28P	194.0	W	440140 403972	Colliery	1988
29K	197.0	W	440167 404172	Colliery	1890
30	225.0	SW	440377 403797	Pond	1948
31L	226.0	W	440224 404241	Unspecified Heap	1948
32J	226.0	W	440229 404172	Unspecified Ground Workings	1931
33J	226.0	W	440229 404172	Unspecified Ground Workings	1938
34K	228.0	W	440144 404173	Colliery	1904
35L	229.0	W	440221 404240	Unspecified Heap	1938
36L	229.0	W	440221 404240	Unspecified Heap	1938
37L	235.0	W	440220 404245	Unspecified Heap	1951
38M	238.0	SW	440338 403801	Refuse Heap	1938
39M	238.0	SW	440338 403801	Refuse Heap	1938
40M	242.0	SW	440340 403799	Refuse Heap	1938
41M	242.0	SW	440340 403799	Refuse Heap	1931

4.2 Historical Underground Working Features derived from Historical Mapping

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

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
42N	10.0	S	440313 403939	Colliery	1977
43G	28.0	S	440313 404008	Colliery	1948
44	54.0	S	440293 403957	Unspecified Mine	1967
45O	68.0	S	440276 404048	Colliery	1951
46P	194.0	W	440140 403972	Colliery	1988
47K	228.0	W	440144 404173	Colliery	1904
Not shown	770.0	W	439328 404262	Colliery	1951
Not shown	886.0	W	439328 404032	Colliery	1948

4.3 Current Ground Workings

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

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
50	246.0	SW	440238 403911	Clay & Shale	Nether Woodhall Mill Brickkiln	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
51	269.0	SW	440283 403819	Fireclay	South Yorkshire Sanitary Tube Works Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
52	281.0	SW	440198 403913	Coal, Deep	Darfield Main Colliery, No 4 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

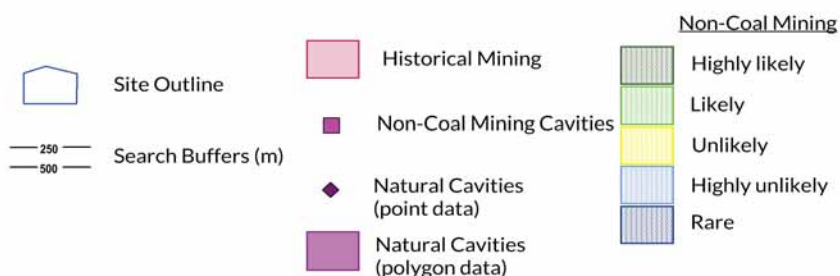
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
53	303.0	W	440154 403994	Coal, Deep	Darfield Main Colliery, No 2 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
54	340.0	W	440115 404025	Coal, Deep	Darfield Main Colliery, No 1 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
55	341.0	SW	440141 403893	Coal, Deep	Darfield Main Colliery, No 3 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	489.0	E	441078 404410	Sandstone	Woodhall	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	764.0	E	441382 404285	Sandstone	Snape Hill	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	978.0	S	440820 403100	Clay & Shale	Park Hill Brickworks	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



**Mining, Extraction and
Natural Cavities Legend**

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
13A	10.0	S	440313 403939	Colliery	1977
14A	28.0	S	440313 404008	Colliery	1948
15A	54.0	S	440293 403957	Unspecified Mine	1967
16	68.0	S	440276 404048	Colliery	1951
17	194.0	W	440140 403972	Colliery	1988
18	228.0	W	440144 404173	Colliery	1904
19	770.0	W	439328 404262	Colliery	1951
Not shown	886.0	W	439328 404032	Colliery	1948

5.2 Coal Mining

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

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

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

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

5.3 Johnson Poole and Bloomer

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

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

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

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

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

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
2	333.0	NE	Sheffield Area	Iron Ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
3	455.0	W	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	703.0	N	Sheffield Area	Iron Ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	765.0	NW	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	834.0	SW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
7	836.0	SW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	851.0	NW	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	881.0	S	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	983.0	NW	Sheffield Area	Iron Ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
11	0.0	On Site	440500 404200	DARFIELD, South Yorkshire	-	-	Fireclay
12	361.0	SW	440300 403700	DARFIELD, South Yorkshire	-	-	Fireclay

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

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

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Tin Mining

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

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

No

Database searched and no data found.

5.10 Clay Mining

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

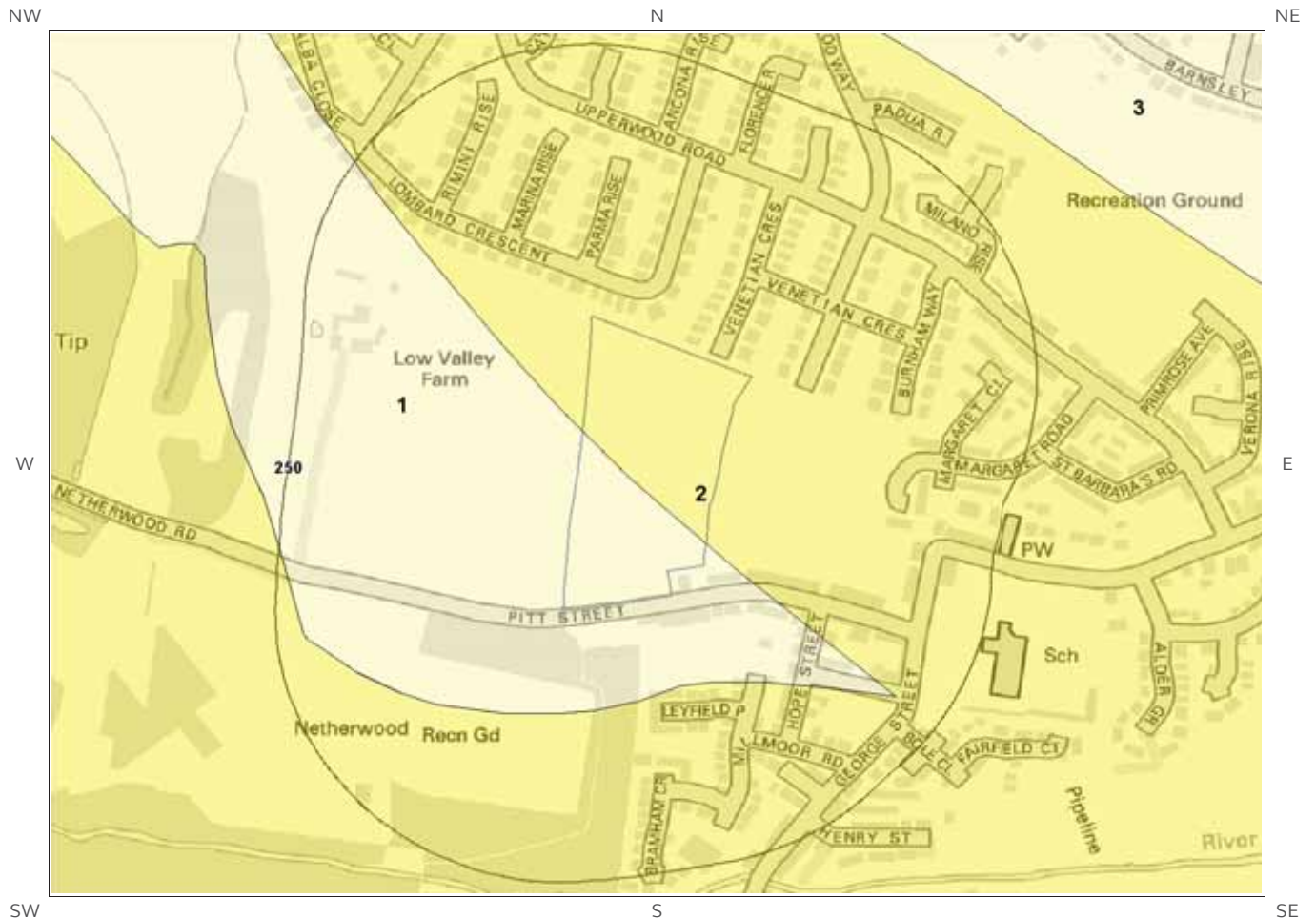
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

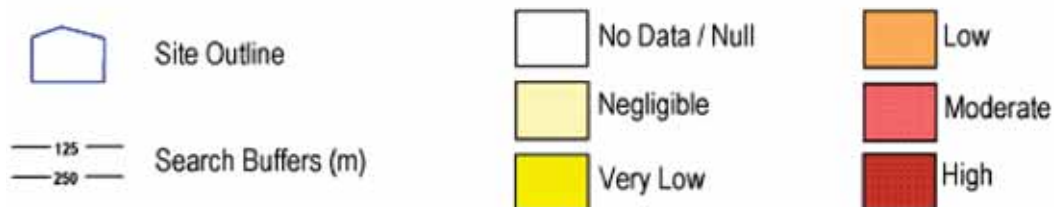
6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

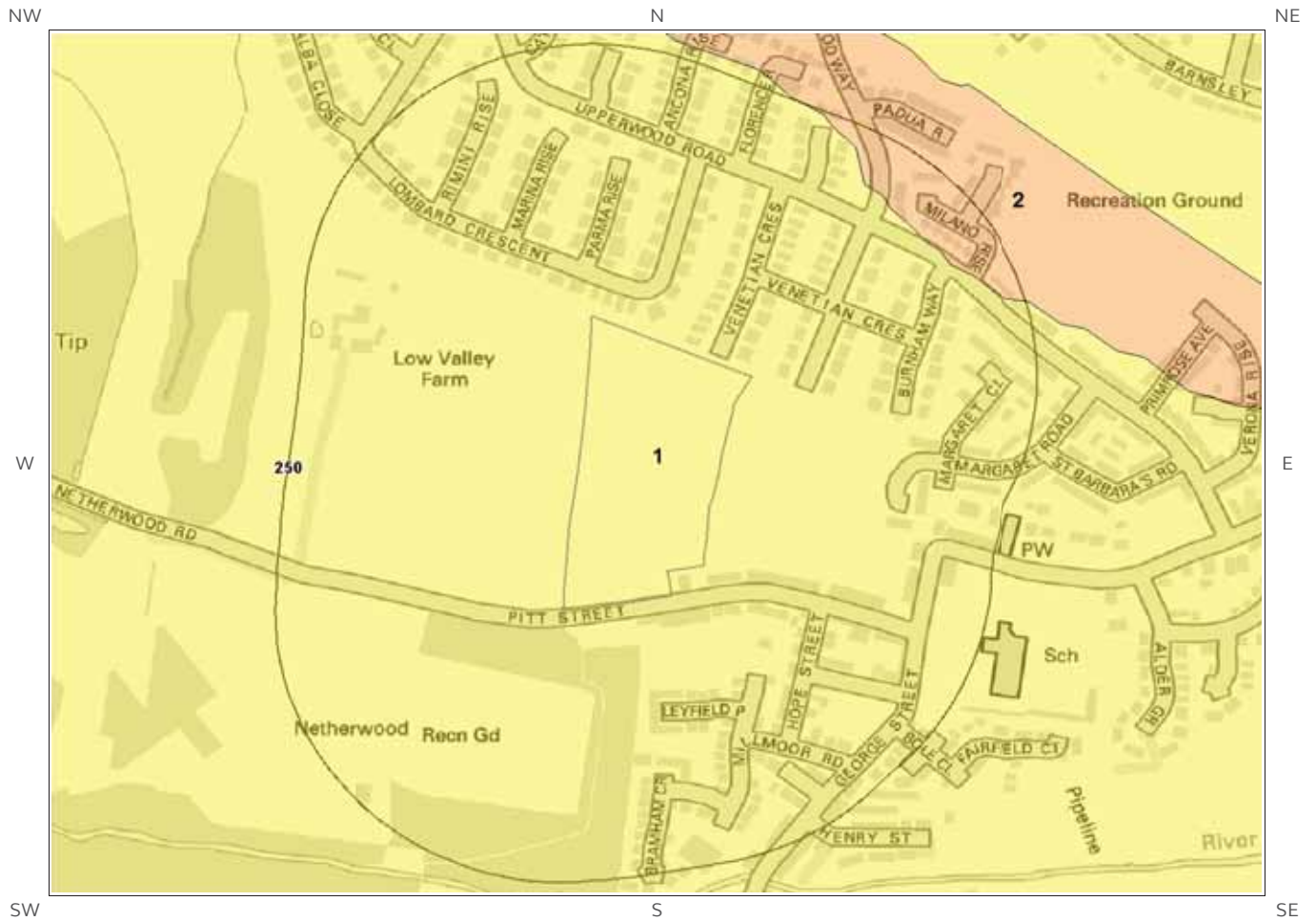


Shrink Swell Clay Legend

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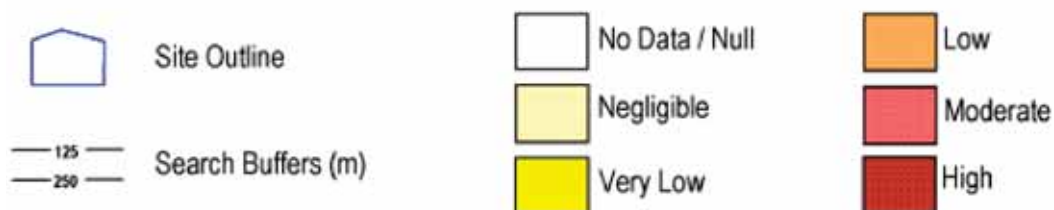


