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environmental consultants



Phase I Preliminary Risk Assessment

Gipsy Lane Battery Energy Storage Facility

For

Arlington Energy Ltd

'Experience and expertise working in unison'

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Phase I Preliminary Risk Assessment

Project:	Gipsy Lane Battery Energy Storage Facility
For:	Arlington Energy Ltd
Ref:	CRM.348.002.GE.R.001.A
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Author:	Steve Rhodes - **Technical Director**
Reviewer:	Richard Hamilton – **Associate Director**

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1.0 INTRODUCTION

Background

1.1 Arlington Energy Ltd have submitted a planning application for a Planning Permission to undertake development works required for the construction of a battery energy storage facility on land at Gipsy Lane, Rochdale, OL11 3HD.

Proposed Development

1.2 The proposed development site would be for the provision of a battery energy storage facility. Energy storage is the capture of energy produced at one time for use at a later time. The site layout will consist of the following equipment:

- 6 X Battery Containers
- 9 X Inverter modules
- 9 X Transformer modules
- 2.4m high security fence
- Temporary construction compound
- DNO Substation

1.3 The above equipment will be mounted on concrete plinths. An access point into the site has been incorporated into the site layout, and this will provide access to all equipment within the site from the access point to the west of the site.

Objectives

1.4 The objectives of the study are to:

- 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 provided, a copy of which is included in Appendix A;
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the proposed development of the site; and
- Provide a factual and interpretative report relating to the desk study.

- Provide a Preliminary Risk Assessment with recommendations for further works where requirements are identified.

Risk Classification

1.5 Enzygo 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
Dismissed	No contamination risk has been identified associated with the proposed development.
Low	No significant contamination risks have been encountered and there is a low risk that remediation will be required.
Low-Moderate	There are unlikely to be significant contamination issue associated with the 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 contamination risks have been encountered or identified. Remediation is considered feasible as part of the development process and no further investigation is considered necessary.
Moderate-High	Some potentially significant contamination risks have been identified that requires remediation. It is recommended that a separate remedial methodology is prepared supported by a site-specific risk assessment.
High	Significant potential contamination risks have been identified and general remediation is likely to be required supported by further intrusive ground investigation, risk assessment and remedial design.

2.0 SITE SETTING

Site Description

Item	Description
Site Address	Land at Gipsy Lane, Rochdale, OL11 3HD
National Grid Reference	SD 88246 11246

Current Site Description

2.1 The following site description has been compiled from a site inspection undertaken by an environmental consultant from Enzygo limited together with current maps and aerial photographs.

2.2 The site is occupied by an area of open land vegetated with grass.

2.3 Mature trees are present across the site.

2.5 No evidence of fuel or chemical storage and no spillages were noted on the site.

Surrounding Area

2.6 Land uses surrounding the site are summarised as follows:

Direction	Land Use
South	Distribution.
East	Vehicle sales.
North	Open space with residential use beyond.
West	Commercial use.

2.7 No evidence of significant contamination sources are identified 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**
1881	Open land.	Open land 0m N, S, E & W. Farm 50m E, Woodland and houses 100m N. Railway 150m SE.
1910	No change.	Bowling green 0m SE. Residential properties 80m NW.
1930	No change.	Commercial Units 100m E & 150m SE. Earthworks 100m SW.
1937	No change.	No change.
1956	No change.	Residential development 50m N & W.
1957	No change.	No change.
1975	No change.	Works 0m SE. Commercial units no longer shown. Earthworks n longer shown.
1977	No change.	No change.
1984	No change.	Works 50m SE & Warehouse 50m SW.
1990	No change.	No change.
1992	No change.	Warehouse 50m SE.
2002	No change.	No change.
2010	No change.	No change.
2014	No change.	No change.

3.2 There is a potential risk from ground gas associated with the earthworks 100m south west. This risk is considered minimal based on the low sensitivity end use of the site. Nearby works and warehouses are unlikely to pose a significant risk to a low sensitivity commercial development.

3.3 No other potential significant contamination sources are identified 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.	Glaciofluvial Deposits.	Sand and Gravel.	Secondary A.
Solid.	Pennine Lower Coal Measures.	Mudstone, Siltstone and Sandstone.	Secondary A.

4.2 Made Ground is not shown close to the site.

4.3 There are no records of landslip within 500m of the site.

4.4 Records of background soil chemistry for the site shows no exceedance of commercial values.

4.5 BGS borehole records available close to the site confirm the presence of sand.

Groundwater

4.6 The recorded permeability of the drift geology is recorded as high to very high consistent with sand and gravel deposits. Permeability of the solid geology is low to high reflecting the variability of the formation.

4.7 The Ground Sure Report shows that the site is not within a Source Protection Zone.

4.8 There are no groundwater abstraction licenses within 500m of the site.

Coal Mining

4.9 The site is identified as being within an area of coal mining risk and therefore a Coal Authority Report has been obtained copy of whi9ch is included in Appendix A. The Coal Authority Report does not identify any significant risk from coal mining.

Non Coal Mining and Cavities

4.10 No significant non-coal mining activities have been identified close to the site.

4.11 No natural cavities have been identified close to the site.

Ground Workings

4.12 No ground workings are identified within 250m of the site other than those already assessed from the historical maps.

Hydrology

4.13 There are no surface water courses on the site.

4.14 The nearest surface water course is a Canal located 291m south east of the site. Given the distance this is not considered a significant receptor.

Radon Risk Potential

4.15 The Groundsure GeoInsight Report indicates that the site is not within a Radon Affected Area and no protective measures are required.

Natural Hazards Finding

4.16 BGS information presented within the Groundsure Geoinsight report identifies the following ground conditions:

Hazard	Risk Designation (Groundsure)
Coal Mining	None Identified.
Collapsible Ground	Very Low.
Compressible Ground	Negligible.
Ground Dissolution	Negligible.
Landslide	Very Low.
Running Sand	Very Low.
Swelling / Shrinking Clay	Negligible.

4.17 No significant ground risks are identified.

Sensitive Land Uses

4.18 The site is open land which is considered to be low sensitivity.

4.19 No historical features are identified on the site.

Environmental Sensitivity

4.20 Overall the site is currently considered to be of **moderate** sensitivity due to the following:

- Site is currently open land;
- The site is underlain by a Secondary A Aquifer;
- There are no groundwater abstractions close by; and
- There are no surface water courses close to the site.

4.21 The proposed end use of the site is for battery storage and as such future sensitivity will be low for end users.

Industrial Land Uses

4.22 No significant Industrial land uses are identified within 250m of the site, other than substation and light industrial uses which are not considered a significant risk.

4.23 There are is one fuel filling station within 250m of the site. This is located 220m south west of the site and is not considered a significant risk given the distance.

4.24 There are no high-pressure gas or oil pipelines within 250m of the site.

4.25 No new significant risks are identified from the register of industrial land uses.

Regulatory Database

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

Environmental Permits, Incidents and Registers	On site	0-250m	Details
Site determined as contaminated land	0	0	Not applicable
Authorised industrial processes & dangerous substances inventory sites.	0	0	Not applicable
Registered radioactive substances	0	0	Not applicable
Enforcements, prohibitions or prosecutions	0	0	Not applicable.
Pollution Incidents	0	1	Category 3 (minor) impact to land from oils 15m SW. Not considered a risk t low sensitivity commercial end use.
Consents issued under the Planning (Hazardous Substances) Act 1990	0	1	Site 78m SW. Not considered a risk given the distance.
Control of Major Accident Hazard (COMAH)/ Notification of Installations Handling Hazardous Substances (NIHHS) sites	0	1	COMAH site 83m S. Not considered a risk given the distance.
Records of Licensed Discharge Consents	0	0	Not applicable

4.27 No significant risks are therefore identified from the regulatory data base.

Landfill Sites and Waste Treatment Sites

4.28 There are no landfills identified within 250m of the site.

4.29 There are no waste operations identified within 250m of the site.

4.30 No new significant potential risks are identified from waste activities.

5.0 DESIGN ENHANCEMENT MEASURES

General

5.1 The proposed development comprises:

- 6 X Battery Containers
- 9 X Inverter modules
- 9 X Transformer modules
- 2.4m high security fence
- Temporary construction compound
- DNO Substation

5.2 The above equipment will be mounted on concrete plinths.

5.3 No significant substructure excavation is proposed.

Hazardous Chemical Storage

5.4 No hazardous chemical storage is proposed at the site.

5.5 Based on this no new contamination risks will be introduced to the site which can impact controlled waters. This risk is therefore dismissed on the absence of a viable pollutant linkage.

Transformer and Electricity Connection

5.6 The transformer is of modern construction and will be PCB free. It will be located on a concrete slab with a containment bund. This will address potential risk of leakage.

5.7 Power cables will be solid and will not have an oil jacket. Therefore, this is not a potential contamination source.

5.8 Switch gear will not contain chemicals and will be located within a structure with a concrete floor slab. This will mitigate potential risks from lubricants if used.

5.9 Based on this no new contamination risks will be introduced to the site which can impact controlled waters. This risk is therefore dismissed on the absence of a viable pollutant linkage.

Management and Maintenance

5.10 The site will be subject to regular inspections and maintenance. Spill response kits will be provided and used to deal with any localised spillage which does occur. This will manage the potential risk from accidental spillage and leakage on site.

Design Remedial Measures

5.11 The proposed development is a low sensitivity commercial use and will utilise hard standing, including hard-core across the site. This will mitigate the already low risk to end users from residual contamination in any potential underlying Made Ground by providing a physical barrier and breaking the pollutant linkage.

5.12 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 discovery strategy will be to remove the source as it is likely to be very limited in extent and the Local Planning Authority advised. Remediation will be undertaken to provide environmental betterment.

Risk To Construction Workers

5.13 No significant contamination risks are identified. Potential risks from unforeseen contamination will be addressed through normal site management and welfare procedures, including use of PPE.

Assessment of Pollutant Pathways

5.14 The development will utilise hardstanding which will break the potential pollutant linkage between residual contamination in soils and end users of the site. This risk is therefore dismissed.

5.15 The risk to surface water receptors is dismissed as no significant contamination sources have been identified on site. The use of concrete hardstanding within a dedicated drainage system will provide a design enhancement measure by reducing surface water ingress in to the ground and minimising the risk of residual unforeseen contamination being mobilised.

5.16 It is considered likely that structures can be constructed off a concrete base acting as a raft and no deep foundations are anticipated.

6.0 PRELIMINARY RISK ASSESSMENT

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
Human Health					
Asbestos, Hydrocarbon and metals.	Potential on-site contamination.	Ingestion dermal and inhalation.	Construction Workers. Site users.	Dismissed.	No source identified, and Design mitigation measures proposed.
Asbestos, Hydrocarbon and metals	Unforeseen contamination.	Ingestion dermal and inhalation.	Construction Workers. Site users	Dismissed.	Design mitigation measures proposed.
Hydrocarbon and metals.	Potential migration from off-site source.	Ingestion dermal and inhalation.	Construction Workers. Site users.	Dismissed.	Design mitigation measures proposed.
Ground Gas.	Landfills	Inhalation & Explosive.	Construction Workers. Site users.	Dismissed.	No source identified.
	Made Ground.	Inhalation & Explosive.	Construction Workers. Site users.	Dismissed.	No source identified.
Groundwater					
Hydrocarbon and metals.	On site source.	Vertical Migration.	Groundwater.	Dismissed.	Design mitigation measures proposed.
Surface Water					
Hydrocarbon and metals.	On site source.	Horizontal Migration.	River Network.	Dismissed.	Design mitigation measures proposed
Environmental Receptors					
On site contaminants		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No source.
		Direct.	Archaeology.	Dismissed.	None receptor.
		Direct.	Geology.	Dismissed.	None receptor.
		Phytotoxic.	Woodland.	Dismissed.	None receptor.
		Phytotoxic.	Crops.	Dismissed.	None receptor.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	None receptor.
Building Services					
On site contaminants		Direct.	Historic Buildings.	Dismissed.	None receptor.
		Direct.	Proposed Buildings.	Dismissed.	None receptor.
		Permeate into pipework.	Water Pipes.	Dismissed.	Water Authority requirements to be used.

7.0 CONCLUSION AND RECOMMENDATIONS

7.1 The proposed development will utilise hardstanding and be used for low sensitivity commercial use. Risk to end users is therefore dismissed as there will be no viable pollutant linkage.

7.2 Risk to surface waters and groundwater are dismissed due to the absence of a viable significant source. In addition, the proposed development will use hardstanding with dedicated drainage. This will reduce infiltration at the site and so reduce potential mobilisation of any unforeseen contamination.

7.3 In the unlikely event that unforeseen contamination is encountered during construction works removal of the material will lead to environmental betterment.

7.4 Potential impact of potable water pipes will be mitigated by using appropriate pipework agreed with the water authority.

7.5 It is considered that no further investigation is warranted at this site.

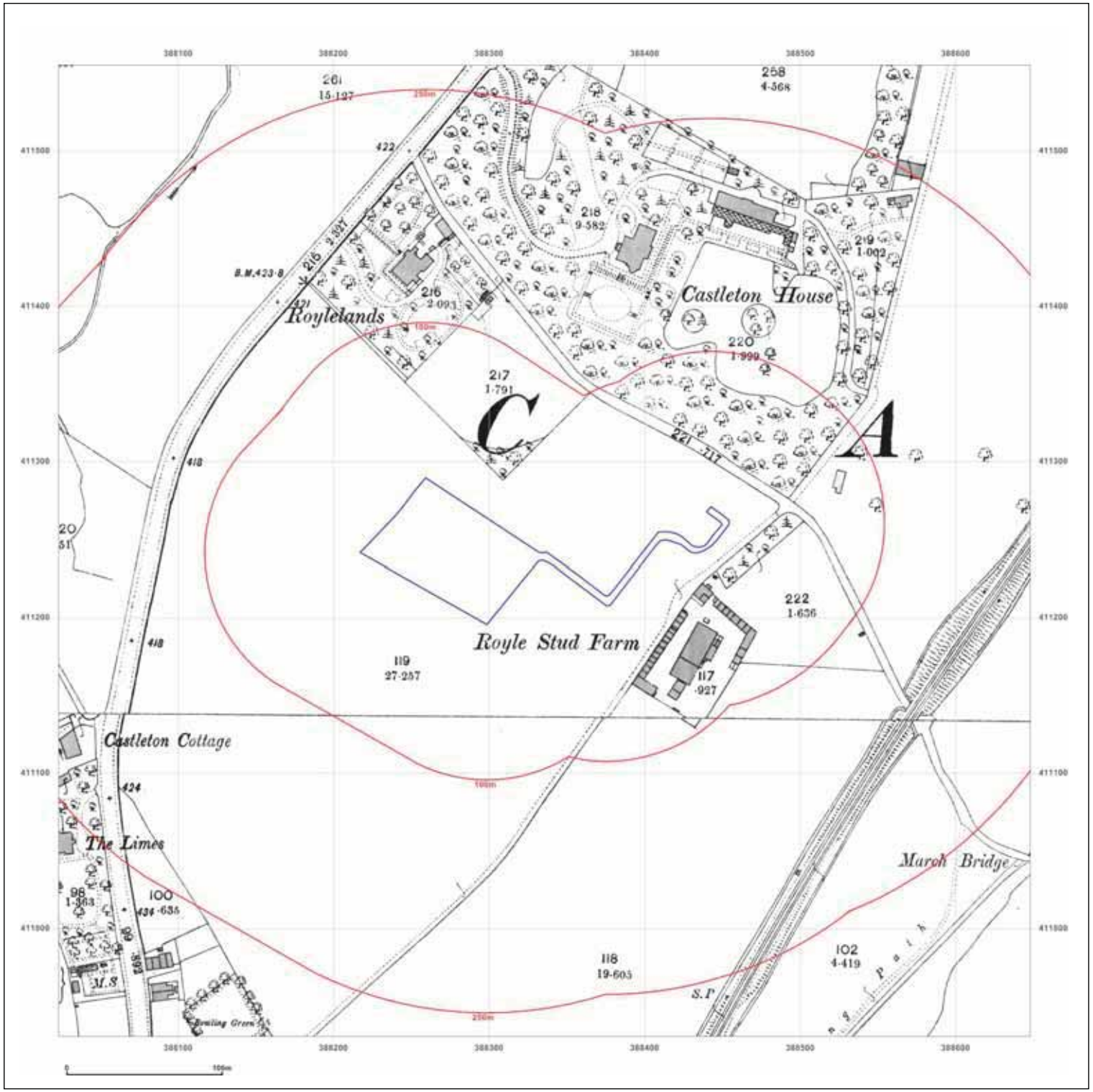


General View



General View

APPENDIX A – DESK STUDY INFORMATION



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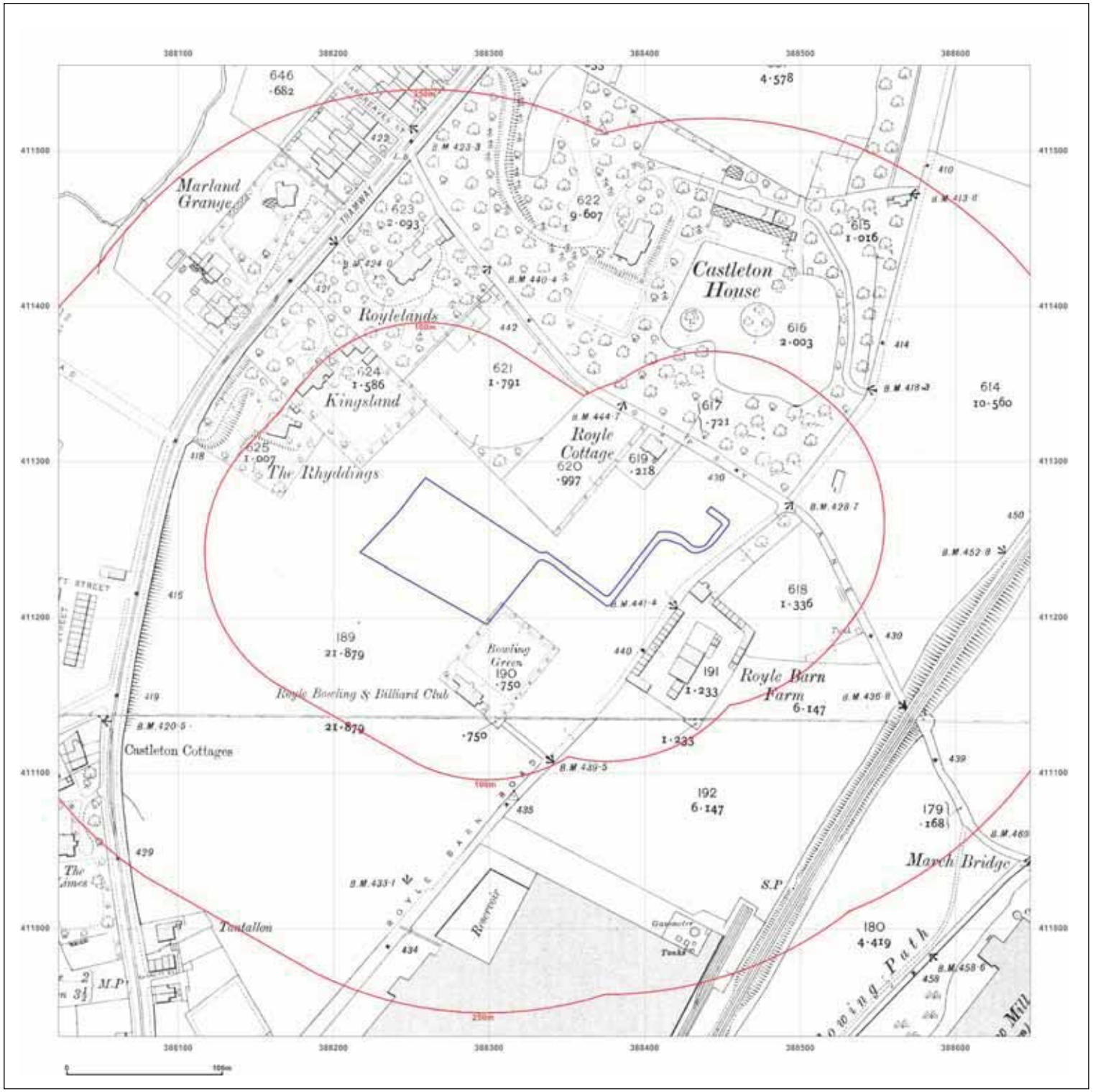
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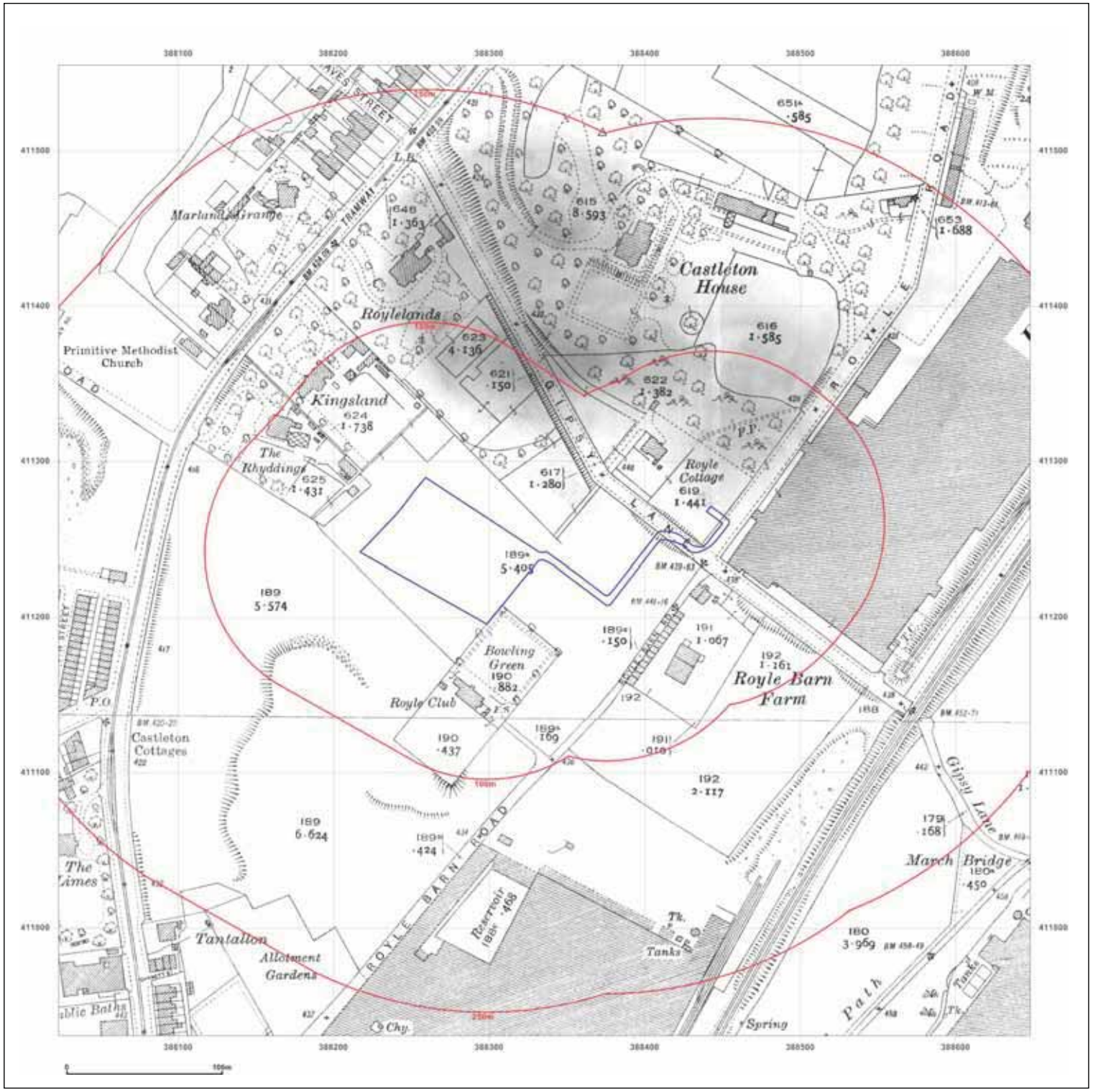
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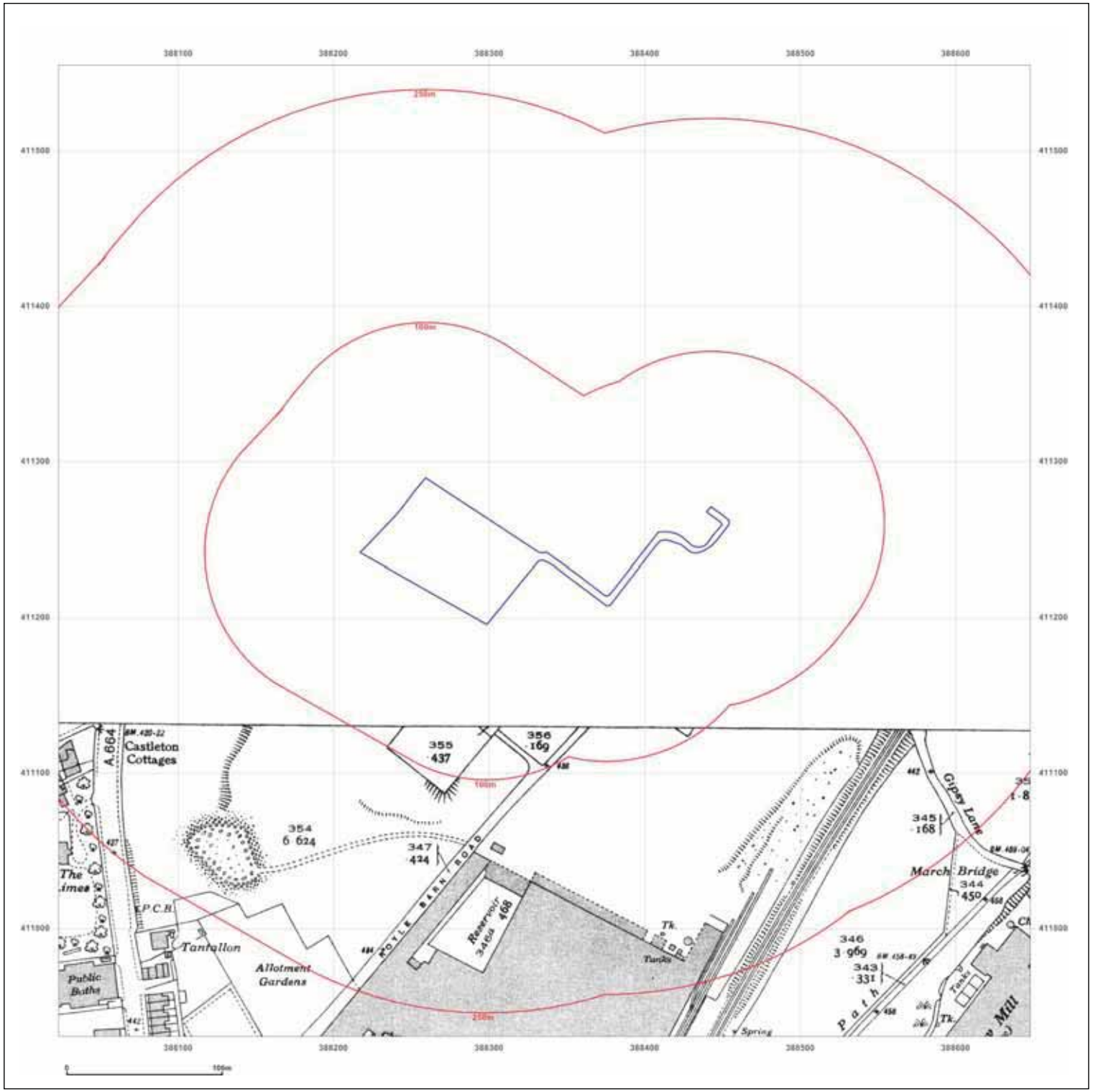
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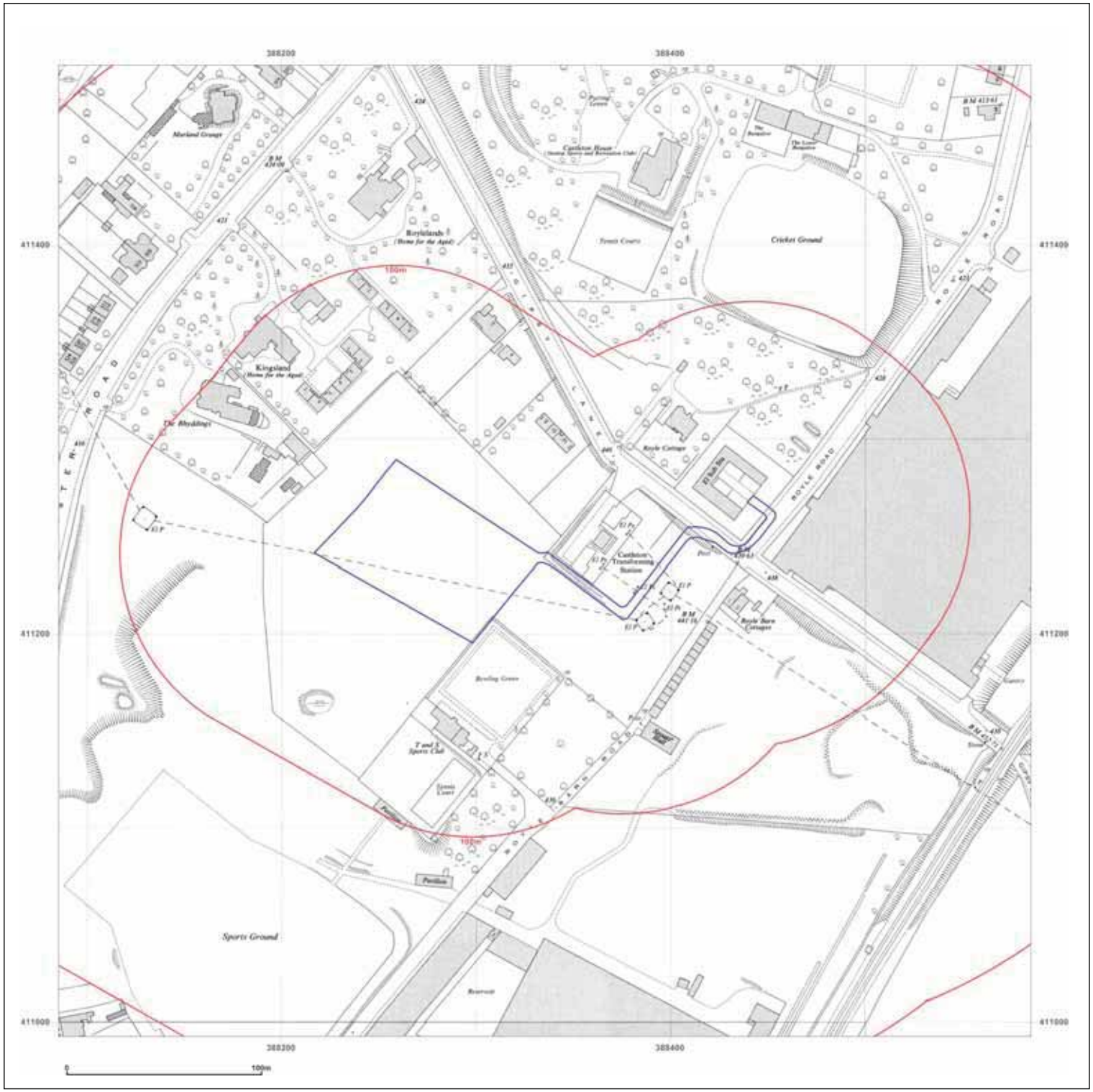
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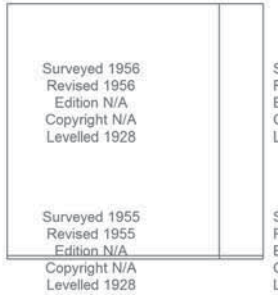
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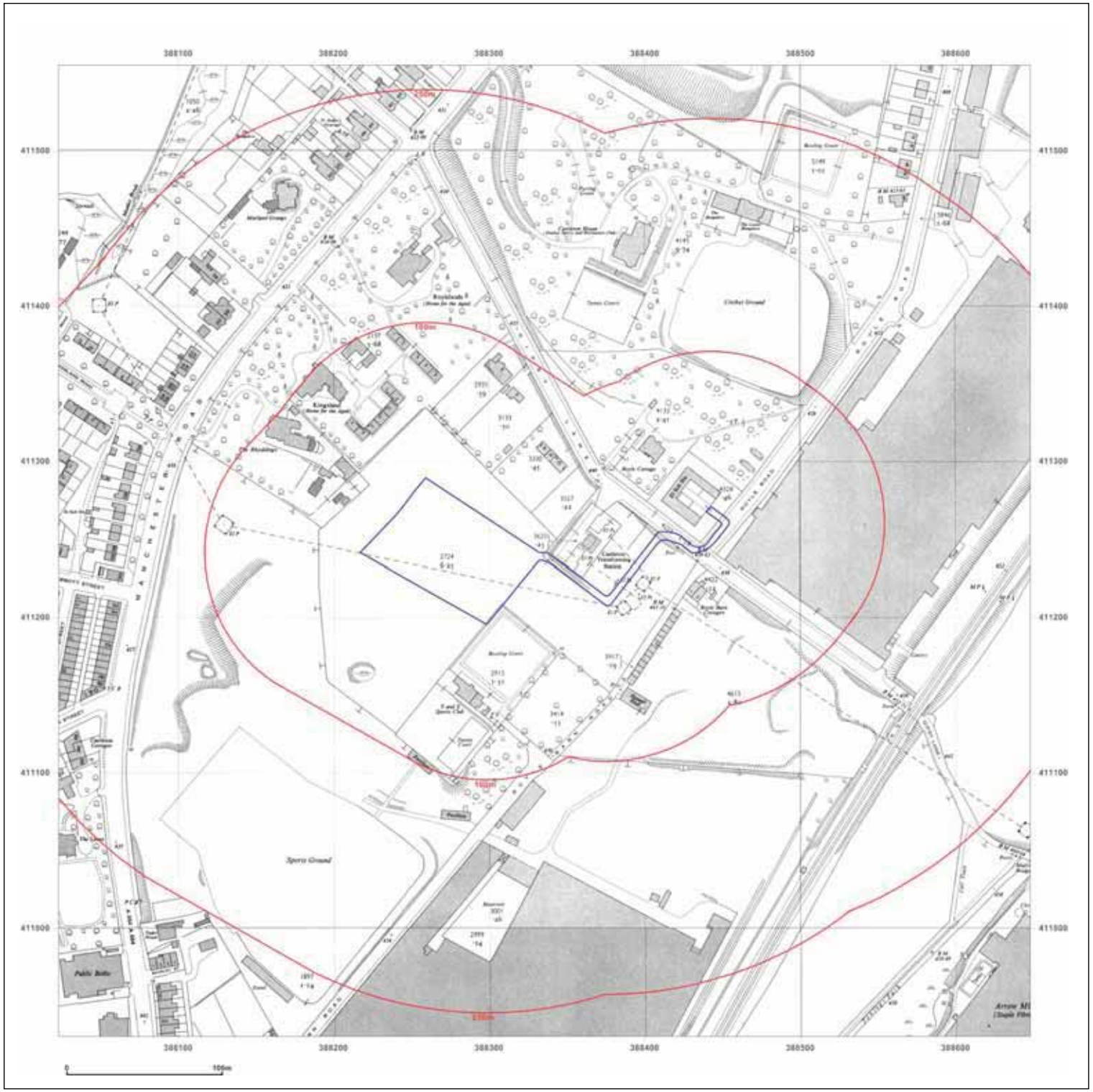
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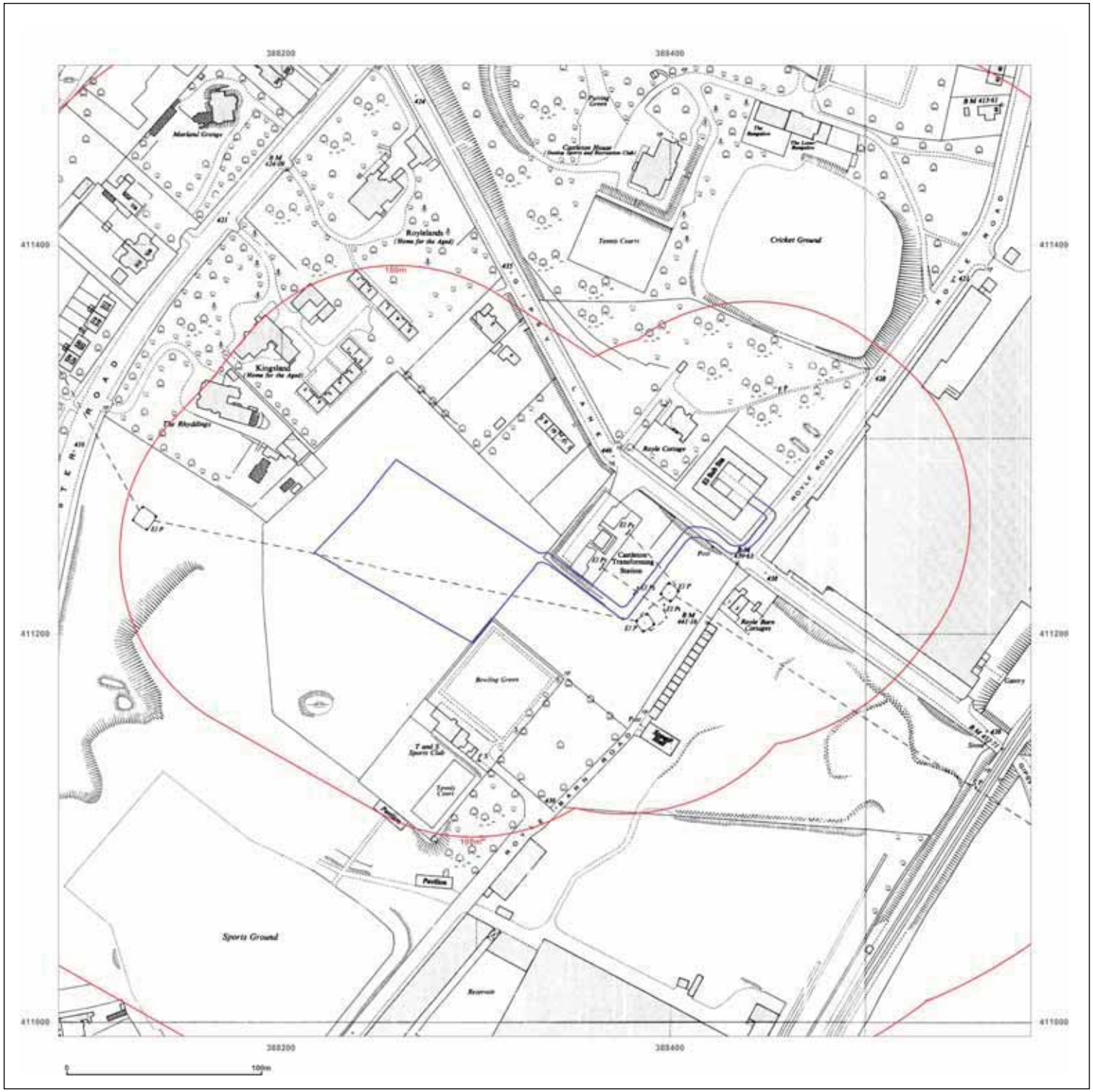
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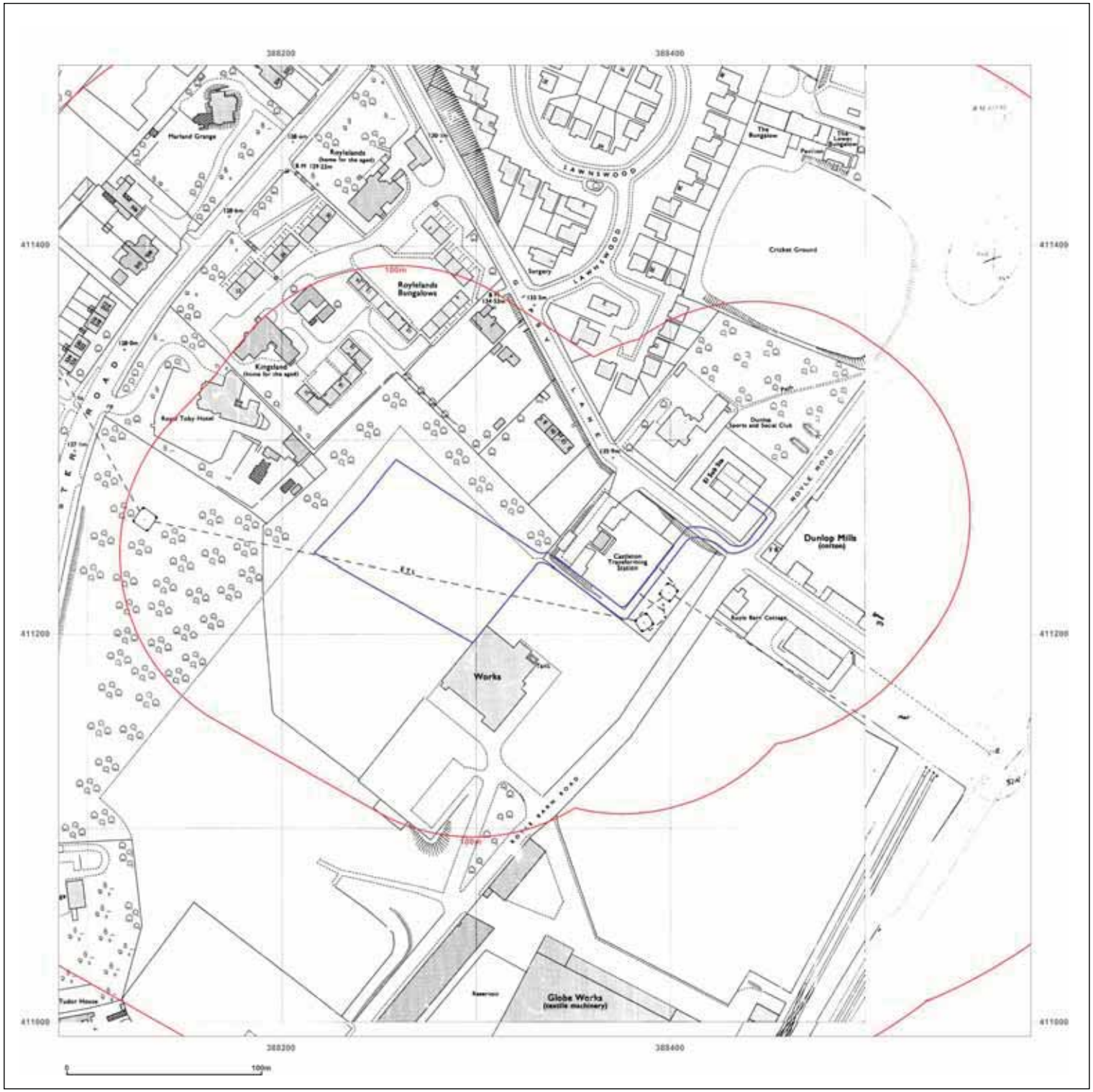
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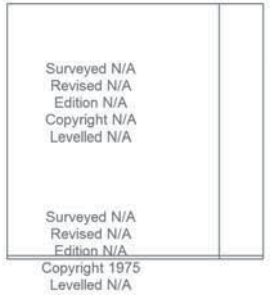
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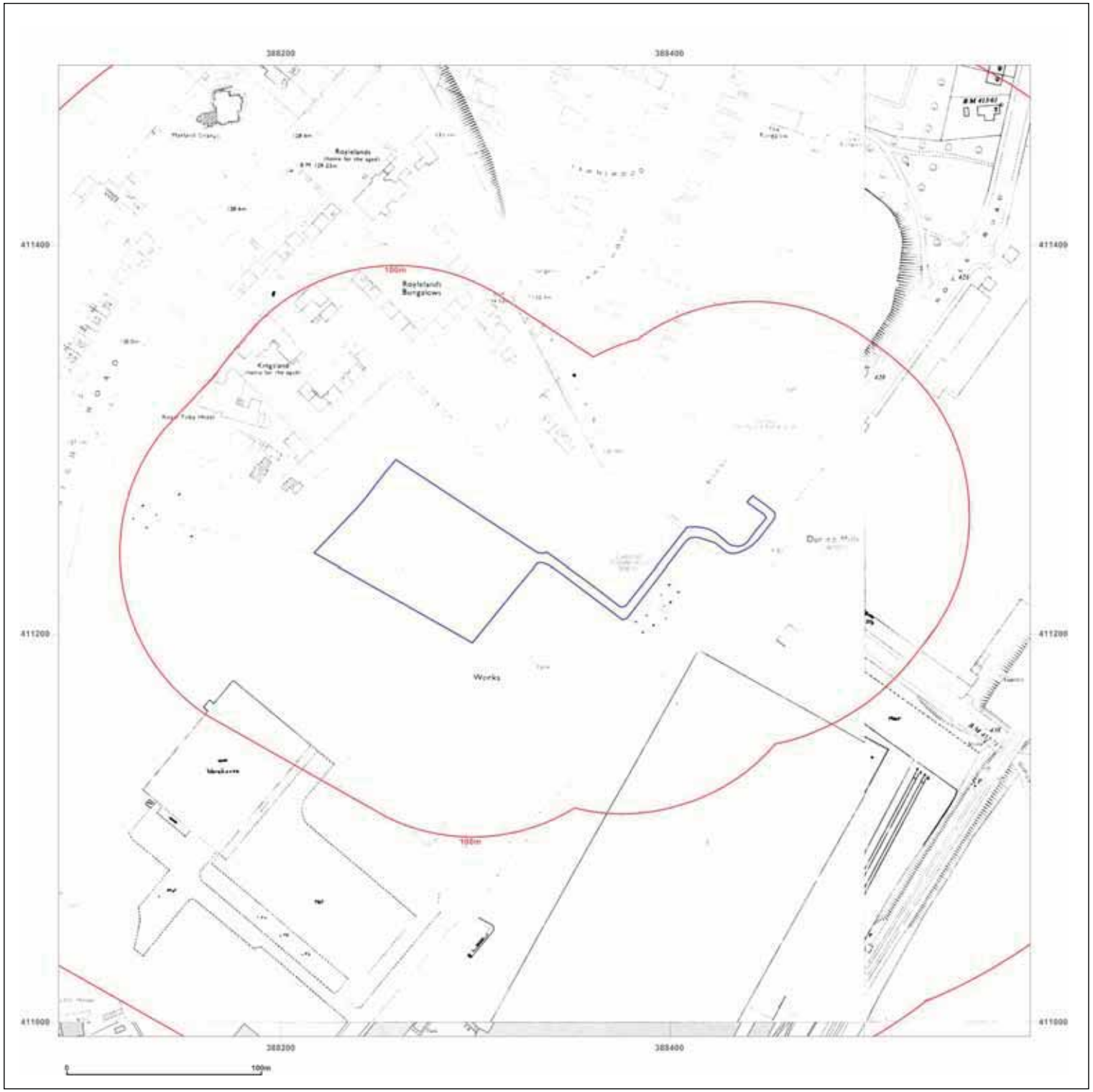
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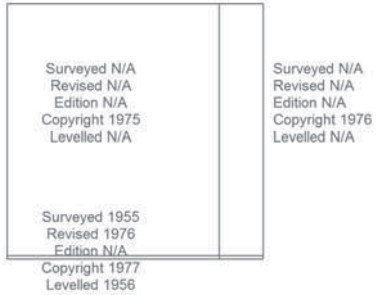
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Surveyed N/A Revised N/A Edition N/A Copyright 1979 Levelled 1962	Surveyed N/A Revised N/A Edition N/A Copyright 1981 Levelled 1956
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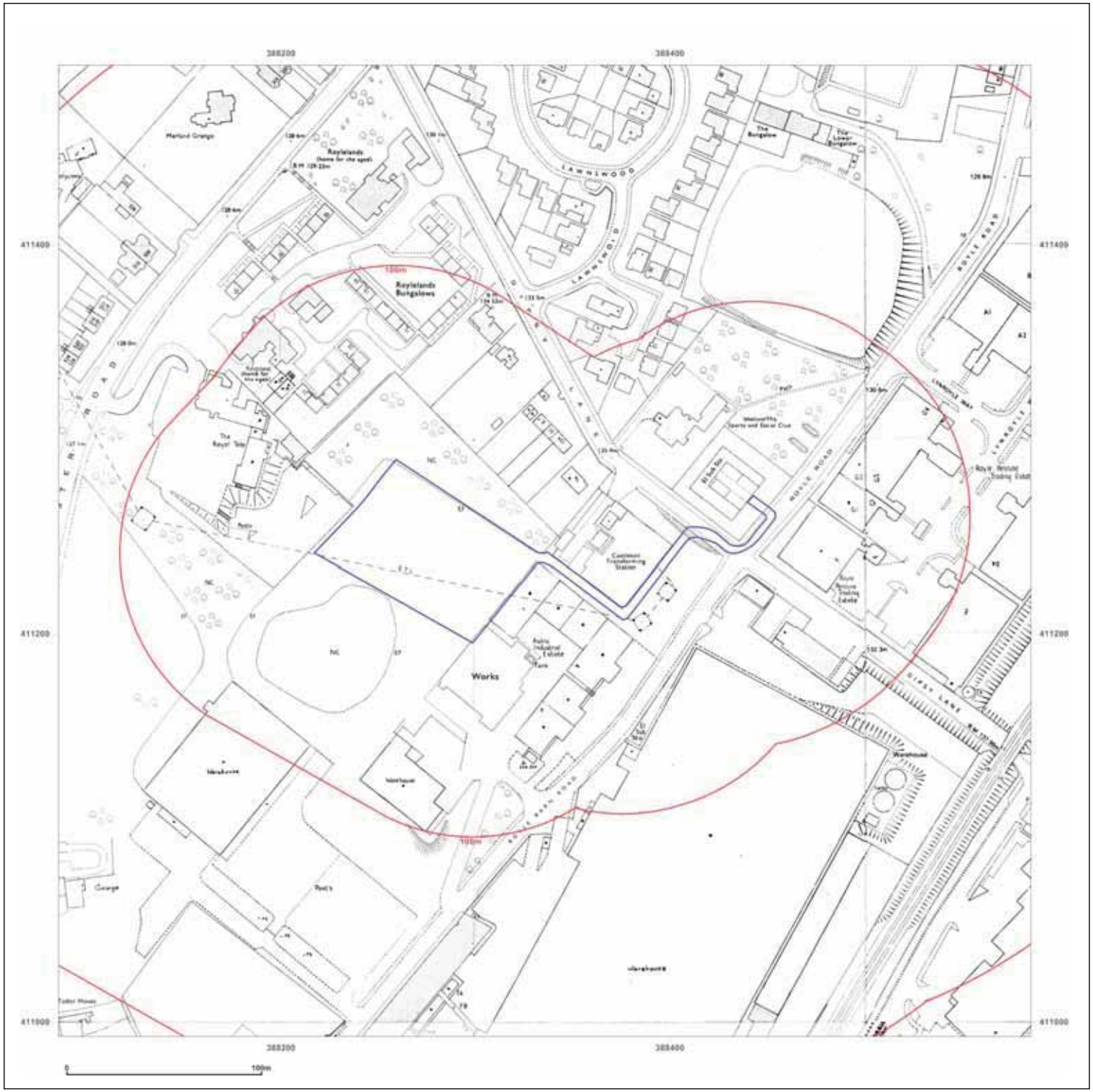
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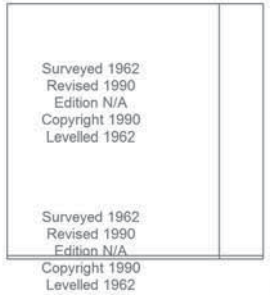
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Site Details:

