



## Phase I Preliminary Risk Assessment

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Station Road, Wombwell

**Hartwood Estates Ltd**

CRM.1122.005.GE.R001

'Experience and expertise working in union'

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## Phase I Preliminary Risk Assessment

Project:	Station Road, Wombwell
For:	Hartwood Estates Ltd
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## 1.0 INTRODUCTION

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### Background

- 1.1 Enzygo Limited has been commissioned by Hartwood Estates Ltd to prepare a Phase I Preliminary Risk Assessment for a site at Station Road, Wombwell, Barnsley, S73 0BN.

### Proposed Development

- 1.2 Hartwood Estates Ltd propose to apply for outline planning permission for a proposed residential development.

### Objectives

- 1.3 The objectives of the study are to:
- Site inspection by a suitably qualified and experienced Environmental Consultant;
  - Review historical plans, geology, hydrogeology, site sensitivity, mining records and contaminated land information provided by the local authority in order to complete a Desk Study. A Groundsure report has been obtained for the site, a copy of which is included in Appendix A; and
  - Preparation of a Phase I Preliminary Risk Assessment report giving an assessment of the likely environmental risks and recommendations for any further works.

### Risk Classification

- 1.4 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
Negligible	No contamination risk has been identified which is likely to affect development.
Low	No significant contaminated land risks have been encountered affecting development and a low risk that remediation will be required.
Low-Moderate	There are unlikely to be significant contaminated land issue associated with the site which will adversely affect its re-development. However, minor or localised contamination may be present requiring remediation. Remediation should be possible under a discovery strategy and with a call out service.
Moderate	Some potential contaminated land risks have been encountered or identified which may affect re- development. The risks identified are unlikely to affect the entire site or preclude development. Remediation is considered feasible as part of the development process and no further investigation is considered necessary.
Moderate-High	Some potentially significant contaminated land risks have been identified at the property that requires remediation. It is recommended that a separate remedial methodology is prepared supported by a site-specific risk assessment
High	Significant potential contaminated land risks have been identified and remediation is required supported by further intrusive ground investigation, risk assessment and remedial design.

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

## 2.0 SITE SETTING

### Site Description

Item	Description
Site Address	Station Road, Wombwell, Barnsley, S73 0BN
National Grid Reference	centre of the site 440484, 403645
Site Area	3.68 Ha

### Current Site Description

- 2.1 The following site description has been compiled from a site inspection undertaken on the 7th<sup>th</sup> January 2019, together with current maps, aerial photographs and a topographical survey.
- 2.2 At the time of the inspection the site was occupied by derelict land with an area of former car park and foundation slab associated with former commercial building.
- 2.3 The site is two parcels of derelict land subdivided by an overgrown ditch/stream (Bulling Dike).
- 2.4 The site is accessed off Station road to the south and along footpaths and from Valley Road to the south.
- 2.5 The site is roughly triangle and is generally flat, however has and is currently subject to spoil heaps which have adjusted the site levels.
- 2.6 The spoil heaps generally comprise granular materials including gravel, sub base and tarmac.
- 2.7 The River Dove is shown on the northern boundary of the site.
- 2.8 No visible chemicals are stored on site and there is no evidence of spillages or tipping with the exception of the spoil heaps and localised fly tipping to create a .
- 2.9 Site photographs are included in Appendix B.

### Surrounding Area

- 2.10 The surrounding land uses are summarised as follows:

Direction	Land Use
North	Trees and River Dove with playing fields beyond associated with Netherwood

	Academy.
<b>West</b>	Factory and other commercial buildings
<b>East</b>	Residential houses and gardens associated with Darfield
<b>South</b>	Station Road with residential houses and gardens and open space beyond

2.11 No significant evidence of contamination sources was noted on or adjacent to the site.

### 3.0 SITE HISTORY

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

Potentially Contaminative Historical Land Use		
Map Edition	Site	Surrounding Area
1893	Open field site. Dike flowing NW to S in western section of the site. Footpath crossing the site west to east.	River Dove 0m N. Brick Yard (referenced Sanitary Tube works), Kilns 80m NW. Shafts 80m NW and 120m NW. Station Road 0m S. Kent Row (residential terraces) 10m W. New Station Inn and residential properties bordering southern boundary of Station Road. 10m SW. Low Valley Road 90m E. Mineral railways 70m NW supplying Brick yard.
1906	Two small ponds shown in centre of site.	Low valley Road renamed Stoneyford road with terraced houses, a school and allotment gardens bordering either side of the road. Pond 100m SW. Pond 120m N.
1931	Two field boundaries shown NE of site.	Allotment Gardens 70m NW. shafts no longer shown. Additional shaft shown 150m NW. Extensive Made Ground and workings shown 10m N to in excess of 200m N associated with the Brick Works. Yorkshire Sports Stadium (speedway) with a track and stand 0m SW. Pond 120m N has enlarged. Pond 100m SW infilled and replaced with sports stadium. Allotments gardens shown 0m E. Continuous residential development along western side of Stoneyford Road 70m W.
1961	Small field boundary NE corner of site. Works building is shown in southern part of the site.	Stadium not shown, Houses associated with Kent Row not shown. Allotments 70mNW shown as trees. Brick works workings shown 10m N. River Dove has embankments either side (possible flood prevention embankments) 0m N.
1982	Small field boundary has enlarged NE corner of the site. Works has enlarged to the south of the site (comprises three buildings access of Station road to the south.	Regarding works of the brickworks has moved embankments 70m N. Industrial/commercial estate shown 0m SW.
1993-2002	Large commercial unit centre of the site accessed from NW and from the enlarged industrial estate recorded to the south west in 1982.	Industrial estate shown 50m NE. Development of the industrial estate 80m W.
2010-2014	Site is shown as vacant open site. Google images shown numerous spoil heaps in the centre of the site.	Continued industrial estate development and expansion 200m SE.

- 3.2 There is a negligible to low risk of ground contamination by metals and spillages from the previous works and commercial buildings in the centre and south of the site. Widespread impact on the soils is not considered likely as it is not likely to be mobile.
- 3.3 No evidence of the historic tanks has been recorded on site.
- 3.4 The shafts are not shown beyond 1961, however given the presence of these shafts underlying deep workings could underlie the site.
- 3.5 The presence of a backfilled pond on the site will need to be assessed and gas monitoring shown be undertaken in this area. However, given the size of the pond and the age of the backfill no significant putrescible materials are expected.
- 3.6 the presence of spoil heaps recorded after the demolition of the buildings on site, could indicate the storage of Made Ground on the site.
- 3.7 No other significant risks are identified from the historical maps.

## 4.0 ENVIRONMENTAL SETTING

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### 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	Alluvium.	Clay and Silt.	Secondary A.
Solid.	Pennine Coal Measures.	Mudstone and siltstone, sandstone and coal.	Secondary A.