6.2 Landslides map

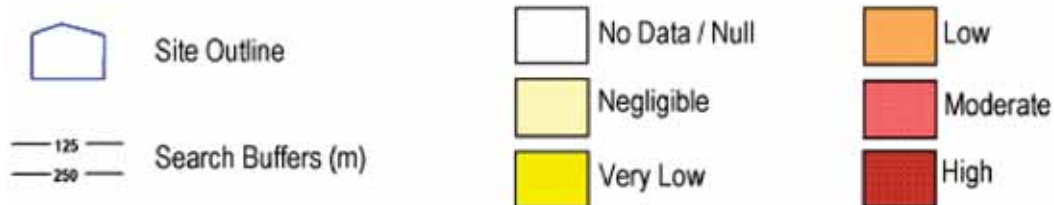


Landslides Legend

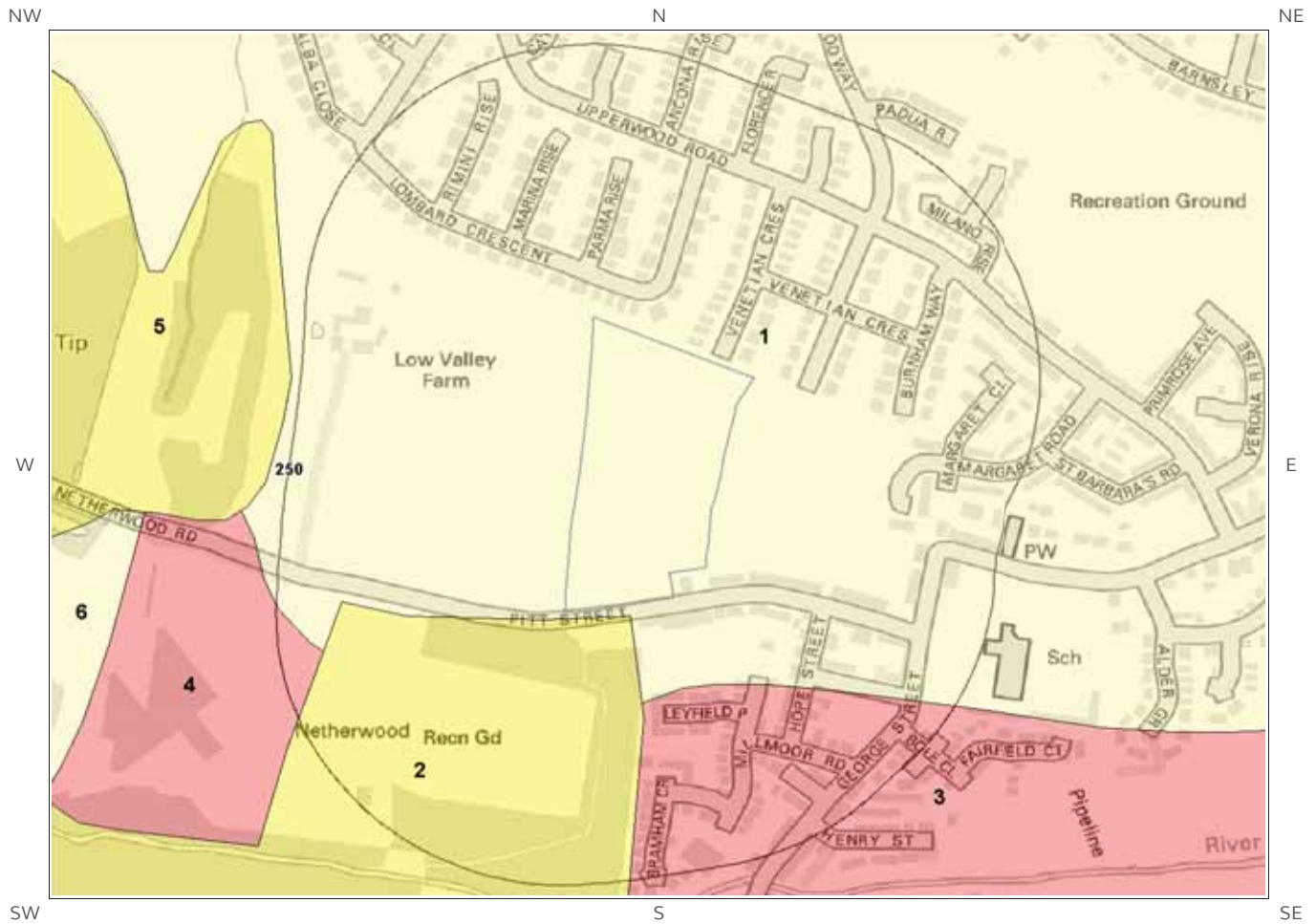
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6.3 Ground Dissolution of Soluble Rocks map

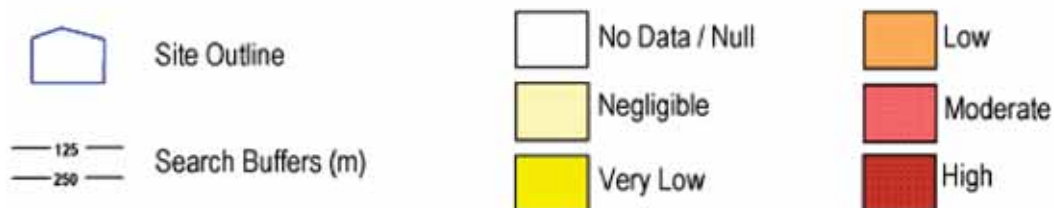


6.4 Compressible Deposits map

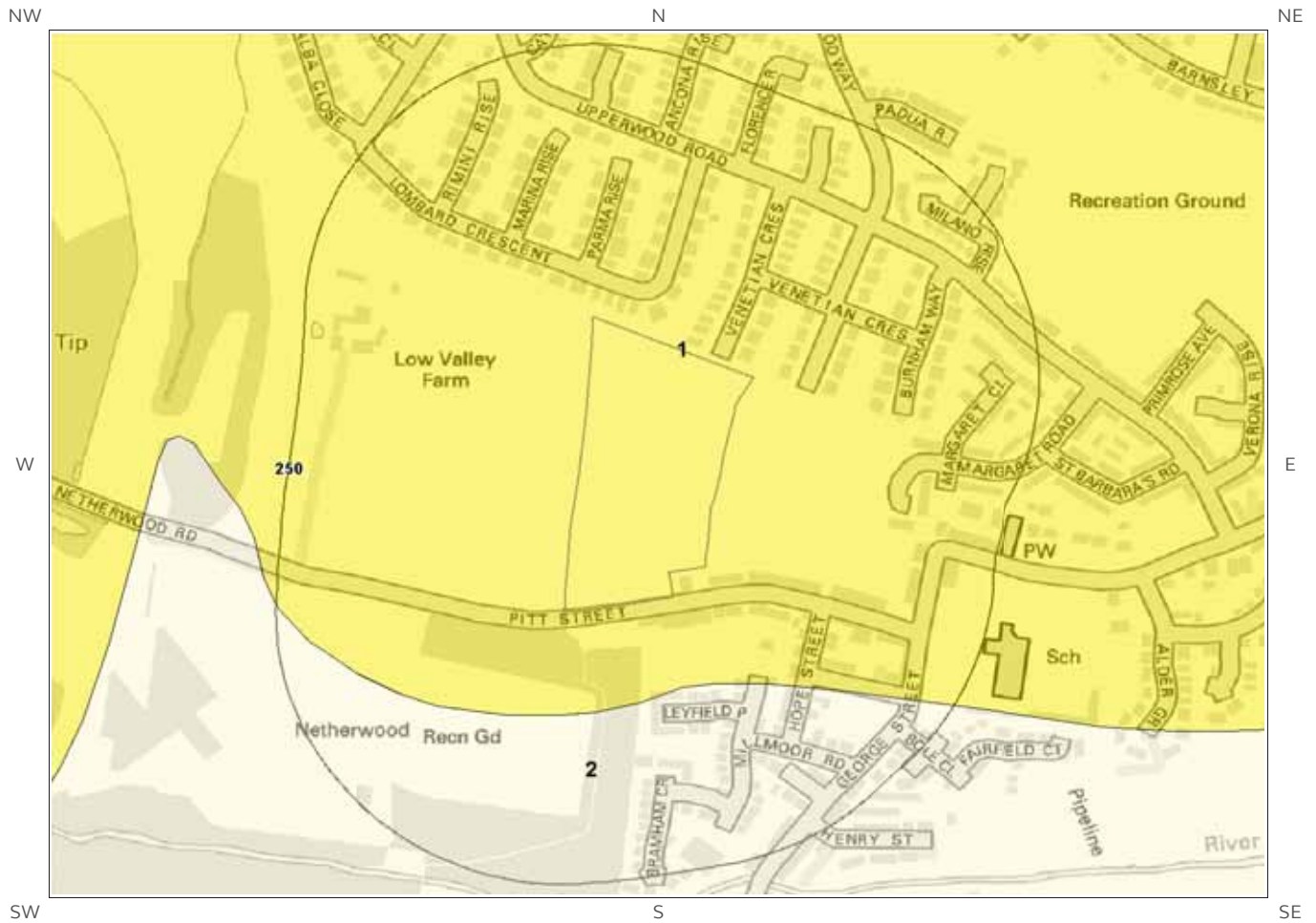


Compressible Deposits Legend

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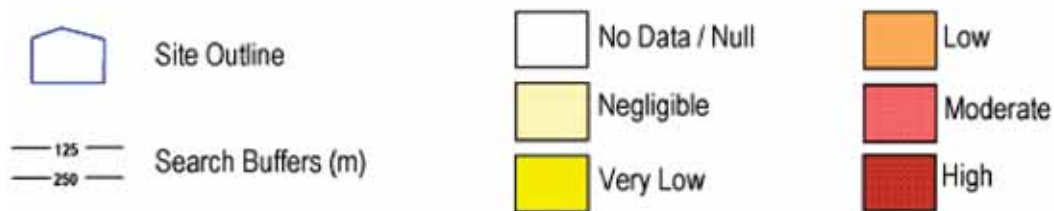


6.5 Collapsible Deposits map

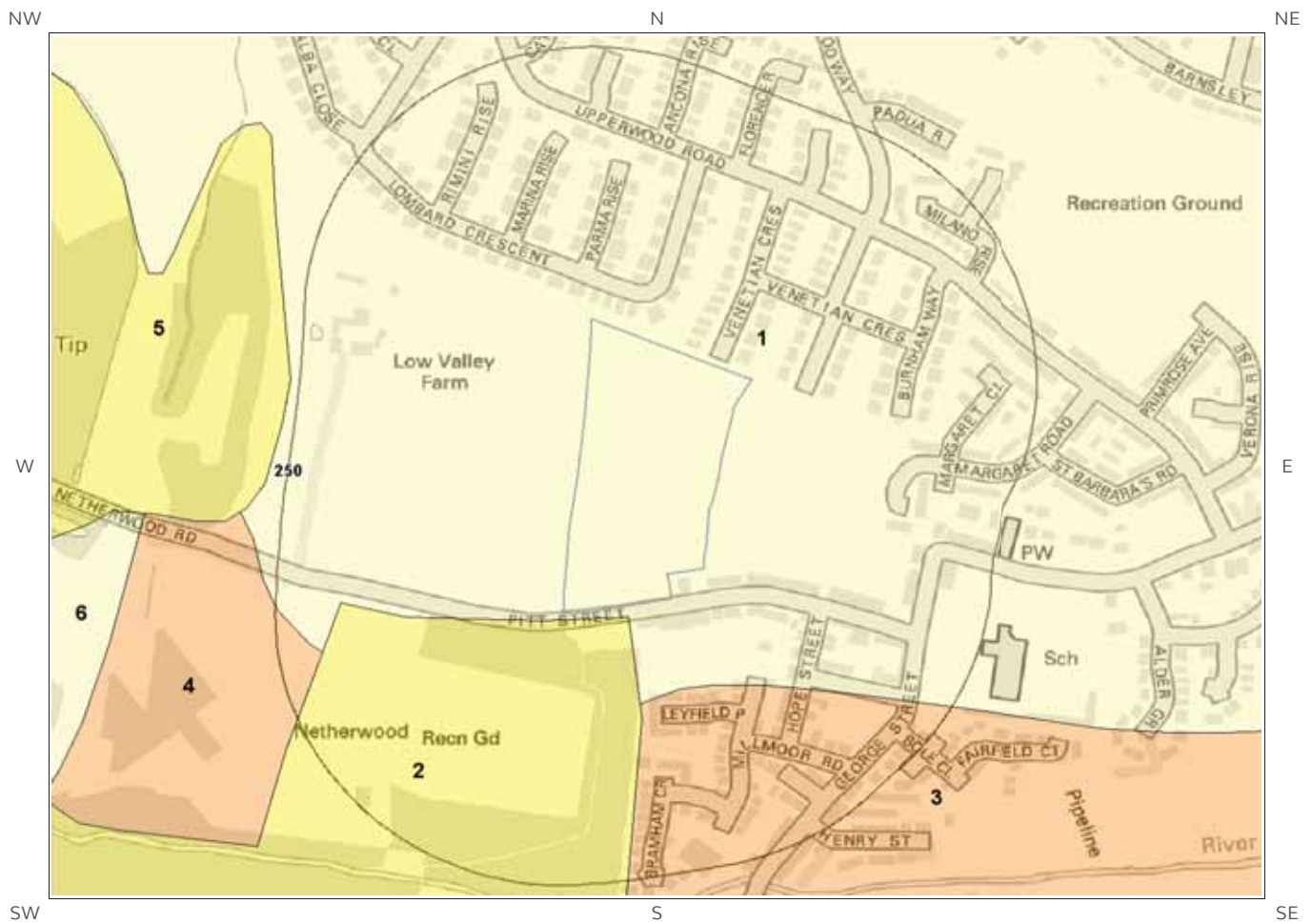


Collapsible Deposits Legend

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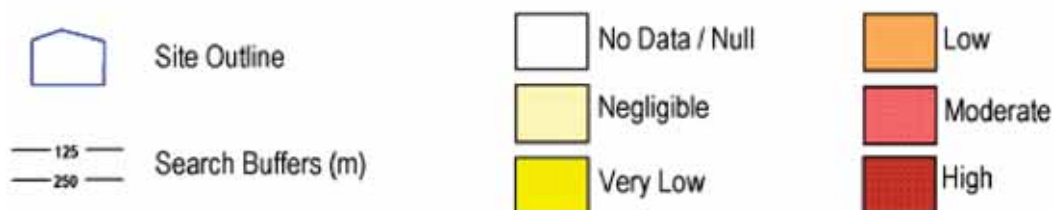