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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: National Grid
Map date: **1989-1990**
Scale: 1:1,250
Printed at: 1:2,000

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Grid Ref: 388335, 411243

Map Name: National Grid
Map date: 1990-1992
Scale: 1:1,250
Printed at: 1:2,000

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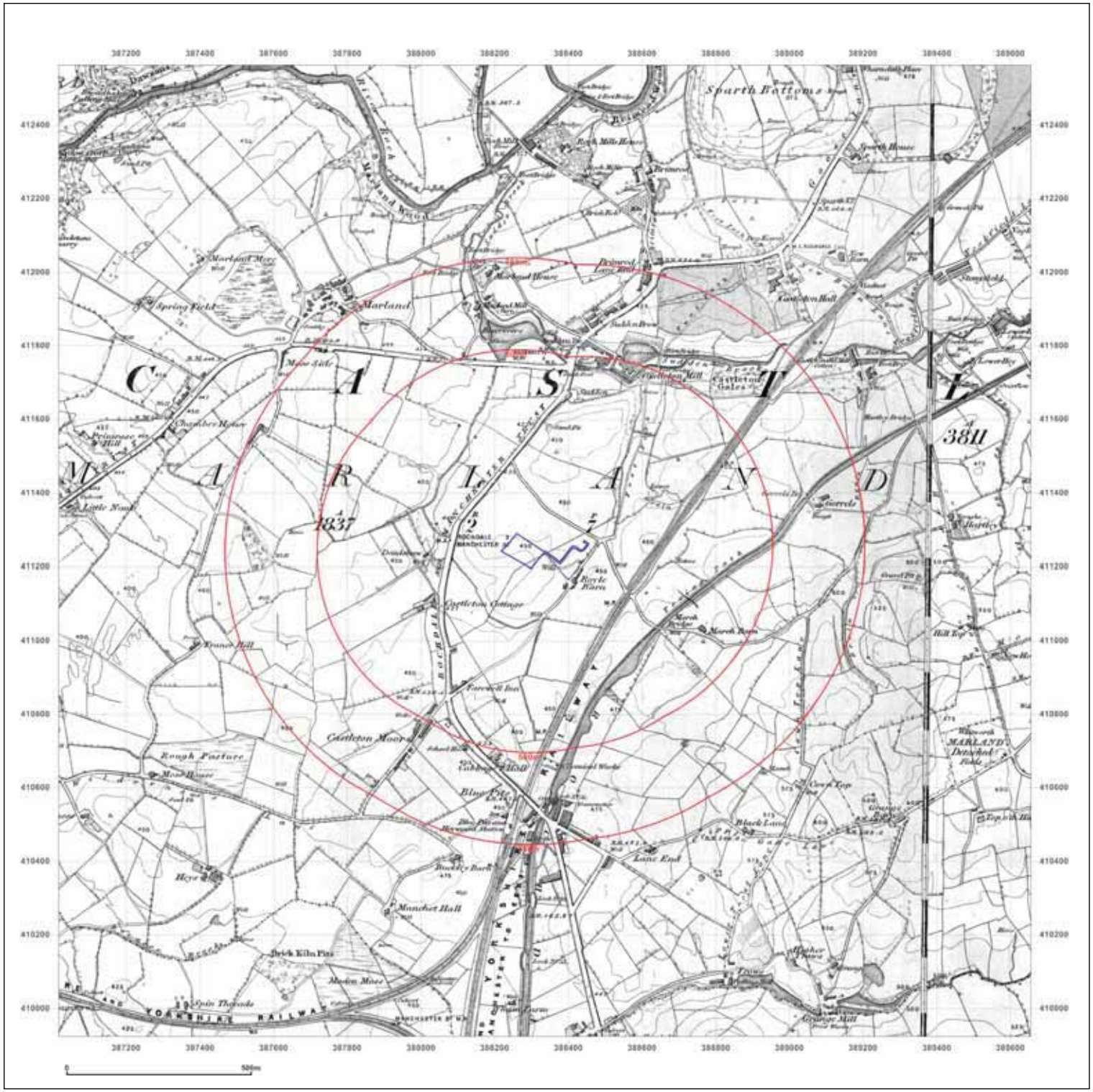
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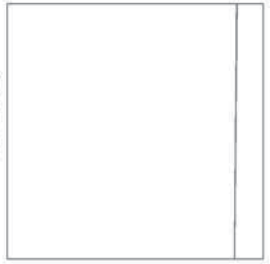
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Site Details:

Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: County Series
Map date: 1851
Scale: 1:10,560
Printed at: 1:10,560

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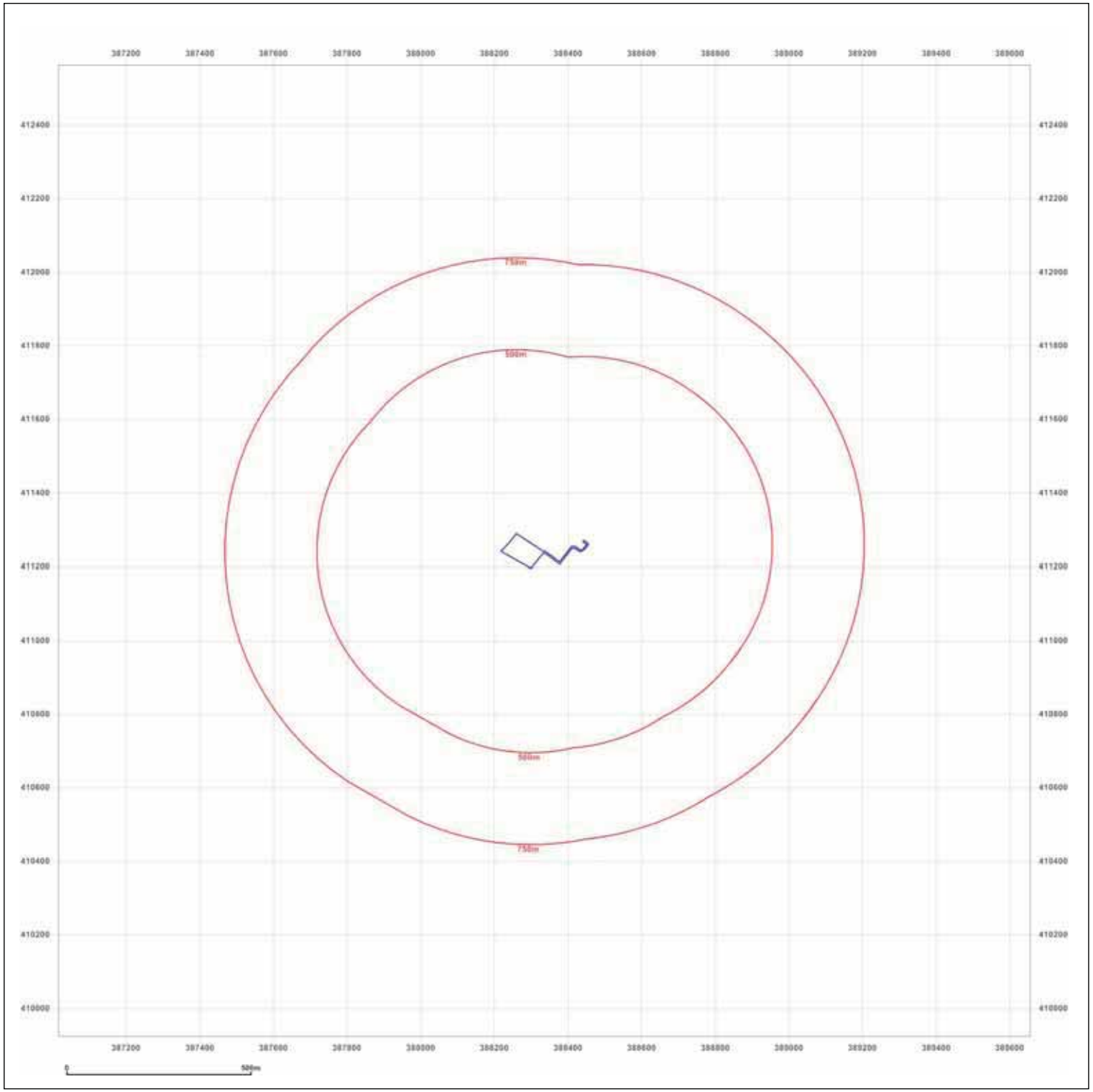
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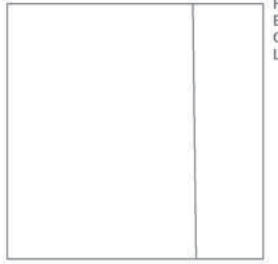
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Site Details:

Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: County Series
Map date: **1854**
Scale: 1:10,560
Printed at: 1:10,560

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Edition N/A
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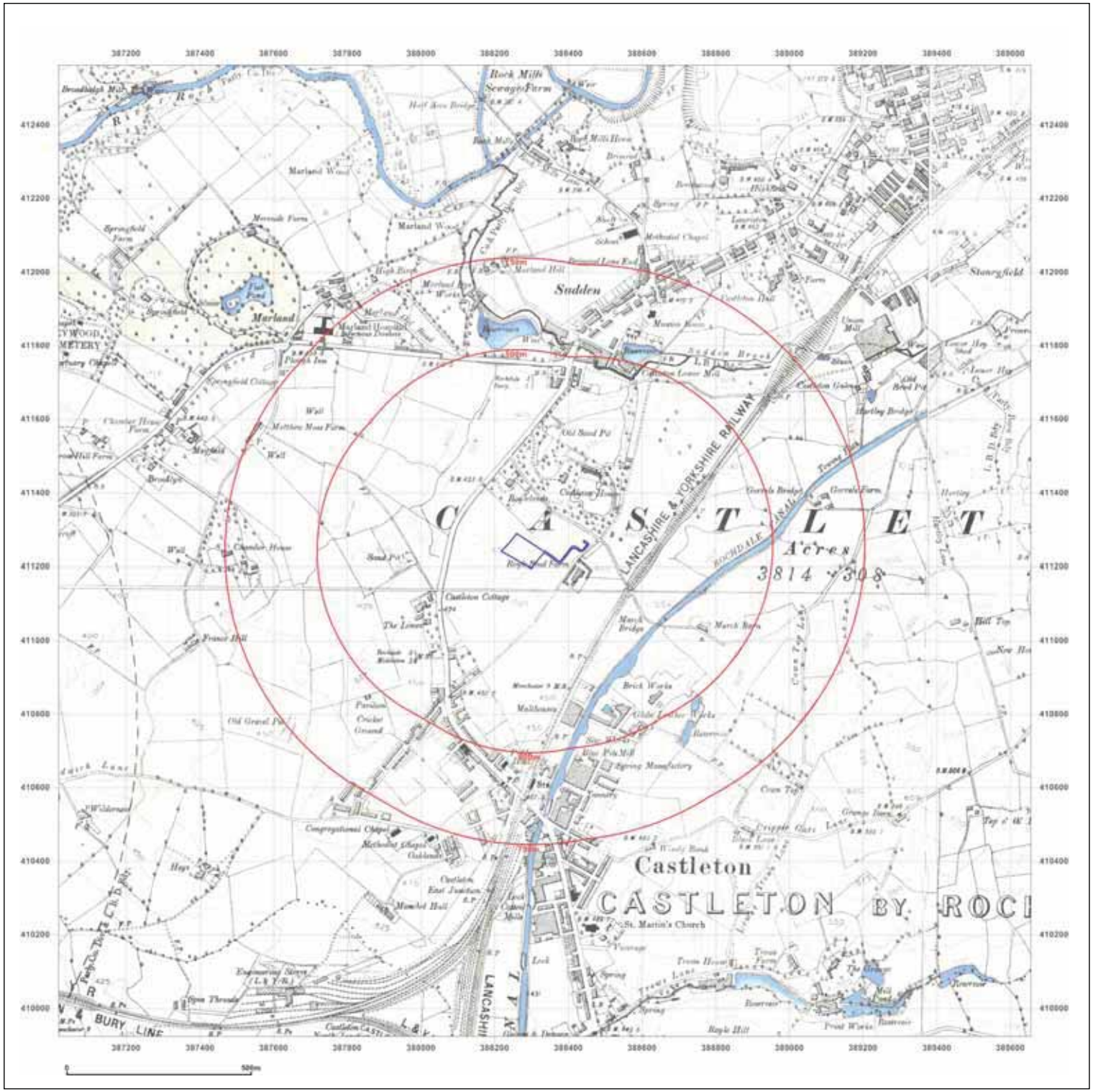
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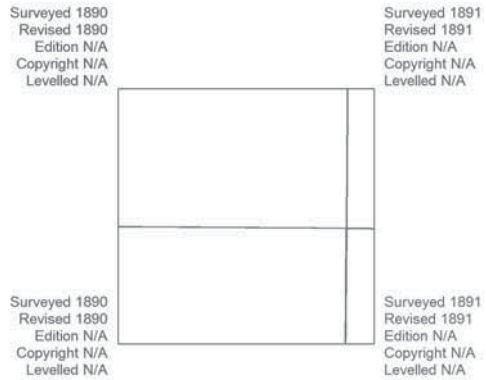
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Site Details:

Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: County Series
Map date: 1890-1891
Scale: 1:10,560
Printed at: 1:10,560

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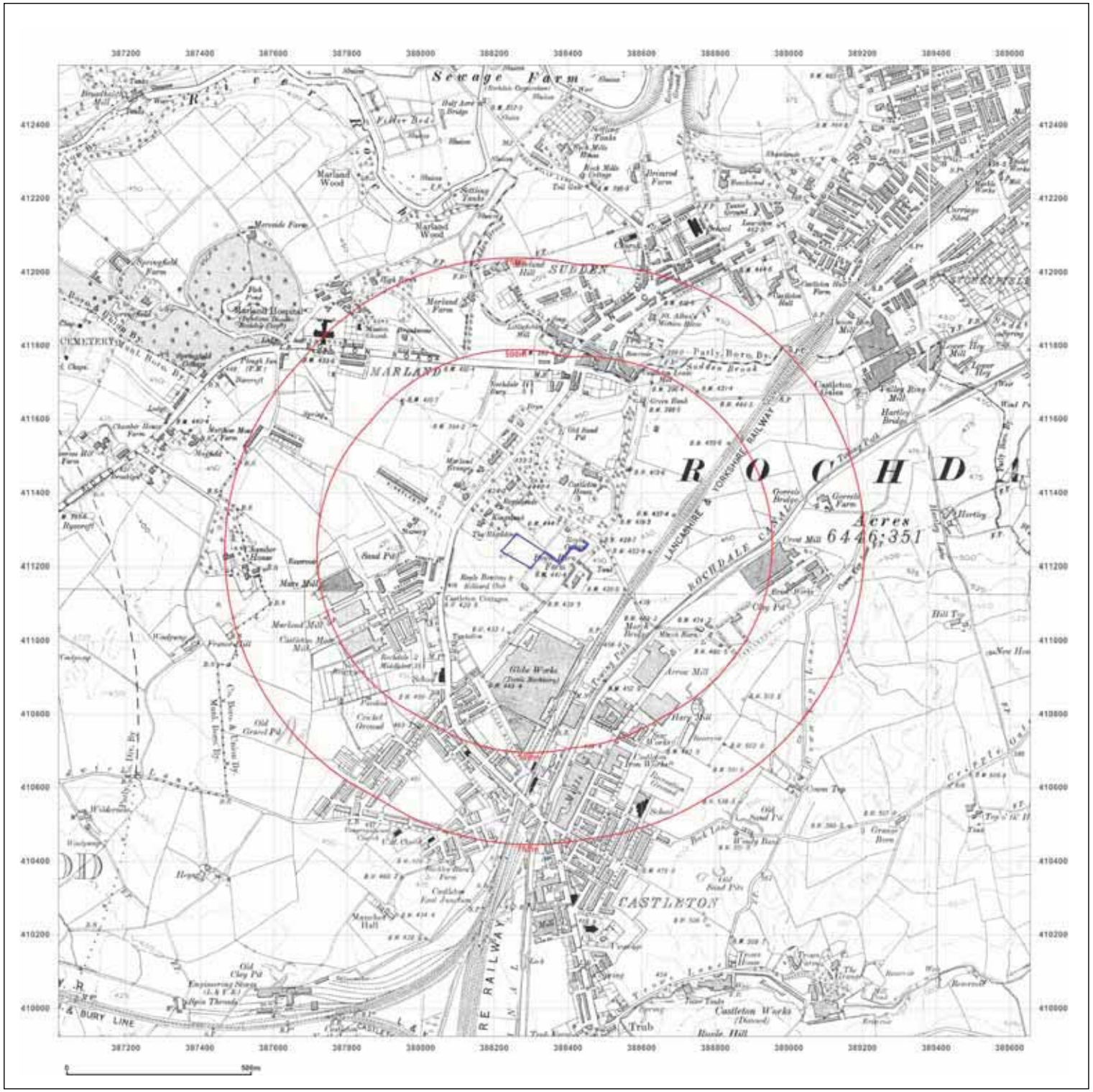
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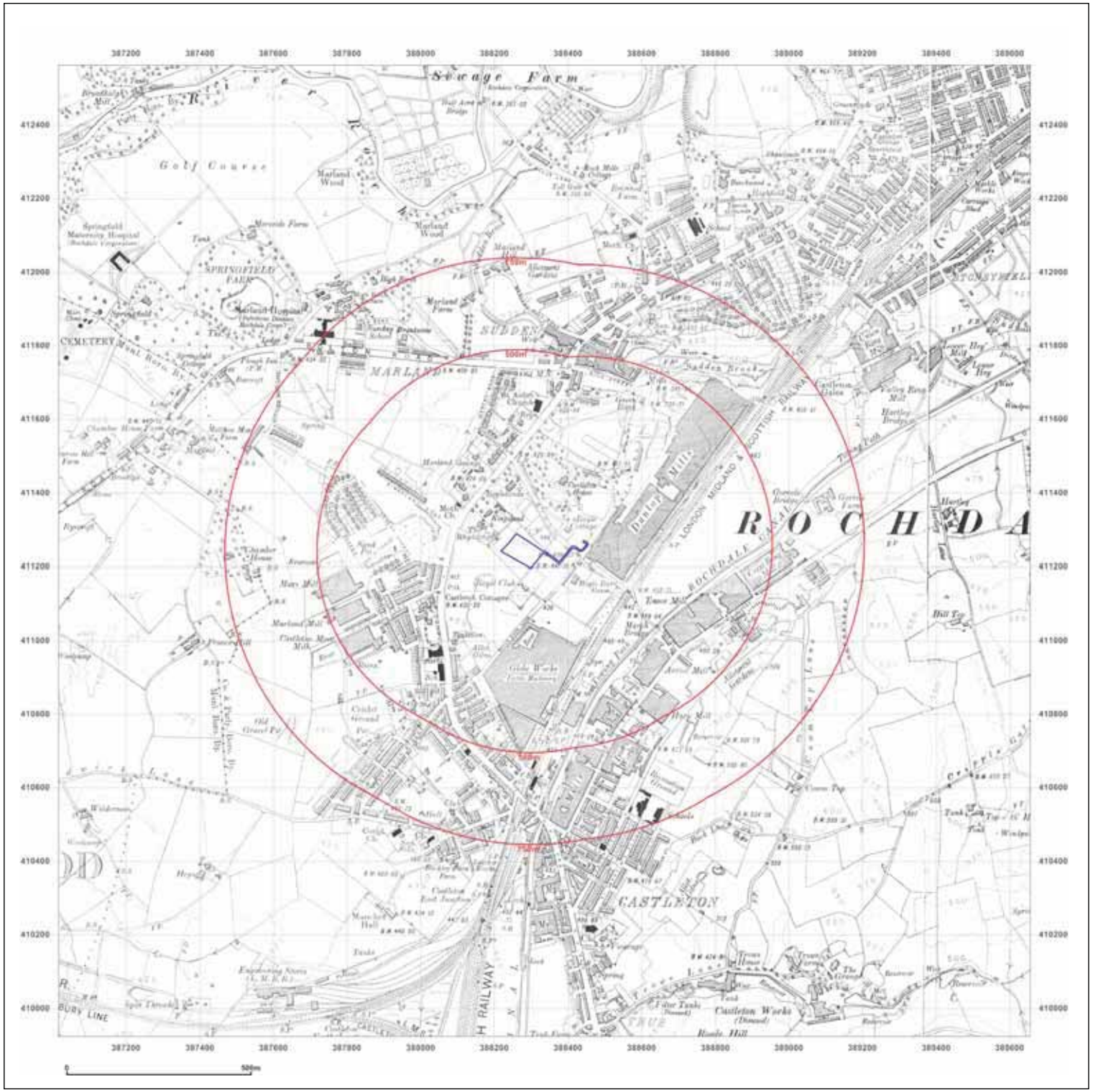
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Sewage Farm
MARLAND
SUDDEN
ROCHDALE
CASTLETON
Acres
6446.351
LANCASHIRE & YORKSHIRE RAILWAY
ROCHDALE CANAL
Marland Wood
Marland Hall
Marland Farm
Castleton Hall
Castleton Mill
Arrow Mill
Globe Works
Castleton Works
Castleton Moor Mill
Marland Mill
Manchester Hall
Cemetery
Old Clay Pit
Old Gravel Pit
Old Sand Pit
Engineering Stores
Tramway
Tramway Path
Tramway Bridge
Gorrells Farm
Gorrells Bridge
Hartley Bridge
Hartley
Lower Hey
Upper Hey
Hill Top
Wind Pump
Sudden Brook
Party Boro Dy
Ch. Boro & Union Dy
Union Dy
Marland Dyeing Co
Marland Hospital
Merryside Farm
Springfield Farm
Chamber House Farm
Northern Moor Farm
Moorfield
Broadfield
Broadfield College
Pinfold Inn (P.H.)
Pinfold
Fish Pond
Fisher Bridge
Fisher Bridge Dy
Old Road
Old Road Pit
Sand Pit
Sand Pits
Cricket Ground
Recreation Ground
Tennis Courts
Bowling Green
Bowling Green Inn
Bowling Green Mill
Bowling Green Bridge
Bowling Green Dy
Bowling Green Terrace
Bowling Green Works
Bowling Green Yard
Bowling Green Cottages
Bowling Green Farm