- 4.2 Made Ground is identified on and adjacent to the site and identified as Undivided Artificial deposit and there are no records of landslips within 250m of the site.
- 4.3 There are numerous BGS borehole records on the site, which confirms Made Ground to depths ranging from of 3.30mbgl to 6.45mbgl over gravel to 9.65mbgl to 14m bgl over mudstone and coal (recovered as backfilled workings below 12.20mbgl). Copies of the BGS boreholes logs are given in the appendices.
- 4.4 Records of background soil chemistry does not identify any concentrations above residential GAC values and confirms the site as rural soil.

### Groundwater

- 4.5 The permeability of the drift geology is recorded as being low to very low reflecting the cohesive nature of these materials. The permeability of the solid geology is recorded as being moderate to low associated with fracture flow in the mudstone. Mudstone weathers near surface to a cohesive dominant material which has a significantly lower permeability.
- 4.6 The GroundSure Report shows the site is not located within a Source Protection Zone.
- 4.7 There are no groundwater abstraction licenses within 1000m of the site.
- 4.8 The site is identified as having moderate risk of groundwater flooding. This is only likely to be an issue where basements are proposed.

### **Coal Mining**

- 4.9 Coal mining extraction has been identified within 1000m of the site and a coal Mining report has been obtained. This indicates that the site is underlain by coal seams from 140m to 640m depth and from a 10 number seams. The coal mining report concludes that any movement in the ground due to coal mining activities associated with these workings should have stopped.
- 4.10 Data supplied by the Emapsite indicates that the workings are associated with the South Yorkshire sanitary Tube works, Mine and the Darfield Main colliery located 10m to the north and separated from the site by the River Dove.
- 4.11 The Coal Authority report also indicates that there are no mine shafts on or within 20m of the site.
- 4.12 Based on this the risk from coal mining affecting the site has been dismissed.
- 4.13 BGS boreholes logs for the site however indicates shallow workings at approximate depths of 12.20m bgl to 14.50mbgl and within two boreholes logs Referenced SE40SW67J and SE40SW67J located to the north and east of the site. Two further boreholes 13m south and 62m south west also confirm potential backfilled workings at depths ranging from 9.20m to 11.00mbgl.
- 4.14 Based on this shallow workings may be present underneath the site and further investigation should be done across the site to confirm the presence of shallow workings.

### **Non Coal Mining and Natural Cavities**

- 4.15 There are no significant non-coal mining activities within 500m of the site.

### **Ground Workings**

- 4.16 There are numerous ground workings on the site associated with the colliery 0m to the north, including refuse tips, ponds, unspecified pits. All of which have been described and dismissed in the historical section. No new risks are identified.

### **Hydrology**

- 4.17 There is one surface water course on the site this is referenced the Bulling dike which flows south at the site. This is classified with a biological Grade D (Poor) and chemical Grade B (Good) 1371m east of the site. In additional the River Dove shown 0m north flowing east has

been classified with a biological quality records of Grade C (Fair) chemical Grade B (Good). Given the presence of the Bulling dike and River Dove on site or on the site boundary both of these are considered to be viable receptors.

- 4.18 There are no surface water abstractions within 1000m of the site.
- 4.19 A separate flood risk assessment is being undertaken and this will be reported separately.

**Radon Risk Potential**

- 4.20 The Groundsure Geolnsight Report indicates that the site is not within a Radon Affected Area therefore no radon protective measures are necessary in the construction of new dwellings.

**Natural Hazards Finding**

- 4.21 BGS information presented within the Groundsure Geolnsight report identifies the following ground conditions:

Hazard	Risk Designation (Groundsure)
Coal Mining	None.
Collapsible Ground	Negligible.
Compressible Ground	very low (moderate eastern boundary of the site)
Ground Dissolution	Negligible.
Landslide	Very Low.
Running Sand	Very Low to low
Swelling / Shrinking Clay	Low.

- 4.22 The moderate compressible risk is associated with the alluvium and is only located on the eastern boundary of the site and is unlikely to have any affect of the development of the site as it is likely that this area will not be developed on. The compressibility of the materials should be assessed during the site investigation.

- 4.23 No other significant ground stability risks have been identified

**Sensitive Land Uses**

- 4.24 The site is currently derelict land and is considered to be of low sensitivity.
- 4.25 No ecologically sensitive designations are identified on the site.

### Historical and Archaeological Features

4.26 English Heritage does not identify any Scheduled Ancient Monuments on the site.

### Environmental Sensitivity

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

- The underlying stratum is classified as a Secondary A Aquifers;
- Two surface water courses on and immediately adjacent to the site;
- No groundwater abstractions within 1000m of the site;
- Site is not within a Source Protection Zone 1; and
- No sensitive ecology noted on site.

4.28 The proposed end use of the site is for residential houses and as such future sensitivity will be high for end users.

### Industrial Land Uses

4.29 Given the surrounding industrial units there are numerous potentially contaminative industrial uses identified within 250m of the site with the closest comprising Europa truck Parts Ltd 5m south west. Given the separation by a watercourse and road the industrial activities these are not considered a significant risk to the site.

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

4.31 The Groundsure EnviroInsight Report indicates that there are no fuel station entries within 250m of the site.

4.32 There are no high-pressure oil/gas pipelines located within 250m of the site.

4.33 No new risks are identified from the register of industrial uses.

## Regulatory Database

4.34 The following information has been obtained from a commercially available environmental database. The summary table only includes records not otherwise detailed in the report.

Environmental Permits, Incidents and Registers	0 -250m	250-500m	Details
Site determined as contaminated land	0	0	Not Applicable.
Authorised industrial processes	1	2	Cadmium from Prestige Electroplating station 11m SW. Not considered a risk to the site. .
Registered radioactive substances	0	0	Not Applicable.
Enforcements, prohibitions or prosecutions	0	0	Not Applicable.
Pollution Incidents	15	2	Closest is Category 3 Discharge to water sewer from Prestige Electroplating 0m dated 2001 and 2005 released to the watercourse. Given the age of the discharge this is not considered a risk to the development of the site.
Consents issued under the Planning (Hazardous Substances) Act 1990	0	0	Not Applicable.
Control of Major Accident Hazard (COMAH)/ Notification of Installations Handling Hazardous Substances (NIHHS) sites	0	0	Not Applicable.
Records of Licensed Discharge Consents	2	7	Closest is a sewerage discharge 114m NE. Not considered a risk.

4.35 No significant risks to the site have been identified.

## Landfill Sites and Waste Treatment Sites

4.36 There are two historic landfill sites on the site for both inert and commercial waste which was surrendered in 1993. Given the age and classification of these landfills the risk is likely to be minimal however gas monitoring and further assessment should be undertaken as part of the investigation. Based on the records given the Emapsite report the landfills are located in the north east corner of the site and central western part of the site. It is recommended that the council is contacted to confirm if they have any further records in relation to this to enable delineation of the landfill extent.

- 4.37 There are two waste treatment facilities identified within 500m of the site, with the closest being 43m south west and licenced for metal recycling. Given the distance this is not considered a risk to the site.
- 4.38 The presence of two landfills of the site will require further investigation to confirm their extent and waste classification before appropriate remediation measures can be incorporated to allow future development.