6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

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

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

6.3 Ground Dissolution of Soluble Rocks

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

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

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	6.0	S	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

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

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	6.0	S	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

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

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

3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	47.0	S	440470 403980	SE40SW221	7.0	BARNLEY-DONCASTER RD BH2A
2	55.0	N	440532 404336	SE40SW93	-1.0	SILKSTONE SEAM PILLAR SAMPLE MAINGATE X103'S
3	84.0	S	440576 403960	SE40SW29	30.48	LOW VALLEY PUMPING STATION

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/106384

#3: scans.bgs.ac.uk/sobi_scans/boreholes/106157

8 Estimated Background Soil Chemistry

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

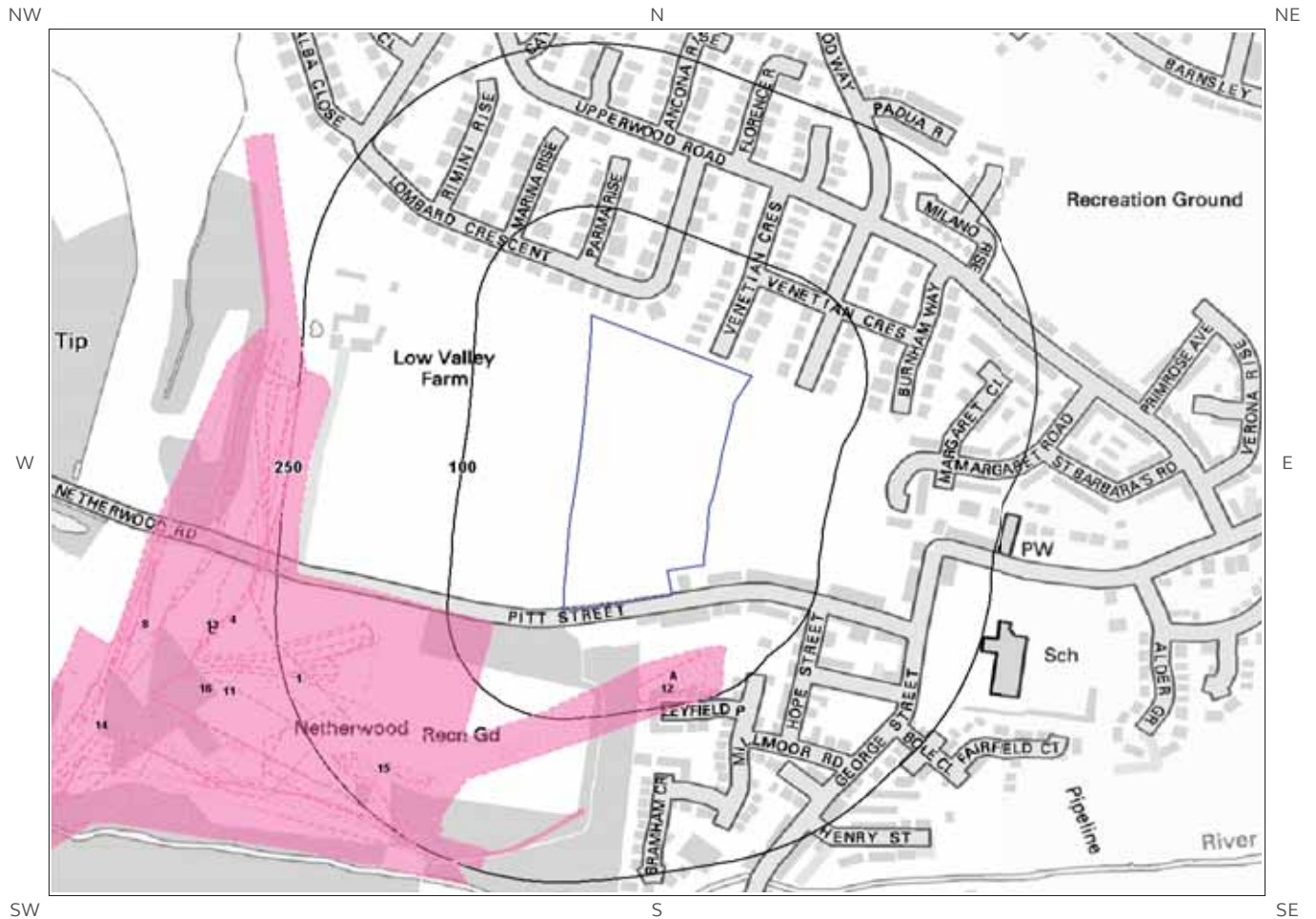
8

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
26.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	<100 mg/kg
26.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
31.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
31.0	S	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

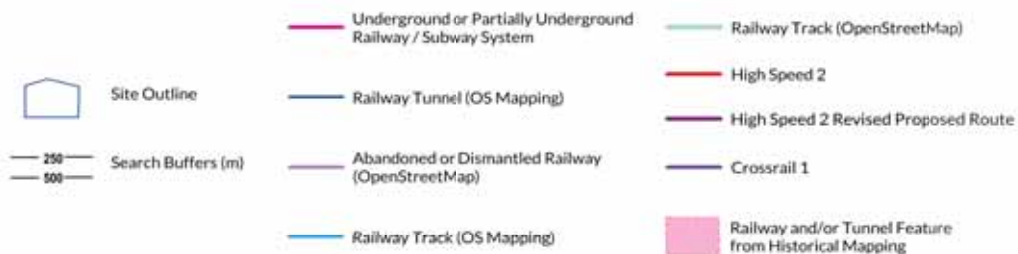
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

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

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

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

Database searched and no data found.

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

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	54	S	440105 403905	Railway Sidings	1904
2A	58	SE	440548 403964	Railway Sidings	1938
3A	60	SE	440556 403958	Railway Sidings	1948
11	64	SE	439865 403721	Railway Sidings	1906
12	76	S	440548 403951	Railway Sidings	1931
4	156	W	440057 403910	Railway Sidings	1948

ID	Distance (m)	Direction	NGR	Details	Date
5C	158	SW	440145 404067	Tramway Sidings	1951
13	162	W	439864 403719	Railway Sidings	1931
6B	165	W	440025 403891	Railway Sidings	1938
7B	165	W	440025 403891	Railway Sidings	1931
8	167	W	439862 403721	Railway Sidings	1938
14	182	S	440045 403900	Railway Sidings	1961
15	195	SW	440297 403878	Tramway Sidings	1931
9B	206	SW	440083 403900	Railway Sidings	1890
16	224	SW	439862 403716	Railway Sidings	1893
10C	229	S	440177 404126	Railway Sidings	1977

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

9.3 Historical Railways

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

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

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

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

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

9.4 Active Railways

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

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

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

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

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

9.5 Railway Projects

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

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail 1 rail project? No

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

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

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

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Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



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<https://www.gov.uk/government/organisations/public-health-england>
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EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Groundsure
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EMS-527470_709399

Your Reference:

EMS_527470_709399

Report Date

15 Feb 2019

Report Delivery
Method:

Email - pdf

Enviro Insight

Address: ,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.

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Reference: EMS-527470_709399
Client: EmapSite

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 07-Jun-2013
Grid Reference: 440526,404159
Site Size: 2.8917ha

Report Reference: EMS-527470_709399
Client Reference: EMS_527470_709399

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Overview of Findings

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1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	11	45	44
1.2 Additional Information – Historical Tank Database	0	0	7	11
1.3 Additional Information – Historical Energy Features Database	0	0	14	13
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	2	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	1	9	22	31
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	1
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	5
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	24
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	4	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	1	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	2	7	3
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	1
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	6	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	1	1	6

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	2	15	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	Identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	None identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

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

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	Yes	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	0	48	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Low					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Very Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Very Low
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	Identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

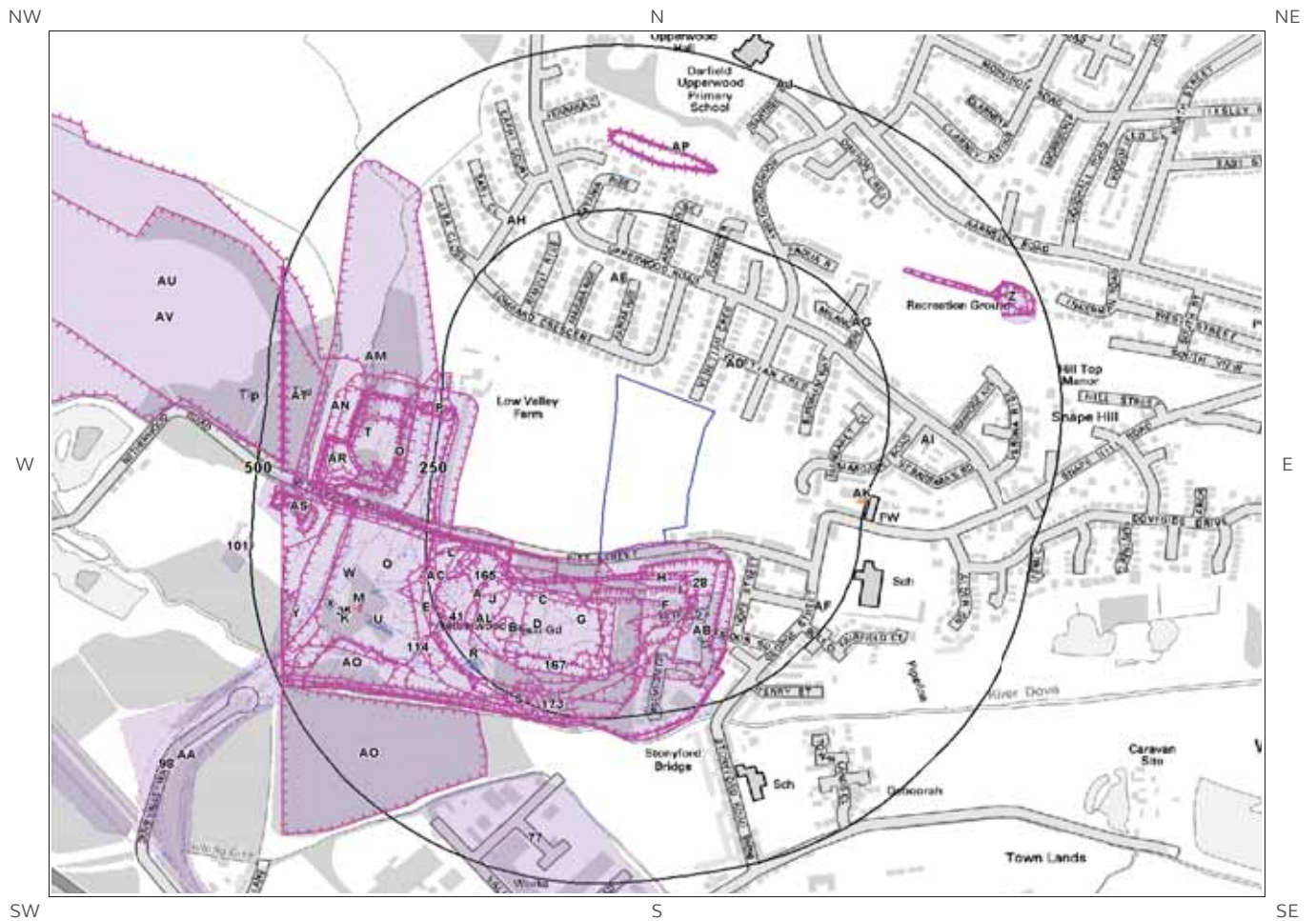
Note: Maps

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

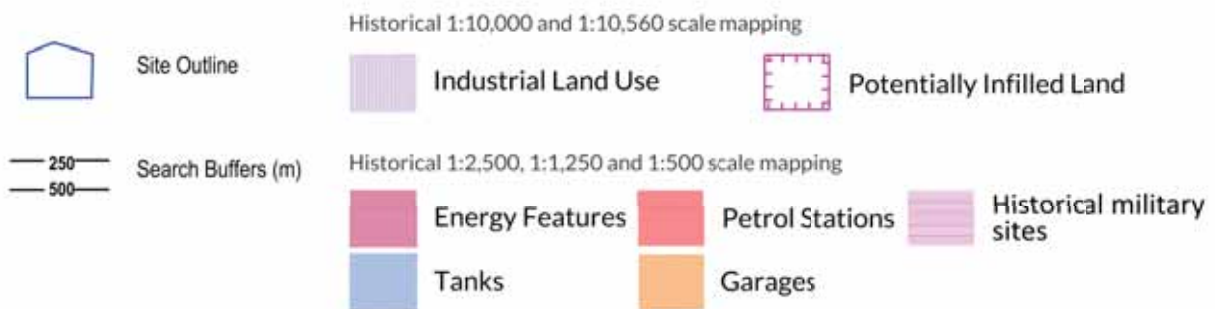
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