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Site Details:

Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: County Series
Map date: 1928
Scale: 1:10,560
Printed at: 1:10,560

N
W E
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Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
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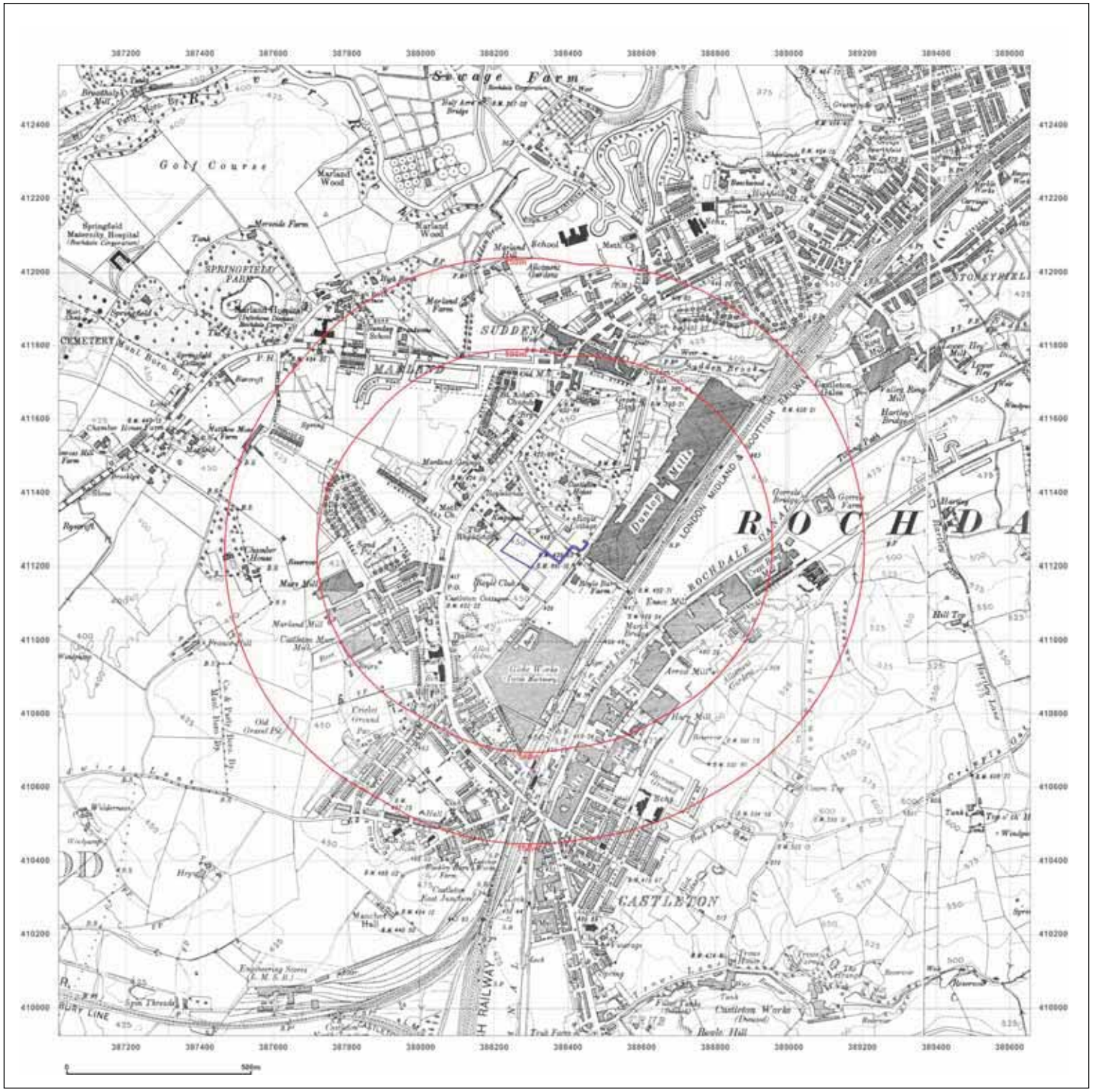
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Site Details:

Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: County Series
Map date: 1938
Scale: 1:10,560
Printed at: 1:10,560

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

Surveyed 1848
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

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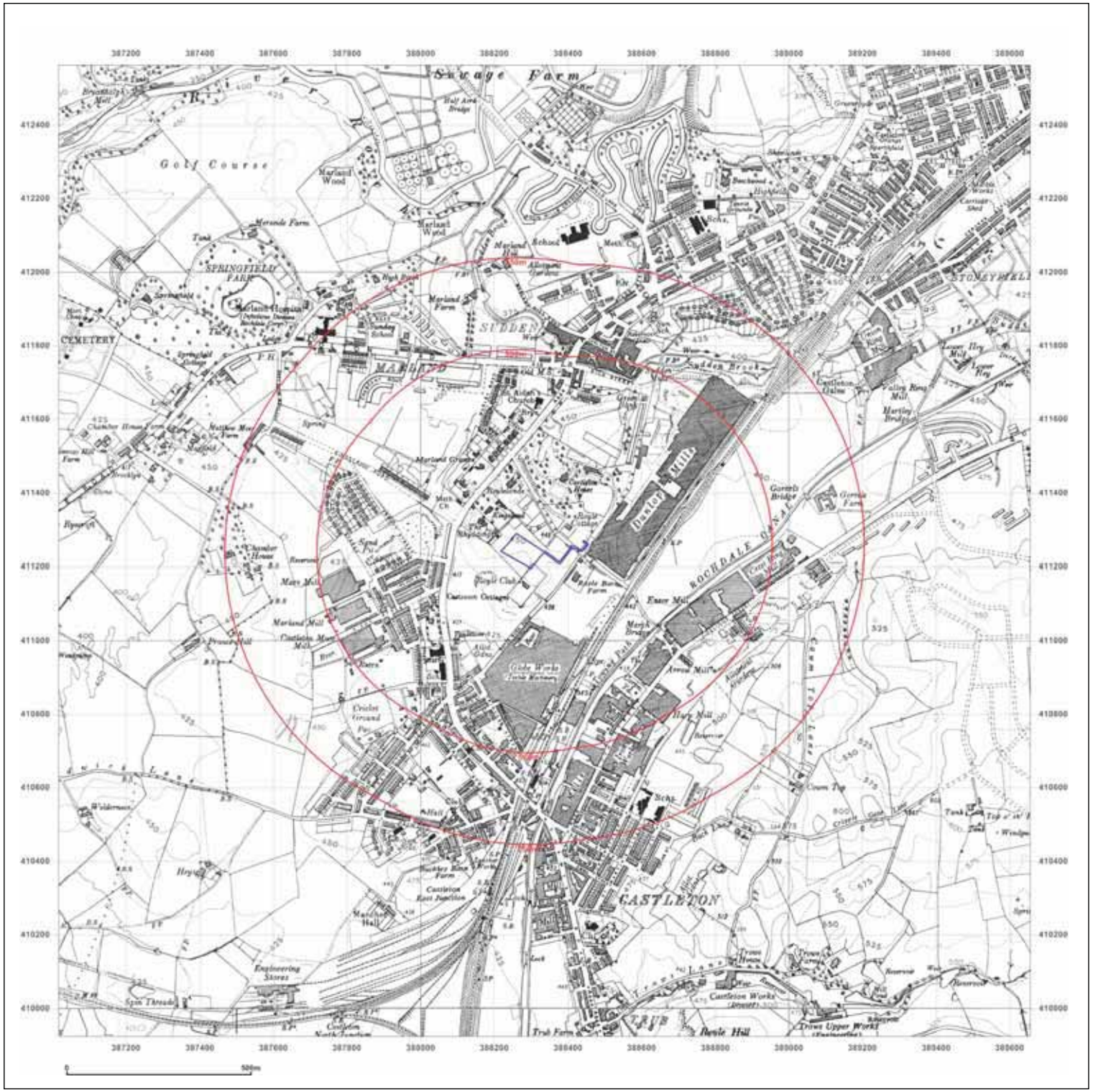
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Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: Provisional
Map date: **1955-1956**
Scale: 1:10,560
Printed at: 1:10,560

N
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Surveyed N/A
Revised 1955
Edition 1956
Copyright N/A
Levelled N/A

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Revised 1955
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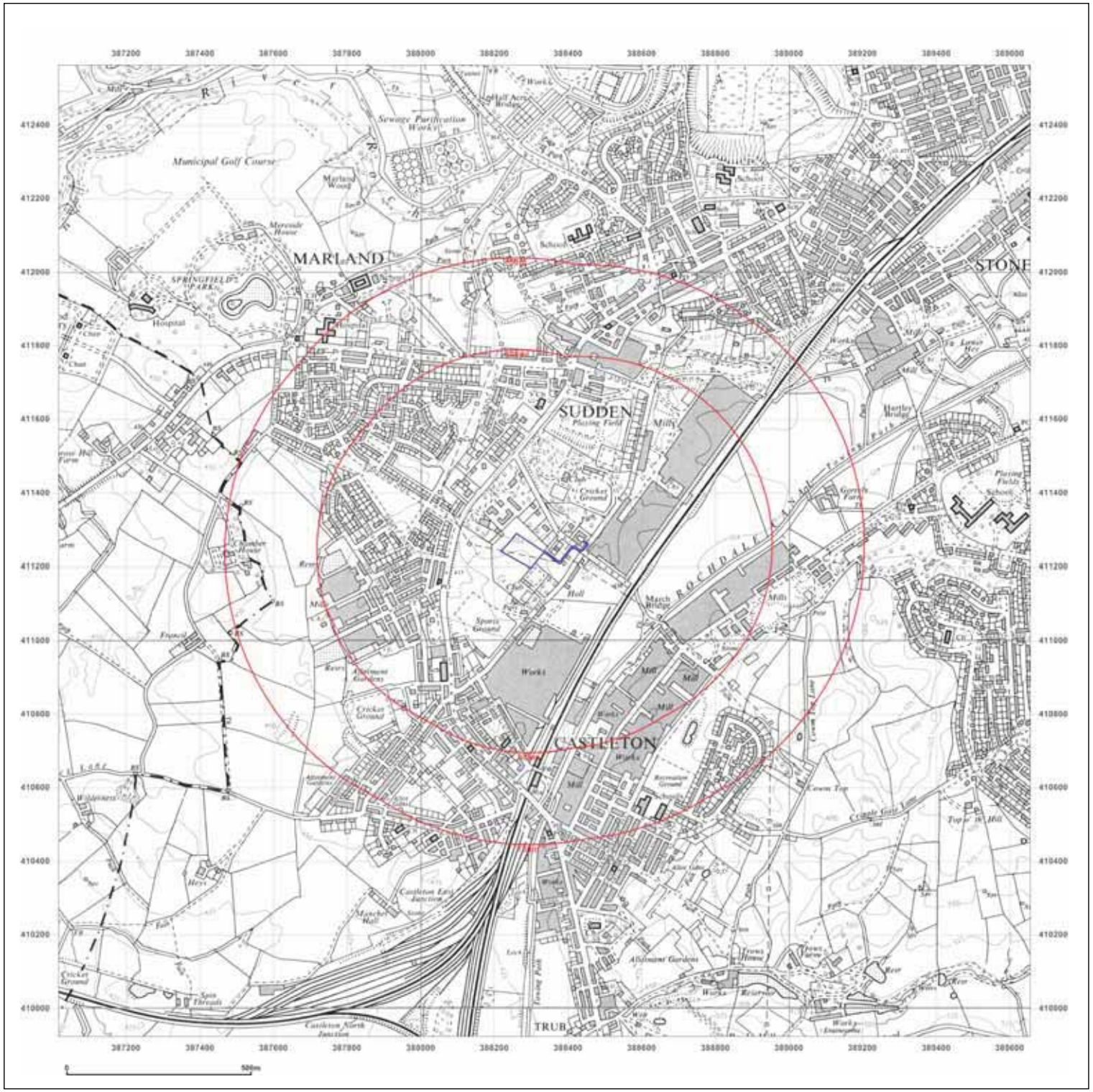
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: Provisional
Map date: **1965-1968**
Scale: 1:10,560
Printed at: 1:10,560

N
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Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1965
Revised 1965
Edition N/A
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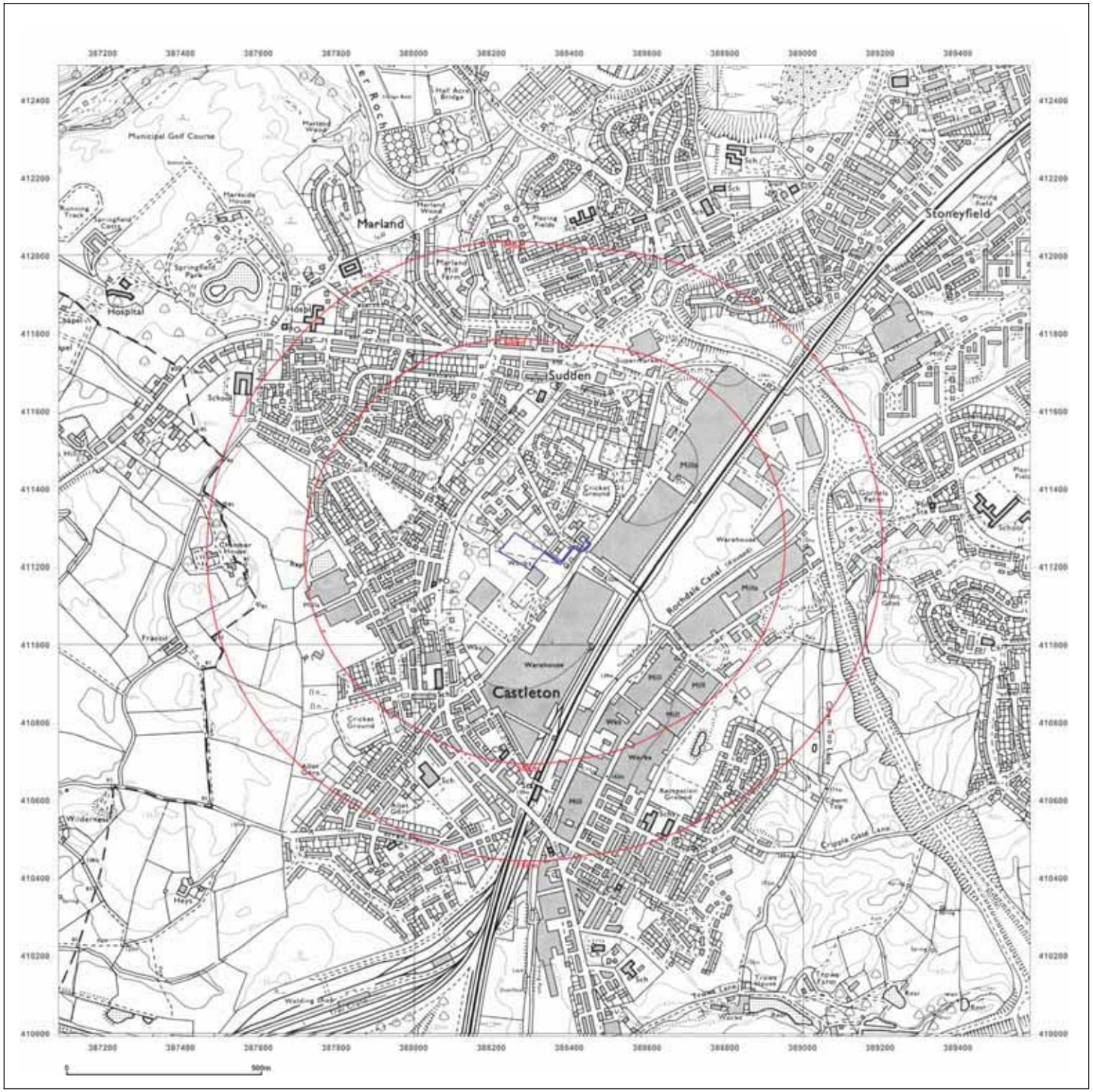
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Client Ref: EMS_461317_619011
Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: National Grid
Map date: 1975
Scale: 1:10,000
Printed at: 1:10,000

N
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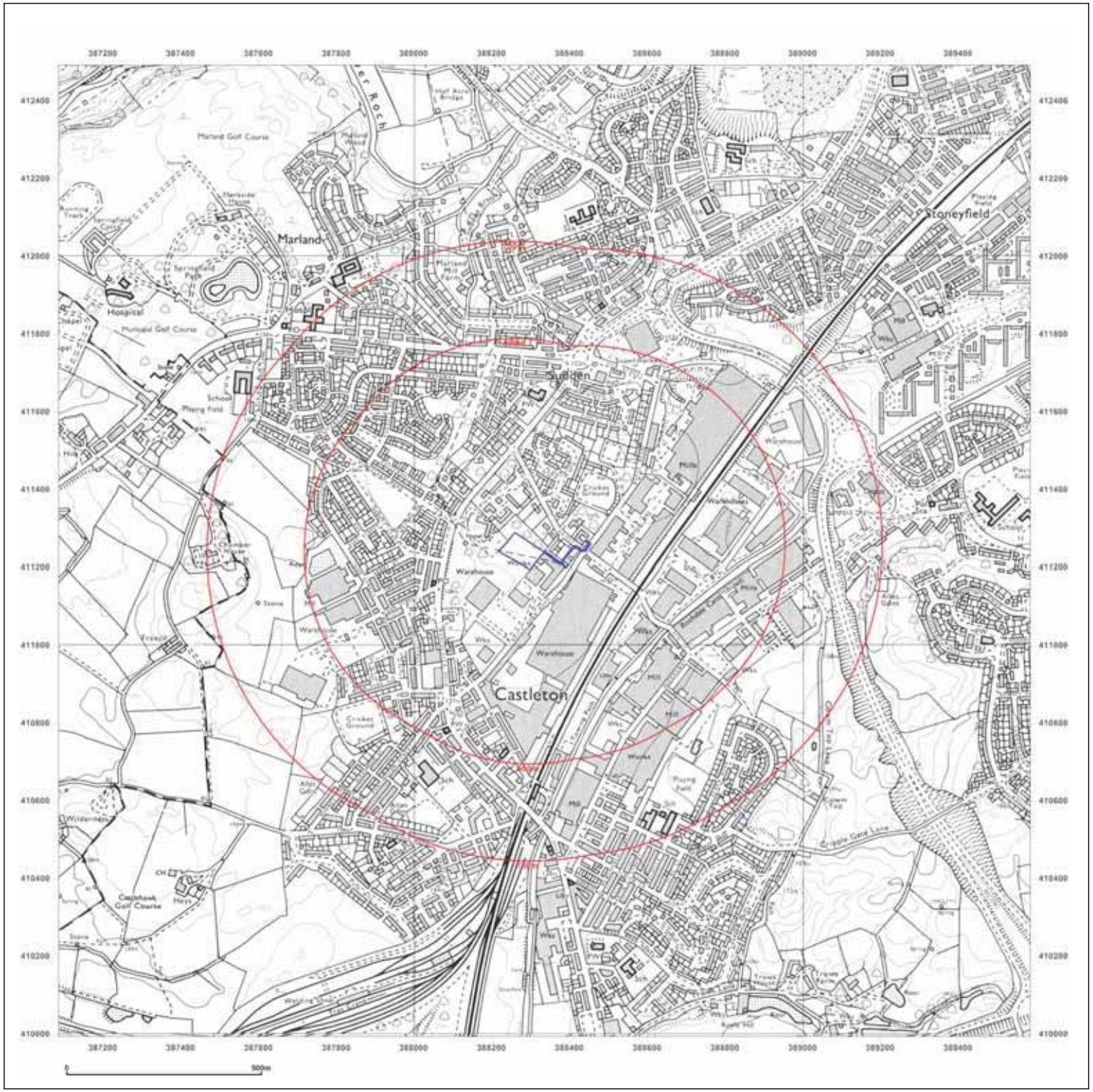
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: National Grid
Map date: 1982-1987
Scale: 1:10,000
Printed at: 1:10,000

N
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Surveyed 1984
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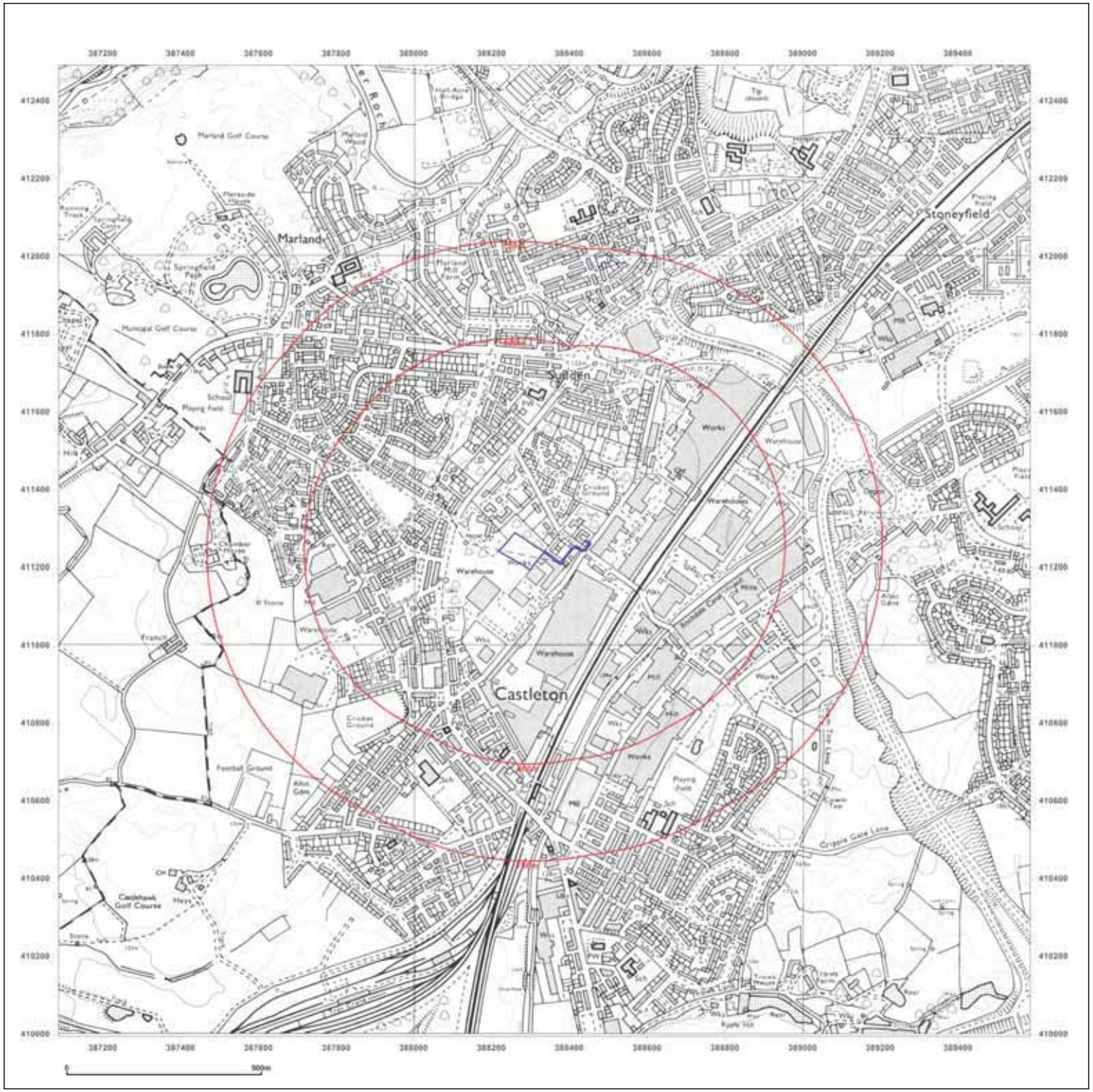
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: National Grid
Map date: 1992
Scale: 1:10,000
Printed at: 1:10,000

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Revised 1992
Edition N/A
Copyright N/A
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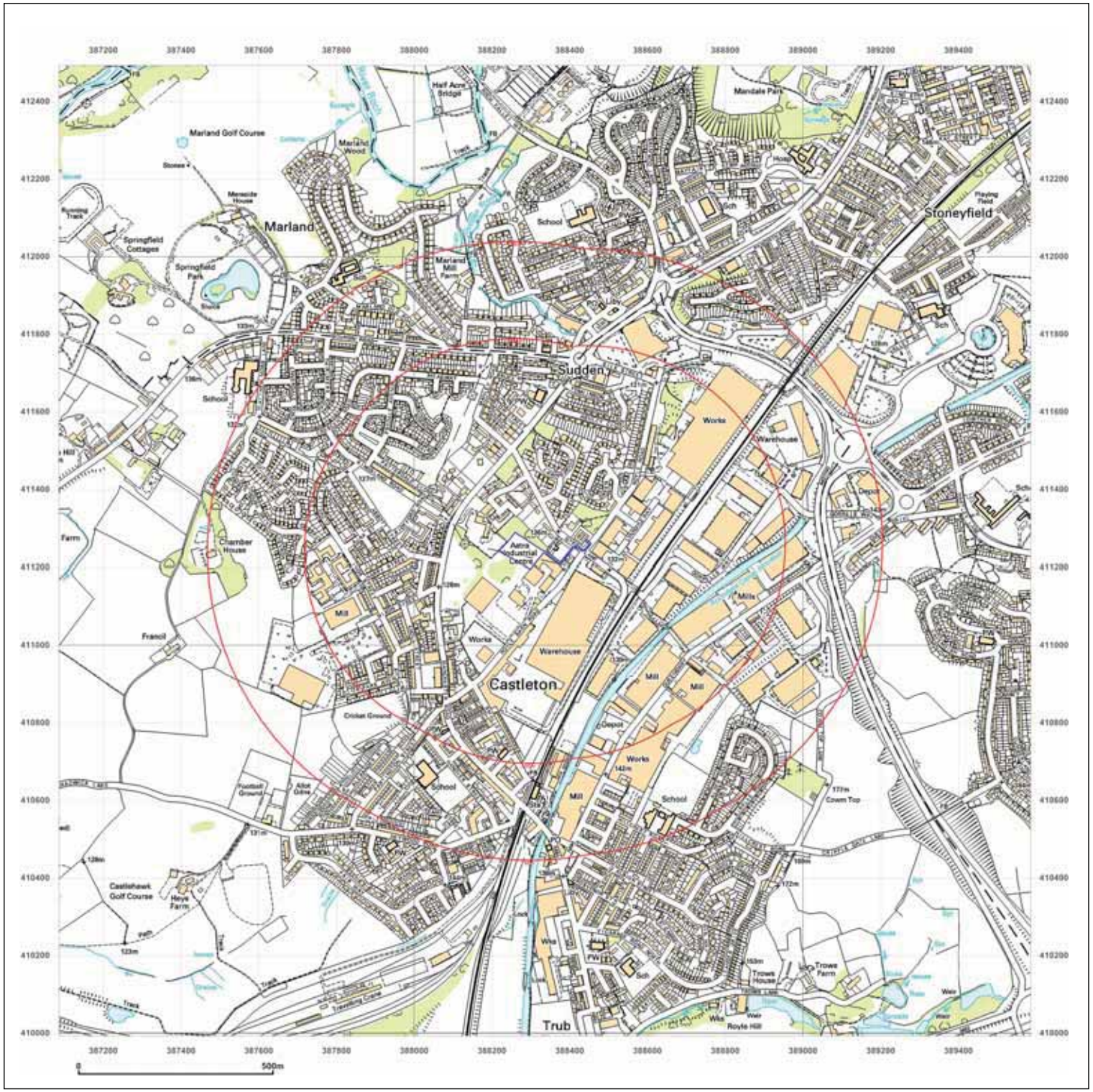
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: 1:10,000 Raster
Map date: 2002
Scale: 1:10,000
Printed at: 1:10,000

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2002

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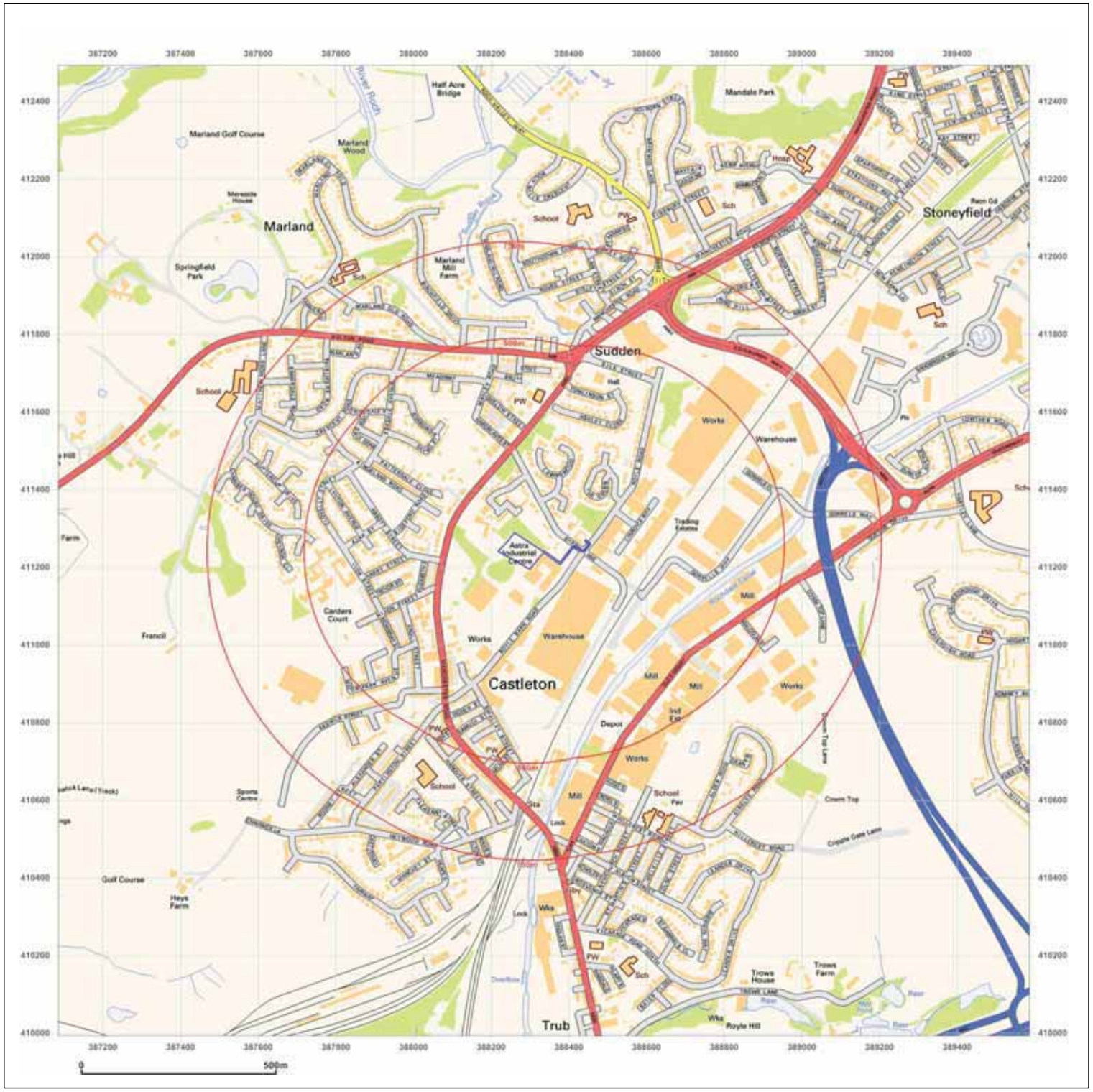
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

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

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2010

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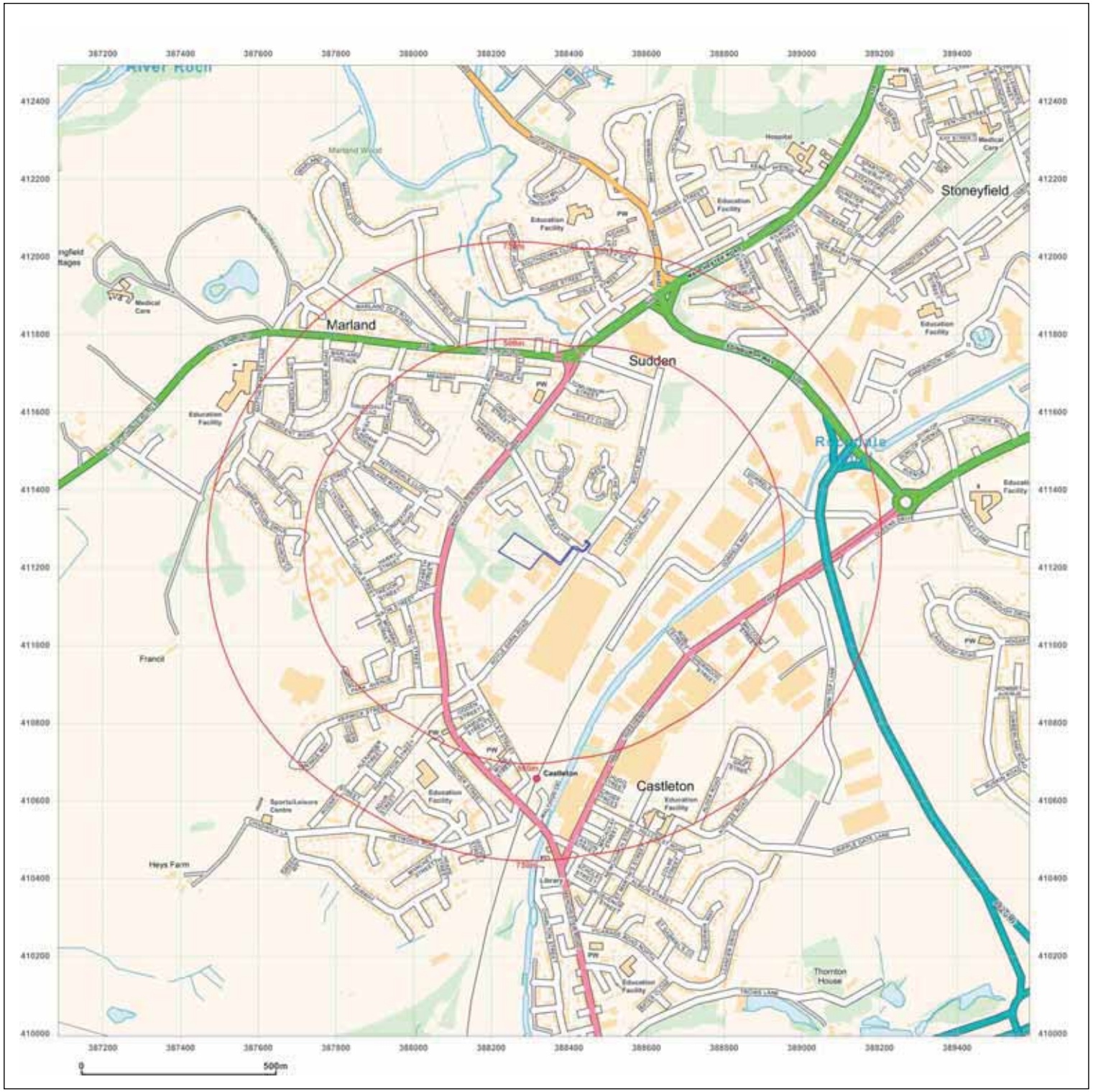
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Report Ref: EMS-461317_619011
Grid Ref: 388335, 411243