## 5.0 PRELIMINARY CONCEPTUAL MODEL

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
<b>Human Health</b>					
Asbestos, hydrocarbon and metals.	Potential Made Ground associated with the former colliery use .	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal PPE will address risk.
			Site users	Low.	Made Ground identified across the site. Investigation required.
Asbestos, hydrocarbon and metals.	Potential Made Ground associated with former buildings.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	Normal PPE will address risk.
			Site users	Negligible.	No significant sources likely
Hydrocarbon and metals	Potential localised spillage off site.	Ingestion dermal and inhalation.	Construction Workers.	Dismissed.	No significant risk identified and surface soils are low permeability clay and silts.
			Site users.		
Ground Gas.	Landfill.	Inhalation & Explosive.	Construction Workers.	Low.	Two landfills identified on the site (inert and commercial designation). Gas risk is likely to be minimal as not putrescible materials likely, however gas monitoring should be undertaken as part of the investigation.
			Site users.		
	Potential Made Ground.	Inhalation & Explosive.	Construction Workers.	Negligible.	No significant putrescible material likely.
			Site users.		
	Coal gas	Inhalation & Explosive.	Construction Workers.	Low.	No shafts recorded on the site, however drilling and possible pilling could drill into backfilled workings could result in future pathway and gas risk.
			Site users.		
<b>Groundwater</b>					
Hydrocarbon and metals.	Potential spillage on site.	Vertical Migration.	Groundwater.	Negligible.	No significant sources identified, and shallow soils are low permeability clay and silts.
<b>Surface Water</b>					
Hydrocarbon and metals.	Potential spillage on site.	Horizontal Migration.	Water Courses.	Negligible.	No significant sources identified, and shallow soils are low permeability clay and silts.
<b>Environmental Receptors</b>					
On site contaminants		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No sensitive ecology designation on site.
		Direct.	Archaeology.	Dismissed.	None present.
		Direct.	Geology.	Dismissed.	None present.
		Phytotoxic.	Woodland.	Dismissed.	None present.
		Phytotoxic.	Crops.	Dismissed.	None present.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	None present.
<b>Building Services</b>					
On site contaminants		Direct.	Historic Buildings.	Dismissed.	None present.
		Direct.	Proposed Buildings.	Dismissed.	No source identified.
		Permeate into pipework.	Water Pipes.	Negligible	Made Ground identified. Water authority guidelines to be followed.

- 6.1 There are negligible risks from potential Made Ground associated with the former buildings, landfill and colliery use across the site, however gross widespread contamination is not considered likely.
- 6.2 Landfills have been identified on site which could generate gas, however their inert and commercial designations are likely to reduce the gas generation and it is unlikely that any significant putrescible materials will be encountered, however gas monitoring should be undertaken as part of the proposed site investigation. In addition coal gas could be generated from the potential underlying shallow coal workings and this will also require further investigation.
- 6.3 As soils are low permeability clay any spillage is likely to be very localised in extent and unlikely to pose a significant risk source.
- 6.4 The Alluvium and underlying Coal Measures are both classified as secondary aquifers and there are no groundwater or surface water abstractions, however Made Ground has been identified. Based on this there is no significant risk to the underlying aquifers, however leachate testing and groundwater sampling should be undertaken as part of the site investigation.
- 6.5 Given the likely low permeability of the underlying Alluvium the risk to surface water is reduced, however the Alluvium is overlain by Made Ground with a variable permeability which could therefore provide a future pathway to the surface waters for any contamination identified. Given this further site investigation is recommended.

## 7.0 ASSESSMENT AND RECOMMENDATIONS

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### Proposed Development

- 7.1 The proposed development is likely to comprise residential units, with associated soft landscaping gardens, driveways and roads.

### Environmental Considerations

- 7.2 As the proposed development is for residential units it is considered to be of high sensitivity. Given the historical usage of the site and based on the desk study assessment is widespread gross contamination is not considered likely. There is a negligible to low risk from potential localised contamination associated with the previous buildings, colliery activities and Made Ground across the site.
- 7.3 The presence of landfills and potential coal workings could result in a potential gas risk and therefore a gas assessment of the site should be undertaken for any future development.
- 7.4 Should significant contamination be identified it is considered that the use of clean cover soils to soft landscape areas and gardens will provide effective remediation.
- 7.5 If unforeseen contamination is encountered during construction works such as localised spillage outside the areas investigated 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. This will provide environmental betterment.
- 7.6 Given the presence of Made Ground and potential contamination it is likely that a remediation strategy will be required to confirm that the soils are being remediated appropriately this is likely to be followed by a verification report. Both of which will be submitted for approval by the Local Planning Authority.

### Ground Engineering

- 7.7 Based on the ground conditions anticipated and the likely loadings from the proposed residential houses it is considered that traditional spread shallow foundations will not be suitable and a vibro or piled foundations is likely to be required.

- 7.8 Given the possible presence of shallow workings and mining assessment will be required to confirm the depth of the shallow workings and if there is enough rock cover above the workings or remediation via grouting will be required prior to any development being achievable.

### **Proposed Ground Investigation**

- 7.9 It is proposed to undertake Ground investigation at the site to provide information to allow detailed design of the scheme. These works should comprise:

- Window sampling boreholes and trail pitting across the site.
- The installation of groundwater and gas monitoring wells and return gas monitoring visits to measure groundwater and ground gas.
- Trial pitting across the site to confirm ground conditions and groundwater depth information and in order to collect appropriate classification testing for foundation design across the site.
- Deep boreholes across the site to confirm the thickness of the superficial materials and provide piling parameters, an assessment of the underlying permeability and the quality and depth of the underlying groundwater.
- Deep rotary boreholes across the site using rotary drilling techniques to 40m depth and water flush with the Coal authorities permission to confirm the depth of the potential workings recorded in the BGS logs to the north and east of the site.
- Chemical testing across the site to confirm the contamination risk.
- WAC testing from the existing spoil heaps to confirm waste classification for disposal purposes.