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1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 101

ID	Distance [m]	Direction	Use	Date
1F	0	On Site	Old Colliery	1904
2AL	10	S	Colliery	1977
3A	20	S	Colliery	1938
4A	20	S	Colliery	1931
5B	26	S	Colliery	1938
6B	26	S	Colliery	1938
7J	28	S	Colliery	1948
8C	35	S	Refuse Heap	1938
9C	35	S	Refuse Heap	1938
10D	41	S	Refuse Heap	1948
11H	43	S	Refuse Heap	1904
12D	45	S	Unspecified Ground Workings	1977
13E	52	W	Sanitary Tube Works	1890
14E	54	S	Railway Sidings	1904
15D	54	S	Refuse Heap	1967
16A	54	S	Unspecified Mine	1967
17F	58	SE	Railway Sidings	1938
18G	60	S	Refuse Heap	1938
19G	60	S	Refuse Heap	1931
20F	60	SE	Railway Sidings	1948
21E	63	W	Sanitary Tube Works	1904
22H	67	SE	Pumping Station	1938
23I	67	SE	Pumping Station	1931
24D	68	S	Refuse Heap	1988
25D	68	S	Refuse Heap	1951
26AC	68	S	Colliery	1951
27I	72	SE	Pumping Station	1938
28	76	SE	Pumping Station	1948
29AB	92	S	Unspecified Works	1988
30J	140	W	Unspecified Pit	1890
31M	156	W	Railway Sidings	1948
32Q	158	SW	Tramway Sidings	1951
33K	165	W	Railway Sidings	1938

34K	165	W	Railway Sidings	1931
35	167	W	Railway Sidings	1938
36L	173	W	Refuse Heap	1904
37L	174	W	Refuse Heap	1890
38M	194	W	Colliery	1988
39O	197	W	Colliery	1890
40K	206	SW	Railway Sidings	1890
41	225	SW	Unspecified Tank	1890
42P	226	W	Unspecified Heap	1948
43N	226	W	Unspecified Ground Workings	1938
44N	226	W	Unspecified Ground Workings	1931
45O	228	W	Colliery	1904
46P	229	W	Unspecified Heap	1938
47P	229	W	Unspecified Heap	1938
48Q	229	S	Railway Sidings	1977
49R	235	SW	Unspecified Tank	1890
50P	235	W	Unspecified Heap	1951
51R	237	SW	Unspecified Tanks	1904
52S	238	SW	Refuse Heap	1938
53S	238	SW	Refuse Heap	1938
54S	242	SW	Refuse Heap	1938
55S	242	SW	Refuse Heap	1931
56R	243	SW	Unspecified Tank	1890
57R	247	SW	Unspecified Tank	1890
58AM	257	W	Unspecified Disused Workings	1988
59K	273	W	Railway Sidings	1967
60AN	283	W	Unspecified Disused Tip	1977
61T	288	W	Unspecified Ground Workings	1967
62T	290	W	Refuse Heap	1938
63T	290	W	Refuse Heap	1931
64T	292	W	Refuse Heap	1938
65T	292	W	Refuse Heap	1938
66T	298	W	Refuse Heap	1904
67T	298	W	Refuse Heap	1951
68AO	298	SW	Refuse Heap	1988
69T	300	W	Refuse Heap	1948
70T	302	W	Refuse Heap	1890
71U	318	W	Unspecified Tanks	1904
72U	319	W	Unspecified Tank	1890
73U	326	W	Unspecified Tank	1890
74U	334	W	Unspecified Tank	1890
75AQ	340	SW	Refuse Heap	1904
76U	341	W	Unspecified Tank	1890

77	342	S	Unspecified Works	1988
78V	344	NE	Unspecified Ground Workings	1967
79V	345	NE	Unspecified Ground Workings	1988
80AP	349	N	Boat House	1904
81AR	354	W	Unspecified Pit	1904
82W	355	W	Unspecified Tank	1967
83W	355	W	Unspecified Tank	1977
84X	388	W	Unspecified Tank	1977
85X	388	W	Unspecified Tank	1988
86X	388	W	Unspecified Tank	1967
87Y	405	W	Unspecified Mill	1890
88AT	414	W	Refuse Heap	1988
89Y	425	W	Unspecified Mill	1904
90Z	432	NE	Unspecified Ground Workings	1948
91Z	432	NE	Unspecified Ground Workings	1904
92Z	434	NE	Unspecified Quarry	1938
93Z	435	NE	Unspecified Pit	1951
94Z	435	NE	Unspecified Quarry	1938
95Z	435	NE	Unspecified Quarry	1931
96AU	461	W	Refuse Heap	1977
97AV	463	W	Unspecified Disused Tip	1987
98	473	W	Railway Sidings	1951
99AA	479	W	Railway Sidings	1966
100AA	479	W	Railway Sidings	1977
101	494	W	Unspecified Mill	1890

1.2 Additional Information – Historical Tank Database

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

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

18

ID	Distance (m)	Direction	Use	Date
102I	78	S	Unspecified Tank	1931
103AB	148	S	Unspecified Tank	1991
104AB	148	S	Unspecified Tank	1982
105AB	149	S	Unspecified Tank	1994
106AB	149	S	Unspecified Tank	1993
107R	239	SW	Tanks	1906
108R	246	SW	Tanks	1893

109AC	255	W	Gasometer	1906
110AC	255	W	Unspecified Tank	1931
111AC	255	W	Gasometer	1893
112Q	279	W	Unspecified Tank	1961
113Q	279	W	Unspecified Tank	1970
114	296	SW	Unspecified Tank	1931
115M	320	W	Tanks	1931
116U	320	W	Tanks	1906
117U	327	W	Tanks	1893
118W	355	W	Unspecified Tank	1961
119X	388	W	Unspecified Tank	1961

1.3 Additional Information – Historical Energy Features Database

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

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

27

ID	Distance (m)	Direction	Use	Date
120AD	71	N	Electricity Substation	1976
121AD	71	N	Electricity Substation	1970
122AD	72	NE	Electricity Substation	1982
123AE	137	N	Electricity Substation	1994
124AE	137	N	Electricity Substation	1982
125AE	139	N	Electricity Substation	1976
126AE	139	N	Electricity Substation	1970
127AF	230	SE	Electricity Substation	1991
128AF	230	SE	Electricity Substation	1982
129AF	230	SE	Electricity Substation	1994
130AF	230	SE	Electricity Substation	1993
131AG	244	NE	Gas Governor	1982
132AG	244	NE	Gas Governor	1976
133AG	244	NE	Electricity Substation	1970
134AC	255	W	Gasometer	1906
135AC	255	W	Gasometer	1893
136AH	268	NW	Electricity Substation	1970
137AH	268	NW	Electricity Substation	1976
138AH	269	NW	Electricity Substation	1982
139AI	304	E	Electricity Substation	1982
140AI	306	E	Electricity Substation	1976
141AI	306	E	Electricity Substation	1970
142M	345	W	Electricity Substation	1982
143M	346	W	Electricity Substation	1991

144AJ	486	N	Electricity Substation	1976
145AJ	486	N	Electricity Substation	1996
146AJ	487	N	Electricity Substation	1982

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 2

ID	Distance (m)	Direction	Use	Date
147AK	235	E	Depot and Destructor Works	1976
148AK	235	E	Depot and Destructor Works	1970

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 63

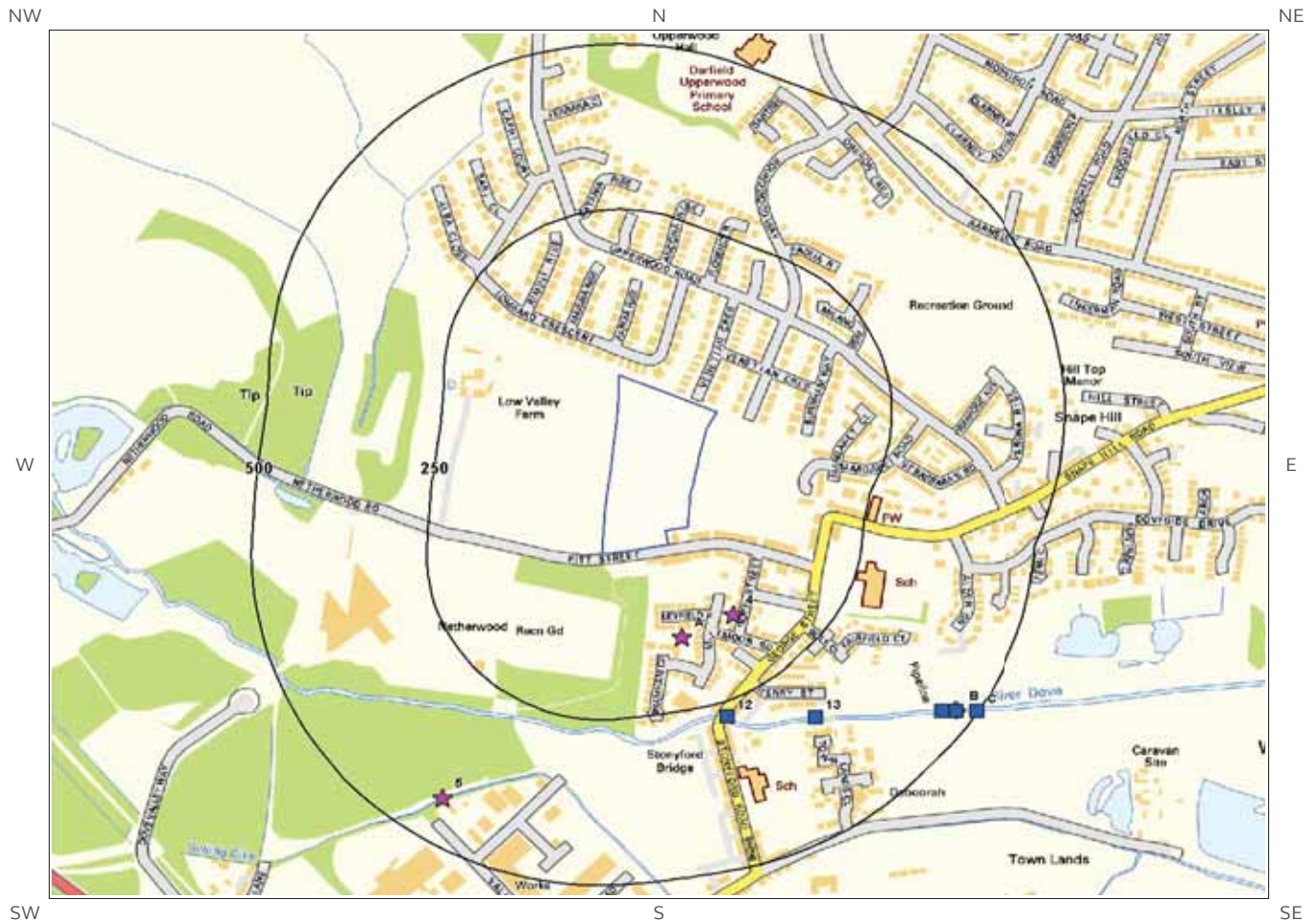
The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
----	-------------	-----------	-----	------