Map Name: National Grid
Map date: 2014
Scale: 1:10,000
Printed at: 1:10,000

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2014

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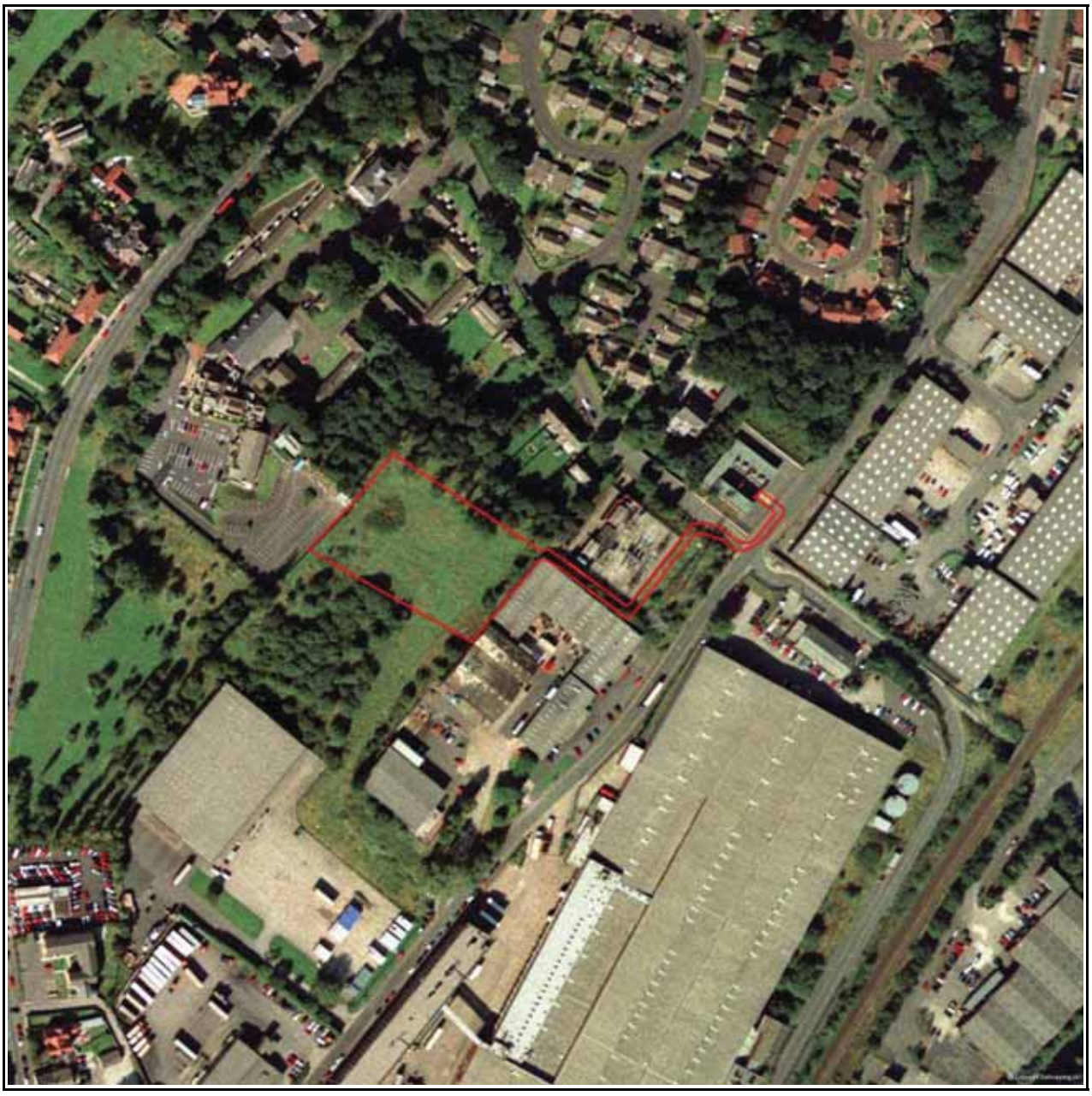
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NW N NE



W E

SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	388291,411241
Site Size:	0.62ha

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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?	No
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?*	Yes
	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?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	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	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
	3.2Radon 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	0	1	24	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	1
4.3 Current Ground Workings	0	0	0	3	7

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	1
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*	0	0	0	0	0
5.5 Non–Coal Mining Cavities	0	0	0	0	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	Negligible
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Very Low

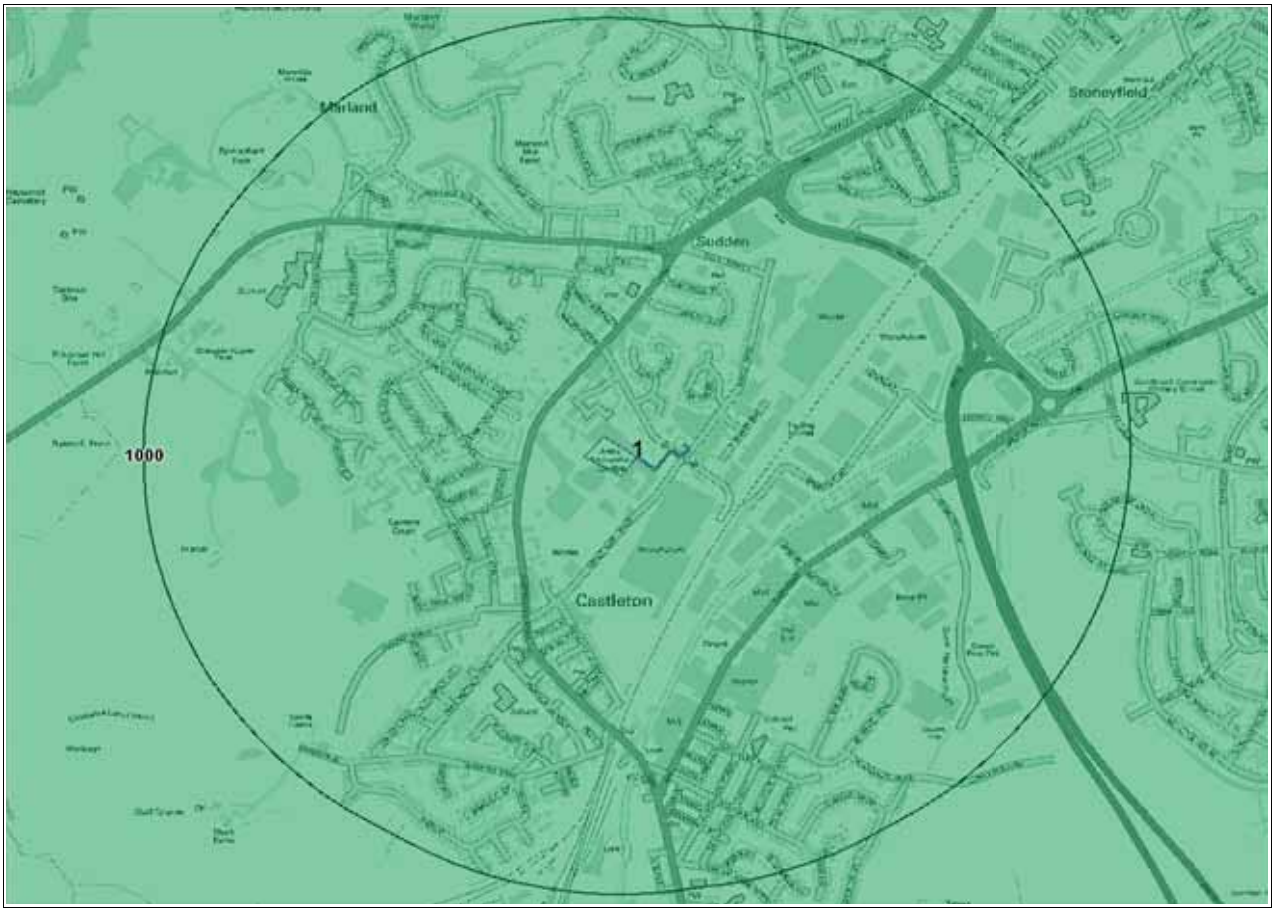
Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	0	16

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	1	1	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	25	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	0	14	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability

NW N NE

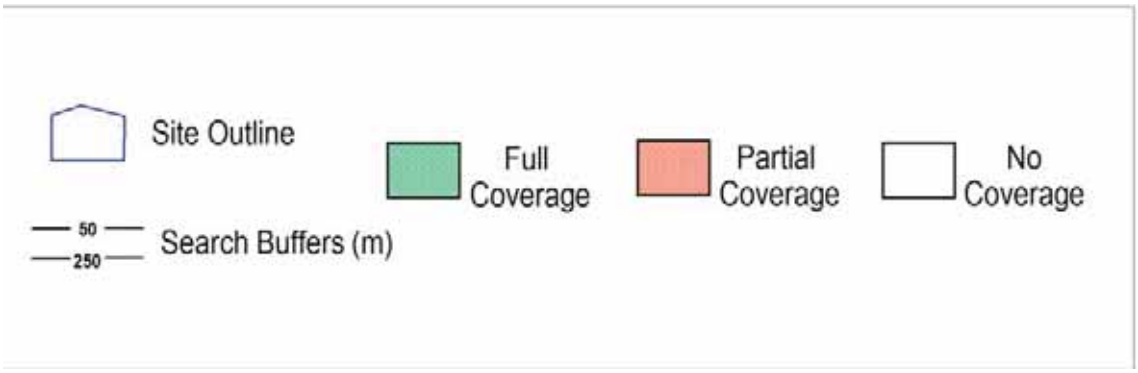


W E

SW S SE

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	Some deposits are mapped
N2	1196.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1546.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1994.0	Some deposits are mapped	Full	Full	Some deposits are mapped

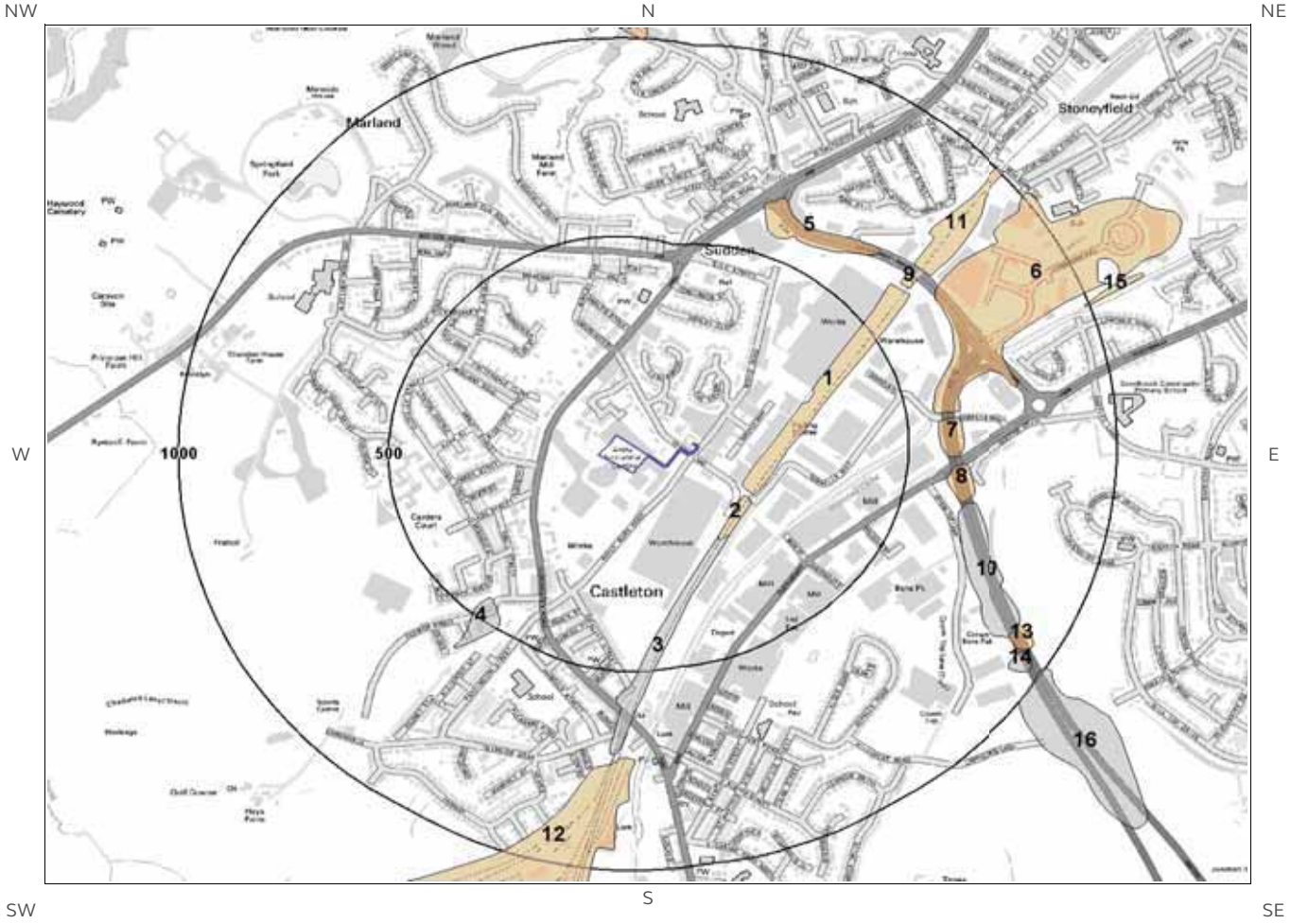
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not 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

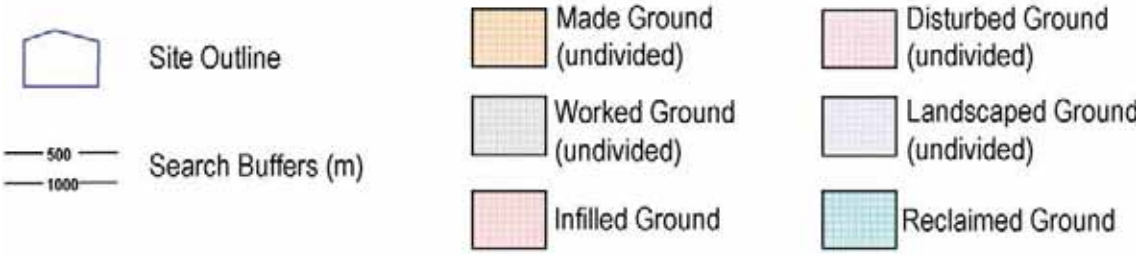
1 Geology (1:10,000 scale).

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	135.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	158.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	209.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
4	443.0	SW	WGR-VOID	Worked Ground (Undivided)	Void

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



Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

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	0.0	On Site	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	285.0	SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	461.0	SW	PEAT-P	Peat - Peat	Peat

1.2.2 Landslip

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

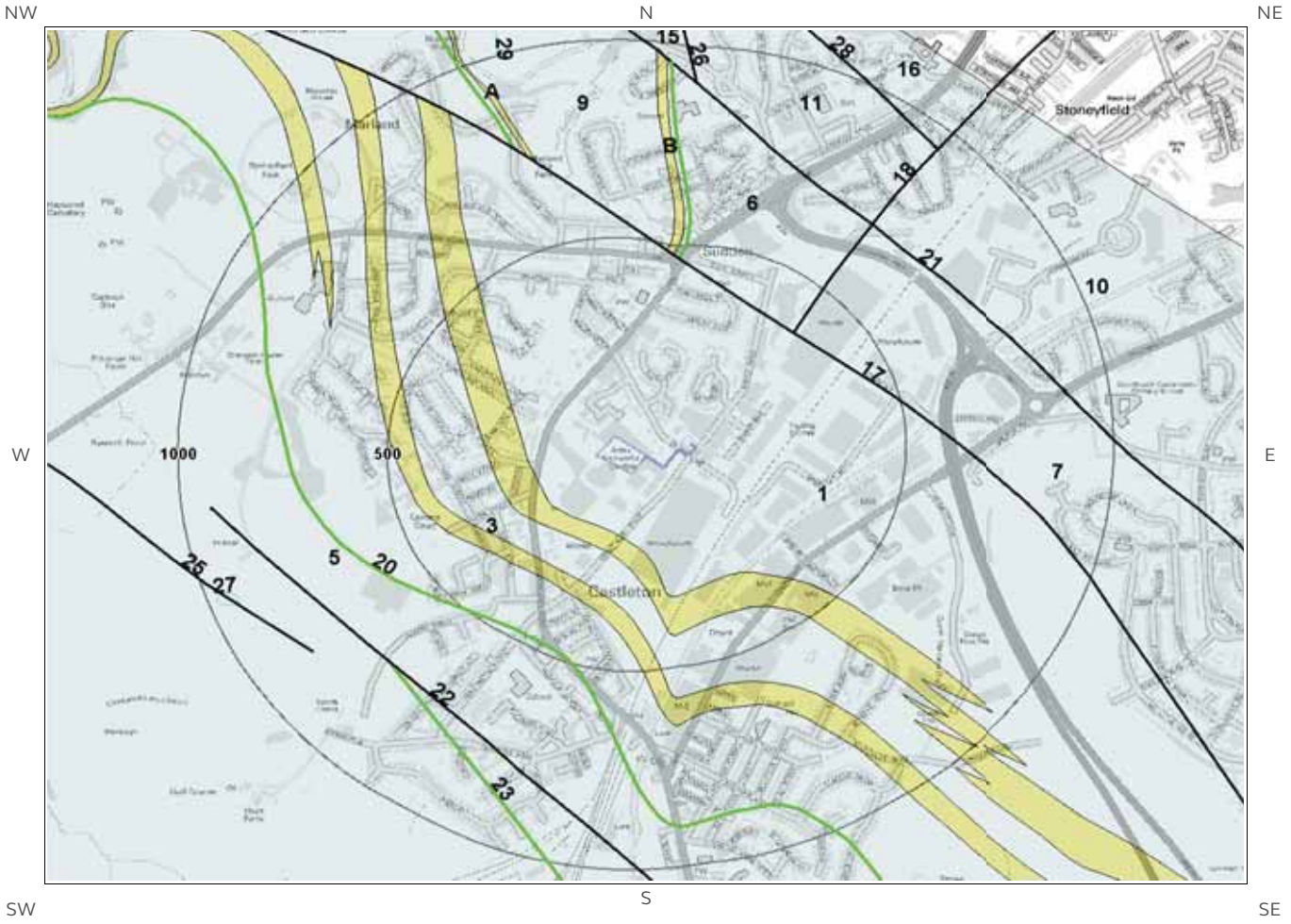
No

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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Site Outline

500
1000
Search Buffers (m)

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	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	153.0	SW	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
3	202.0	SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
4	294.0	SW	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age
5	332.0	SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	367.0	NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
7	370.0	NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8B	479.0	N	RSC-SDST	Riddle Scout Rock - Sandstone	Langsettian Sub-age
9	486.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian 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

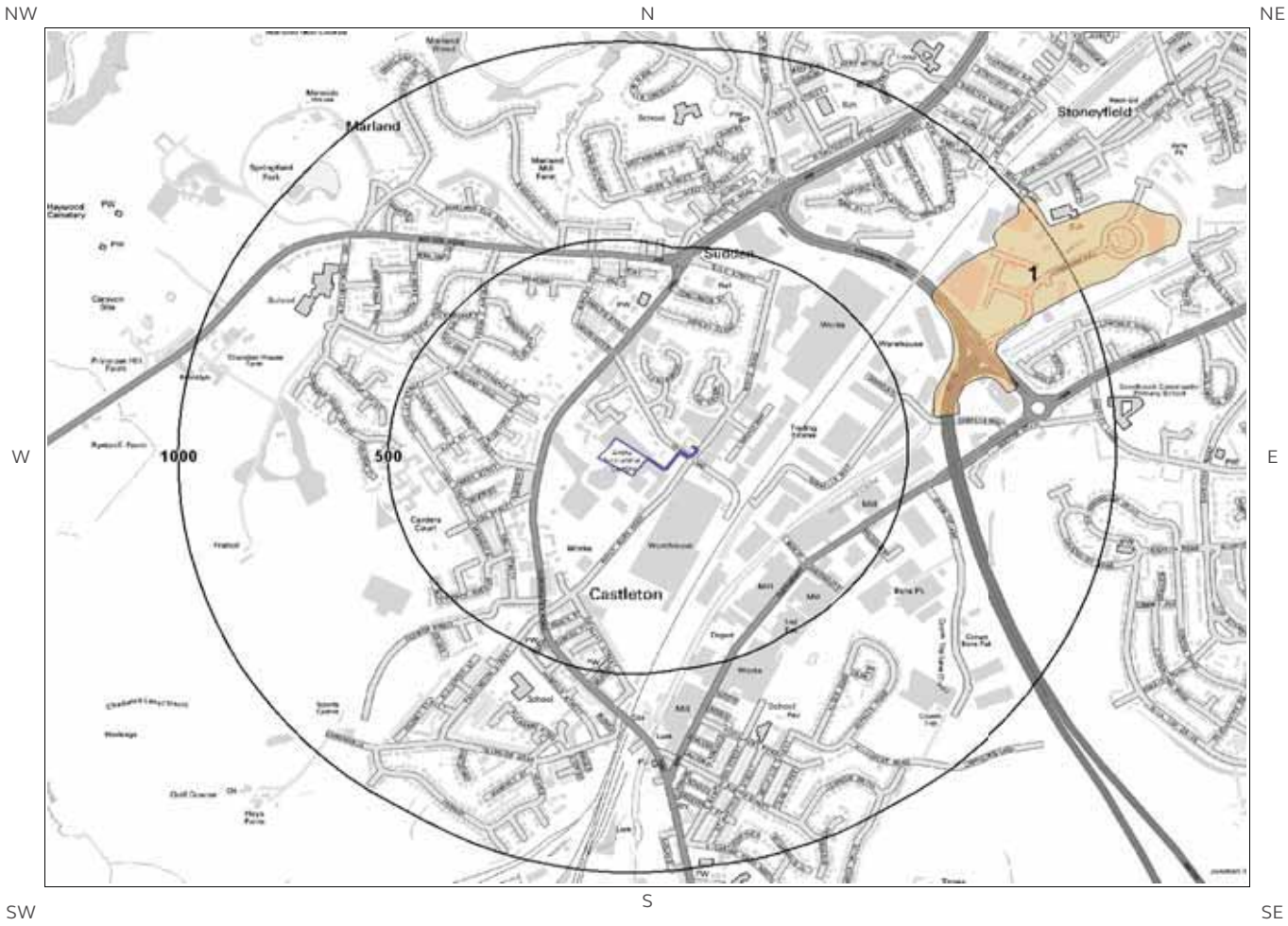
ID	Distance (m)	Direction	Category Description	Feature Description
17	367.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
18	370.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
19B	469.0	N	ROCK	Coal seam, inferred
20	477.0	SW	ROCK	Coal seam, inferred

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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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

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: 085

2.1.1 Artificial/ Made Ground

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

Database searched and no data found.

2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.

2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline

500
1000
Search Buffers (m)

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	0.0	On Site	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	257.0	SE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	461.0	SW	PEAT-P	PEAT	PEAT

2.2.2 Permeability of Superficial Ground

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

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

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.

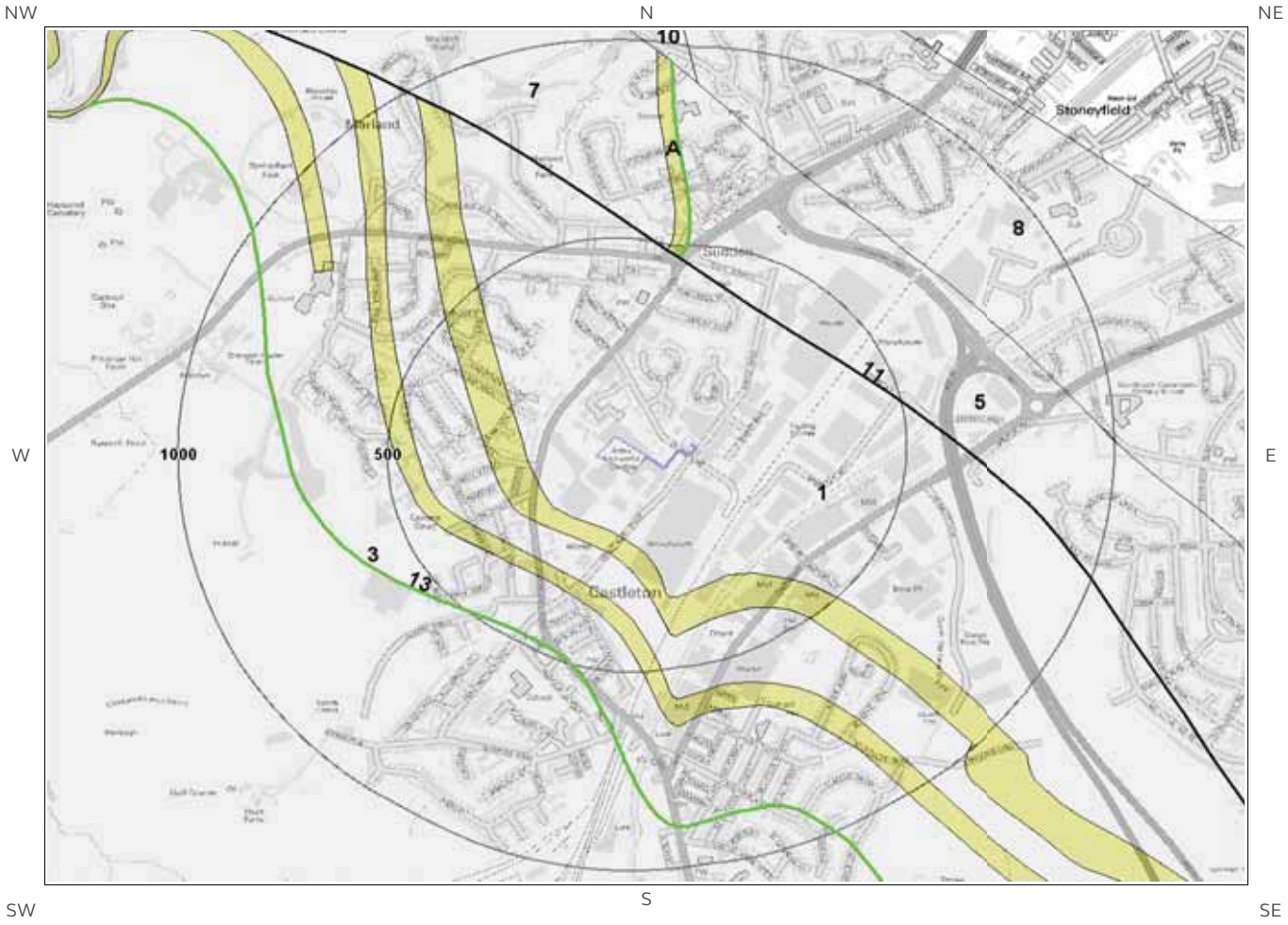
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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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Site Outline

500
1000
Search Buffers (m)

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: 085

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	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	152.0	SW	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
3	202.0	SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	294.0	SW	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN
5	367.0	NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6A	469.0	N	RSC-SDST	RIDDLE SCOUT ROCK - SANDSTONE	WESTPHALIAN
7	486.0	N	PLCM-MDSS	PENNINE LOWER 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	High	Low

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
11	367.0	NE	FAULT	Fault, inferred
12A	469.0	N	ROCK	Coal seam, inferred
13	477.0	SW	ROCK	Coal seam, inferred

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.

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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 not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

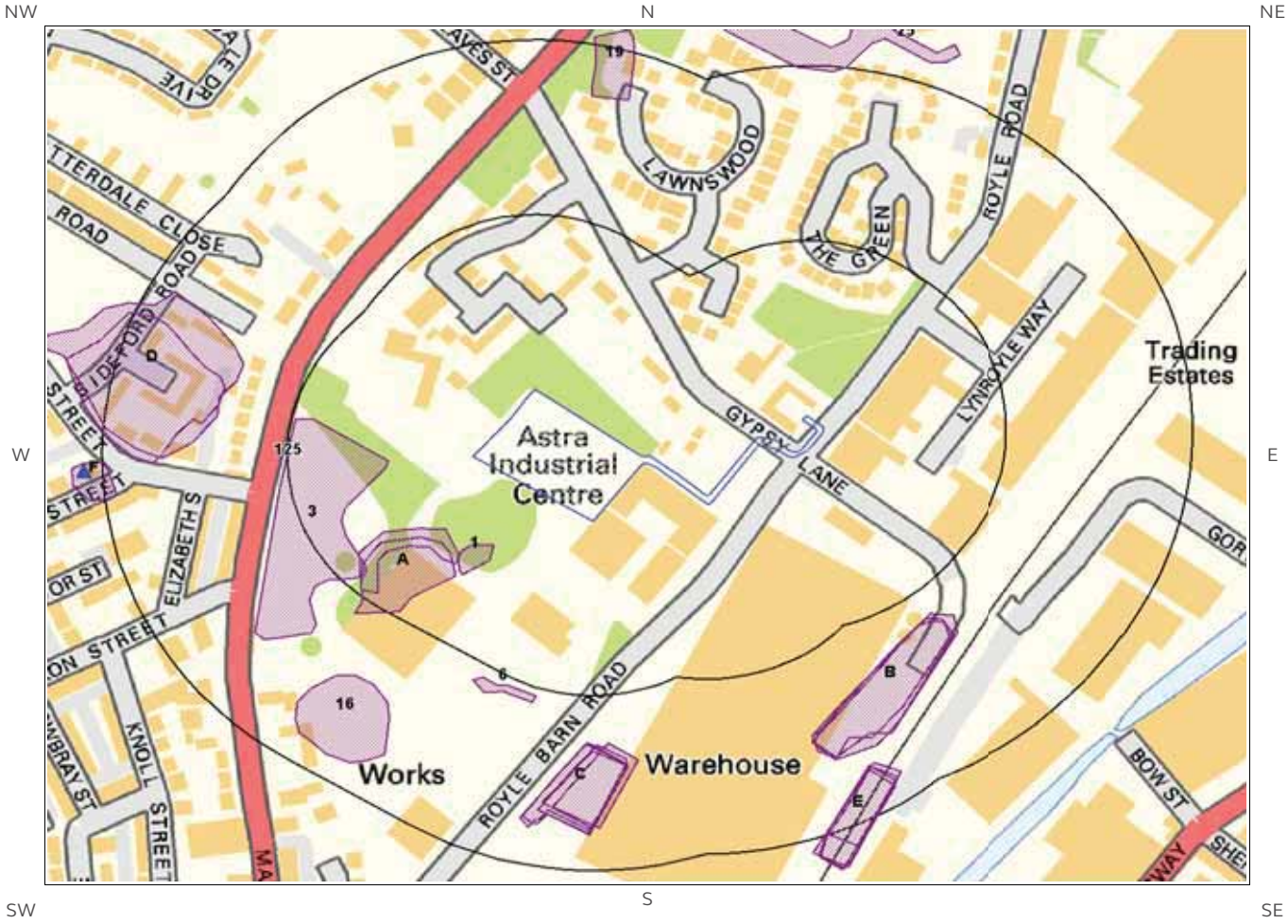
The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, 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.

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4 Ground Workings map



Ground Workings Legend

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Site Outline

125 / 250 Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

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	48.0	SW	388219 411168	Unspecified Pit	1968
2	54.0	SW	388147 411167	Unspecified Heap	1949
3	57.0	W	388115 411189	Unspecified Pit	1968
4A	64.0	SW	388171 411157	Refuse Heap	1938
5A	64.0	SW	388171 411157	Refuse Heap	1928
6	131.0	S	388238 411075	Unspecified Ground Workings	1949
7B	143.0	SE	388496 411078	Unspecified Heap	1949
8B	145.0	SE	388494 411076	Unspecified Heap	1928
9B	146.0	SE	388492 411075	Unspecified Heap	1938
10C	159.0	S	388286 411006	Reservoir	1928
11C	159.0	S	388300 411007	Pond	1968
12C	160.0	S	388285 411004	Reservoir	1938
13C	160.0	S	388293 411006	Reservoir	1949
14C	164.0	S	388291 411001	Reservoir	1909
15D	168.0	W	387994 411300	Unspecified Ground Workings	1949
16	175.0	SW	388129 411054	Refuse Heap	1938
17D	175.0	W	387996 411290	Refuse Heap	1928
18D	175.0	W	387996 411290	Refuse Heap	1938
19	213.0	N	388312 411522	Cuttings	1968
20E	216.0	SE	388477 410985	Cuttings	1949
21E	216.0	SE	388480 410992	Cuttings	1928

ID	Distance (m)	Direction	NGR	Use	Date
22E	217.0	SE	388478 410984	Cuttings	1938
23E	218.0	SE	388477 410982	Cuttings	1909
24F	241.0	W	387962 411224	Sand Pit	1890
25	247.0	N	388408 411548	Unspecified Ground Workings	1968

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
Not shown	873.0	N	388554 412140	Unspecified Shaft	1890

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.