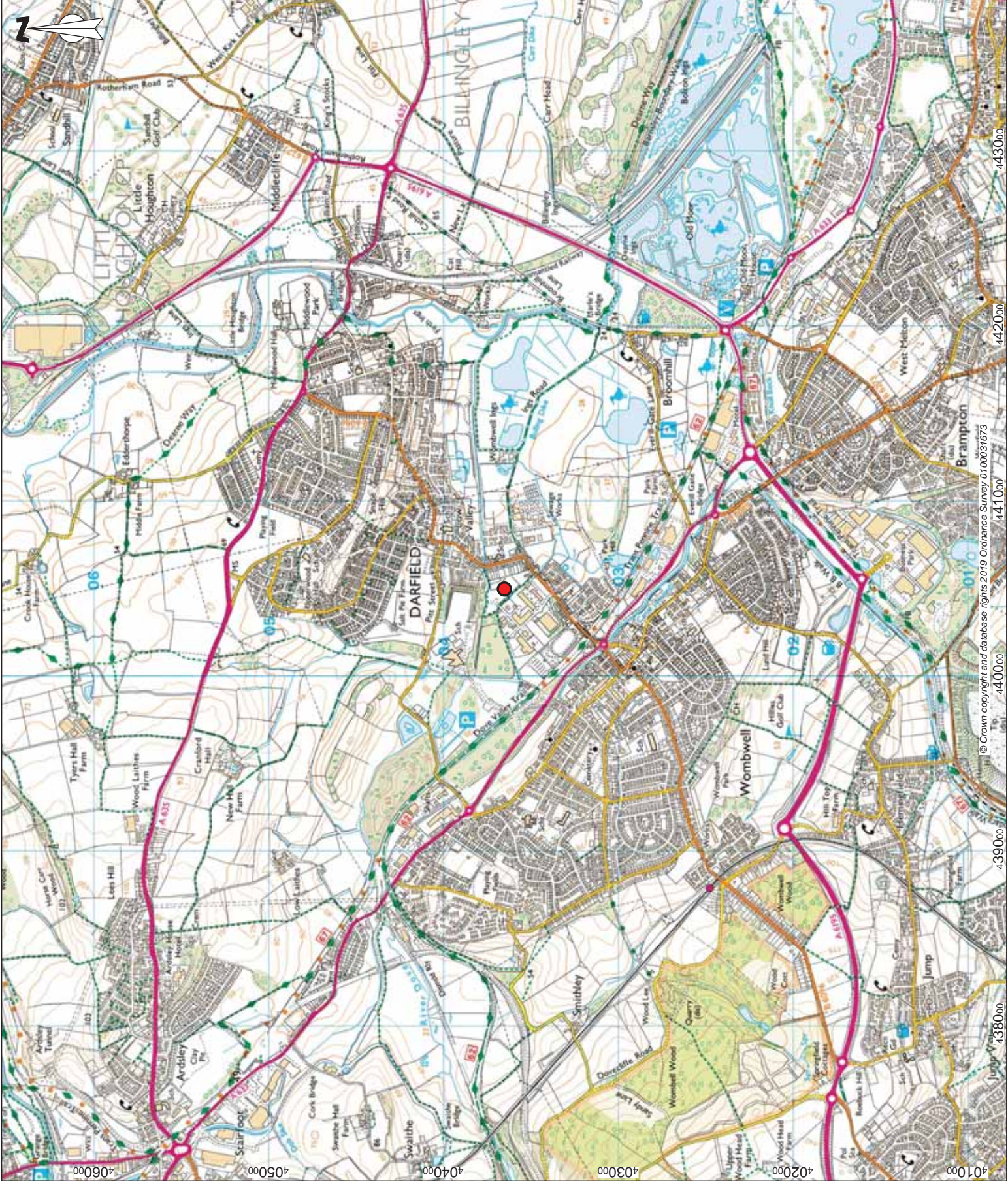
- 7.10 A full Phase II Geo environmental report including an updated Conceptual Site Model and coal mining and shallow coal working, foundations and pavement assessment should be prepared. This is likely to be followed by a remediation strategy and validation exercise to provide information to the local authority on the appropriate remediation of the site.



Key



Site Location  
(SE 40201.03651)



Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S18 2AA

CLIENT:	Hartwood Estates		
SCALE:	1:20,000@A3	PROJECT REF:	CRM.1122.005
DRAWN:	CH	CHECKED:	MG
DATE:	Jan 2019		
PROJECT:	Wombwell Outline Planning Application		
TITLE:	Site Location Plan		
DRAWING NO:	CRM.1122.005.HY.D.001		

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EmapSite

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

Report Reference: EMS-522961\_703403

Your Reference: EMS\_522961\_703403

Report Date 24 Jan 2019

Report Delivery Method: Email - pdf

## Geo Insight

Address: land off Station Road, Wombwell, S73 0BN, land off Station Road, Wombwell, S73 0BN, S73 0BN,

Dear Sir/ Madam,

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

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

Yours faithfully,

emapsite customer services team

Enc.  
Groundsure Geo Insight

Address: land off Station Road, Wombwell, S73 0BN, land off Station Road,  
Wombwell, S73 0BN, S73 0BN,  
Date: 24 Jan 2019  
Reference: EMS-522961\_703403  
Client: EmapSite

NW N NE



SW S SE

Aerial Photograph Capture date: 07-Jun-2013  
Grid Reference: 440484,403645  
Site Size: 3.68ha

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9.4 Active Railways.....	50
9.5 Railway Projects.....	50

# Overview of Findings

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

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

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

## Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	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?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	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

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

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

3.2 Radon Protection

No radon protective measures are necessary.

## Section 4: Ground Workings

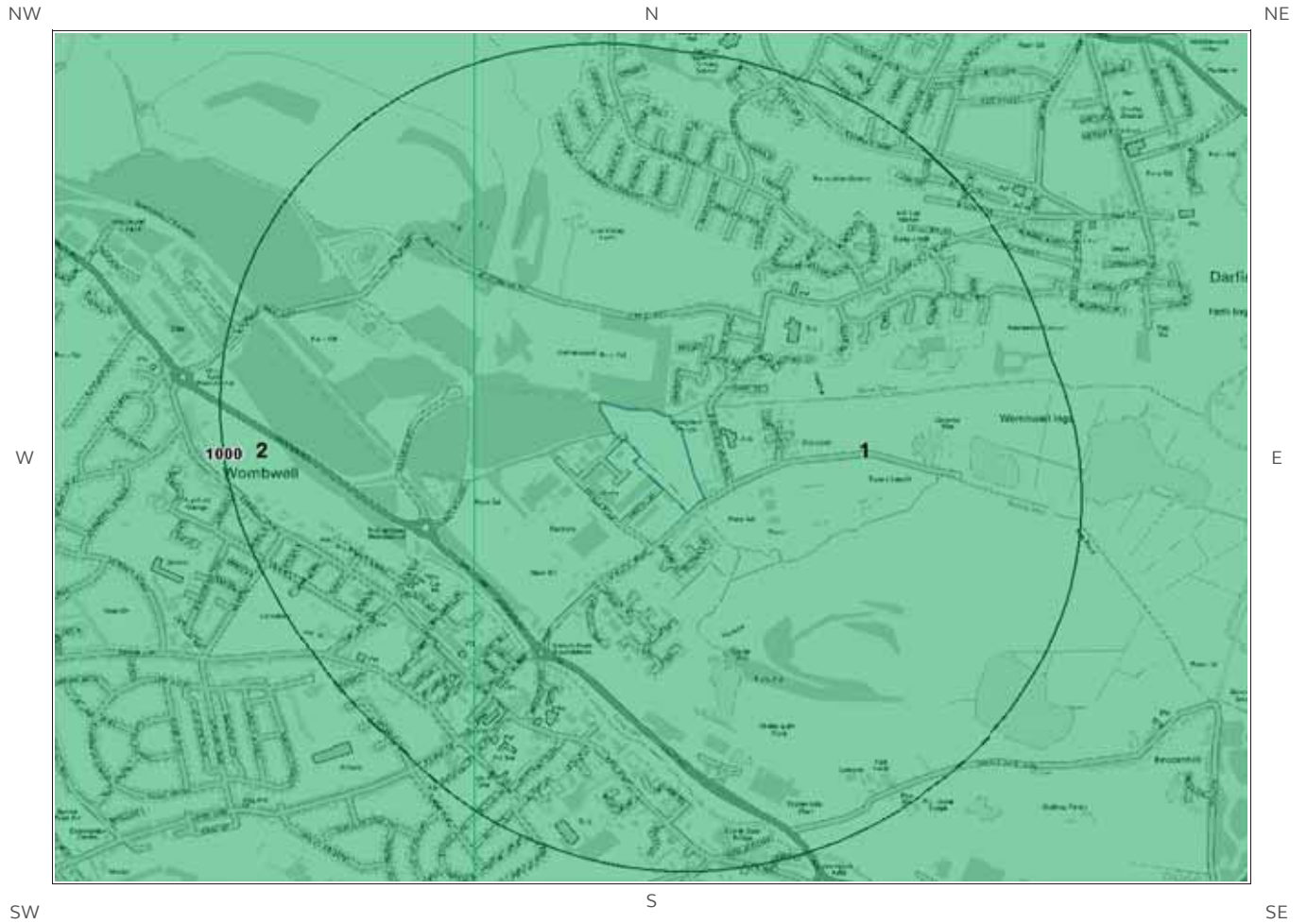
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	6	11	22	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	2	2	1	1	4
4.3 Current Ground Workings	0	0	4	3	2

## Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	2	2	1	1	4
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	1	0	0	3	2
5.5 Non-Coal Mining Cavities	0	0	1	1	0
5.5 Natural Cavities	0	0	0	0	0

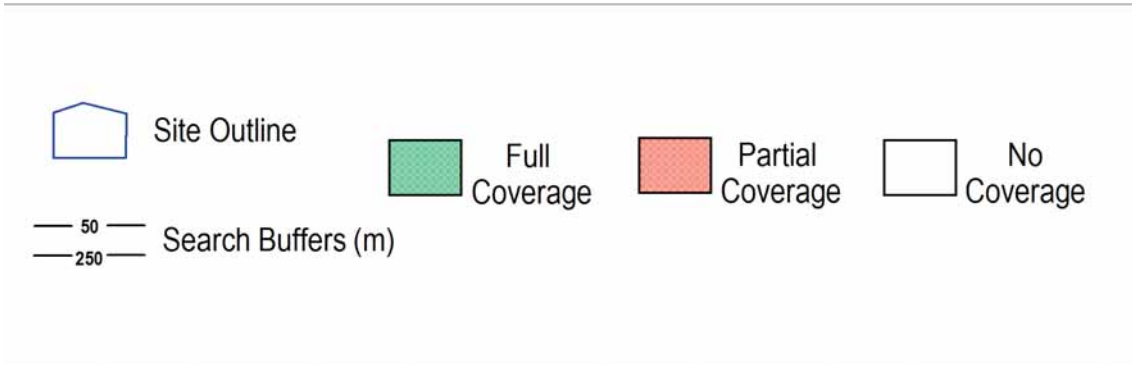
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
<b>Section 6: Natural Ground Subsidence</b>					
6.1 Shrink-Swell Clay	Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Negligible				
6.5 Running Sand	Low				
<b>Section 7: Borehole Records</b>					
7 BGS Recorded Boreholes	27	2	12		
<b>Section 8: Estimated Background Soil Chemistry</b>					
8 Records of Background Soil Chemistry	3	1	0		
<b>Section 9: Railways and Tunnels</b>					
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	10	14	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

# 1:10,000 Scale Availability



1\_10,000 Availability Legend

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# Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	330.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1221.0	Some deposits are mapped	Full	Full	No coverage
N4	1265.0	Some deposits are mapped	Full	Full	No coverage

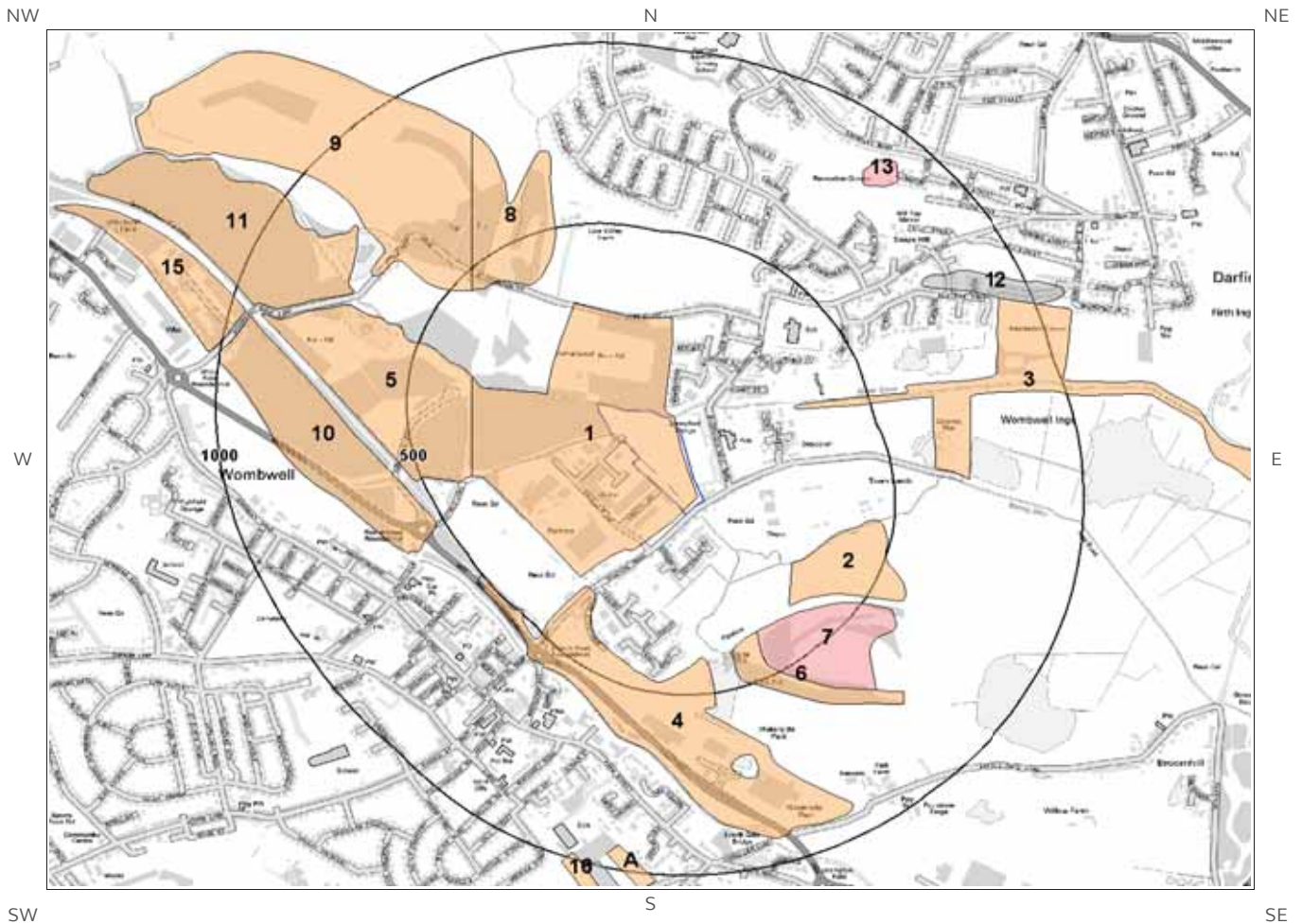
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