149F	0	On Site	Old Colliery	1904
150AL	10	S	Colliery	1977
151B	26	S	Colliery	1938
152B	26	S	Colliery	1938
153J	28	S	Colliery	1948
154C	35	S	Refuse Heap	1938
155C	35	S	Refuse Heap	1938
156D	41	S	Refuse Heap	1948
157I	43	S	Refuse Heap	1904
158D	45	S	Unspecified Ground Workings	1977
159A	54	S	Unspecified Mine	1967
160D	54	S	Refuse Heap	1967
161D	68	S	Refuse Heap	1988
162AC	68	S	Colliery	1951
163B	68	S	Refuse Heap	1951
164G	84	S	Ponds	1977
165	134	W	Pond	1904
166A	140	W	Unspecified Pit	1890
167	151	S	Pond	1938
168AL	160	SW	Pond	1904
169L	173	W	Refuse Heap	1904
170L	174	W	Refuse Heap	1890
171M	194	W	Colliery	1988
172O	197	W	Colliery	1890
173	225	SW	Pond	1948
174P	226	W	Unspecified Heap	1948
175O	228	W	Colliery	1904
176P	229	W	Unspecified Heap	1938
177P	229	W	Unspecified Heap	1938
178P	235	W	Unspecified Heap	1951
179S	238	SW	Refuse Heap	1938
180S	238	SW	Refuse Heap	1938
181AM	257	W	Unspecified Disused Workings	1988
182AN	283	W	Unspecified Disused Tip	1977
183T	288	W	Unspecified Ground Workings	1967
184T	292	W	Refuse Heap	1938
185T	292	W	Refuse Heap	1938
186T	298	W	Refuse Heap	1904
187T	298	W	Refuse Heap	1951
188AO	298	SW	Refuse Heap	1988
189T	300	W	Refuse Heap	1948
190T	302	W	Refuse Heap	1890
191AP	324	N	Pond	1938
192AP	325	N	Pond	1890

193AP	327	N	Pond	1948
194AP	327	N	Pond	1904
195AP	327	N	Pond	1951
196AQ	340	SW	Refuse Heap	1904
197V	344	NE	Unspecified Ground Workings	1967
198V	345	NE	Unspecified Ground Workings	1988
199AR	354	W	Unspecified Pit	1904
200AS	407	W	Ponds	1890
201AS	411	W	Ponds	1904
202AT	414	W	Refuse Heap	1988
203AS	417	W	Pond	1948
204AS	419	W	Pond	1938
205AS	424	W	Pond	1988
206Z	432	NE	Unspecified Ground Workings	1948
207Z	432	NE	Unspecified Ground Workings	1904
208Z	434	NE	Unspecified Quarry	1938
209Z	435	NE	Unspecified Pit	1951
210AU	461	W	Refuse Heap	1977
211AV	463	W	Unspecified Disused Tip	1987

2. Environmental Permits, Incidents and Registers Map



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- | | | |
|--------------------|-------------------------------|--|
| Site Outline | Recorded Pollution Incident | RAS 3 & 4 Authorisations |
| Search Buffers (m) | Dangerous Substances (List 1) | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | Dangerous Substances (List 2) | Part A(2) and Part B Authorised Processes |
| | Water Industry Referrals | COMAH / NIHHS Sites |
| | Licenced Discharge Consents | Sites Determined as Contaminated Land |
| | Red List Discharge Consents | Hazardous Substance Consents and Enforcements |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
6B	472	SE	440960 403790	Name: Wombwell (new) Stw - Treated Sewage Status: Not Active Receiving Water: Any, Deve Authorised Substances: -

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

5

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
7B	472	SE	440960 403790	Name: Barnsley Premier Leisure Hoyland Leisure Centre West Street Status: Not Active Receiving Water: None Authorised Substances: -
8B	472	SE	440960 403790	Name: Barnsley Premier Leisure Wombwell Swimming Pool Hough Lane, Status: Not Active Receiving Water: None Authorised Substances: -
9B	472	SE	440960 403790	Name: Watsons Anodising Ltd, Chambers Road Status: Active Receiving Water: - Authorised Substances: Zinc
10B	472	SE	440960 403790	Name: Wombwell Stw Status: Not Active Receiving Water: River Dearne Authorised Substances: -
11B	472	SE	440960 403790	Name: Wombwell (new) Stw - Treated Sewage Status: Active Receiving Water: Deve Authorised Substances: Chromium, Copper, Lead, Nickel, Zinc

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

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

24

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
12	272	S	440633 403781	Address: GEORGE STREET DARFIELD NO 2 CSO, GEORGE STREET, WOMBWELL, BARNSELY, SOUTH YORKSHIRE, S73 8AQ Receiving Water: RIVER DOVE Status: NEW ISSUED UNDER EPR 2010 Issue date: 29/09/2016

ID	Distance (m)	Direction	NGR	Details	
				Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: EPRUP3222GW Permit Version: 1	Effective Date: 29-Sep-2016 Revocation Date: -
13	334	SE	440760 403780	Address: GERORGE STREET DARFIELD NO.1 CSO, GEORGE STREET, WOMBWELL, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA9257 Permit Version: 1	Receiving Water: RIVER DOVE Status: SURRENDERED UNDER EPR 2010 Issue date: 04/09/2007 Effective Date: 04-Sep-2007 Revocation Date: 09/01/2017
14B	456	SE	440940 403790	Address: DOVESIDE DRIVE SPS, DOVESIDE DRIVE, LOW VALLEY, DARFIELD, BARNSELY, WF10 1LD Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WRA7001 Permit Version: 2	Receiving Water: RIVER DOVE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 27/02/2003 Effective Date: 27-Feb-2003 Revocation Date: -
15B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996
16B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
17B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 7	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995 Revocation Date: 30/03/1996
18B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 7	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995 Revocation Date: 30/03/1996
19B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996 Revocation Date: 07/04/1998
20B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996
21B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE	Receiving Water: RIVER DOVE AND BULLING DYKE

ID	Distance (m)	Direction	NGR	Details	
				Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996 Revocation Date: 07/04/1998
22B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
23B	472	SE	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 1	Receiving Water: RIVER DOVE AND BULLING DYKE Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 11/12/1990 Effective Date: 11-Dec-1990 Revocation Date: 05/03/1995
24C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
25C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
26C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
27C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
28C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009
29C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009
30C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS

ID	Distance (m)	Direction	NGR	Details
				STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 15 AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000 Revocation Date: 30/03/2008
31C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 15 Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000 Revocation Date: 30/03/2008
32C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 14 Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
33C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 14 Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
34C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 13 Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998
35C	497	SE	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 13 Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

5

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

ID	Distance (m)	Direction	NGR	Details
1A	139	S	440568 403902	Incident Date: 08-Aug-2001 Incident Identification: 22825 Pollutant: Specific Waste Materials:Oils and Fuel Pollutant Description: Tyres:Mixed/Waste Oils Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
2A	139	S	440568 403902	Incident Date: 08-Aug-2001 Incident Identification: 22825 Pollutant: Specific Waste Materials Pollutant Description: Tyres Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
3A	139	S	440568 403902	Incident Date: 08-Aug-2001 Incident Identification: 22825 Pollutant: Oils and Fuel Pollutant Description: Mixed/Waste Oils Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
4	140	SE	440642 403935	Incident Date: 04-Oct-2003 Incident Identification: 194315 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
5	433	SW	440226 403659	Incident Date: 23-Oct-2003 Incident Identification: 197768 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

0

Database searched and no data found.

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

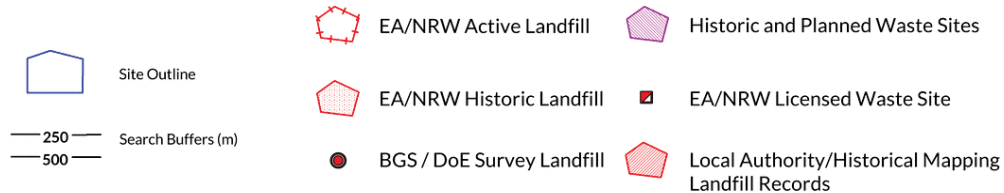
Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

1

The following Environment Agency/Natural Resources Wales landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	854	S	441100 403100	Address: Land / Premises At, Everill Gate Lane, Wombwell, Barnsley, South Yorkshire, S73 0DX Landfill Reference: 60604.0 Environmental Permitting Regulations (Waste) Reference: BDR009 Landfill Type: A04: Household, Commercial & Industrial Waste Landfill Operator: B D R Waste Disposal Ltd Status: Issued IPPC Reference: EPR Reference:

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

12

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
9	291	S		Site Address: Land North of Valley Road, Station Road, Industrial Estate, Wombwell, Barnsley Waste Licence: Yes Site Reference: 20B803(110), WD20 B803, 4400/B803 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 19-Dec-1990 Licence Surrendered: 28-Sep-1993 Licence Holder Address: Hangmanstone Depot, Birdwell, Barnsley Operator: Rafahart Limited Licence Holder: Rafahart Project and Mangement Limited First Recorded: 01-Jan-1991 Last Recorded: 31-Dec-1992
10	398	S		Site Address: Station Road Industrial Estate, Valley Road, Wombwell, Barnsley Waste Licence: Yes Site Reference: 4400/(125), WD20/B803 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 19-Dec-1990 Licence Surrendered: 31-Dec-1993 Licence Holder Address: - Operator: - Licence Holder: Rafahart Limited First Recorded: 31-Jan-1991 Last Recorded: 31-Dec-1993
Not shown	823	NW		Site Address: Land to the rear of Brookfield, Doncaster Road, Ardsley, Licence Issue: 11-Apr-1988 Licence Surrendered: 07-Apr-1991

ID	Distance (m)	Direction	NGR	Details
				Barnsley Waste Licence: Yes Site Reference: 4400/B568, 20B568(105), WD20 B568 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Holder Address: Brookfield, Doncaster Road, Ardsley, Barnsley Operator: S T Horrobin Licence Holder: S T Horrobin First Recorded: 11-Apr-1988 Last Recorded: 07-Aug-1989
Not shown	853	SW		Site Address: Disused canal between Station Road and Littlefield Road, Wombell, Barnsley Waste Licence: Yes Site Reference: WD2 B19, WD20 B609, 4400/B609, 20B609(56) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 26-Sep-1988 Licence Surrendered: 22-Apr-1993 Licence Holder Address: Stanney Mill Road, Little Stanney, Chester Operator: Barnsley Metropolitan Borough Council Licence Holder: J L F Civil Engineering Limited First Recorded: 26-Sep-1988 Last Recorded: 22-Apr-1993
Not shown	857	S		Site Address: Parkhill Quarry, Everill Gate Lane, Wombwell, Barnsley Waste Licence: Yes Site Reference: 4400/B8, WD2 B8, WD2 B16, WD2 B24, 4400/B24, 4400/0410, 4400/0563 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 17-Nov-1976 Licence Surrendered: 31-Dec-1990 Licence Holder Address: Central Offices, Barnsley Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Dec-1948 Last Recorded: 31-Dec-1995
Not shown	870	N		Site Address: Upperwood Hall, Doncaster Road, Darfield, Barnsley Waste Licence: Yes Site Reference: 4400/2B11, WD2 B11, 2B11(55) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 04-Oct-1974 Licence Surrendered: 31-Dec-1990 Licence Holder Address: - Operator: - Licence Holder: South Yorkshire County Council First Recorded: 04-Oct-1974 Last Recorded: 31-Dec-1990
Not shown	882	SW		Site Address: Disused Canal between Littlefield Lane and Station Road, Wombwell, Barnsley Waste Licence: Yes Site Reference: WD2 B17, 4400/B17 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 02-Mar-1988 Licence Surrendered: - Licence Holder Address: Public Services Department, Central Offices, Kendray Street, Barnsley Operator: - Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Dec-1988 Last Recorded: 30-Nov-1990
Not shown	965	SW		Site Address: North Ferriby Tip, Church Road, North Ferriby Waste Licence: Yes Site Reference: 55/30/10, 4400/41B61 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 13-Jul-1995 Licence Surrendered: - Licence Holder Address: - Operator: Humberside County Council Licence Holder: Mr C Bell First Recorded: - Last Recorded: -
Not shown	984	E		Site Address: End Of Ings Road, Wombwell, Barnsley Waste Licence: - Site Reference: (123)B, 4400/(123) Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1050	S		Site Address: Land To North of Wombwell Bypass, Wombwell, Barnsley Waste Licence: Yes Site Reference: WD20 B787, 4400/B787, 20B787(143) Licence Issue: 13-Jun-1991 Licence Surrendered: 10-Feb-1995 Licence Holder Address: Pontefract Road, Broom Hill, Wombwell, Barnsley Operator: VHE Construction Limited

ID	Distance (m)	Direction	NGR	Details
				Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Holder: VHE Construction Limited First Recorded: 31-Dec-1991 Last Recorded: 10-Feb-1995
Not shown	1056	S		Site Address: Rear of Catholic Club, 23 Park Street, Wombwell, Barnsley Waste Licence: - Site Reference: (145)B, WD20 B185, 4400/(125) Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: P J Burke Limited Licence Holder: Mr C W Hadfield First Recorded: 31-Dec-1979 Last Recorded: -
Not shown	1481	S		Site Address: Section of disused canal between Everill Gate Lane, Wombwell Bypass, Barnsley Waste Licence: - Site Reference: 2B25(111), WD2 B25, 4400/B25 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: Public Services Department, Kendray Street, Barnsley Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Oct-1990 Last Recorded: 31-Dec-1990

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

1

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	1003	S	440900.0 403100.0	Address: Park Hill Tip, Wombwell, S.Yorks BGS Number: 184.0 Risk: Risk to major aquifer Waste Type: N/A

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

0

Database searched and no data found.