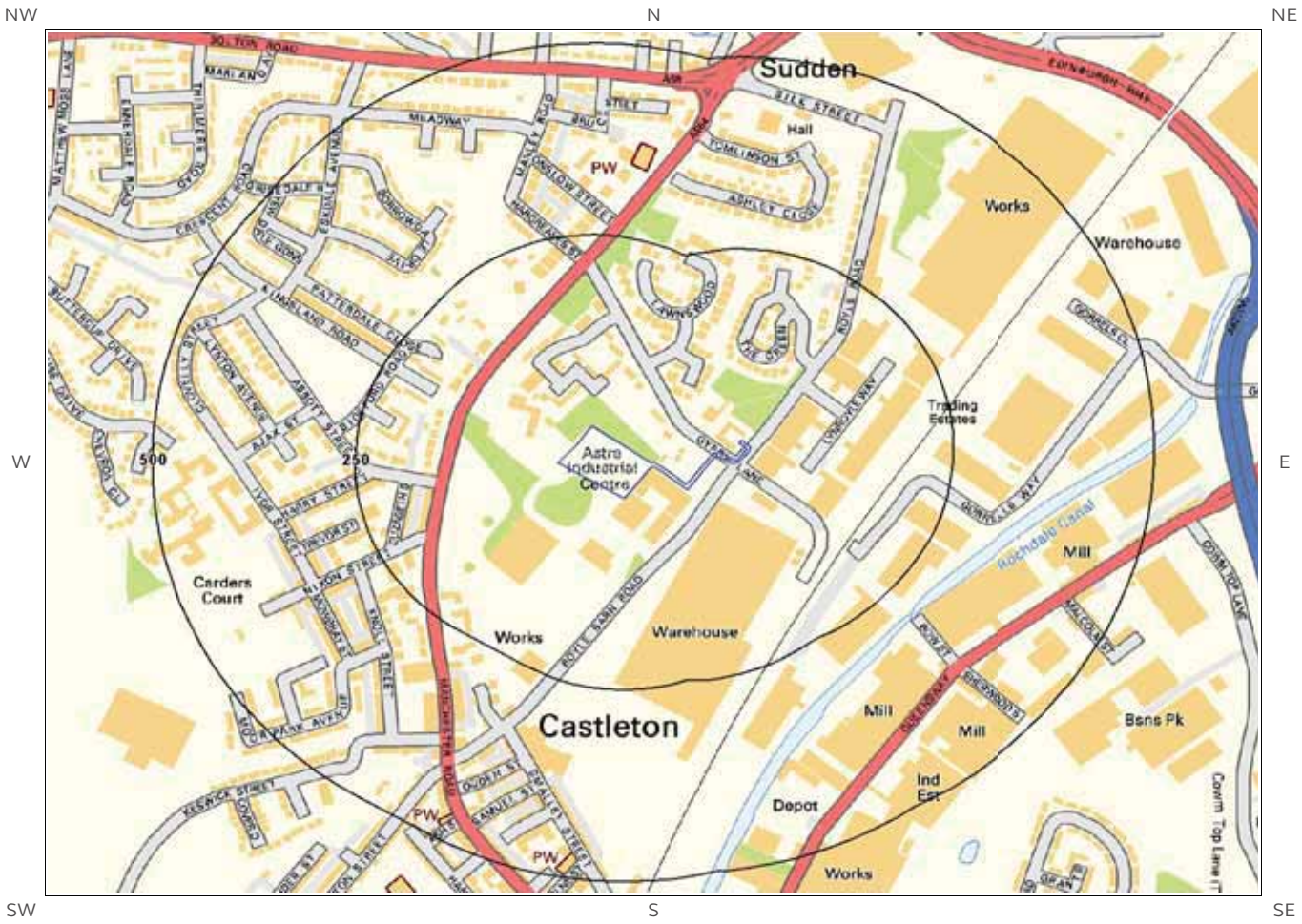
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

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
27F	263.0	W	387954 411231	Sand	Mars Mill Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	307.0	N	388360 411580	Sand	Dunlop Sand	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	407.0	SE	388612 410875	Clay & Shale	Castleton Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	550.0	E	388990 411136	Clay & Shale	Martin Bridge	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	744.0	SW	387645 410766	Sand & Gravel	Castleton Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

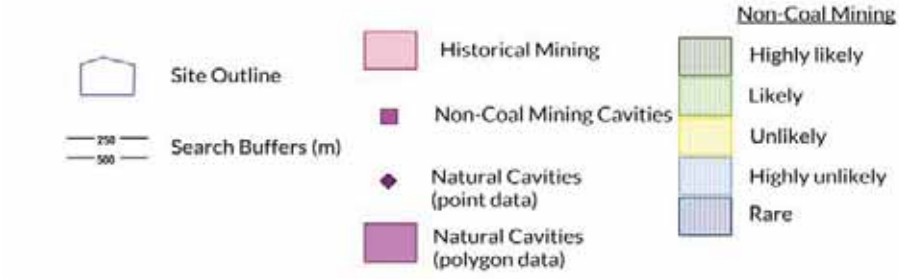
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	865.0	SE	388893 410507	Sand	Windy Bank Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	911.0	E	389361 411170	Sand & Gravel	March Barn Gravel Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	928.0	SE	388811 410387	Sand	Windy Bank Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	934.0	N	388591 412193	Clay & Shale	Brimrod Brick Field	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	936.0	NE	389270 411721	Sand	Castleton Gales Sand Pit	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
Not shown	873.0	N	388554 412140	Unspecified Shaft	1890

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? No

Database searched and no data found.

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? No

Database searched and no data found.

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 Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

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.

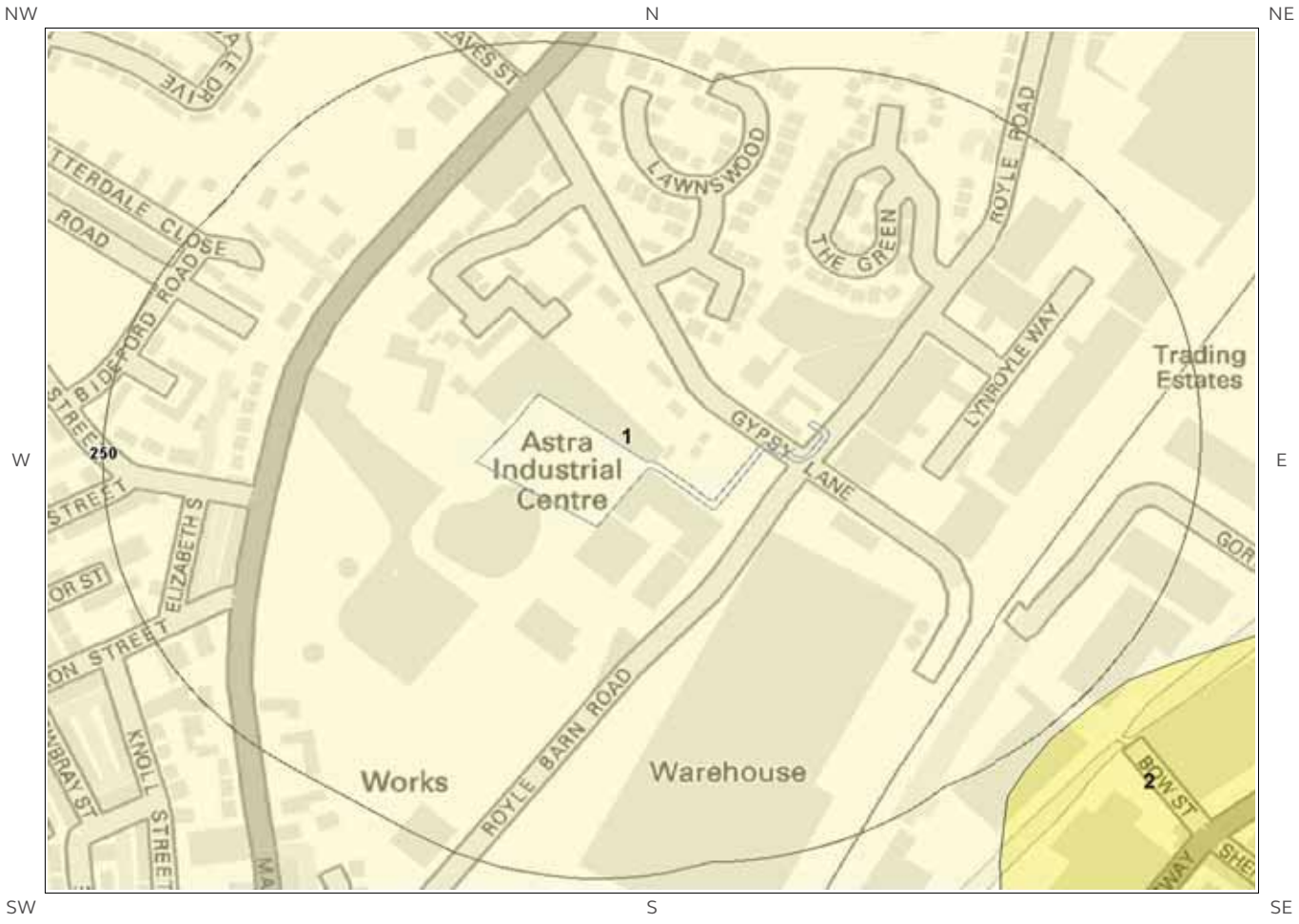
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

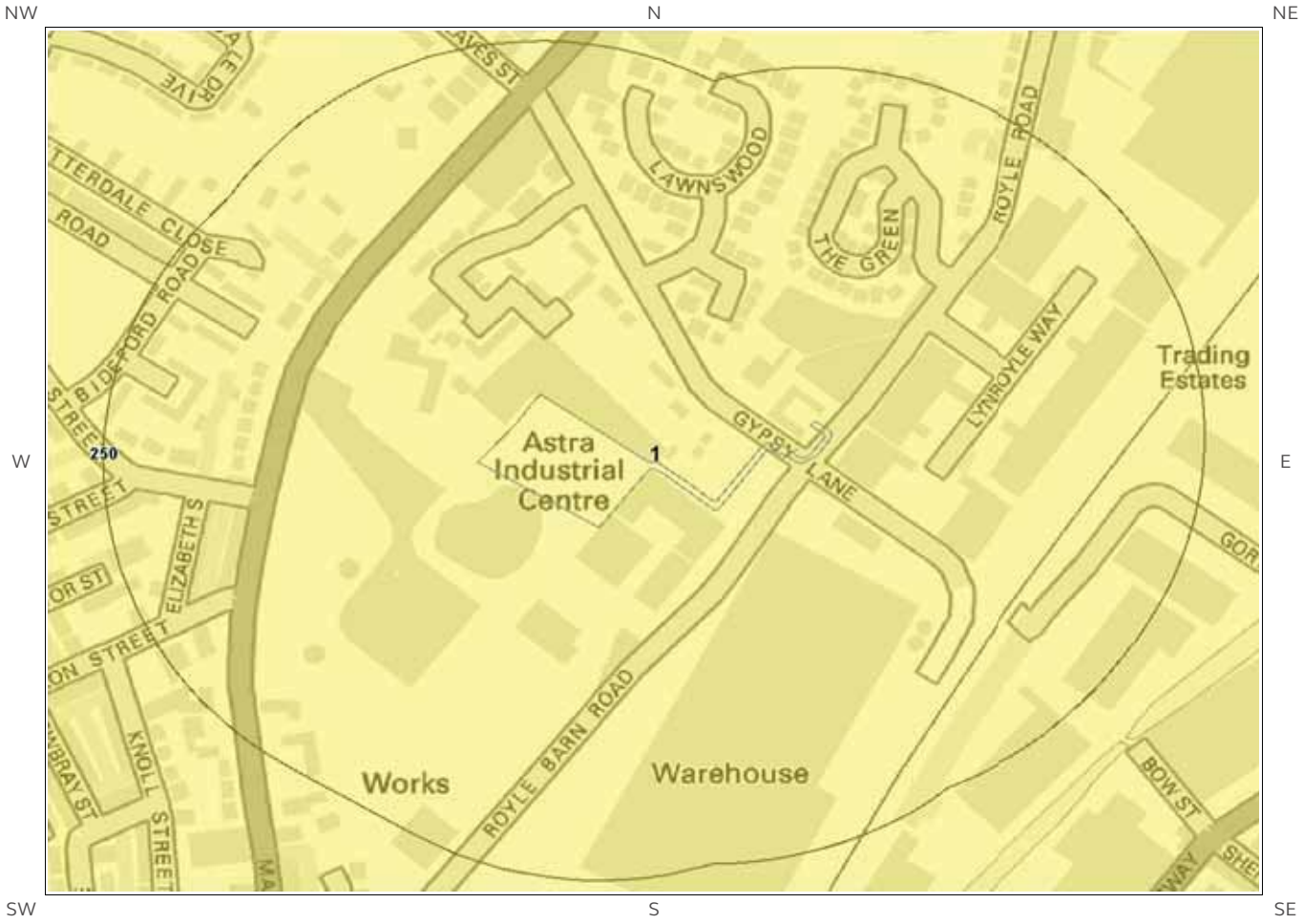


Shrink Swell Clay Legend

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6.2 Landslides map

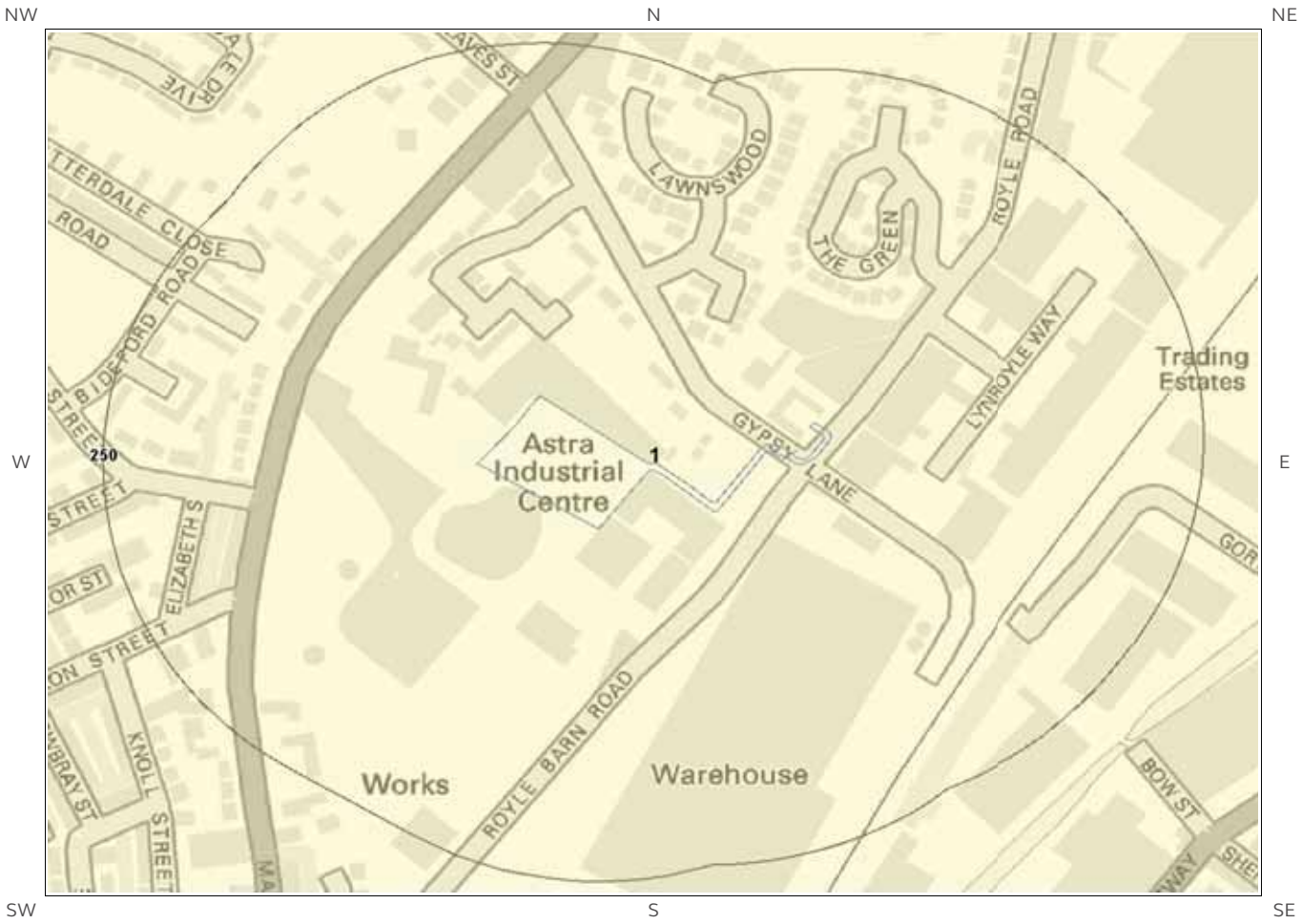


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks map

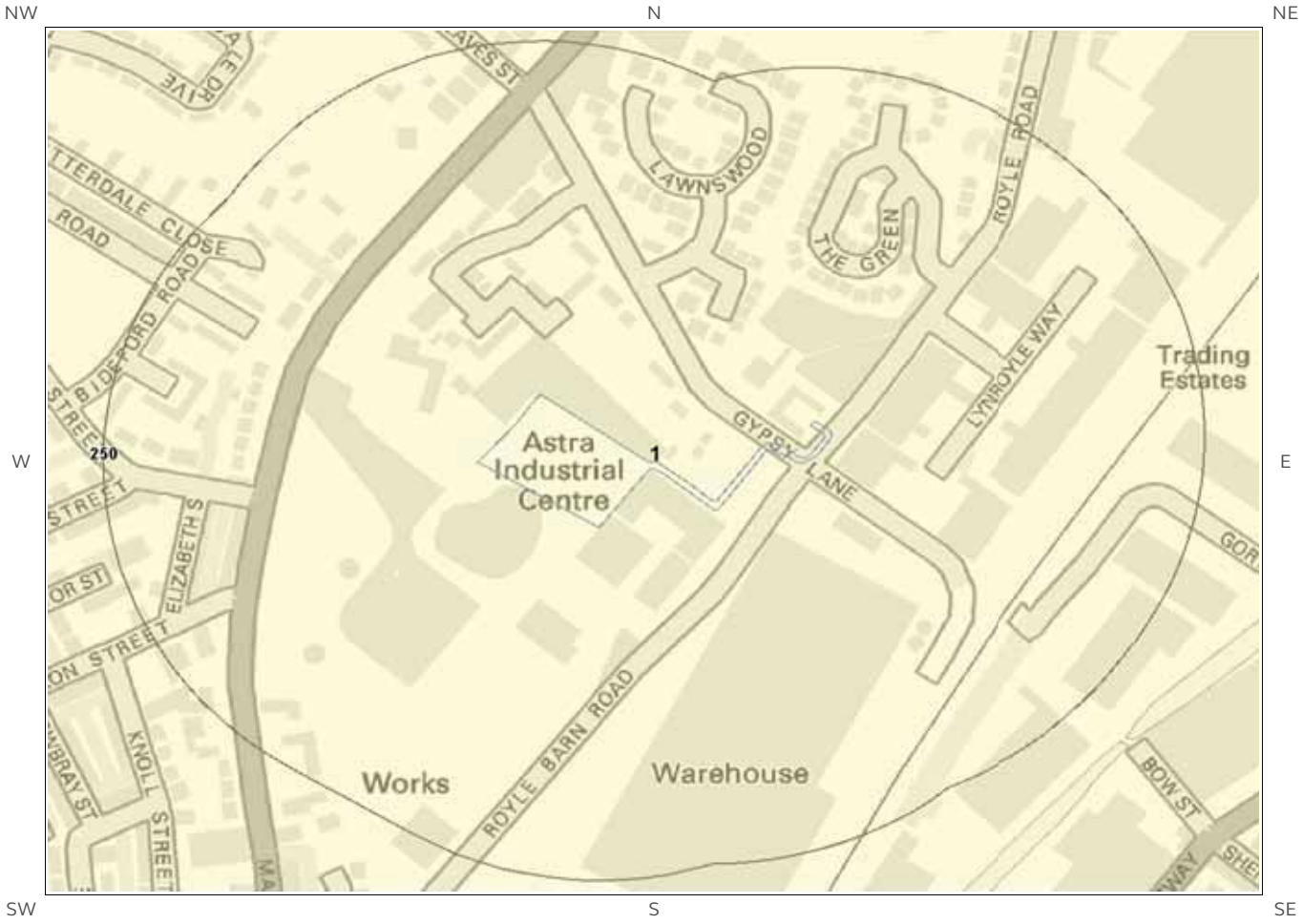


Ground Dissolution Soluble Rocks Legend

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6.4 Compressible Deposits map

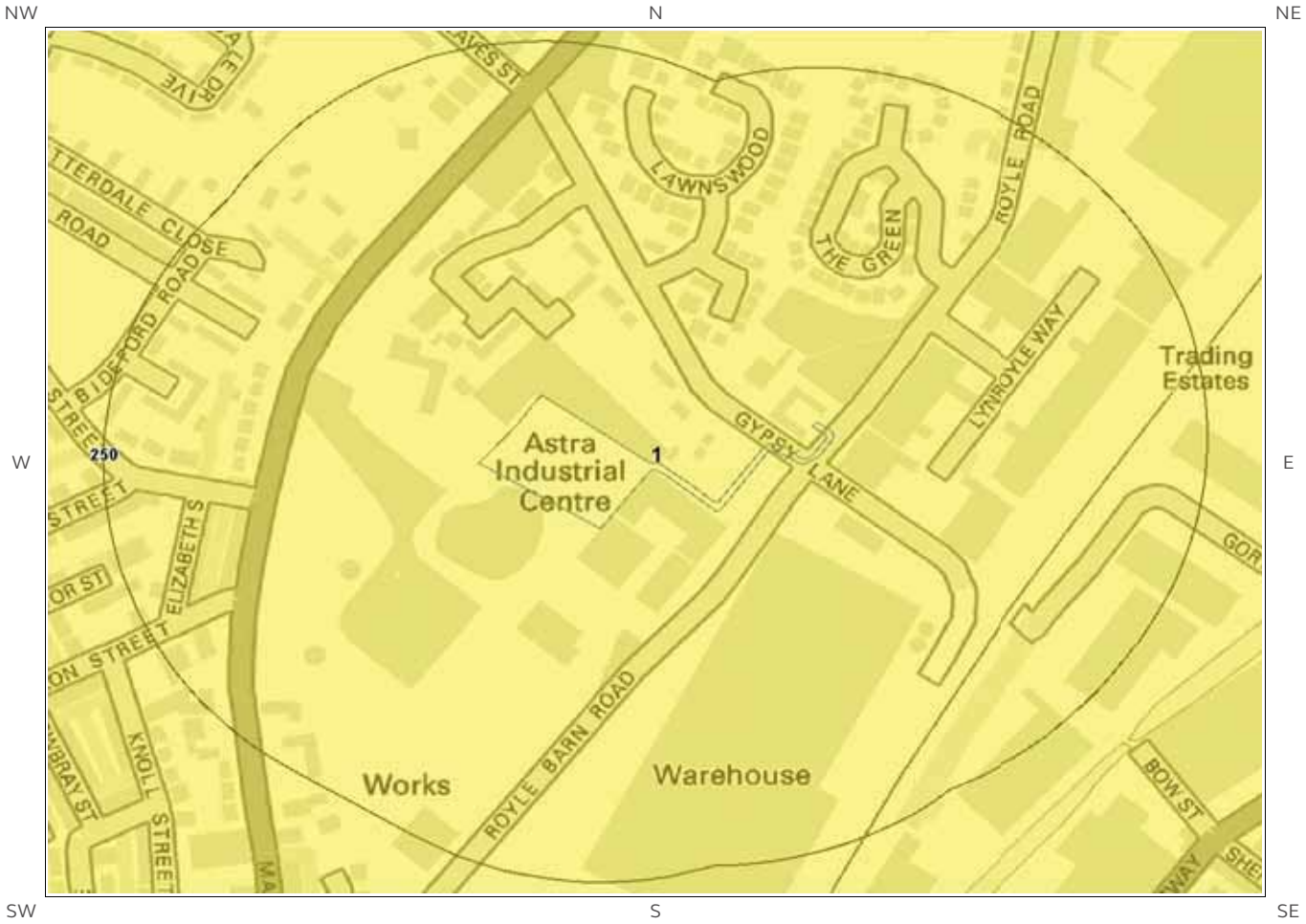


Compressible Deposits Legend

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6.5 Collapsible Deposits map

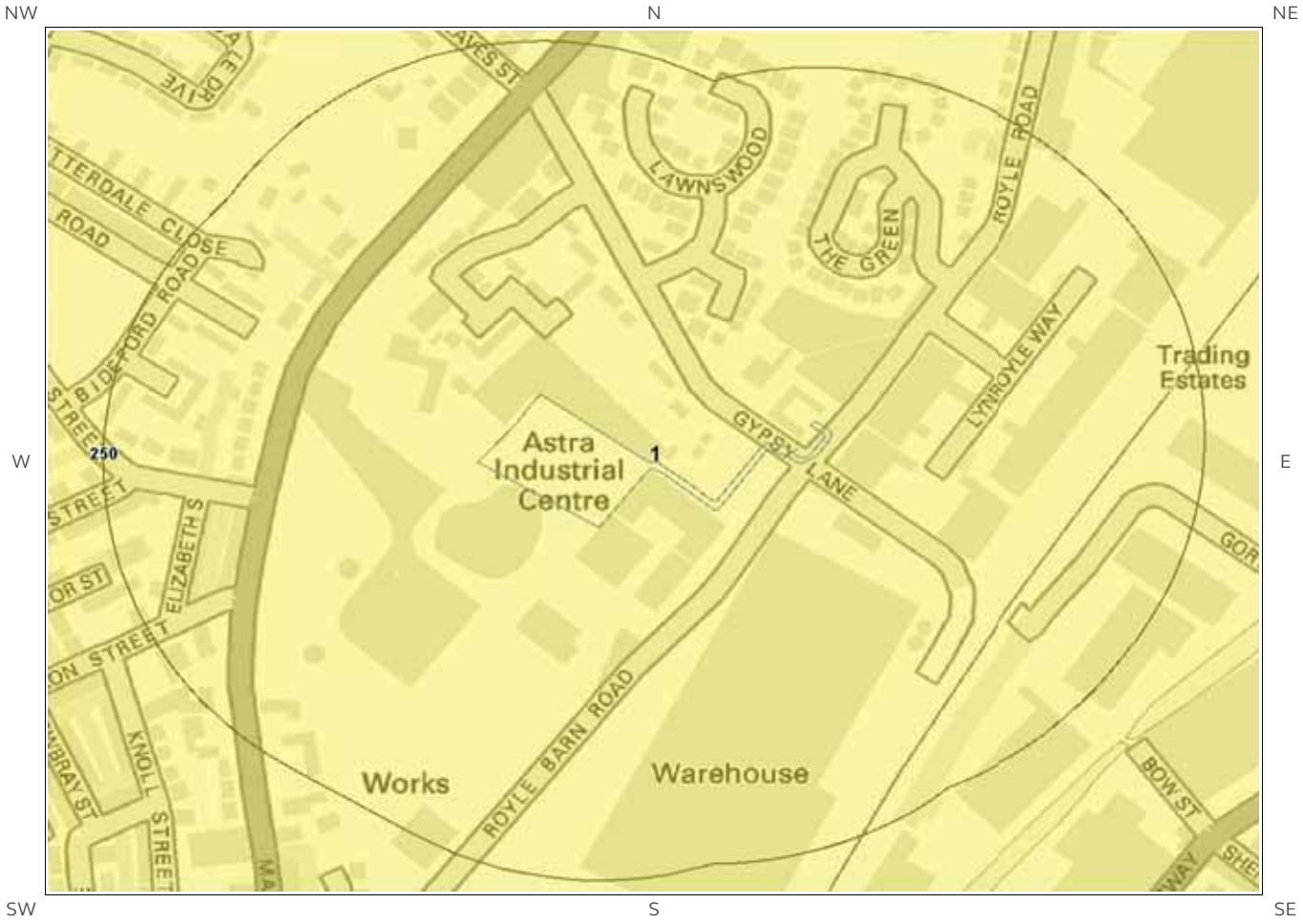


Collapsible Deposits Legend

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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.

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.

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.

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

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.

6.5 Collapsible Deposits

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

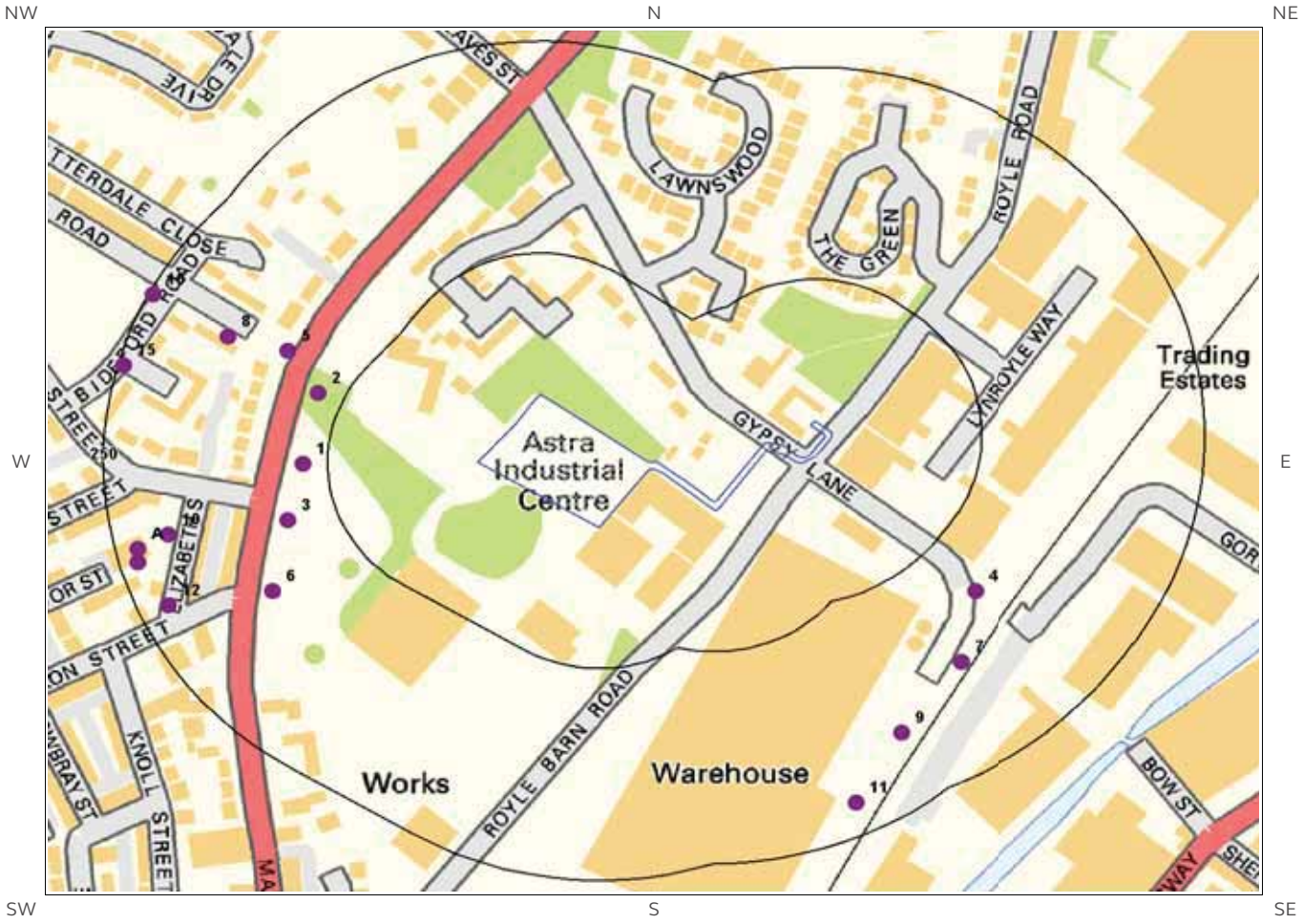
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

Borehole Locations

125
250
Search Buffers (m)

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: 16

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	117.0	W	388100 411240	SD81SE273	8.0	MANCHESTER RD CASTLETON 2
2	117.0	NW	388110 411290	SD81SE272	9.0	MANCHESTER RD CASTLETON 1
3	134.0	W	388090 411200	SD81SE274	8.0	MANCHESTER RD CASTLETON 3
4	144.0	SE	388550 411150	SD81SE440	10.0	DISTRIBUTION CENTRE 1
5	149.0	NW	388090 411320	SD81SE284	10.15	AJAX ST CASTLETON BH8
6	165.0	SW	388080 411150	SD81SE275	7.0	MANCHESTER RD CASTLETON 4
7	175.0	SE	388540 411100	SD81SE448	3.0	DISTRIBUTION CENTRE TP8
8	189.0	NW	388050 411330	SD81SE283	10.0	AJAX ST CASTLETON BH7/7A
9	200.0	SE	388500 411050	SD81SE447	3.0	DISTRIBUTION CENTRE TP7
10	213.0	W	388010 411190	SD81SE108	-1.0	PROP SURGERY ABBOT STREET 5
11	228.0	SE	388470 411000	SD81SE446	3.0	DISTRIBUTION CENTRE TP6
12	230.0	SW	388010 411140	SD81SE107	-1.0	PROP SURGERY ABBOT STREET 4
13A	235.0	W	387990 411180	SD81SE104	-1.0	PROP SURGERY ABBOT STREET 1
14A	238.0	W	387990 411170	SD81SE106	-1.0	PROP SURGERY ABBOT STREET 3
15	247.0	W	387980 411310	SD81SE281	12.0	AJAX ST CASTLETON BH5
16	247.0	NW	388000 411360	SD81SE282	12.0	AJAX ST CASTLETON BH6

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/29999
#2: scans.bgs.ac.uk/sobi_scans/boreholes/29998
#3: scans.bgs.ac.uk/sobi_scans/boreholes/30000
#4: scans.bgs.ac.uk/sobi_scans/boreholes/30166
#5: scans.bgs.ac.uk/sobi_scans/boreholes/30010
#6: scans.bgs.ac.uk/sobi_scans/boreholes/30001
#7: scans.bgs.ac.uk/sobi_scans/boreholes/30174
#8: scans.bgs.ac.uk/sobi_scans/boreholes/30009
#9: scans.bgs.ac.uk/sobi_scans/boreholes/30173
#11: scans.bgs.ac.uk/sobi_scans/boreholes/30172
#15: scans.bgs.ac.uk/sobi_scans/boreholes/30007
#16: scans.bgs.ac.uk/sobi_scans/boreholes/30008

8 Estimated Background Soil Chemistry

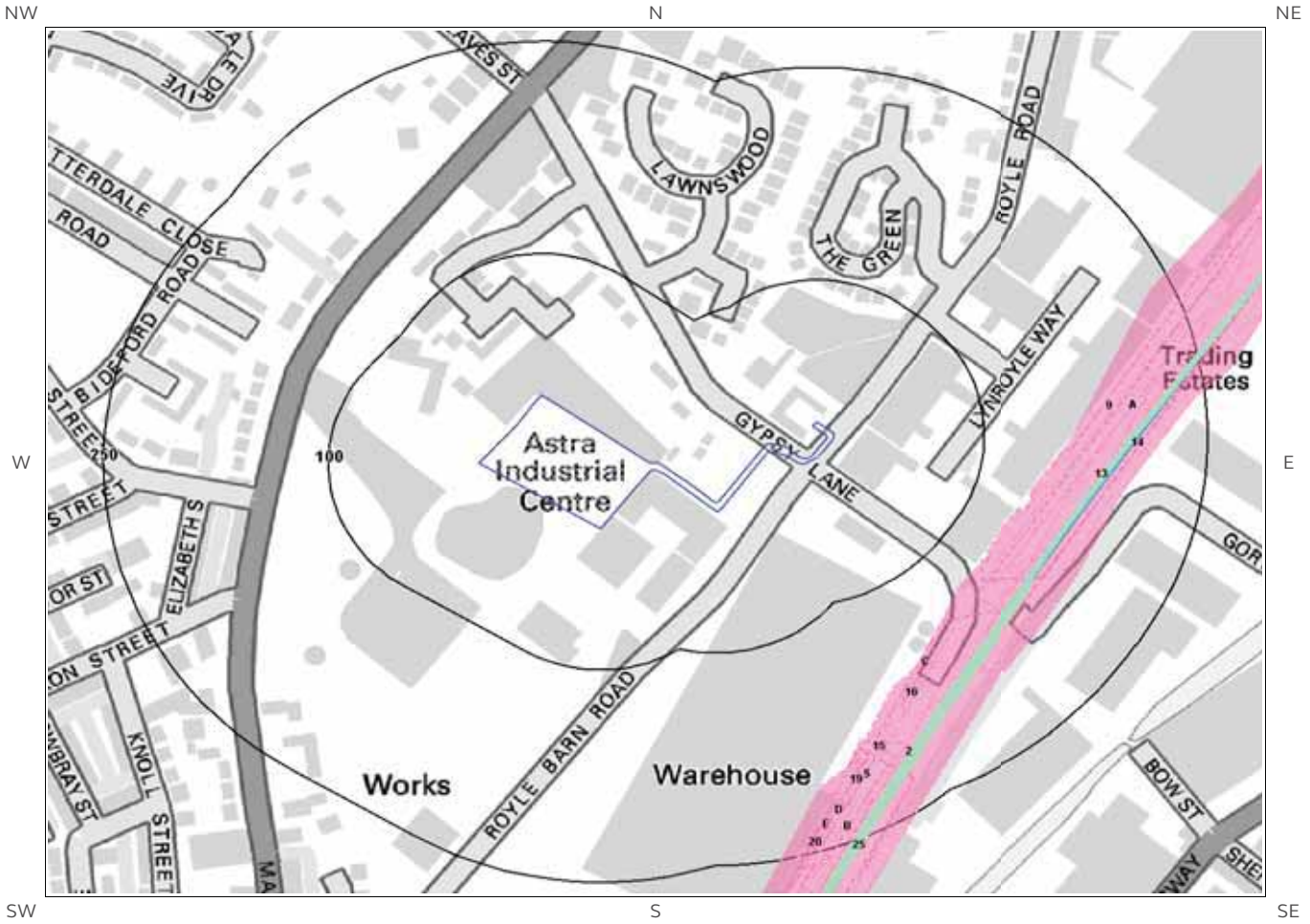
Records of background estimated soil chemistry within 250m of the study site boundary: 2