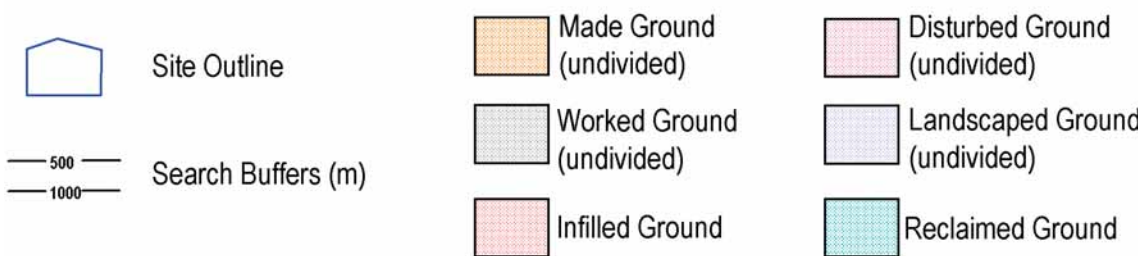
# 1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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# 1. Geology 1:10,000 scale

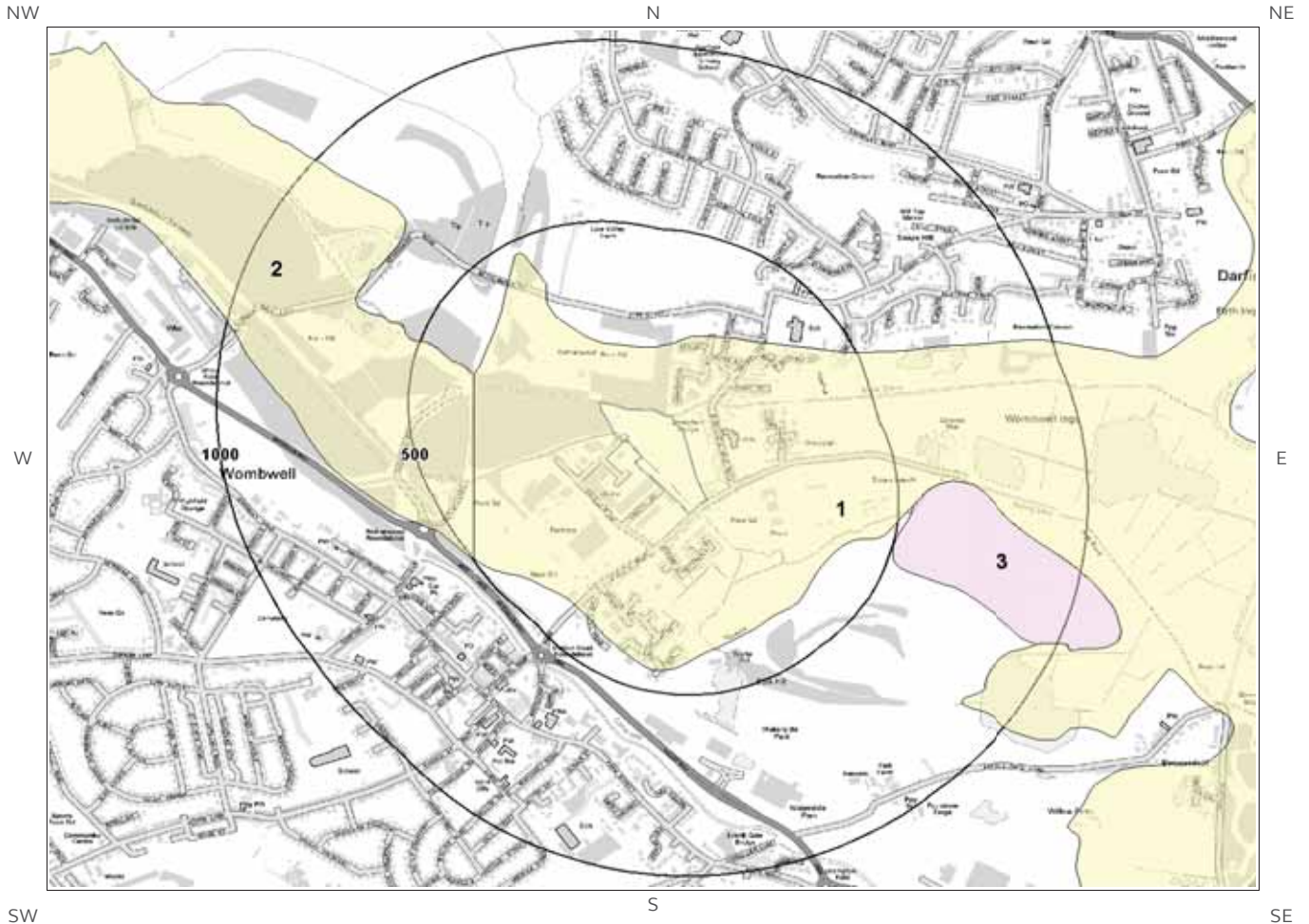
## 1.1 Artificial Ground

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

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	287.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	306.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	322.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	330.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	372.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	372.0	SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
8	373.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	457.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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



Artificial Ground Legend

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# 1.2 Superficial Deposits and Landslips

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

## 1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt
2	330.0	W	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