3.2 Other Waste Sites

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

6

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
3A	60	SE	440637 404018	Type of Site: Scrap Metal Yard Site Address: N/A	Planning Application Reference: N/A Date: 1976	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	60	SE	440637 404018	Type of Site: Scrap Metal Yard Site Address: N/A	Planning Application Reference: N/A Date: 1970	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5B	97	SE	440638 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6B	97	SE	440638 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
7B	97	SE	440637 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
8B	97	SE	440639 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

8

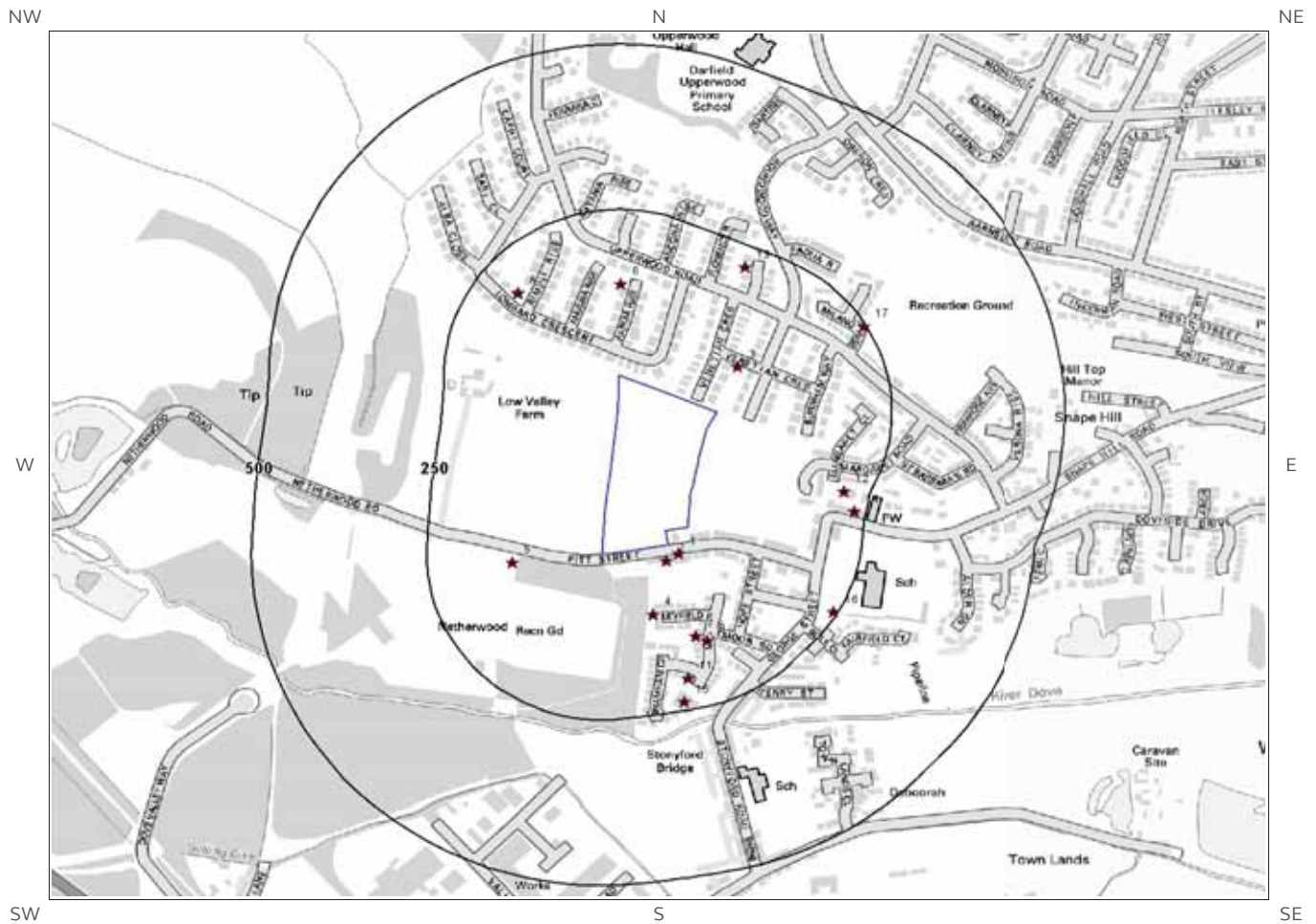
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
21	441	S	440386 403591	Site Address: Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GIL048 EPR reference: EA/EPR/CB3032RL/A001 Operator: Gillott Alloys Limited Waste Management licence No: 103352 Annual Tonnage: 74999.0	Issue Date: 09/01/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Gillott Alloys Ltd Correspondence Address: -	

ID	Distance (m)	Direction	NGR	Details
Not shown	782	SE	441000 403400	Site Address: Wombwell Wwtw, Ings Lane, Wombwell, Barnsley, South Yorkshire, S73 0BP Type: Biological Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR035 EPR reference: EA/EPR/DP3292ZS/A001 Operator: Yorkshire Water Services Ltd Waste Management licence No: 65470 Annual Tonnage: 4999.0 Issue Date: 17/05/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Wombwell Wwtw Correspondence Address: -
Not shown	1089	SE	441100 403100	Site Address: Everhill Gate Lane, Wombwell, Barnsley, S Yorks Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: - Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 0.0 Issue Date: 31/03/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: Thurcroft Heritage Centre, Thurcroft, Rotherham, South Yorkshire, S66 9AB
Not shown	1089	SE	441100 403100	Site Address: Land / Premises At, Everill Gate Lane, Wombwell, Barnsley, South Yorkshire, S73 0DX Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: EA/EPR/JP3490ZK/A001 Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 5000.0 Issue Date: 31/03/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: -
Not shown	1089	SE	441100 403100	Site Address: Everhill Gate Lane, Wombwell, Barnsley, S Yorks Type: Co-Disposal Landfill Site Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: - Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 0.0 Issue Date: 31/03/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: Thurcroft Heritage Centre, Thurcroft, Rotherham, South Yorkshire, S66 9AB
Not shown	1260	W	439200 404150	Site Address: Mitchell's Enterprise Park, Off Bradbury Balk Lane, Wombwell, Barnsley, South Yorkshire, S73 8HR Type: Physical Treatment Facility Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CUL008 EPR reference: EA/EPR/CB3635RY/V002 Operator: G. B. Cullet Limited Waste Management licence No: 103467 Annual Tonnage: 60000.0 Issue Date: 28/02/2013 Effective Date: - Modified: 11/12/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: The Cullet Yard Correspondence Address: -
Not shown	1260	W	439200 404150	Site Address: Mitchell's Enterprise Park, Bradbury Balk Lane, Wombwell, Barnsley, South Yorks, S73 8HR Type: Physical Treatment Facility Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CUL008 EPR reference: EA/EPR/CB3635RY/A001 Operator: G B Cullet Ltd Waste Management licence No: 103467 Issue Date: 28/02/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: The Cullet Yard Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
Annual Tonnage: 60000.0					
Not shown	1260	W	439200 404150	Site Address: Mitchell's Enterprise Park, Off Bradbury Balk Lane, Wombwell, Barnsley, South Yorkshire, S73 8HR Type: Physical Treatment Facility Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CUL008 EPR reference: EA/EPR/CB3635RY/V002 Operator: G B Cullet Limited Waste Management licence No: 103467 Annual Tonnage: 60000.0	Issue Date: 28/02/2013 Effective Date: - Modified: 11/12/2015 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: The Cullet Yard Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

17

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	19	SE	Depot	440565 404028	South Yorkshire, S73	Container and Storage	Transport, Storage and Delivery
2	21	S	Goldglaze Ltd	440547 404018	Pitt Street, Wombwell, Barnsley, South Yorkshire, S73 8AS	Conservatories	Consumer Products
3	74	NE	Electricity Sub Station	440648 404310	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
4	99	S	Mr Interiors	440528 403936	20, Leyfield Place, Wombwell, Barnsley, South Yorkshire, S73 8BF	Building and Component Suppliers	Construction Services
5	128	W	Electricity Sub Station	440327 404015	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
6	139	N	Electricity Sub Station	440481 404436	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
7	143	S	Bonjour Bake Shop	440589 403903	20, Millmoor Road, Wombwell, Barnsley, South Yorkshire, S73 8BD	Baking and Confectionery	Foodstuffs
8	154	S	Tank	440605 403896	South Yorkshire, S73	Tanks (Generic)	Industrial Features
9A	191	NW	A1 Tuning	440335 404422	28, Lombard Crescent, Darfield, Barnsley, South Yorkshire, S73 9PX	Vehicle Repair, Testing and Servicing	Repair and Servicing
10A	191	NW	A1 Mobile Crypton Tuning	440335 404422	28, Lombard Crescent, Darfield, Barnsley, South Yorkshire, S73 9PX	Vehicle Repair, Testing and Servicing	Repair and Servicing
11	202	S	Industrial Estate	440578 403840	South Yorkshire, S73	Business Parks and Industrial Estates	Industrial Features
12	213	E	Bus Depot	440801 404122	South Yorkshire, S73	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
13	219	N	R Sagar	440660 404461	5, Amalfi Close, Darfield, Barnsley, South Yorkshire, S73 9PN	Sports and Leisure Equipment Repair	Repair and Servicing
14	233	E	Ricky P-rpm	440815 404092	128, Snape Hill Road, Darfield, Barnsley, South Yorkshire, S73 9LT	Vehicle Repair, Testing and Servicing	Repair and Servicing
15	237	S	Adria Glass	440573 403804	Unit 5, Low Valley Industrial Estate, Wombwell, Barnsley, South Yorkshire, S73 8AG	Glass	Industrial Products
16	243	SE	Electricity Sub Station	440785 403940	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
17	247	NE	Gas Governor Station	440829 404372	South Yorkshire, S73	Gas Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

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

5.3 Bedrock and Solid Geology

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

Lex Code	Description	Rock Type
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
ACR-SDST	ACKTON ROCK	SANDSTONE

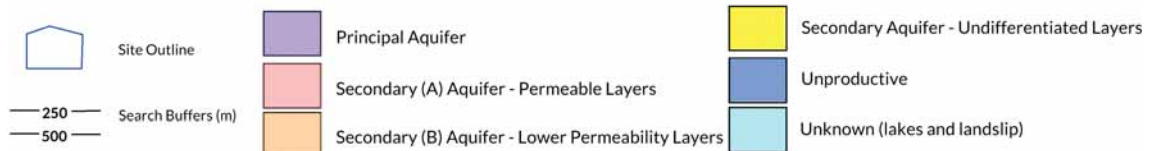
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