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	Sediment	15 - 25 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	200 - 300 mg/kg
46.0	E	Sediment	15 - 25 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

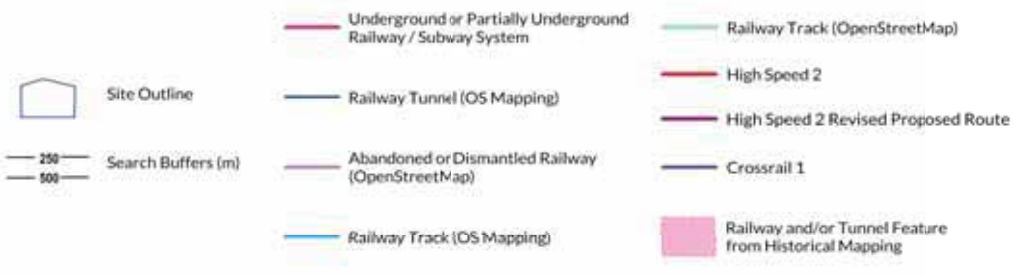
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

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
1A	129	SE	388742 411405	Railway Sidings	1949
9	131	SE	n/a	Railway	1928
10A	140	SE	388735 411402	Railway Sidings	1930
11C	142	SE	388517 411096	Railway Sidings	1981
2	143	SE	388435 410900	Railway Sidings	1975
3A	143	SE	388741 411390	Railway Sidings	1928

ID	Distance (m)	Direction	NGR	Details	Date
4A	143	SE	388741 411390	Railway Sidings	1938
12C	143	SE	388515 411095	Railway Sidings	1977
13	149	SE	n/a	Railway	1893
14	159	SE	n/a	Railway	1909
5	162	SE	388410 410881	Railway Sidings	1968
15	168	SE	388485 411045	Railway Sidings	1956
16	170	SE	388506 411077	Railway Sidings	1956
6D	186	SE	388382 410852	Railway Sidings	1928
7B	192	SE	388381 410846	Railway Sidings	1938
8B	196	SE	388391 410853	Railway Sidings	1949
17D	196	SE	388371 410836	Railway Sidings	1937
18E	197	SE	388371 410836	Railway Sidings	1929
19	200	SE	388468 411016	Railway Sidings	1956
20	212	S	388371 410836	Railway Sidings	1910
21D	221	S	388389 410868	Railway Sidings	1963
22D	221	S	388389 410868	Railway Sidings	1955
23E	222	S	388386 410862	Railway Sidings	1977
24D	222	S	388381 410844	Railway Sidings	1955
25	227	SE	n/a	Railway	1890

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? Yes

Distance (m)	Direction	Name	Type
165	SE	Caldervale Line	Rail
165	SE	Caldervale Line	Rail
165	SE	Caldervale Line	Rail
165	SE	Caldervale Line	Rail
166	SE	Caldervale Line	Rail
166	SE	Not given	Multi Track
166	SE	Not given	Multi Track
166	SE	Caldervale Line	Rail
168	SE	Caldervale Line	Rail
168	SE	Caldervale Line	Rail
169	SE	Not given	Rail
169	SE	Not given	Rail
172	SE	Not given	Rail
172	SE	Not given	Rail

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? No

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

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

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

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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Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

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DX 716176 Mansfield 5
www.coal.gov.uk

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Public Health England, Wellington House
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https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
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Report Date	6 Feb 2018
Report Delivery Method:	Email - pdf

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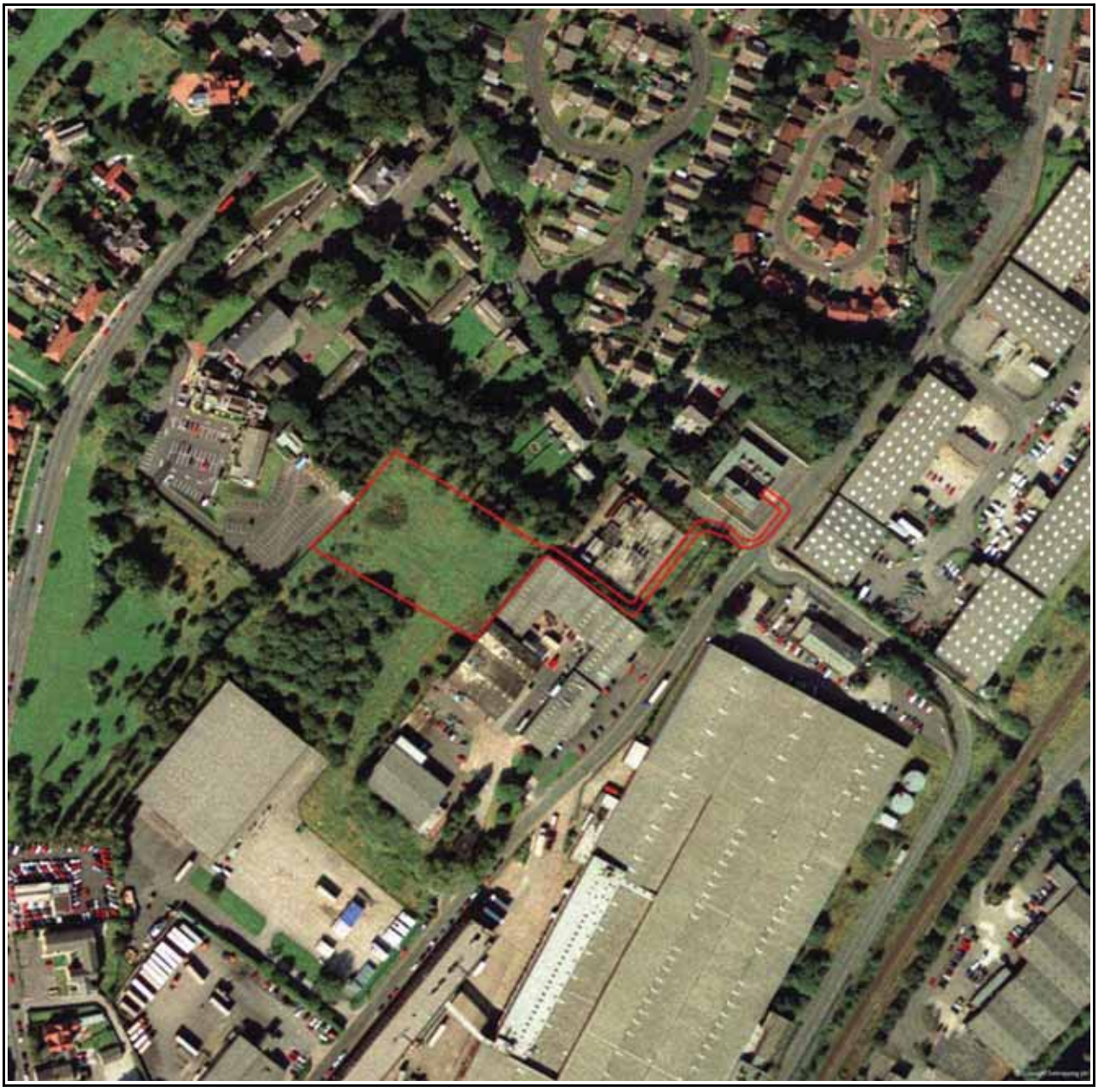
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Groundsure Enviroinsight

Enviro Insight

Address:	**,**
Date:	**6 Feb 2018**
Reference:	**EMS-461317_619013**
Client:	**emapsite**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	388291,411241
Site Size:	0.62ha

Report Reference: EMS-461317_619013
Client Reference: EMS_461317_619013

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Overview of Findings

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Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	14	47	171
1.2 Additional Information – Historical Tank Database	0	3	27	73
1.3 Additional Information – Historical Energy Features Database	2	3	14	65
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	4	6
1.6 Potentially Infilled Land	0	1	25	92

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	2
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	2	2
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	1
2.1.9 Records of Water Industry Referrals	0	1	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	1	0
2.2 Records of COMAH and NIHHS sites	0	0	1	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	1	0	4
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	0	2	5
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	1	1
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	3	1	3
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	3	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	1	0	10

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	7	17	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

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

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	5
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	9
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	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 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	Yes	No	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	0	2	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 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the 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	1	3	4
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	1	3	4
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	3
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	0	0	0	0	1	3
8.14 Records of Green Belt land	0	0	0	0	1	4

Section 9: Natural Hazards

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

Section 10: Mining

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

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

Note: Maps

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

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

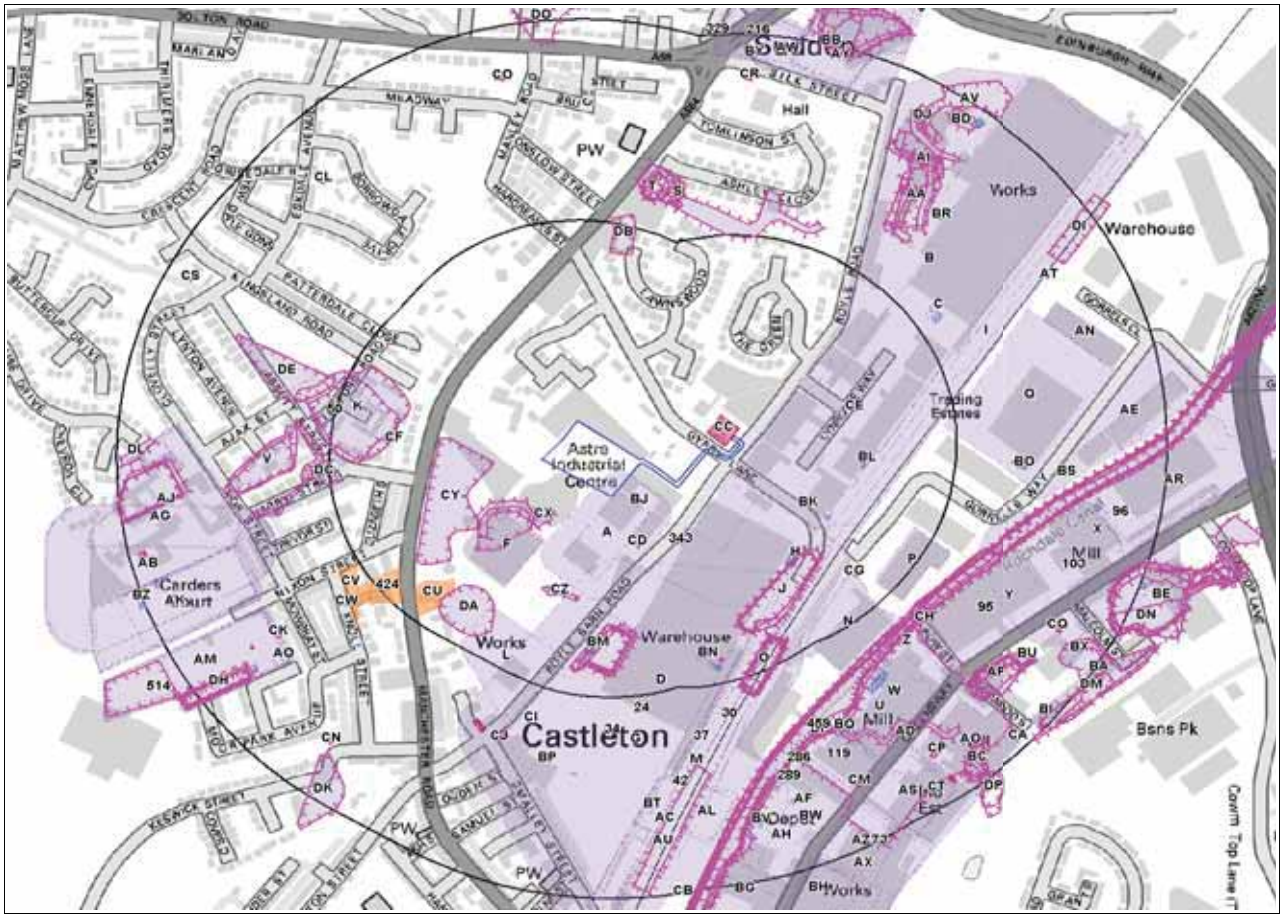
All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use

NW N NE

W E

SW S SE



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Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Site Outline

250
500
Search Buffers (m)

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

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: 233

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Unspecified Works	1975
2A	4	SE	Unspecified Works	1992
3A	4	SE	Unspecified Works	1987
4B	6	SE	Unspecified Mills	1987
5B	6	SE	Unspecified Mills	1992
6B	6	SE	Unspecified Mills	1968
7B	6	SE	Unspecified Mills	1949
8B	6	SE	Unspecified Mills	1975
9C	9	SE	Unspecified Mills	1938
10C	9	SE	Unspecified Mills	1928
11D	14	SE	Unspecified Warehouse	1975
12D	14	SE	Unspecified Warehouse	1987
13D	14	SE	Unspecified Warehouse	1992
14D	31	SE	Textile Machinery Works	1949
15CX	48	SW	Unspecified Pit	1968
16E	54	SW	Unspecified Heap	1949
17CY	57	W	Unspecified Pit	1968
18E	64	SW	Refuse Heap	1938
19E	64	SW	Refuse Heap	1928
20F	74	SW	Unspecified Warehouse	1992
21F	74	SW	Unspecified Warehouse	1987
22G	78	S	Textile Machinery Works	1928
23G	78	S	Textile Machinery Works	1909
24	97	S	Unspecified Works	1968
25BK	103	SE	Unspecified Tank	1908
26I	129	SE	Railway Sidings	1949
27CZ	131	S	Unspecified Ground Workings	1949
28H	134	SE	Unspecified Tanks	1987
29H	134	SE	Unspecified Tanks	1992
30	143	SE	Railway Sidings	1975
31I	143	SE	Railway Sidings	1928
32I	143	SE	Railway Sidings	1938
33J	143	SE	Unspecified Heap	1949

34	144	S	Textile Machinery Works	1938
35J	145	SE	Unspecified Heap	1928
36J	146	SE	Unspecified Heap	1938
37	162	SE	Railway Sidings	1968
38K	168	W	Unspecified Ground Workings	1949
39DA	175	SW	Refuse Heap	1938
40K	175	W	Refuse Heap	1928
41K	175	W	Refuse Heap	1938
42	186	SE	Railway Sidings	1928
43L	188	SW	Unspecified Works	1987
44L	188	SW	Unspecified Works	1992
45L	188	SW	Unspecified Works	1975
46M	192	SE	Railway Sidings	1938
47M	196	SE	Railway Sidings	1949
48N	197	SE	Unspecified Works	1987
49N	197	SE	Unspecified Works	1992
50	205	W	Nursery	1908
51O	212	SE	Cuttings	1851
52DB	213	N	Cuttings	1968
53O	216	SE	Cuttings	1949
54O	216	SE	Cuttings	1928
55O	217	SE	Cuttings	1938
56O	218	SE	Cuttings	1909
57P	223	SE	Unspecified Works	1992
58P	223	SE	Unspecified Works	1987
59Q	236	E	Unspecified Warehouses	1992
60Q	236	E	Unspecified Warehouses	1987
61DC	241	W	Sand Pit	1890
62DD	247	N	Unspecified Ground Workings	1968
63	257	W	Sand Pit	1908
64DE	263	W	Unspecified Pit	1928
65C	266	NE	Unspecified Tank	1938
66C	266	NE	Unspecified Tank	1928
67AC	273	S	Railway Sidings	1909
68C	274	NE	Unspecified Tank	1949
69C	275	NE	Chimney	1992
70C	275	NE	Chimney	1987
71C	275	NE	Chimney	1968
72C	275	NE	Chimney	1975
73R	286	SE	Disused Canal	1987
74R	286	SE	Disused Canal	1975
75R	286	SE	Disused Canal	1992
76T	286	N	Sand Pit	1851
77S	288	NE	Unspecified Ground Workings	1928

78S	288	NE	Unspecified Ground Workings	1938
79T	288	N	Old Sand Pit	1908
80T	289	N	Unspecified Pit	1938
81T	289	N	Unspecified Pit	1928
82V	289	W	Sand Pit	1949
83AD	289	SE	Brick Works	1890
84S	291	N	Unspecified Pit	1949
85U	294	SE	Unspecified Mill	1968
86U	294	SE	Unspecified Mill	1987
87U	294	SE	Unspecified Mill	1992
88U	294	SE	Unspecified Mill	1975
89V	294	W	Sand Pit	1938
90V	294	W	Sand Pit	1928
91W	296	SE	Unspecified Mill	1938
92T	296	N	Old Sand Pit	1890
93W	297	SE	Unspecified Mill	1949
94Y	298	SE	Unspecified Mill	1928
95	299	SE	Unspecified Mill	1938
96	300	SE	Unspecified Mills	1975
97X	300	SE	Unspecified Mills	1987
98X	300	SE	Unspecified Mills	1992
99Y	300	SE	Unspecified Commercial/Industrial	1949
100X	300	SE	Unspecified Mills	1968
101Z	303	SE	Unspecified Tank	1987
102Z	303	SE	Unspecified Tank	1992
103	304	SE	Unspecified Commercial/Industrial	1938
104U	307	SE	Unspecified Mill	1909
105U	307	SE	Unspecified Mill	1928
106AA	311	NE	Unspecified Ground Workings	1949
107AA	314	NE	Unspecified Ground Workings	1968
108AA	319	NE	Unspecified Ground Workings	1928
109AA	319	NE	Unspecified Ground Workings	1938
110W	321	SE	Unspecified Tanks	1949
111W	321	SE	Unspecified Tanks	1938
112W	321	SE	Unspecified Tanks	1928
113AB	328	W	Unspecified Commercial/Industrial	1938
114AB	330	W	Unspecified Commercial/Industrial	1928
115AB	330	W	Unspecified Commercial/Industrial	1909
116AI	334	NE	Unspecified Ground Workings	1928

117AC	346	S	Cuttings	1851
118AF	349	SE	Corporation Yard	1949
119	350	SE	Corporation Yard	1928
120AD	351	SE	Unspecified Ground Workings	1890
121AE	351	E	Unspecified Works	1987
122AE	351	E	Unspecified Works	1992
123AF	352	SE	Corporation Yard	1938
124AG	357	W	Unspecified Mills	1992
125AG	357	W	Unspecified Mills	1975
126AG	357	W	Unspecified Mills	1987
127AG	357	W	Unspecified Mills	1968
128AH	357	SE	Unspecified Works	1968
129AH	357	SE	Unspecified Works	1975
130AH	357	SE	Unspecified Works	1992
131AH	357	SE	Unspecified Works	1987
132AF	358	S	Unspecified Works	1890
133AG	358	W	Unspecified Mill	1949
134AI	360	NE	Unspecified Pit	1992
135AI	360	NE	Unspecified Pit	1987
136AI	360	NE	Unspecified Pit	1975
137AJ	363	W	Unspecified Mill	1928
138AJ	363	W	Unspecified Mill	1938
139AK	365	SW	Unspecified Warehouse	1987
140AK	365	SW	Unspecified Warehouse	1992
141AK	365	SW	Unspecified Commercial/Industrial	1975
142AK	365	SW	Unspecified Commercial/Industrial	1968
143AL	371	S	Malthouses	1890
144AK	371	SW	Unspecified Mill	1949
145AM	371	SW	Unspecified Commercial/Industrial	1968
146AL	371	S	Railway Building	1949
147AG	373	W	Unspecified Mill	1908
148AK	373	SW	Unspecified Mill	1938
149AK	374	SW	Unspecified Mill	1928
150AK	375	SW	Unspecified Mill	1909
151AM	376	SW	Unspecified Mill	1949
152AM	378	SW	Unspecified Mill	1928
153AM	379	SW	Unspecified Mill	1938
154AM	380	SW	Unspecified Mill	1909
155AN	387	NE	Unspecified Warehouses	1992
156AN	387	NE	Unspecified Warehouses	1987
157AQ	388	SW	Unspecified Tank	1968
158AO	390	SE	Unspecified Mill	1968

159AO	390	SE	Unspecified Commercial/Industrial	1992
160AO	390	SE	Unspecified Commercial/Industrial	1987
161AO	390	SE	Unspecified Mill	1975
162AP	391	SE	Unspecified Heap	1928
163AP	392	SE	Unspecified Ground Workings	1938
164AP	392	SE	Unspecified Ground Workings	1949
165AP	395	SE	Unspecified Heap	1968
166AP	395	SE	Unspecified Heap	1975
167AQ	399	SW	Unspecified Tank	1909
168AI	402	NE	Unspecified Ground Workings	1968
169AR	410	E	Unspecified Mill	1908
170AR	410	E	Unspecified Mill	1938
171AR	410	E	Unspecified Mill	1928
172AT	411	NE	Railway Building	1928
173	413	SE	Iron Works	1949
174AS	414	SE	Unspecified Mill	1938
175AS	414	SE	Unspecified Mill	1968
176AS	414	SE	Unspecified Mill	1992
177AS	414	SE	Unspecified Mill	1975
178AS	414	SE	Unspecified Mill	1987
179AR	414	E	Unspecified Mill	1949
180AT	417	NE	Railway Building	1949
181AE	424	E	Unspecified Warehouse	1975
182AS	428	SE	Unspecified Mill	1909
183AS	428	SE	Unspecified Mill	1928
184AU	430	S	Railway Building	1968
185AU	430	S	Railway Building	1975
186DI	431	NE	Cuttings	1908
187AV	437	NE	Unspecified Ground Workings	1975
188AV	437	NE	Unspecified Ground Workings	1987
189AV	437	NE	Unspecified Ground Workings	1992
190AV	437	NE	Unspecified Ground Workings	1968
191DJ	438	NE	Unspecified Heap	1949
192AW	443	N	Unspecified Mills	1938
193AW	443	N	Unspecified Mill	1928
194DK	443	SW	Unspecified Pit	1992
195AX	445	SE	Unspecified Works	1968
196AX	445	SE	Unspecified Works	1975
197AX	445	SE	Unspecified Works	1987
198AX	445	SE	Unspecified Works	1992

199AY	448	N	Cotton Mill	1851
200AZ	448	SE	Unspecified Works	1909
201BB	450	N	Unspecified Commercial/Industrial	1968
202AY	450	N	Unspecified Mill	1908
203AZ	453	SE	Leather Works	1890
204AW	454	N	Unspecified Mills	1949
205BC	455	SE	Unspecified Pit	1949
206BA	455	SE	Unspecified Ground Workings	1968
207BA	455	SE	Unspecified Ground Workings	1975
208BB	457	N	Unspecified Mill	1890
209BC	457	SE	Unspecified Pit	1938
210BC	459	SE	Unspecified Ground Workings	1928
211BC	459	SE	Unspecified Ground Workings	1909
212BG	466	S	Unspecified Mills	1949
213DM	467	SE	Unspecified Ground Workings	1928
214BD	467	NE	Unspecified Heap	1938
215BD	467	NE	Unspecified Heap	1928
216	468	N	Hat Manufactory	1851
217BF	469	SE	Unspecified Ground Workings	1938
218BE	469	E	Unspecified Ground Workings	1949
219BE	473	SE	Unspecified Heap	1928
220BF	473	E	Unspecified Ground Workings	1968
221AV	474	NE	Unspecified Heap	1949
222BE	474	E	Unspecified Ground Workings	1975
223BI	478	SE	Unspecified Works	1987
224DN	480	SE	Unspecified Heap	1938
225BD	482	NE	Unspecified Tank	1992
226BD	482	NE	Unspecified Tank	1987
227BG	486	S	Unspecified Mills	1938
228BH	486	S	Unspecified Manufactory	1890
229AX	486	SE	Iron Works	1938
230BH	490	S	Iron Works	1928
231BI	492	SE	Unspecified Pit	1938
232BH	492	S	Iron Works	1909
233BZ	497	W	Chimney	1968

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: 103

ID	Distance (m)	Direction	Use	Date
234BJ	28	SE	Unspecified Tank	1979
235BJ	28	SE	Unspecified Tank	1990
236BJ	28	SE	Unspecified Tank	1996
237BK	104	SE	Unspecified Tank	1910
238BK	130	SE	Unspecified Tank	1996
239H	135	SE	Tanks	1996
240H	135	SE	Tanks	1984
241BL	140	E	Unspecified Tank	1956
242BL	140	E	Unspecified Tank	1956
243BM	173	S	Unspecified Tank	1979
244BM	173	S	Unspecified Tank	1990
245BM	174	S	Unspecified Tank	1996
246BM	197	S	Unspecified Tank	1997
247BM	197	S	Unspecified Tank	1996
248BM	197	S	Unspecified Tank	1977
249BM	197	S	Unspecified Tank	1990
250BM	197	S	Unspecified Tank	1988
251BM	197	S	Unspecified Tank	1984
252BN	212	S	Unspecified Tank	1937
253BN	212	S	Unspecified Tank	1929
254BN	218	S	Unspecified Tank	1929
255BN	218	S	Unspecified Tank	1937
256BN	218	S	Gasometer	1910
257BN	221	S	Tanks	1910
258BN	221	S	Tanks	1929
259BN	221	S	Tanks	1937
260BN	225	S	Tanks	1929
261BN	225	S	Tanks	1937
262BN	227	S	Unspecified Tank	1910
263BN	229	S	Tanks	1910
264C	268	NE	Tanks	1984
265CW	290	SW	Unspecified Tank	1929
266CI	291	S	Tanks	1977
267W	319	SE	Tanks	1955
268W	320	SE	Tanks	1955
269W	323	SE	Tanks	1929
270W	323	SE	Tanks	1937

271CJ	328	SW	Unspecified Tank	1977
272BO	329	E	Unspecified Tank	1996
273BO	330	E	Unspecified Tank	1984
274BP	336	S	Unspecified Tank	1990
275U	338	SE	Unspecified Tank	1937
276U	338	SE	Unspecified Tank	1929
277BP	346	S	Unspecified Tank	1990
278BQ	354	SE	Unspecified Tank	1990
279BQ	355	SE	Unspecified Tank	1992
280BR	360	NE	Unspecified Tank	1993
281BR	360	NE	Unspecified Tank	1998
282BR	360	NE	Unspecified Tank	1993
283BQ	361	SE	Unspecified Tank	1955
284BQ	361	SE	Unspecified Tank	1955
285BR	361	NE	Unspecified Tank	1988
286	367	SE	Unspecified Tank	1929
287BS	381	E	Unspecified Tank	1996
288BS	382	E	Unspecified Tank	1984
289	383	S	Tanks	1910
290BT	387	S	Oil Tank	1910
291AQ	388	SW	Unspecified Tank	1956
292BT	395	S	Unspecified Tank	1929
293BT	395	S	Unspecified Tank	1937
294AF	411	S	Unspecified Tank	1929
295AF	411	S	Unspecified Tank	1937
296AQ	421	SW	Tanks	1955
297AQ	421	SW	Tanks	1968
298BU	422	SE	Unspecified Tank	1910
299BU	422	SE	Unspecified Tank	1930
300AQ	422	SW	Tanks	1955
301BV	424	S	Unspecified Tank	1990
302BV	425	S	Unspecified Tank	1997
303BV	425	S	Unspecified Tank	1996
304BV	437	S	Unspecified Tank	1937
305BV	437	S	Unspecified Tank	1929
306BW	440	S	Unspecified Tank	1929
307BW	440	S	Unspecified Tank	1937
308AB	468	W	Unspecified Tank	1956
309AB	468	W	Unspecified Tank	1956
310AB	468	W	Unspecified Tank	1968
311BX	469	SE	Unspecified Tank	1996
312BX	470	SE	Unspecified Tank	1984
313BY	471	N	Tanks	1956
314BY	471	N	Tanks	1956
315BY	475	N	Unspecified Tank	1968
316BZ	476	W	Unspecified Tank	1937

317BZ	476	W	Unspecified Tank	1929
318BZ	476	W	Unspecified Tank	1910
319CT	477	SE	Unspecified Tank	1891
320BY	478	N	Unspecified Tank	1910
321BD	479	NE	Unspecified Tank	1988
322BD	479	NE	Unspecified Tank	1993
323BD	480	NE	Unspecified Tank	1998
324BD	480	NE	Unspecified Tank	1993
325BY	483	N	Unspecified Tank	1956
326CA	484	SE	Unspecified Tank	1990
327CA	486	SE	Unspecified Tank	1992
328BZ	499	W	Unspecified Tank	1956
329	499	N	Unspecified Tank	1910
330BZ	500	W	Unspecified Tank	1956
331BZ	500	W	Unspecified Tank	1968
332BE	500	E	Unspecified Tank	1996
333CB	500	S	Unspecified Tank	1984
334CB	500	S	Unspecified Tank	1988
335CB	500	S	Unspecified Tank	1990
336CB	500	S	Unspecified Tank	1977

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: 84

ID	Distance (m)	Direction	Use	Date
337CC	0	On Site	Electricity Substation	1956
338CC	0	NW	Electricity Substation	1956
339CC	1	NW	Electricity Substation	1990
340CC	1	NW	Electricity Substation	1979
341CC	9	NW	Electricity Substation	1996
342CD	63	SE	Electricity Substation	1990
343	64	S	Electricity Substation	1990
344CD	65	SE	Electricity Substation	1996
345CE	133	E	Electricity Substation	1984
346CE	135	E	Electricity Substation	1996
347CF	174	W	Electricity Substation	1996
348CF	175	W	Electricity Substation	1990
349CF	175	W	Electricity Substation	1979
350CF	175	W	Electricity Substation	1956
351CF	175	W	Electricity Substation	1956

352CG	200	SE	Electricity Substation	1981
353CG	200	SE	Electricity Substation	1996
354CG	200	SE	Electricity Substation	1984
355BN	218	S	Gasometer	1910
356Z	297	SE	Electricity Substation	1981
357CH	298	SE	Electricity Substation	1956
358CH	298	SE	Electricity Substation	1956
359CI	314	SW	Electricity Substation	1996
360CJ	314	SW	Electricity Substation	1997
361CJ	318	SW	Electricity Substation	1977
362CJ	318	SW	Electricity Substation	1996
363CJ	318	SW	Electricity Substation	1997
364CJ	318	SW	Electricity Substation	1988
365CJ	318	SW	Electricity Substation	1984
366CJ	318	SW	Electricity Substation	1990
367CJ	319	SW	Electricity Substation	1977
368CJ	320	SW	Electricity Substation	1990
369CJ	320	SW	Electricity Substation	1988
370CJ	320	SW	Electricity Substation	1984
371BO	320	E	Electricity Substation	1981
372BO	320	E	Electricity Substation	1996
373BO	320	E	Electricity Substation	1984
374CK	376	SW	Electricity Substation	1992
375CK	376	SW	Electricity Substation	1992
376CK	411	SW	Electricity Substation	1956
377CK	411	SW	Electricity Substation	1956
378CK	411	SW	Electricity Substation	1968
379CL	419	NW	Electricity Substation	1967
380CL	419	NW	Electricity Substation	1992
381CM	422	SE	Electricity Substation	1992
382CM	422	SE	Electricity Substation	1990
383CN	425	SW	Electricity Substation	1971
384CN	425	SW	Electricity Substation	1990
385CN	425	SW	Electricity Substation	1980
386CN	425	SW	Electricity Substation	1990
387CN	426	SW	Electricity Substation	1992
388CO	432	N	Electricity Substation	1992
389CP	432	SE	Electricity Substation	1990
390CO	432	N	Electricity Substation	1968
391CO	432	N	Electricity Substation	1971
392CQ	433	SE	Electricity Substation	1996
393CP	433	SE	Electricity Substation	1992
394CO	433	N	Electricity Substation	1991
395CO	433	N	Electricity Substation	1988
396CO	433	N	Electricity Substation	1978
397CQ	438	SE	Electricity Substation	1984

398CR	442	N	Electricity Substation	1971
399CR	442	N	Electricity Substation	1968
400CR	443	N	Electricity Substation	1992
401CR	443	N	Electricity Substation	1988
402CR	443	N	Electricity Substation	1988
403CR	443	N	Electricity Substation	1978
404CR	443	N	Electricity Substation	1991
405CS	468	NW	Electricity Substation	1992
406CS	468	NW	Electricity Substation	1992
407CS	468	NW	Electricity Substation	1968
408CT	471	SE	Electricity Substation	1990
409CT	472	SE	Electricity Substation	1955
410CT	472	SE	Electricity Substation	1955
411CT	472	SE	Electricity Substation	1992
412AB	477	W	Electricity Substation	1956
413AB	477	W	Electricity Substation	1968
414AB	477	W	Electricity Substation	1956
415AB	477	W	Electricity Substation	1992
416AB	477	W	Electricity Substation	1992
417AB	479	W	Electricity Substation	1956
418AB	480	W	Electricity Substation	1956
419AB	480	W	Electricity Substation	1968
420AB	480	W	Electricity Substation	1992

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 10

ID	Distance (m)	Direction	Use	Date
421CU	181	SW	Garage	1996
422CU	205	SW	Garage	1990
423CU	205	SW	Garage	1979

424	213	SW	Garage	1979
425CV	252	SW	Garage	1956
426CV	252	SW	Garage	1968
427CV	254	SW	Garage	1956
428CV	259	SW	Garage	1956
429CV	260	SW	Garage	1979
430CW	277	SW	Garage	1956