## 1.2.2 Landslip

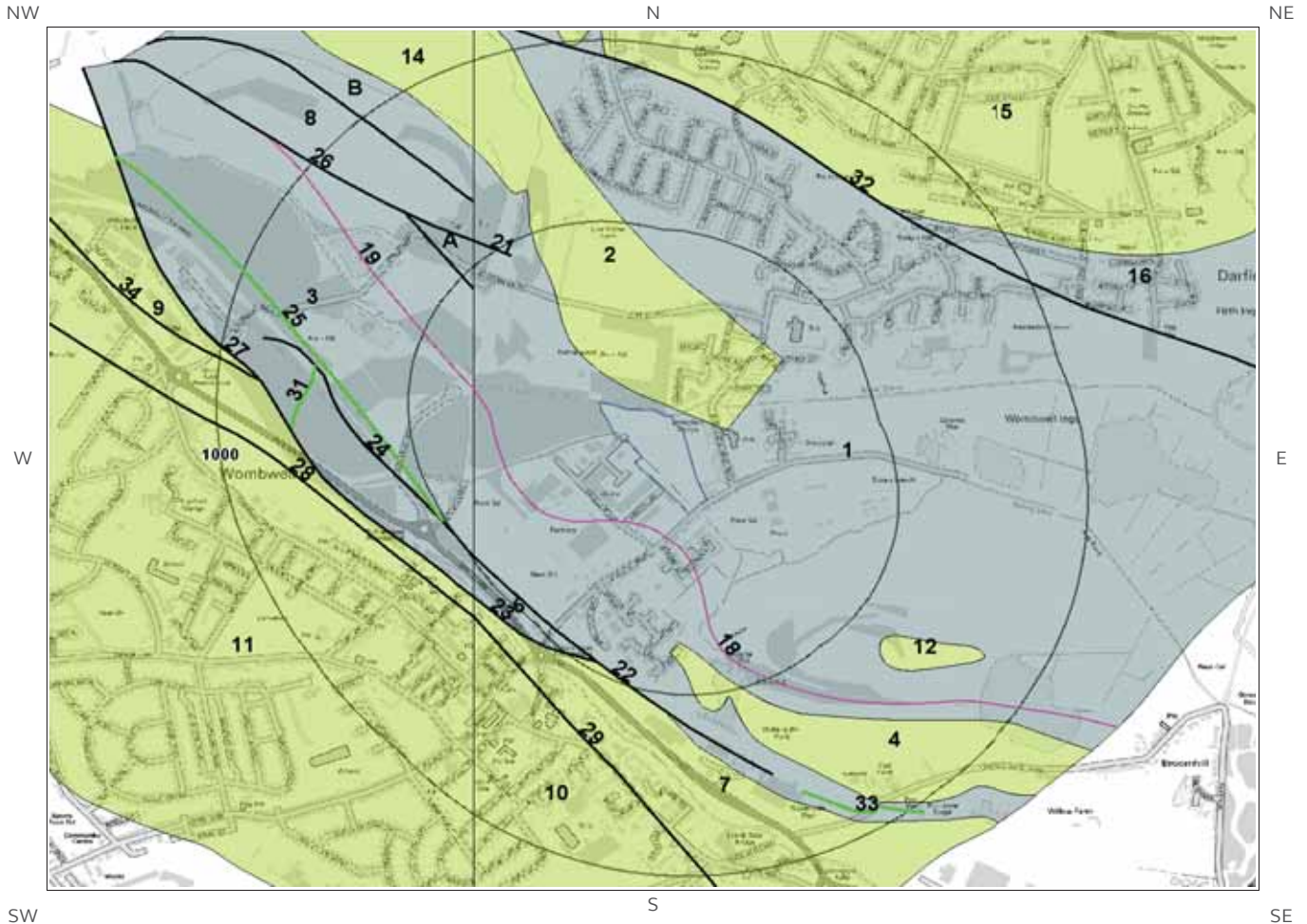
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

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

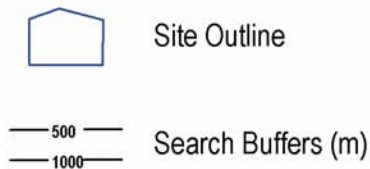
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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



Bedrock and linear features Legend

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# 1.3 Bedrock and linear features

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

## 1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
2	22.0	NE	ACR-SDST	Ackton Rock - Sandstone	Bolsoviaian Sub-age
3	330.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
4	357.0	S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
5A	457.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
6	468.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
7	474.0	SW	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age

## 1.3.2 Linear features

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

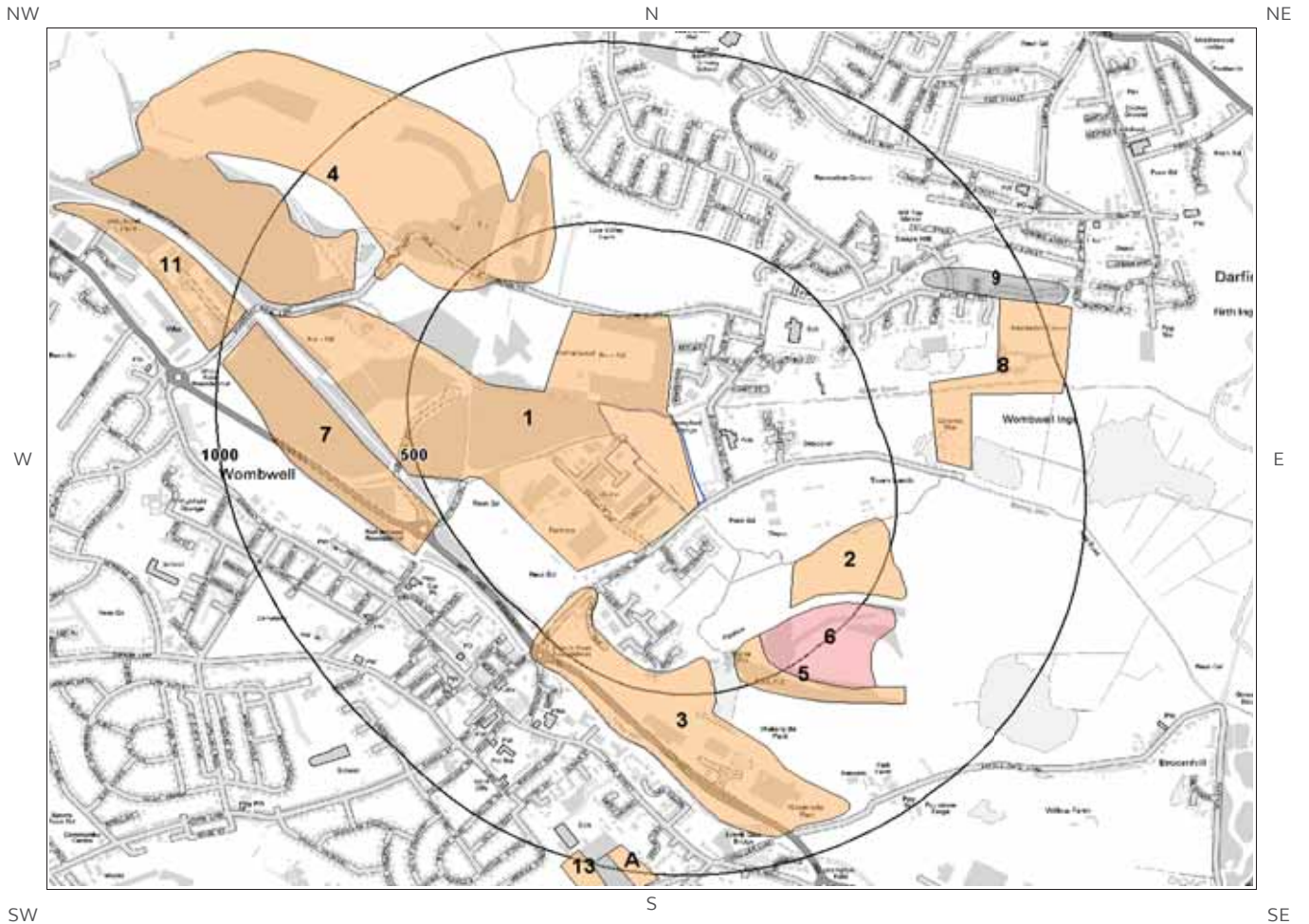
ID	Distance (m)	Direction	Category Description	Feature Description
18	88.0	SW	FOSSIL_HORIZON	Fossil horizon, marine band
19	333.0	W	FOSSIL_HORIZON	Fossil horizon, marine band
20A	457.0	NW	FAULT	Normal fault, inferred
21	466.0	NW	FAULT	Normal fault, inferred
22	468.0	SW	FAULT	Normal fault, inferred
23	474.0	SW	FAULT	Normal fault, inferred
24	496.0	SW	FAULT	Normal fault, 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.