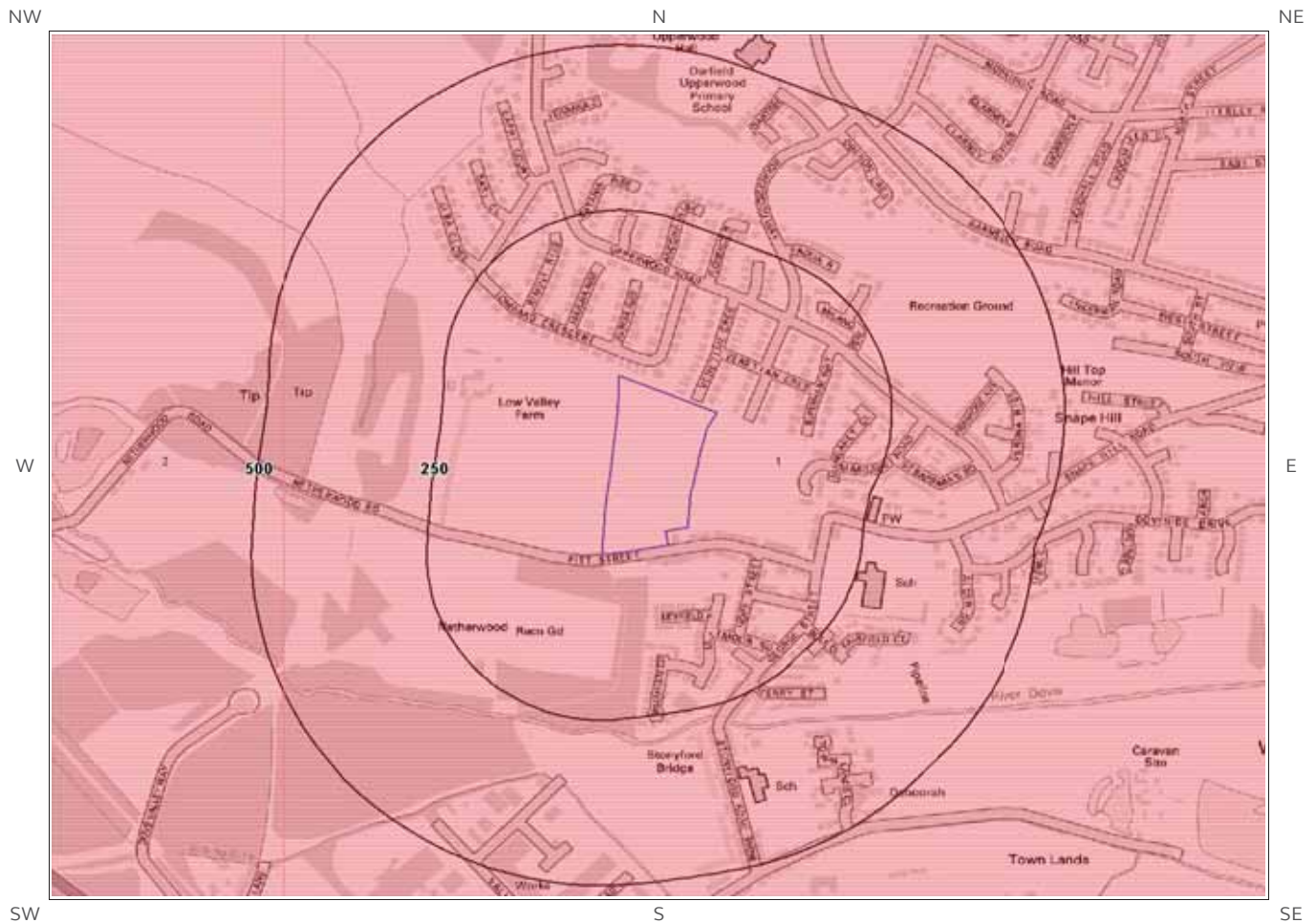
6a. Aquifer Within Superficial Geology



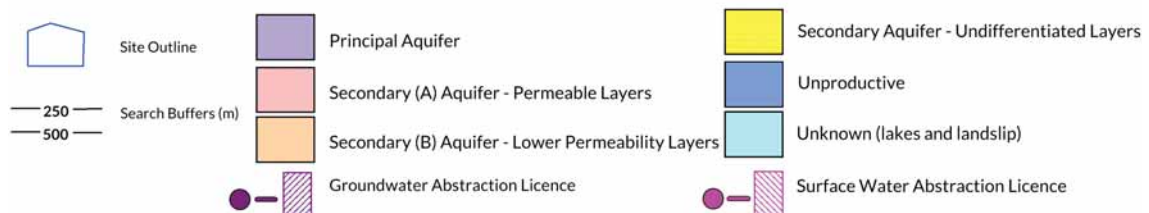
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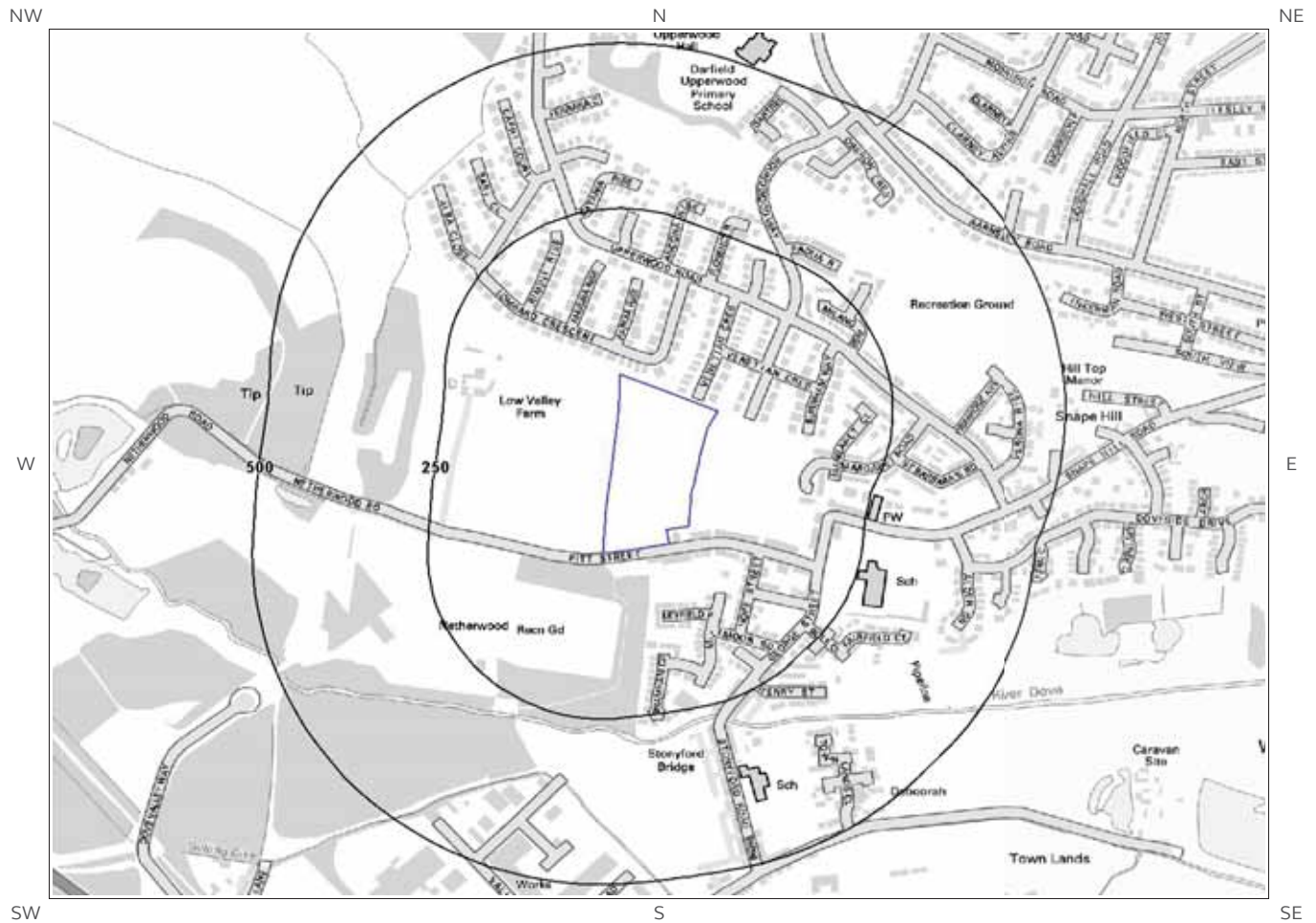
6b. Aquifer Within Bedrock Geology and Abstraction Licences



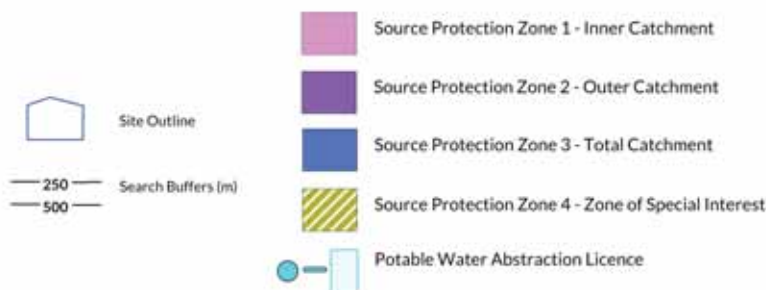
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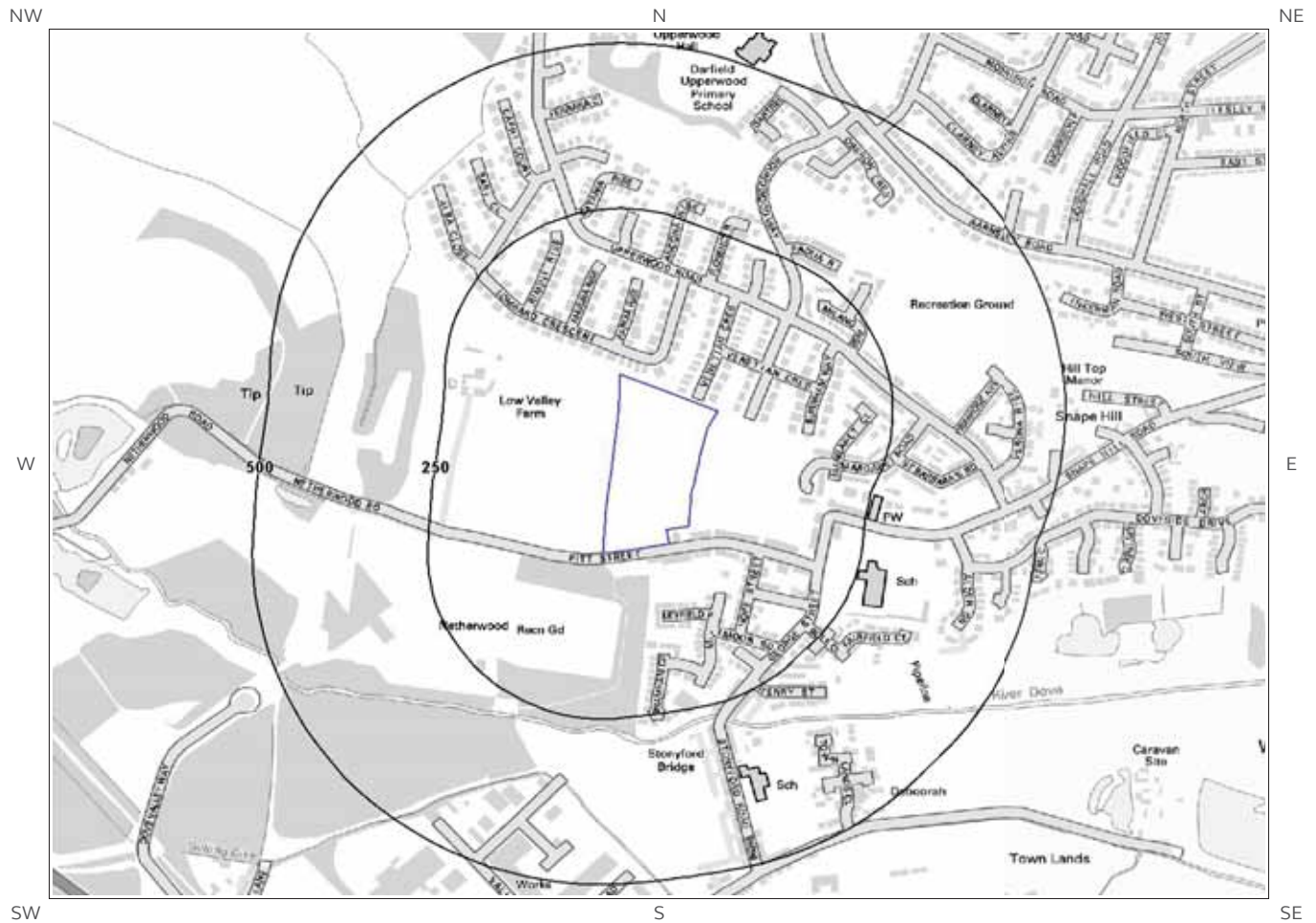
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



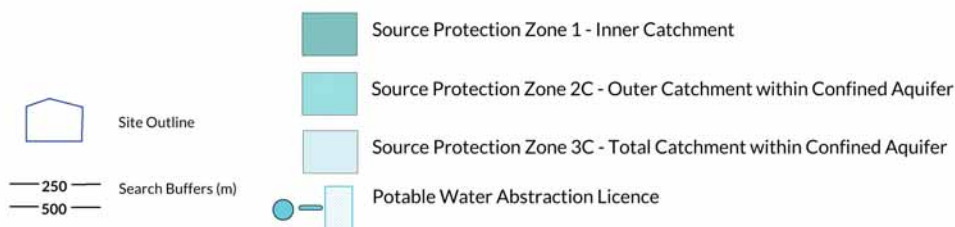
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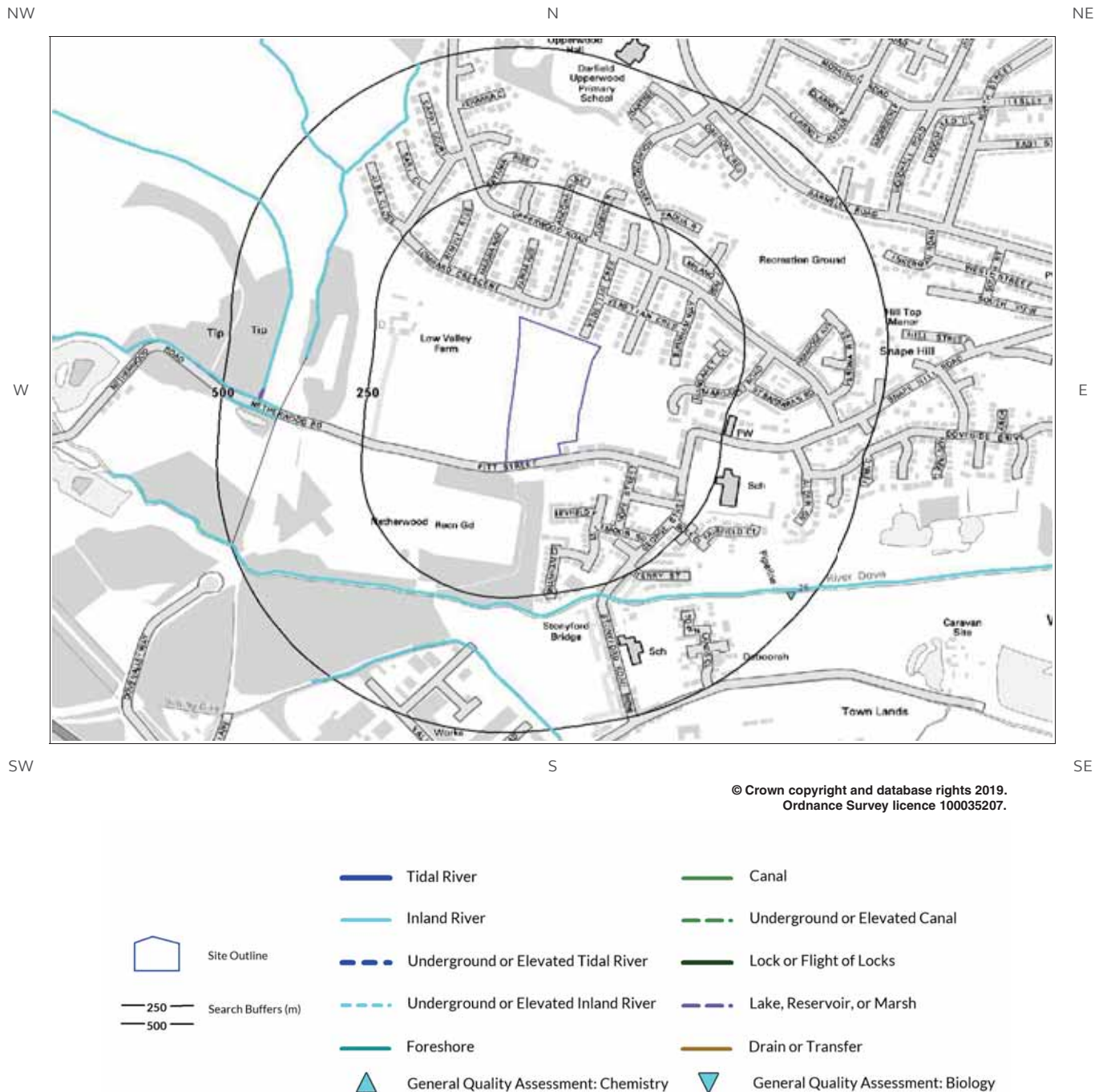
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