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 118

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

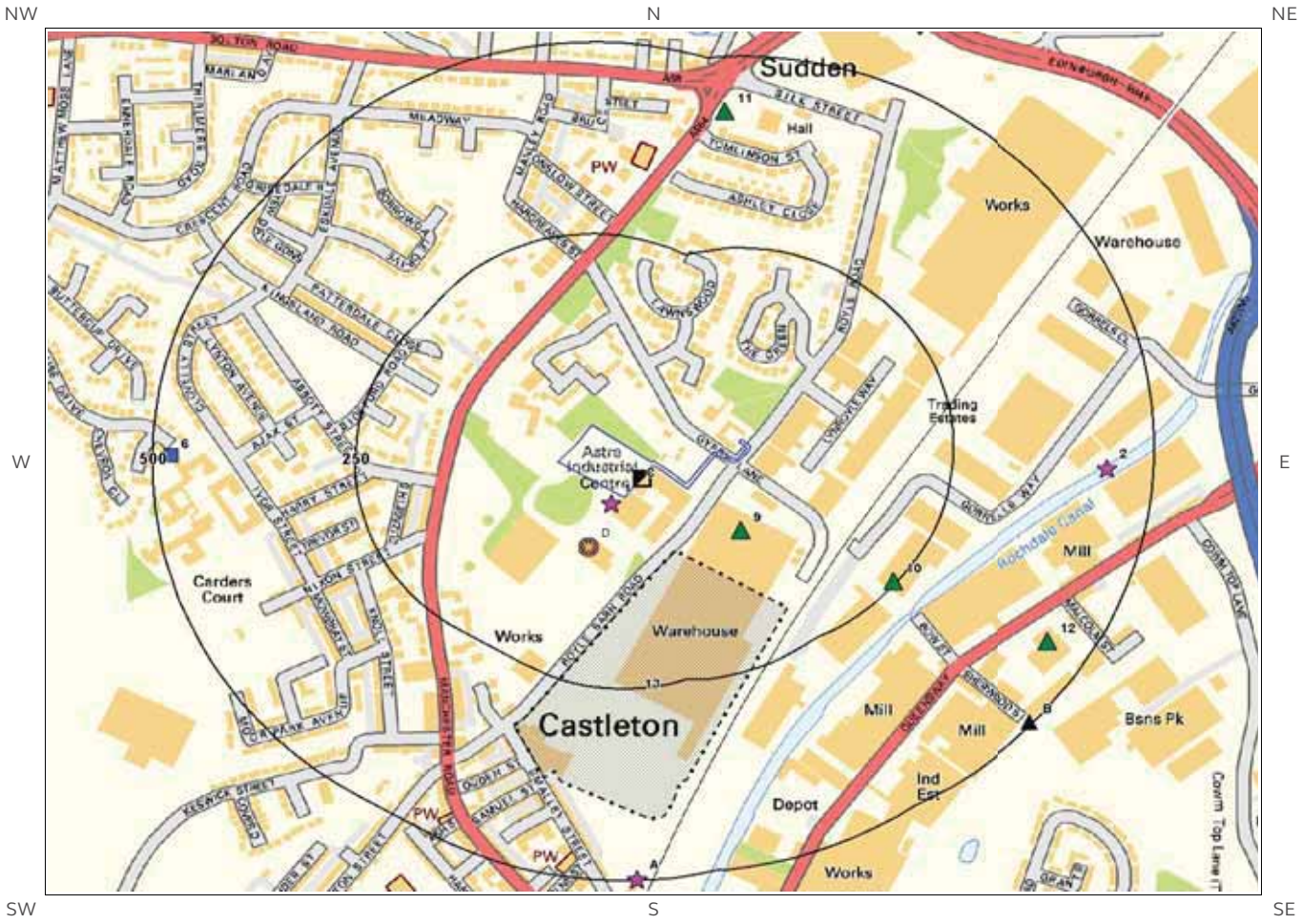
ID	Distance(m)	Direction	Use	Date
431CX	48	SW	Unspecified Pit	1968
432E	54	SW	Unspecified Heap	1949
433CY	57	W	Unspecified Pit	1968
434E	64	SW	Refuse Heap	1928
435E	64	SW	Refuse Heap	1938
436CZ	131	S	Unspecified Ground Workings	1949
437J	143	SE	Unspecified Heap	1949
438J	145	SE	Unspecified Heap	1928
439J	146	SE	Unspecified Heap	1938
440BM	159	S	Reservoir	1928
441BM	159	S	Pond	1968
442BM	160	S	Reservoir	1938
443BM	160	S	Reservoir	1949
444BM	164	S	Reservoir	1909
445K	168	W	Unspecified Ground Workings	1949
446DA	175	SW	Refuse Heap	1938
447K	175	W	Refuse Heap	1938
448K	175	W	Refuse Heap	1928
449O	212	SE	Cuttings	1851
450DB	213	N	Cuttings	1968
451O	216	SE	Cuttings	1949
452O	216	SE	Cuttings	1928
453O	217	SE	Cuttings	1938
454O	218	SE	Cuttings	1909
455DC	241	W	Sand Pit	1890
456DD	247	N	Unspecified Ground Workings	1968
457DC	257	W	Sand Pit	1908
458DE	263	W	Unspecified Pit	1928
459	281	SE	Canal	1890

460	282	SE	Canal	1938
461	285	SE	Canal	1968
462	286	SE	Canal	1851
463R	286	SE	Disused Canal	1975
464R	286	SE	Canal	1949
465R	286	SE	Disused Canal	1987
466R	286	SE	Disused Canal	1992
467T	286	N	Sand Pit	1851
468S	288	NE	Unspecified Ground Workings	1938
469S	288	NE	Unspecified Ground Workings	1928
470S	288	N	Old Sand Pit	1908
471S	289	N	Unspecified Pit	1938
472S	289	N	Unspecified Pit	1928
473V	289	W	Sand Pit	1949
474AD	289	SE	Brick Works	1890
475DF	291	SE	Canal	1928
476DF	291	SE	Canal	1909
477S	291	N	Unspecified Pit	1949
478V	294	W	Sand Pit	1938
479V	294	W	Sand Pit	1928
480S	296	N	Old Sand Pit	1890
481AA	311	NE	Unspecified Ground Workings	1949
482AA	314	NE	Unspecified Ground Workings	1968
483DG	315	SE	Canal	1908
484DG	316	SE	Canal	1890
485DG	316	SE	Canal	1938
486DG	316	SE	Canal	1928
487AA	319	NE	Unspecified Ground Workings	1938
488AA	319	NE	Unspecified Ground Workings	1928
489AI	334	NE	Unspecified Ground Workings	1928
490AU	346	S	Cuttings	1851
491AD	351	SE	Unspecified Ground Workings	1890
492AI	360	NE	Unspecified Pit	1987
493AI	360	NE	Unspecified Pit	1975
494AI	360	NE	Unspecified Pit	1992
495AP	391	SE	Unspecified Heap	1928
496AP	392	SE	Unspecified Ground Workings	1938
497AP	392	SE	Unspecified Ground Workings	1949
498AP	395	SE	Unspecified Heap	1975

499AP	395	SE	Unspecified Heap	1968
500AI	402	NE	Unspecified Ground Workings	1968
501AJ	418	W	Reservoir	1992
502AJ	418	W	Reservoir	1987
503AJ	418	W	Reservoir	1968
504AJ	418	W	Reservoir	1975
505AJ	418	W	Reservoir	1949
506AJ	424	W	Reservoir	1928
507AJ	424	W	Reservoir	1938
508AJ	424	W	Reservoir	1908
509DH	429	SW	Reservoirs	1949
510DH	429	SW	Reservoirs	1968
511DI	431	NE	Cuttings	1908
512DH	433	SW	Reservoirs	1928
513DH	435	SW	Reservoirs	1938
514	436	SW	Reservoirs	1909
515AV	437	NE	Unspecified Ground Workings	1975
516AV	437	NE	Unspecified Ground Workings	1968
517AV	437	NE	Unspecified Ground Workings	1992
518AV	437	NE	Unspecified Ground Workings	1987
519DJ	438	NE	Unspecified Heap	1949
520DK	443	SW	Unspecified Pit	1992
521BC	455	SE	Unspecified Pit	1949
522BA	455	SE	Unspecified Ground Workings	1968
523BA	455	SE	Unspecified Ground Workings	1975
524DL	455	W	Pond	1938
525DL	455	W	Pond	1928
526BC	457	SE	Unspecified Pit	1938
527BC	459	SE	Unspecified Ground Workings	1909
528BC	459	SE	Unspecified Ground Workings	1928
529DM	467	SE	Unspecified Ground Workings	1928
530BD	467	NE	Unspecified Heap	1938
531BD	467	NE	Unspecified Heap	1928
532BF	469	SE	Unspecified Ground Workings	1938
533BE	469	E	Unspecified Ground Workings	1949
534DO	471	N	Reservoirs	1851
535BE	473	SE	Unspecified Heap	1928

536BF	473	E	Unspecified Ground Workings	1968
537BD	474	NE	Unspecified Heap	1949
538BE	474	E	Unspecified Ground Workings	1975
539DN	480	SE	Unspecified Heap	1938
540BB	490	N	Reservoir	1851
541BB	491	N	Disused Reservoir	1928
542BB	491	N	Reservoir	1908
543DM	492	SE	Unspecified Pit	1938
544DP	496	SE	Pond	1890
545BB	496	N	Reservoir	1890
546BB	497	N	Disused Reservoir	1938
547DO	499	N	Reservoirs	1890
548DP	500	SE	Pond	1909

2. Environmental Permits, Incidents and Registers Map



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- Site Outline
- Search Buffers (m) 250 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- 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:

2

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
16B	497	SE	388800 410900	Operator: Dale Joinery Ltd Address: Queensway, Rochdale, OL11 2PR Process: Timber Processes	Permit Number: BD5771 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked
17B	497	SE	388800 410900	Operator: Dale Joinery Ltd Address: Queensway, Rochdale, OL11 2PR Process: Timber Processes	Permit Number: AV5071 Original Permit Number: IPCAPP Date Approved: 2-12-1996 Effective Date: 9-12-1996 Status: Superseded By Variation

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

4

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
9	87	SE	388442 411149	Address: Webmaster Ltd, Astra Indl Est, Royle Barn Road, Rochdale, OL11 3DU Process: Adhesive Coating Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	247	SE	388629 411083	Address: Inx International Ltd, Unit 6B Transpennine Trading Estate, Gorrels Way, Rochdale, Lancashire, OL11 2PX Process: Ink Manufacture, Coating Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
11	426	N	388421 411697	Address: Johnsons Dry Cleaners, Manchester Road, Rochdale, Lancashire, OL11 2ST Process: Dry Cleaners Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
12	448	SE	388824 411007	Address: Taylor Engineering & Plastics, Queensway, Rochdale, Lancashire, OL11 2QW Process: Plastic coating Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

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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:

1

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

ID	Distance (m)	Direction	NGR	Details	
6	477	W	387740 411250	Address: MATTHEW MOSS PS, SUDDEN, ROCHDALE, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: 01ROC0179 Permit Version: 1	Receiving Water: - Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: -

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

1

The following Water Industry Referral records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Address	Permission reference	Local Authority	First Date Received	Last Date Received	Status
18C	1	SE	PROCESSED LIGHT ALLOYS LTD, 2 THE ASTRA CENTRE,ROYLE BARN ROAD, CASTLETON, ROCHDALE, LANCASHIRE, OL11 3DT	BA6097	ROCHDALE METROPOLITAN BOROUGH COUNCIL	01-Jun-2001	01-Oct-2017	RECEIVED

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

1

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

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
19D	78	SW	No Details	388254 411131	Approved	No Details	Tetrosyl Limited Royle Barn Road, Castleton, Rochdale, England, OL11 3DT	No Details	Enforcement: No Enforcements Notified Date of Enforcement: No Details Comment: No Details

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 1

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
13	83	S	Tetrosyl Limited	Tetrosyl Limited, Rochdale - Royal Barn Road, Royle Barn Road, Castleton, Rochdale, Greater Manchester, OL11 3DT	Current COMAH Site	COMAH Upper Tier Operator

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	
1	15	SW	388282 411188	Incident Date: 22-Jul-2002 Incident Identification: 93581 Pollutant: Oils and Fuel Pollutant Description: Mixed/Waste Oils	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	442	E	388895 411233	Incident Date: 29-Aug-2001 Incident Identification: 27638 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
3A	499	S	388313 410697	Incident Date: 10-Sep-2002 Incident Identification: 106871 Pollutant: Specific Waste Materials:Organic Chemicals/Products Pollutant Description: Other Composites:Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	499	S	388313 410697	Incident Date: 10-Sep-2002 Incident Identification: 106871 Pollutant: Specific Waste Materials Pollutant Description: Other Composites	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5A	499	S	388313 410697	Incident Date: 10-Sep-2002 Incident Identification: 106871 Pollutant: Organic Chemicals/Products Pollutant Description: Other Organic Chemical or Product	Water Impact: Category 4 (No Impact) 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

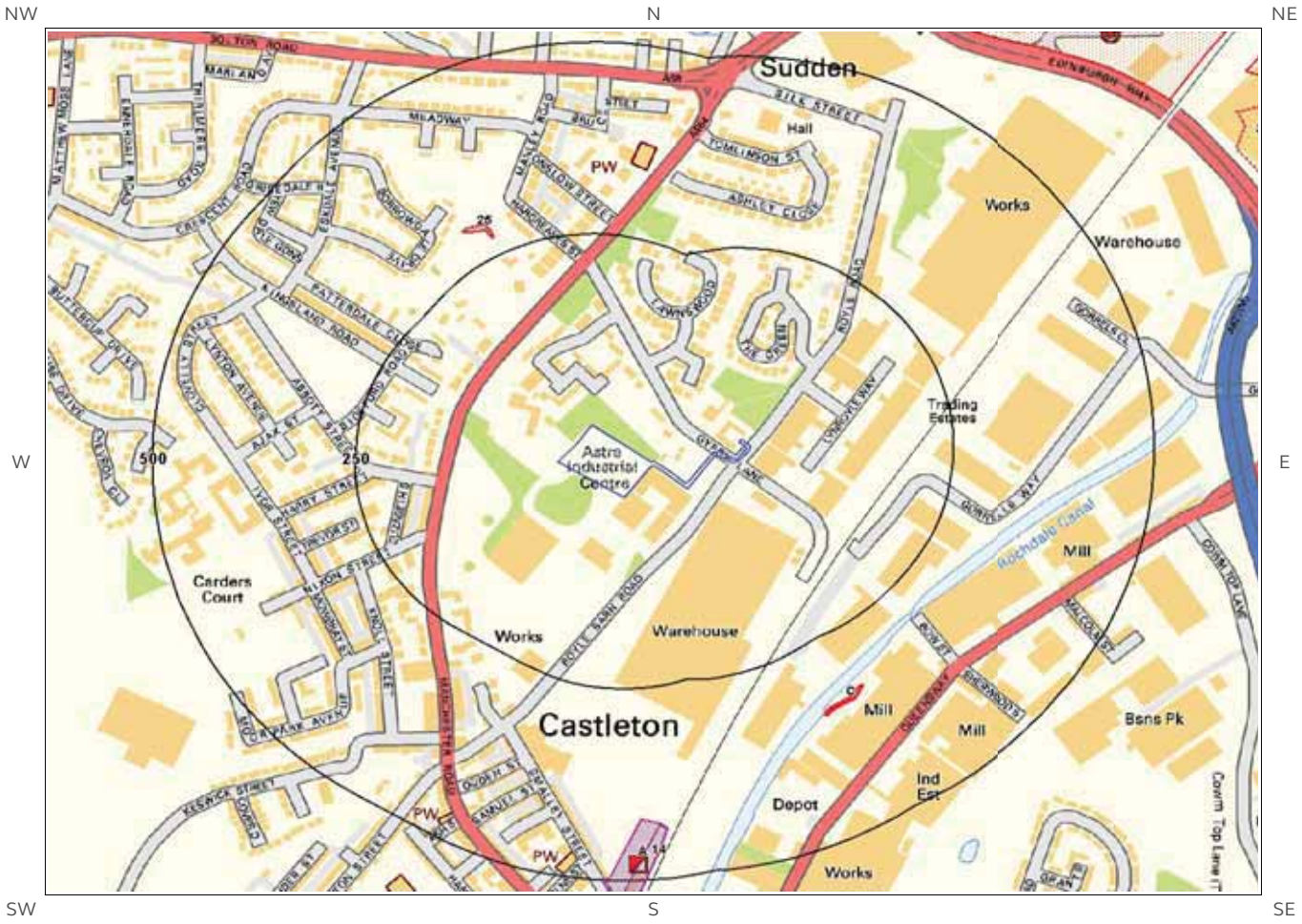
Database searched and no data found.

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

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

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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Site Outline

250
500
Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

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	
3	715	NE	389420 411700	Address: Arundel Avenue, Rochdale, Lancashire, OL11 1QL Landfill Reference: 53728.0 Environmental Permitting Regulations (Waste) Reference: WCL001 Landfill Type: A05: Landfill taking Non-Biodegradeable Wastes	Operator: Wimpey Construction U K Ltd Status: Closure IPPC Reference: EPR Reference:

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

7

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	
7B	604	NE		Site Address: Edinburgh Way, Rochdale, Greater Manchester Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Rochdale County Borough Council Licence Holder: - First Recorded: 30-Sep-1972 Last Recorded: -
8	783	NE		Site Address: Hailwood Street, Deeplish, Rochdale, Greater Manchester Waste Licence: - Site Reference: D083 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1150	NE		Site Address: Mandale Park, Rochdale, Greater Manchester Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Rochdale County Borough Council Licence Holder: - First Recorded: 31-Dec-1969 Last Recorded: -
Not shown	1153	N		Site Address: Mandale Park Tip, Manchester Road, Rochdale Waste Licence: Yes Site Reference: D006, RD/LIC/228/81 Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 30-Sep-1983 Licence Surrendered: Licence Holder Address: Town Hall, Rochdale Operator: - Licence Holder: Rochdale Metropolitan Borough Council (Recs Dept) First Recorded: 31-Dec-1990 Last Recorded: 31-Dec-1990
Not shown	1155	SW		Site Address: Land South of Chadwick Lane, Heywood, Rochdale Waste Licence: Yes Site Reference: RD/LIC/350/84, D009, RD/LIC/265/83, 4200/9007 Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 28-Sep-1984 Licence Surrendered: 28-Apr-1994 Licence Holder Address: Victoria House, Higher Bury Street, Stockport Operator: - Licence Holder: Wilderness Quarries Limited First Recorded: 31-Dec-1984 Last Recorded: 31-Dec-1986
Not shown	1295	N		Site Address: Sparth Mill, Corporation Road, Rochdale, Greater Manchester Waste Licence: - Site Reference: D084 Waste Type: Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1307	N		Site Address: Roch Valley Way, Rochdale Waste Licence: Yes Site Reference: D014, RD/LIC/400/85 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 20-Mar-1986 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: D H Wrigley First Recorded: 01-Apr-1986 Last Recorded: 31-Dec-1988

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

2

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

ID	Distance (m)	Direction	NGR	Details	
1B	699	NE	388900.0 411800.0	Address: Edinburgh Way, Rochdale, Gt Manchester BGS Number: 1852.0	Risk: No risk to aquifer Waste Type: N/A
Not shown	1406	N	388900.0 412600.0	Address: Mandale Park, Rochdale, Gt Manchester BGS Number: 1853.0	Risk: No risk to aquifer Waste Type: N/A

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

7

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
25	273	NW	388105 411542	Refuse Tip	1962 mapping	Polygon
26C	330	SE	388569 410931	Refuse Tip	1963 mapping	Polygon
27C	331	SE	388573 410930	Refuse Tip	1963 mapping	Polygon
Not shown	610	N	388375 411908	Refuse Tip	1962 mapping	Polygon
Not shown	1210	NE	388943 412432	Refuse Tip	1975 mapping	Polygon
Not shown	1247	NE	389074 412442	Refuse Tip	1973 mapping	Polygon
Not shown	1349	NE	389074 412578	Refuse Tip	1973 mapping	Polygon

3.2 Other Waste Sites

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

3

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		
4A	421	S	388312 410716	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1997	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5A	421	S	388312 410716	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1996	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6A	430	S	388320 410712	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1990	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:

11

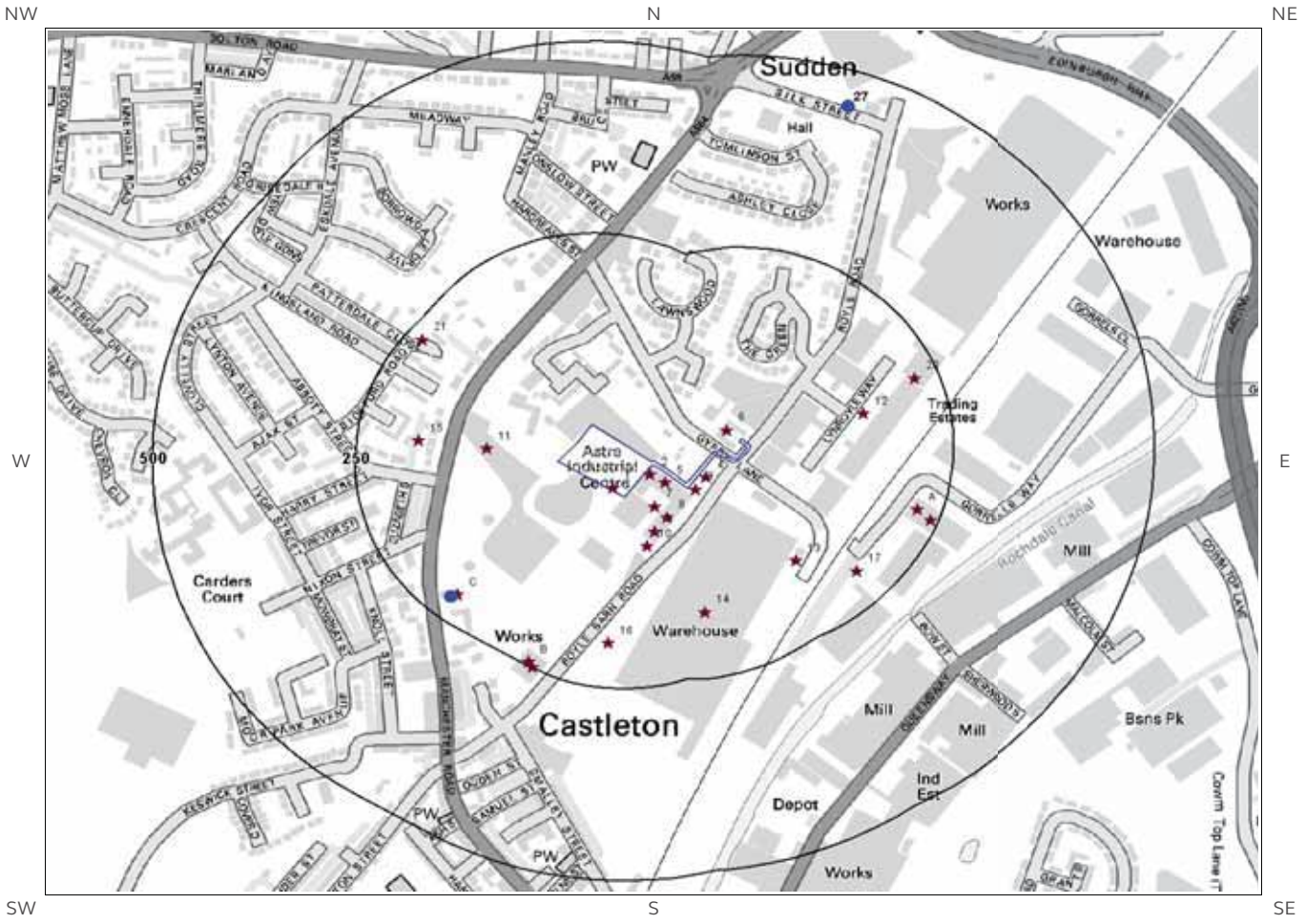
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
14	479	S	388315 410717	Site Address: Land At, Railway Approach, Castleton, Rochdale, Lancashire, OL11 3EE Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BIE022 EPR reference: EA/EPR/JP3998CF/A001 Operator: Britannia Import Export Ltd Waste Management licence No: 50145 Annual Tonnage: 4999.0	Issue Date: 10/03/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Britannia Import Export Ltd Correspondence Address: Land At, Railway Approach, Castleton, Rochdale, Lancashire, OL11
Not shown	1061	NE	389420 411700	Site Address: Arundel Avenue, Rochdale, Lancashire, OL11 Type: Landfill taking Non-Biodegradeable Wastes Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WCL001 EPR reference: - Operator: Wimpey Construction U K Ltd Waste Management licence No: 53728 Annual Tonnage: 0.001	Issue Date: 21/06/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ashfield Valley Inert Landfill Site Correspondence Address: Carillion Building, New Chester Road, Wirral, Merseyside, CH62 3NZ
Not shown	1061	NE	389420 411700	Site Address: Arundel Avenue, Rochdale, Lancashire, OL11 1QL Type: Landfill taking Non-Biodegradeable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WCL001 EPR reference: EA/EPR/GP3296CN/A001 Operator: Wimpey Construction U K Ltd Waste Management licence No: 53728 Annual Tonnage: 0.001	Issue Date: 21/06/1994 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Ashfield Valley Inert Landfill Site Correspondence Address: Arundel Avenue, Rochdale, Lancashire, OL11
Not shown	1170	N	388250 412460	Site Address: Rochdale Wastewater Treatment Works, Rochdale Valley Way, Rochdale, Lancashire, OL11 4DB Type: - Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ROC009 EPR reference: - Operator: United Utilities Water Plc Waste Management licence No: 50521 Annual Tonnage: 0.0	Issue Date: 03/01/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: IPPC Site Name: Rochdale Wastewater Treatment Works Correspondence Address: Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Warrington, Cheshire, WA5 3LP

ID	Distance (m)	Direction	NGR	Details	
Not shown	1170	N	388250 412460	Site Address: Rochdale Wastewater Treatment Works, Rochdale Valley Way, Rochdale, Lancashire, OL11 4DB Type: Physico-Chemical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ROC009 EPR reference: EA/EPR/BP3792CF/A001 Operator: United Utilities Water Plc Waste Management licence No: 50521 Annual Tonnage: 27000.0	Issue Date: 03/01/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Rochdale Wastewater Treatment Works Correspondence Address: Rochdale Wastewater Treatment Works, Rochdale Valley Way, Rochdale, Lancashire, OL11
Not shown	1354	N	388700 412600	Site Address: Corporation Road, Rochdale, Lancashire, OL11 4EU Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PDI001 EPR reference: - Operator: Dickinson Phil Waste Management licence No: 53515 Annual Tonnage: 2084.0	Issue Date: 06/01/1998 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Dickinson Envionmental Correspondence Address: Lower Stakehill Farm, Stakehill Lane, Middleton, Manchester, M24 2RY
Not shown	1354	N	388700 412600	Site Address: Slates Yard, Corporation Road, Rochdale, Lancashire, OL11 4EU Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AHK001 EPR reference: EA/EPR/CP3092CJ/V002 Operator: Hayto Andrew Waste Management licence No: 53515 Annual Tonnage: 2084.0	Issue Date: 06/01/1998 Effective Date: 10/07/2003 Modified: 30/06/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Kingsway Car Parts Correspondence Address: Slates Yard, Corporation Road, Rochdale, Lancashire, OL11
Not shown	1354	N	388700 412600	Site Address: Slates Yard, Corporation Road, Rochdale, Lancashire, OL11 4EU Type: Metal Recycling Site (Vehicle Dismantler) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SUL008 EPR reference: EA/EPR/UP3793VL/T001 Operator: Mr Shehzad Suleman And Mr Arsalan Asim Waste Management licence No: 53515 Annual Tonnage: 4999.0	Issue Date: 06/01/1998 Effective Date: 21/09/2011 Modified: 30/06/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Kingsway Car Parts Correspondence Address: Slates Yard, Corporation Road, Rochdale, Lancashire, OL11
Not shown	1421	N	388614 412682	Site Address: End Yard, Corporation Road, Rochdale, Lancashire, OL11 4EU Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DIC001 EPR reference: EA/EPR/CP3098CH/V004 Operator: Mr P Dickinson Waste Management licence No: 50016 Annual Tonnage: 25000.0	Issue Date: 20/09/1999 Effective Date: 24/05/2002 Modified: 30/06/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Dickinson Environmental Transfer Station Correspondence Address: End Yard, Corporation Road, Rochdale, Lancashire, OL11

ID	Distance (m)	Direction	NGR	Details	
Not shown	1421	N	388614 412682	Site Address: End Yard, Corporation Road, Rochdale, Lancashire, OL11 4EU Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DIC001 EPR reference: - Operator: Mr P Dickinson & Mr D Dickinson Waste Management licence No: 50016 Annual Tonnage: 417.0	Issue Date: 20/09/1999 Effective Date: 24/05/2002 Modified: 23/05/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Dickinson Environmental Correspondence Address: Lower Stakehill Farm, Stakehill Lane, Middleton, Manchester, M24 2RY
Not shown	1421	N	388614 412682	Site Address: End Yard, Corporation Road, Rochdale, Lancashire, OL11 4EU Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DIC001 EPR reference: EA/EPR/CP3098CH/V006 Operator: Mr P Dickinson Waste Management licence No: 50016 Annual Tonnage: 75000.0	Issue Date: 20/09/1999 Effective Date: 24/05/2002 Modified: 17/02/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Dickinson Environmental Transfer Station Correspondence Address: End Yard, Corporation Road, Rochdale, Lancashire, OL11

4. Current Land Use Map



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Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 25

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Astra Industrial Centre	388284 411208	OL11	Business Parks and Industrial Estates	Industrial Features
2	5	SE	Kempster Valves & Engineering Ltd	388329 411225	Unit 1 Astra Centre, Royle Barn Road, Rochdale, OL11 3DT	Seals, Tapes, Taps and Valves	Industrial Products
3	8	SE	Pylon	388386 411206	OL11	Electrical Features	Infrastructure and Facilities
4	8	SE	Pylon	388399 411222	OL11	Electrical Features	Infrastructure and Facilities
5	11	SW	Processed Light Alloys Ltd	388347 411214	Unit 2 Astra Centre, Royle Barn Road, Rochdale, OL11 3DT	Industrial Coatings and Finishings	Industrial Products
6	22	NW	Electricity Sub Station	388424 411283	OL11	Electrical Features	Infrastructure and Facilities
7	36	SE	Tank	388335 411184	OL11	Tanks (Generic)	Industrial Features
8	45	SW	Swedish Truck Parts	388350 411169	Unit 5 Astra Centre, Royle Barn Road, Rochdale, OL11 3DT	Vehicle Parts and Accessories	Motoring
9	58	SE	S M Distribution UK	388335 411151	Unit 6 Astra Centre, Royle Barn Road, Rochdale, OL11 3DT	Catering and Non Specific Food Products	Foodstuffs
10	69	SE	Electricity Sub Station	388326 411132	OL11	Electrical Features	Infrastructure and Facilities
11	90	W	Pylon	388129 411259	OL11	Electrical Features	Infrastructure and Facilities
12	145	E	Electricity Sub Station	388592 411305	OL11	Electrical Features	Infrastructure and Facilities
13	148	SE	Tank	388509 411113	OL11	Tanks (Generic)	Industrial Features
14	163	S	Warehouse	388397 411046	OL11	Container and Storage	Transport, Storage and Delivery
15	175	W	Electricity Sub Station	388044 411270	OL11	Electrical Features	Infrastructure and Facilities
16	191	S	Tank	388278 411006	OL11	Tanks (Generic)	Industrial Features
17	203	SE	Electricity Sub Station	388584 411100	OL11	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
18C	213	SW	Dale Car Sales	388093 411068	Castleton Service Station, Manchester Road, Rochdale, OL11 3AD	Secondhand Vehicles	Motoring
19A	220	E	Advanced Engineering Middleton Ltd	388659 411180	Unit 5d Trans Pennine Trading Estate, Gorrells Way, Rochdale, OL11 2PX	General Purpose Machinery	Industrial Products
20	221	NE	Crane	388656 411351	OL11	Travelling Cranes and Gantries	Industrial Features
21	231	NW	Pylon	388049 411401	OL11	Electrical Features	Infrastructure and Facilities
22A	240	SE	Wheaton	388675 411166	Unit 20-21 Trans Pennine Trading Estate, Gorrells Way, Rochdale, OL11 2PX	Glass	Industrial Products
23B	245	SW	Aquacheck Engineering Ltd	388180 410981	Royle Barn Road, Rochdale, OL11 3DT	Seals, Tapes, Taps and Valves	Industrial Products
24B	245	SW	James Nuttall Transport Ltd	388180 410981	Royle Barn Road, Rochdale, OL11 3DT	Distribution and Haulage	Transport, Storage and Delivery
25B	249	SW	Works	388185 410974	OL11	Unspecified Works Or Factories	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 2

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
26C	220	SW	388084 411066	Obsolete	Dale Car Centre, Manchester Road, Manchester Road, Rochdale, Greater Manchester, OL11 3AD	Not Applicable	Obsolete
27	454	N	388574 411705	Tesco	Tesco Rochdale, Silk Street, Silk Street, Rochdale, Greater Manchester, OL11 3ER	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

---

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

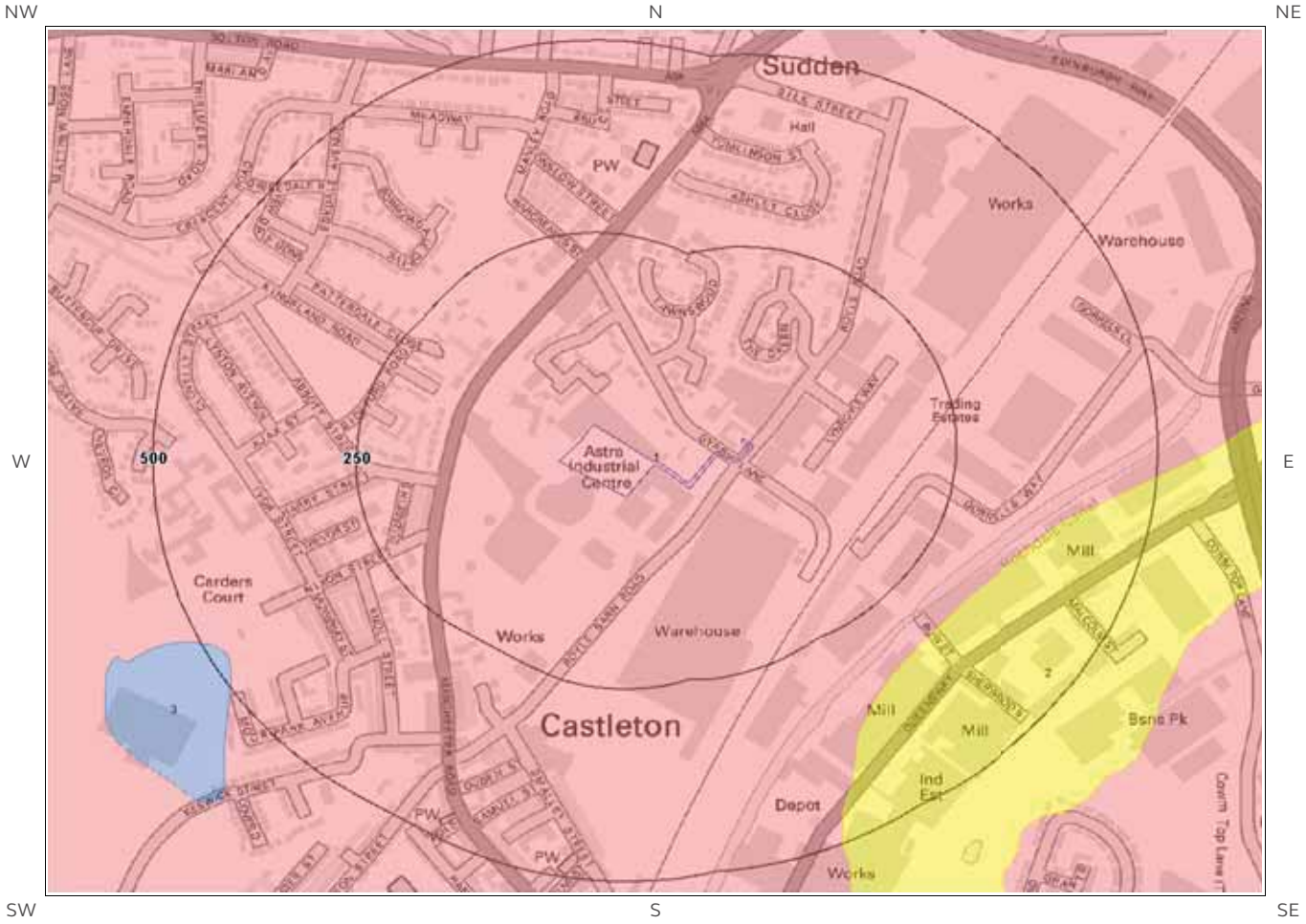
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