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

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

ID	Distance (m)	Direction	Designation	Description
1	83	S	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	485	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	455	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1596	NW	439100 405100	Status: Historical Licence No: 2/27/08/029 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING NO2 - LOW LAITHES Data Type: Point Name: LOW LAITHES DAIRY FARM LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1990 Version End Date:
Not shown	1596	NW	439100 405100	Status: Historical Licence No: 2/27/08/029 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING NO2 Data Type: Point Name: LOW LAITHES DAIRY FARM LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1990 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
151	W	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
356	SE	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
455	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
468	W	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site Identified

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
25	470	SE	440950 403780	River Name: Dove Reach: Blacker Dyke Wombwell Stw End/Start of Stretch: End of Stretch NGR	D	D	D	C	C
Not shown	1438	E	442047 404414	River Name: Dearne Reach: Grimethorpe Dike Billingley Dyke End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
Not shown	1438	E	442047 404414	River Name: Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
Not shown	1443	E	441969 403683	River Name: Dearne Reach: River Dove Bulling Dyke End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
Not shown	1443	E	441969 403683	River Name: Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
Not shown	1443	E	441969 403683	River Name: Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: End of Stretch NGR	D	D	D	C	C

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1251	E	441800 403800	River Name: River Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: Sample Point NGR	B	B	B	B	B
Not shown	1438	E	442047 404414	River Name: River Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: Start of Stretch NGR	C	C	C	C	B
Not shown	1438	E	442047 404414	River Name: River Dearne Reach: Grimethorpe Dike Billingley Dyke End/Start of Stretch: End of Stretch NGR	C	C	C	C	B
Not shown	1443	E	441969 403683	River Name: River Dearne Reach: River Dove Bulling Dike End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C
Not shown	1443	E	441969 403683	River Name: River Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: End of Stretch NGR	C	C	C	C	B
Not shown	1443	E	441969 403683	River Name: River Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: End of Stretch NGR	B	B	B	B	B
Not shown	1487	E	442072 404561	River Name: River Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: Sample Point NGR	C	C	C	C	B
Not shown	1487	E	442072 404561	River Name: River Dearne Reach: Grimethorpe Dike Billingley Dyke End/Start of Stretch: Sample Point NGR	C	C	C	C	B

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	261 S	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4
19	261 S	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4
2	266 S	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
20	266 S	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
3	340 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
Not shown	340 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
4	341 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	341 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	342 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
Not shown	342 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
6	345 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	345 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
7	349 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3
25	349 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3
8	350 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
Not shown	350 S	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
9	351 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	351 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	365 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	365 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	396 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	396 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	396 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	396 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
13	399 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
31	399 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	401 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	401 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	402 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
16	402 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	402 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
34	402 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	405 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	405 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	406 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	406 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	406	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	406 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
20	411 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
38	411 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	429 W	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
39	429 W	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
22	434 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
40	434 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	457 SE	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
41	457 SE	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
24	499 W	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
Not shown	499 W	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3

6.11 Surface Water Features

Surface water features within 250m of the study site

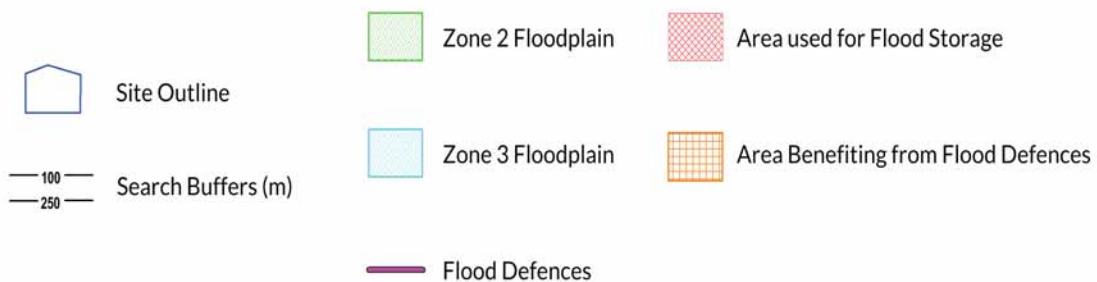
None identified

Database searched and no data found.

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



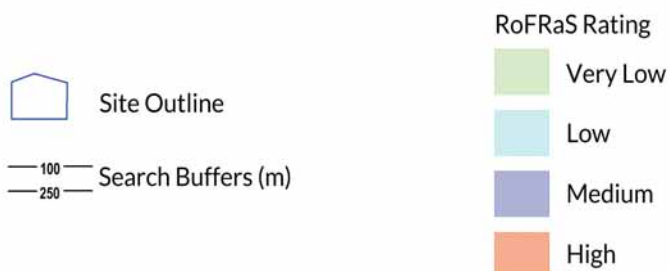
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

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

ID	Distance (m)	Direction	Update	Type
1	240	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
2A	243	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
3	246	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

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

ID	Distance (m)	Direction	Update	Type
1	248	S	12-Oct-2018	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite

Very Low

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

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

Flood Defences within 250m of the study site None identified
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified

Clearwater Flooding or Superficial Deposits Flooding Clearwater Flooding

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

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

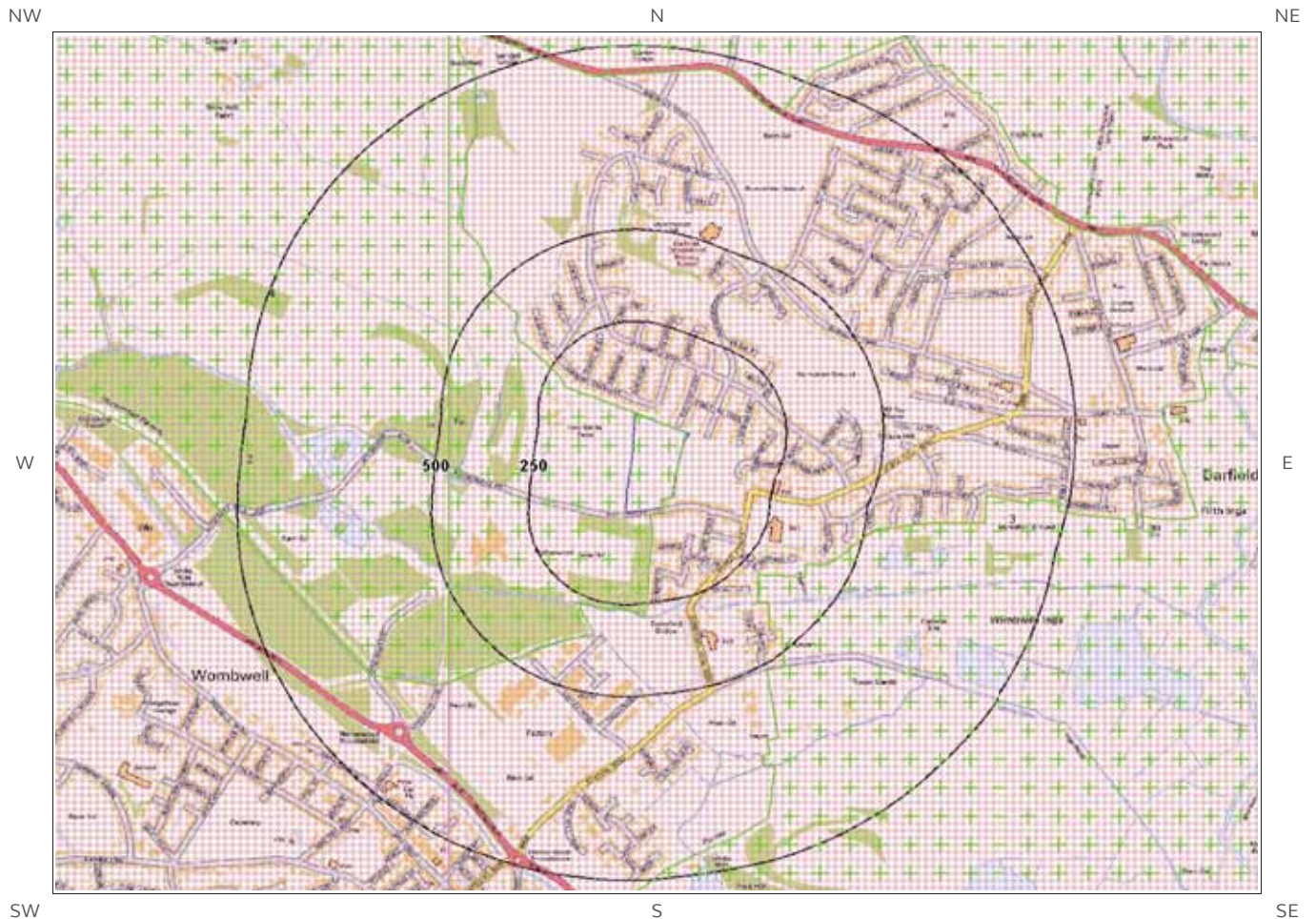
7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result Low

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

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

Database searched and no data found.

0

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

2

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	0	On Site	Existing	DEFRA
2	455	W	Existing	DEFRA

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

3

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
3	0	On Site	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
4	455	W	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1709	S	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

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

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

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Very Low

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

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

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

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

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

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

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

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

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

Identified

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site
Guidance: No Guidance Required.

None identified

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BGS Geological Hazards Reports and general geological enquiries:
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**British
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Phone: 01226 770770
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SE40SW/221

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION 4047, 0398	SAMPLES	
	From	To		Depth	Test and Result
Borehole 2A 11.7.73.	0	1.0	Grass on colliery waste.	0.3- 0.9	m 11
	1.0	2.1	Brick rubble pieces of concrete, broken sandstone, ash and clay fill.	2.1- 2.45	m 17 LL 39 FL 27 DD 1740 CU 55 QU 7
	2.1	2.6	Firm to stiff light brown and grey sandy clay with occasional fragments of mudstone and sandstone	2.45- 2.5	m 13
	2.6	3.3	Firm dark brown with veins of light grey very sandy clay with small fragments of ironstained sandstone.	2.9- 3.35	m 13 LL 23 FL 13 DD 1950 CU 60 QU 30
	3.3	4.25	Light grey ironstained medium grained weathered flaggy sandstone becoming less weathered with depth.	3.8- 3.85	m 14 50 blows for 50cm initial penetration N > 300
				3.8- 4.675	Core 1 Recovery 100% RCD 30%
	4.25	5.28	Dark grey ironstained silty mudstone.	4.675- 5.55	Core 2 Recovery 100% RCD 20%
	5.28	5.75	Brown fine to medium grained sand with fragments of weathered sandstone.	5.55- 6.425	Core 3 Recovery 100% RCD 15%
	5.75	6.0	Dark grey ironstained sandy mudstone.		
	6.0	7.05	Grey ironstained fine to medium grained very fractured sandstone, less fractured below 6.35m.	6.475- 7.05	Core 4 Recovery 100% RCD 65%
		7.05	End of Borehole. Water encountered at 3.35m.		



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