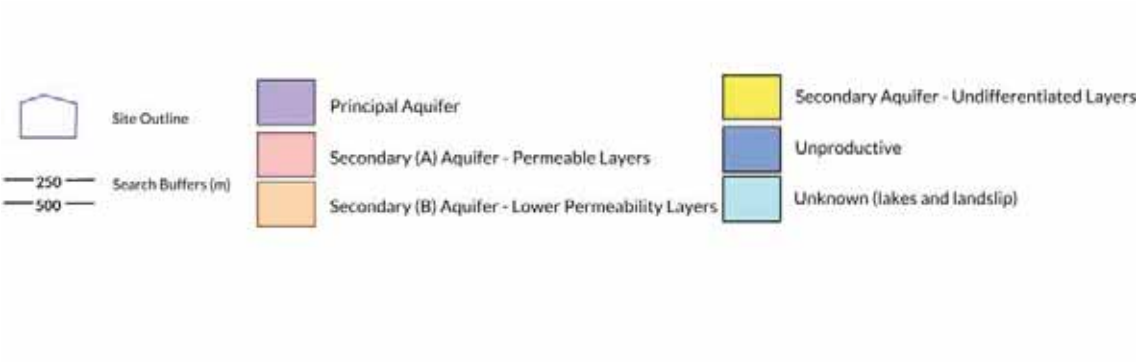
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

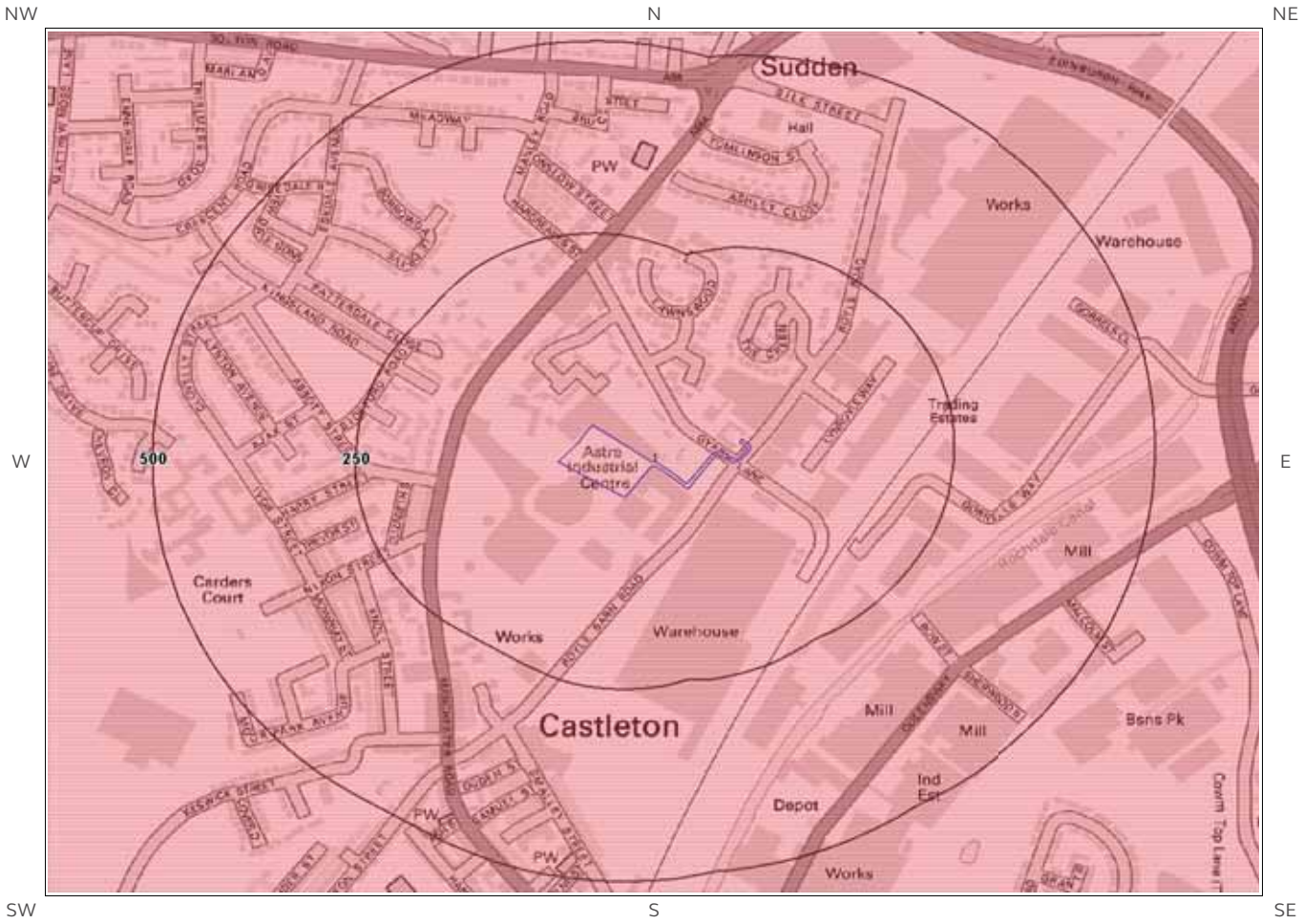
6a. Aquifer Within Superficial Geology



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6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline

250 — 500 — Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

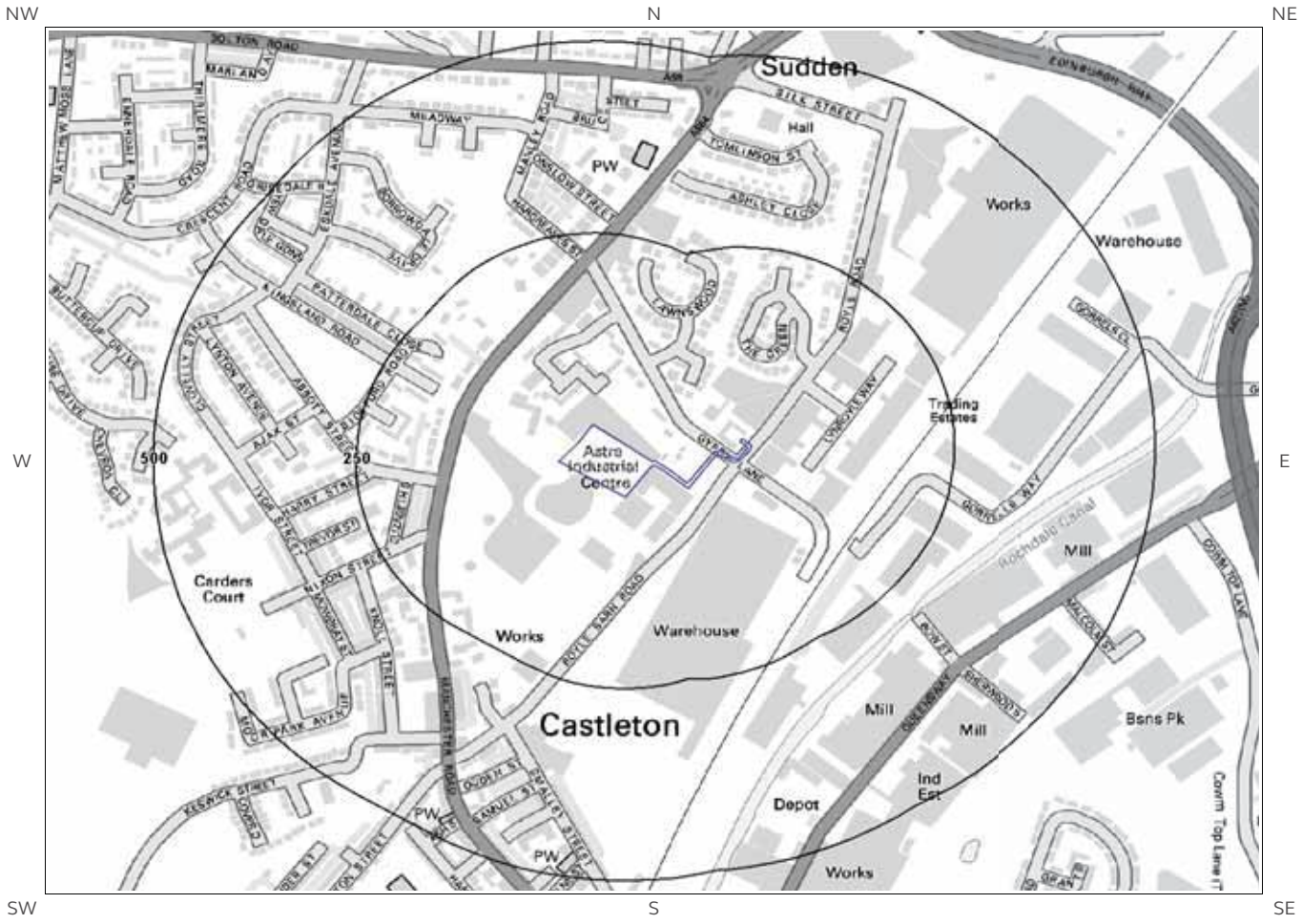
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

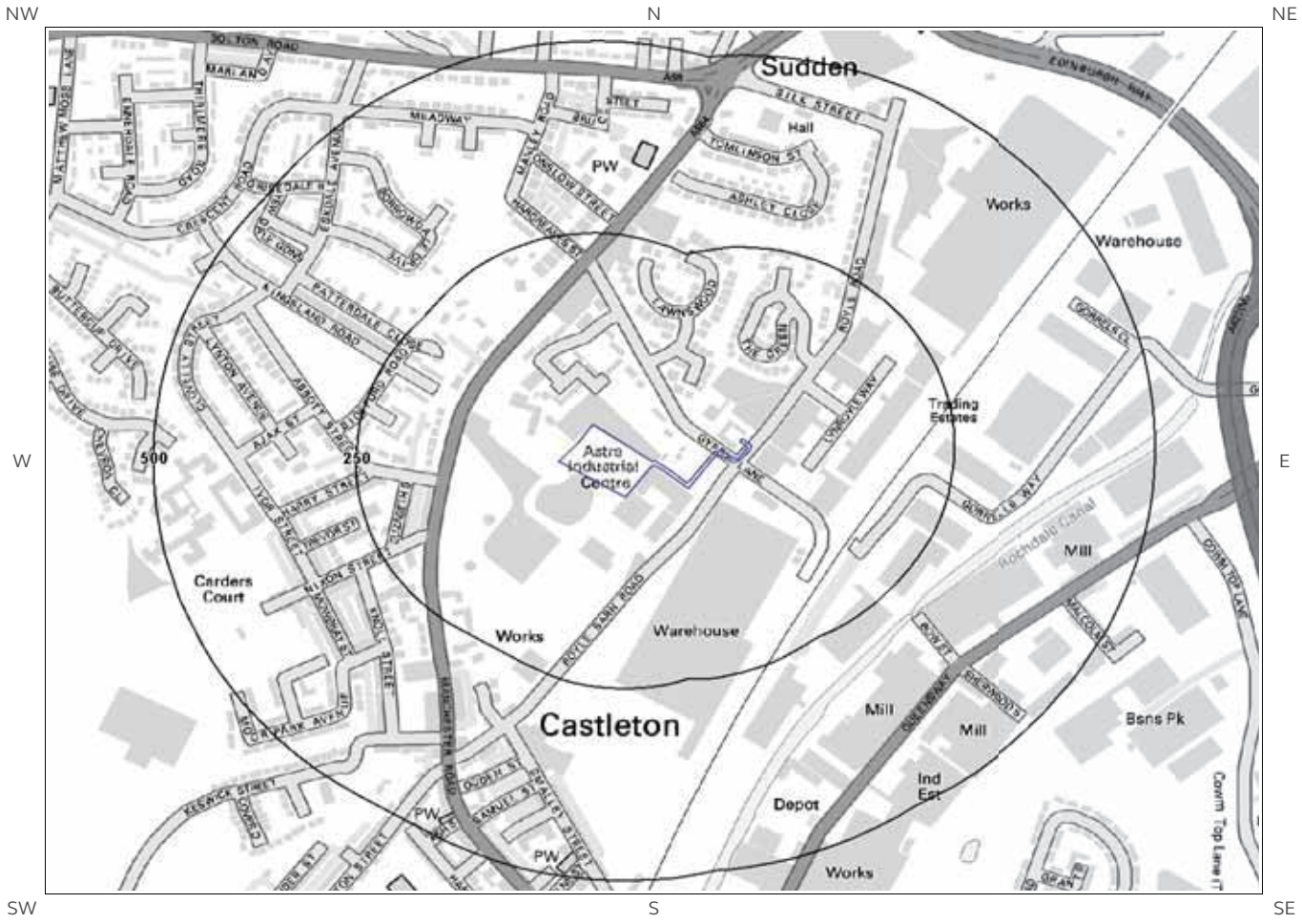
Source Protection Zone 4 - Zone of Special Interest

Site Outline

250
500
Search Buffers (m)

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

Site Outline

250
500
Search Buffers (m)

6e. Hydrology – Detailed River Network and River Quality



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6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

From 1 April 2010, the Environment Agency/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	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	325	SE	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
3	480	SW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

6.2 Aquifer within Bedrock Deposits

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

From 1 April 2010, the Environment Agency/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

6.3 Groundwater Abstraction Licences

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

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1754	W	386500 411600	Status: Historical Licence No: 2569002037 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: "borehole At Premises, Crimble Mills,heywood" Data Type: Point Name: ROE ACRE DYEING & FELTING CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 247 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/5/1993 Version End Date:
Not shown	1754	W	386500 411600	Status: Historical Licence No: 2569002037 Details: Process water Direct Source: Ground Water - North West Region Point: "borehole At Premises, Crimble Mills,heywood" Data Type: Point Name: ROE ACRE DYEING & FELTING CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 247 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/5/1993 Version End Date:
Not shown	1754	W	386500 411600	Status: Historical Licence No: 2569002037 Details: Process water Direct Source: Ground Water - North West Region Point: Borehole At Premises, Crimble Mills,heywood Data Type: Point Name: K.SHAW & COMPANY LTD.	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 0247 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/10/2002 Version End Date:
Not shown	1754	W	386500 411600	Status: Historical Licence No: 2569002037 Details: Boiler Feed Direct Source: Ground Water - North West Region Point: Borehole At Premises, Crimble Mills,heywood Data Type: Point Name: K.SHAW & COMPANY LTD.	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 0247 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/10/2002 Version End Date:
Not shown	1840	SW	386700 410200	Status: Historical Licence No: 2569002257 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: Borehole At Green Lane,heywood Data Type: Point Name: TARMAC TOPMIX LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 7229 Original Start Date: 28/6/1993 Expiry Date: - Issue No: 100 Version Start Date: 28/6/1993 Version End Date:

6.4 Surface Water Abstraction Licences

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

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1618	W	386620 411500	Status: Historical Licence No: 2569002270 Details: Boiler Feed Direct Source: Surface, Non-tidal - North West Region Point: River Roch At Heywood Data Type: Line Name: ROE ACRE DYEING & FELTING CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 7450 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 17/6/1999 Version End Date:
Not shown	1618	W	386620 411500	Status: Historical Licence No: 2569002270 Details: Process water Direct Source: Surface, Non-tidal - North West Region Point: River Roch At Heywood Data Type: Line Name: ROE ACRE DYEING & FELTING CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 7450 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 17/6/1999 Version End Date:
Not shown	1760	NE	390070 411960	Status: Historical Licence No: 2569002107 Details: Boiler Feed Direct Source: "surface, Non-tidal - North West Region" Point: "rochdale Canal At Queensway,rochdale" Data Type: Point Name: SEALOCRETE PLA LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 571 Original Start Date: 2/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/12/1993 Version End Date:
Not shown	1760	NE	390070 411960	Status: Historical Licence No: 2569002107 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-tidal - North West Region Point: Rochdale Canal At Queensway,rochdale Data Type: Point Name: SEALOCRETE PLA LTD	Annual Volume (m^3): 10455.8 Max Daily Volume (m^3): 45.46 Application No: 0571 Original Start Date: 2/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2008 Version End Date:
Not shown	1760	NE	390070 411960	Status: Historical Licence No: 2569002107 Details: Boiler Feed Direct Source: Surface, Non-tidal - North West Region Point: Rochdale Canal At Queensway,rochdale Data Type: Point Name: SEALOCRETE PLA LTD	Annual Volume (m^3): 10455.8 Max Daily Volume (m^3): 45.46 Application No: 0571 Original Start Date: 2/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2008 Version End Date:
Not shown	1760	NE	390070 411960	Status: Historical Licence No: 2569002107 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "surface, Non-tidal - North West Region" Point: "rochdale Canal At Queensway,rochdale" Data Type: Point Name: SEALOCRETE PLA LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 571 Original Start Date: 2/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/12/1993 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1767	S	387800 409500	Status: Active Licence No: 2569005053 Details: Spray Irrigation - Direct Direct Source: Surface, Non-tidal - North West Region Point: Trub Brk At Rochdale Data Type: Point Name: THE MANCHESTER GOLF CLUB LTD	Annual Volume (m^3): 1473 Max Daily Volume (m^3): 26.2 Application No: 1704 Original Start Date: 18/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2008 Version End Date:
Not shown	1827	E	390200 411800	Status: Historical Licence No: 2569002178 Details: Boiler Feed Direct Source: "surface, Non-tidal - North West Region" Point: "catchpit Fed By Surface Drainage At Premises, Rochdale" Data Type: Point Name: DUNPHY COMBUSTION LTD.	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: CW 1093 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/2/1991 Version End Date:
Not shown	1827	E	390200 411800	Status: Active Licence No: 2569002178 Details: Boiler Feed Direct Source: Surface, Non-tidal - North West Region Point: Catchpit Fed By Surface Drainage At Premises, Rochdale Data Type: Point Name: DUNPHY COMBUSTION LTD	Annual Volume (m^3): 2318.46 Max Daily Volume (m^3): 34.09 Application No: CW 1093 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/2/1991 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	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.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? Yes

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
9A	264	NW	388100 411500	River Name: Roch Reach: Stanney Bk. To Rochdale Stw End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
10A	264	NW	388100 411500	River Name: Roch Reach: Rochdale Stw To Irwell End/Start of Stretch: Start of Stretch NGR	D	D	D	E	E
Not shown	1012	N	388200 412300	River Name: Sudden Bk Reach: Qsl At Balderstone To Roch End/Start of Stretch: End of Stretch NGR	E	E	E	D	D

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). 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
12A	264	NW	388100 411500	River Name: Roch Reach: Rochdale Stw To Irwell End/Start of Stretch: Start of Stretch NGR	B	B	B	B	C

6.10 Detailed River Network

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

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

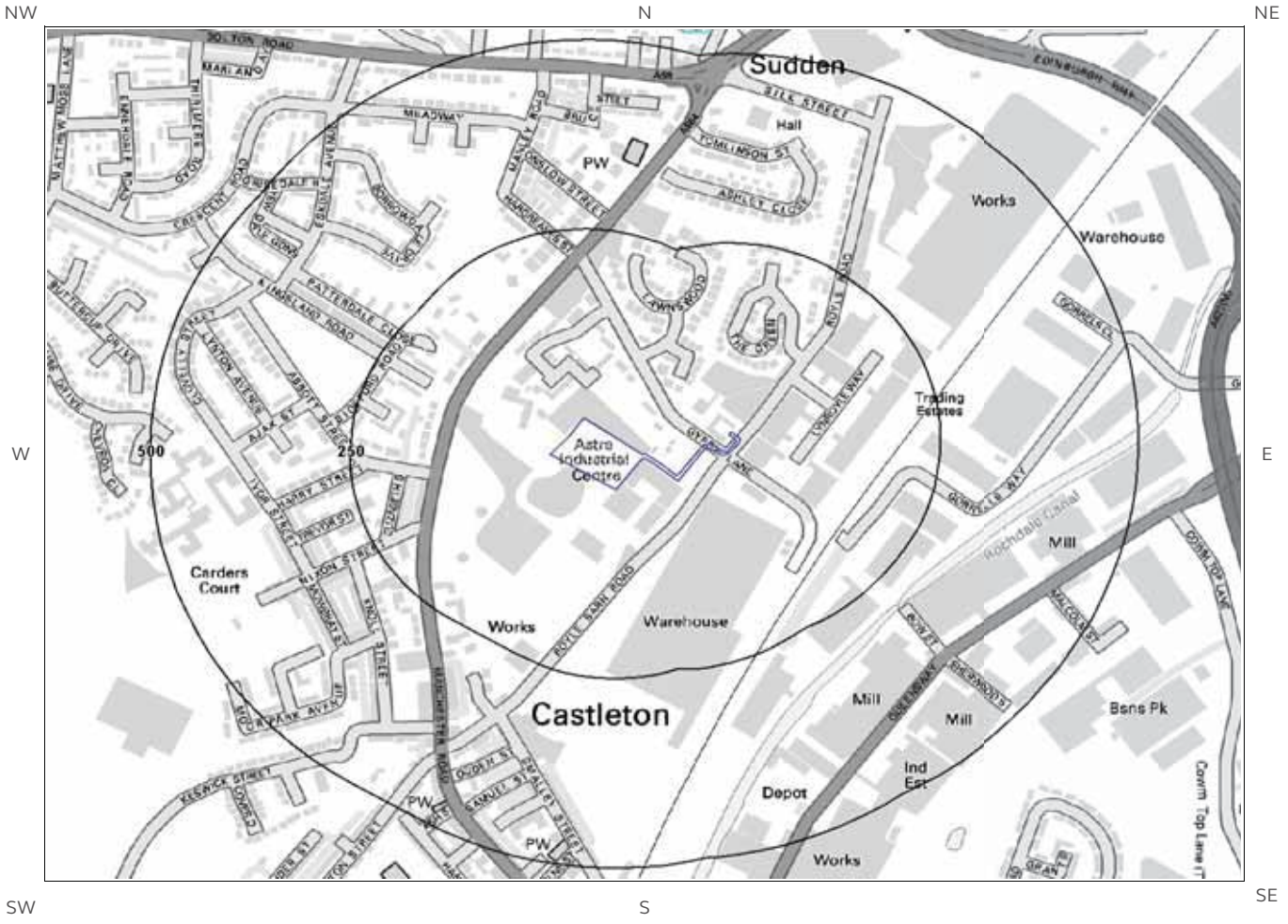
ID	Distance (m)	Direction	Details	
1	291	SE	River Name: Rochdale Canal Welsh River Name: - Alternative Name: -	River Type: Canal Main River Status: Currently Undefined
2	469	N	River Name: Sudden Brook Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

6.11 Surface Water Features

Are there any surface water features within 250m of the study site? No

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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Site Outline

Search Buffers (m)

Zone 2 Floodplain

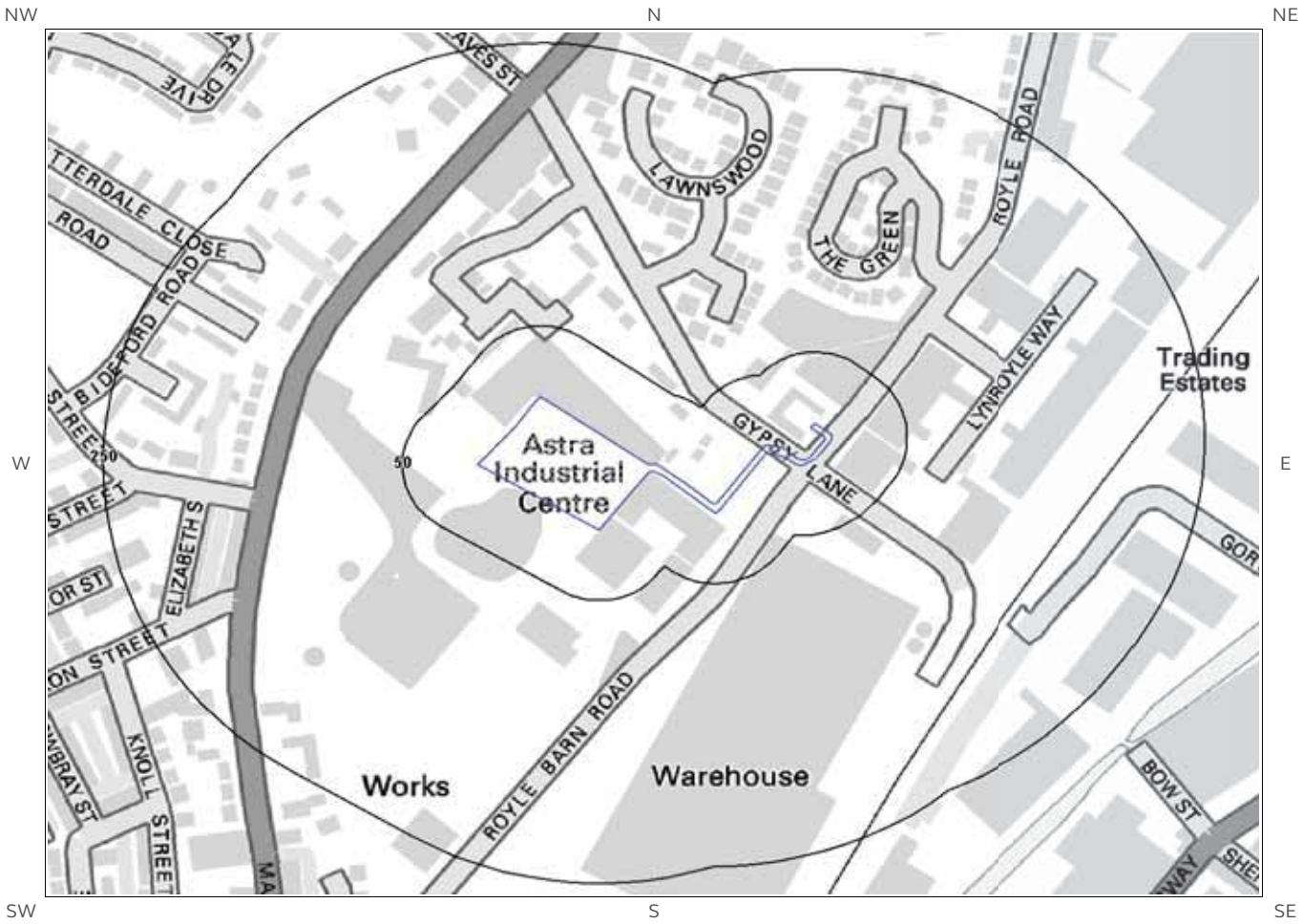
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



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Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? No

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:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? No

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.

Database searched and no data found.

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

What is the highest risk of flooding onsite? Very Low

The Environment Agency/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.

7.4 Flood Defences

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

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

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

7.6 Areas benefiting from Flood Storage

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

---

7.7 Groundwater Flooding Susceptibility Areas

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

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

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

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

Potential 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.

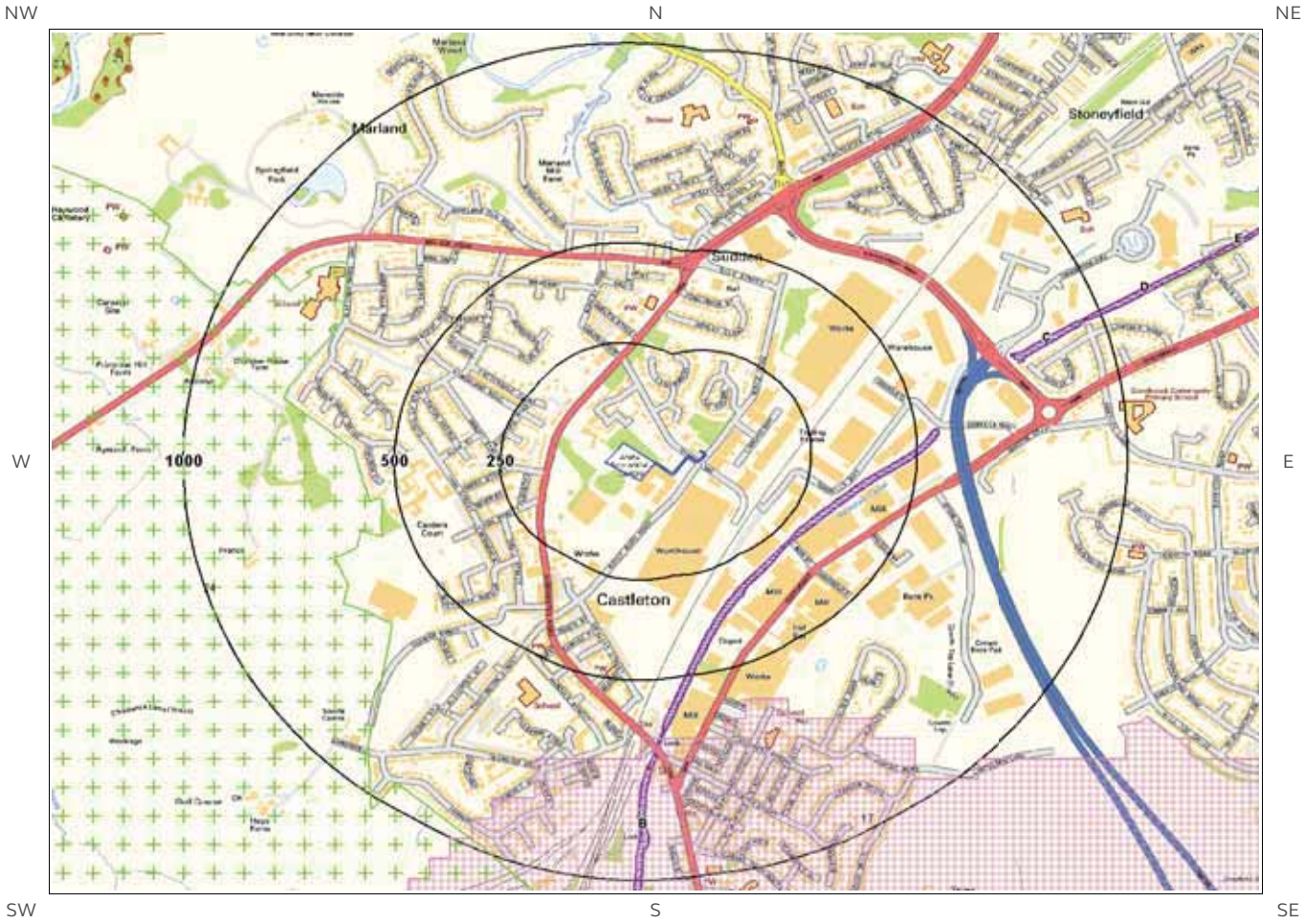
7.8 Groundwater Flooding Confidence Areas

What is the 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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Site Outline

100 / 250 Search Buffers (m)

- AONB
- National Park
- SSSI
- Special Protection Areas
- Nitrate Vulnerable Zones
- Green Belt
- Environmentally Sensitive Areas
- Special Areas of Conservation
- World Heritage Sites
- Nitrate Sensitive Areas
- Ancient Woodland
- National Nature Reserve
- Local Nature Reserves
- Ramsar Sites

8. Designated Environmentally Sensitive Sites

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

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

8

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
9A	286	SE	Rochdale Canal	Natural England
10B	683	S	Rochdale Canal	Natural England
11C	768	E	Rochdale Canal	Natural England
12D	961	E	Rochdale Canal	Natural England
Not shown	1196	S	Rochdale Canal	Natural England
14E	1286	E	Rochdale Canal	Natural England
Not shown	1455	S	Rochdale Canal	Natural England
Not shown	1685	NE	Rochdale Canal	Natural England

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:

8

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1A	286	SE	Rochdale Canal	Natural England
2B	683	S	Rochdale Canal	Natural England

ID	Distance (m)	Direction	SAC Name	Data Source
3C	768	E	Rochdale Canal	Natural England
4D	961	E	Rochdale Canal	Natural England
Not shown	1196	S	Rochdale Canal	Natural England
6E	1286	E	Rochdale Canal	Natural England
Not shown	1455	S	Rochdale Canal	Natural England
Not shown	1685	NE	Rochdale Canal	Natural England

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:

3

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
21	1422	NW	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1548	NW	UNKNOWN	Ancient and Semi-Natural Woodland
23	1601	NW	UNKNOWN	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

4

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
17	584	S	Existing	DEFRA
Not shown	1196	S	Existing	DEFRA
Not shown	1820	SE	Existing	DEFRA

ID	Distance (m)	Direction	NVZ Name	Data Source
Not shown	1994	SE	Existing	DEFRA

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

5

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ID	Distance	Direction	Green Belt Name	Local Authority Name
24	538	W	Liverpool, Manchester and West Yorks Greenbelt	Rochdale
Not shown	1208	S	Liverpool, Manchester and West Yorks Greenbelt	Rochdale
Not shown	1703	SE	Liverpool, Manchester and West Yorks Greenbelt	Rochdale
Not shown	1865	SE	Liverpool, Manchester and West Yorks Greenbelt	Rochdale
Not shown	1994	SE	Liverpool, Manchester and West Yorks Greenbelt	Rochdale

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

What is the maximum Shrink-Swell*[*] 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
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.

9.1.2 Landslides

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

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

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

9.1.3 Soluble Rocks

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

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

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

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

9.1.4 Compressible Ground

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

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

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

9.1.5 Collapsible Rocks

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

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

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

9.1.6 Running Sand

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

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

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

* 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 property is not in a Radon Affected Area, as less than 1% 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

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

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

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

10.2 Non-Coal Mining

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

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

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sales@emapsite.com

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

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

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DX 716176 Mansfield 5
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Ordnance Survey
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Tel: 08456 050505

Local Authority
Authority: Rochdale Metropolitan Borough Council
Phone: 01706 647 474
Web: http://www.rochdale.gov.uk/
Address: Number One Riverside, Smith Street, Rochdale, Lancashire,

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
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Tel: 01252 845444

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The Coal Authority

Resolving the impacts of mining

CON29M Non-Residential Mining Report







14 GIPSY LANE
ROCHDALE
OL11 3HA

Date of enquiry:	01 March 2018
Date enquiry received:	01 March 2018
Issue date:	01 March 2018
Our reference:	51001804533001
Your reference:	P1254

CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

ENZYGO LTD

Enquiry address

14 GIPSY LANE, ROCHDALE, OL11 3HA



Approximate position of property

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NG18 4RG

www.groundstability.com

/company/the-coal-authority
/thecoalauthority
/coalauthority

Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	No
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	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

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

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 plans to grant a licence to remove coal using 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 31st 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 Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support
The property is not in an area where a notice to withdraw support has been given.

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.

15. Information from the Cheshire Brine Subsidence Compensation Board
The property lies outside the Cheshire Brine Compensation District.

Additional remarks

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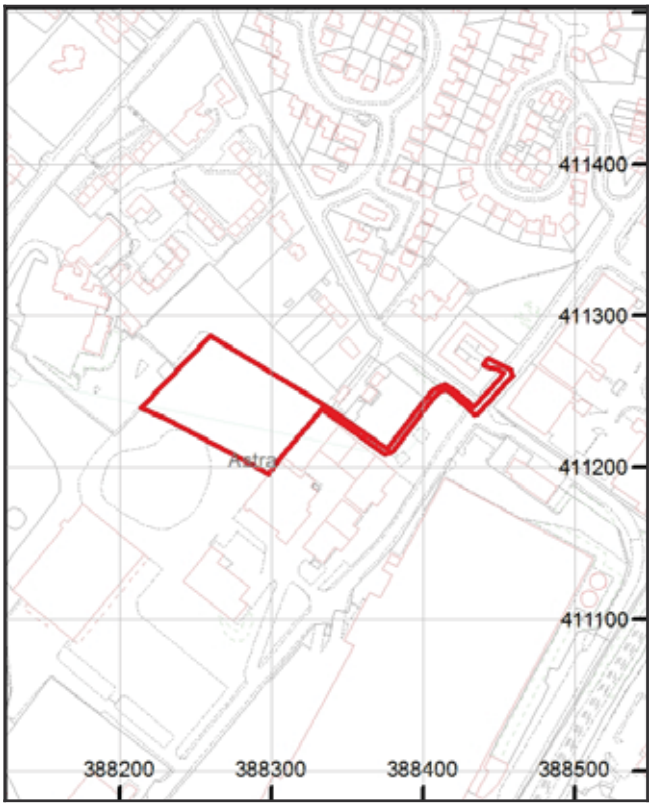
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Enquiry boundary

Key

Approximate position of enquiry boundary shown



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