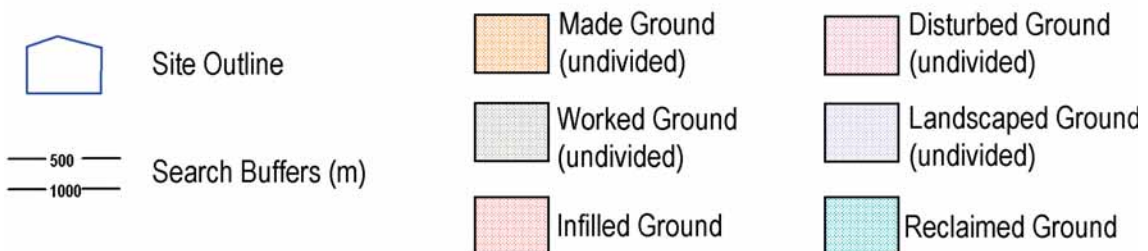
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

# 2 Geology 1:50,000 Scale

## 2.1 Artificial Ground map



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## 2. Geology 1:50,000 scale

### 2.1 Artificial Ground

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

#### 2.1.1 Artificial/ Made Ground

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

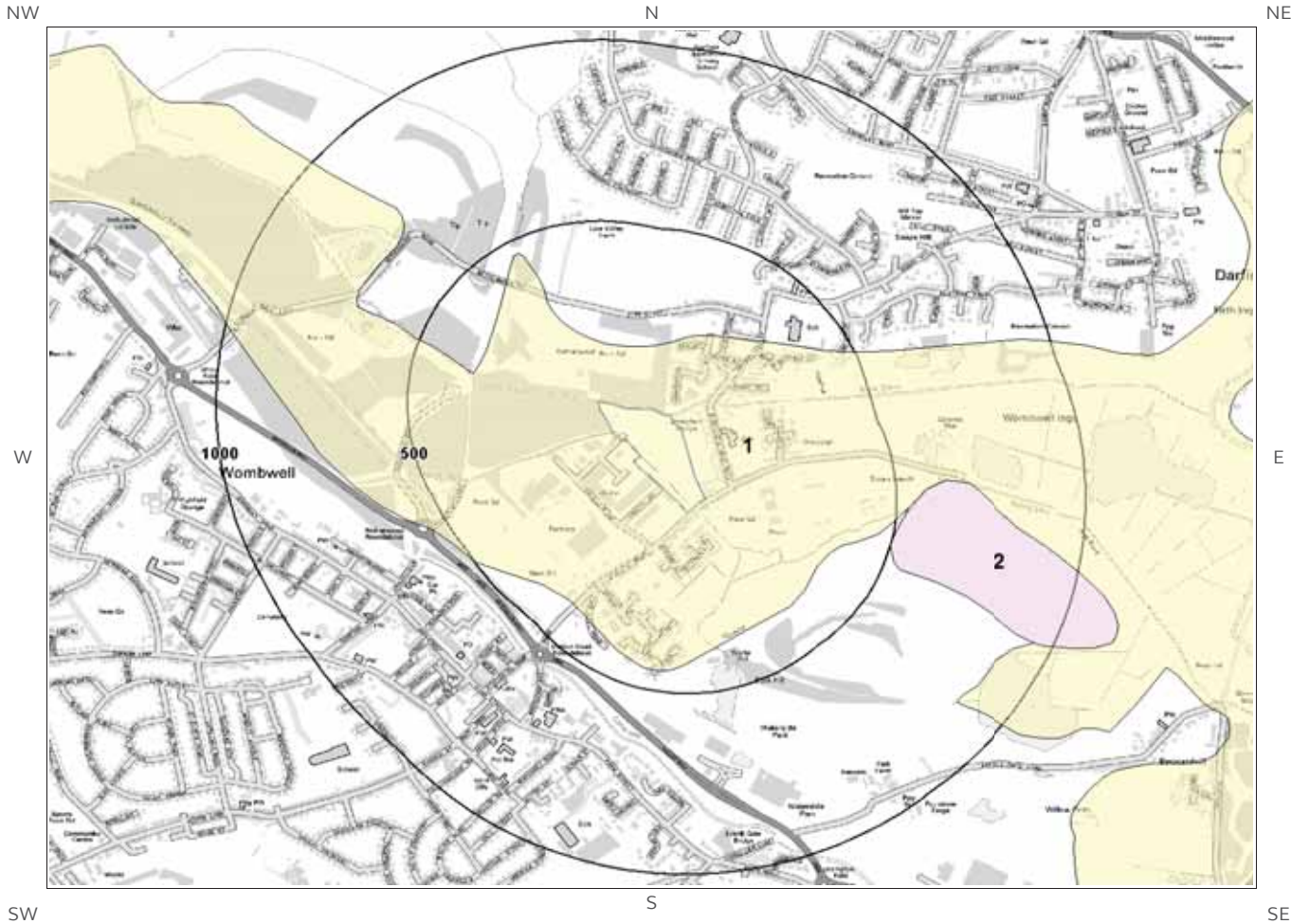
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	289.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	317.0	SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	373.0	NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
5	381.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
6	381.0	SE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

#### 2.1.2 Permeability of Artificial Ground

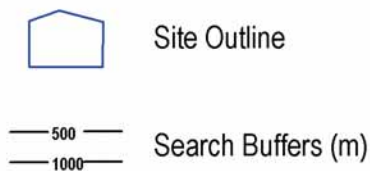
Are there any records relating to permeability of artificial ground within the study site boundary? Yes

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

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



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## 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	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	499.0	E	GFDMP-XSV	GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE	SAND AND GRAVEL

### 2.2.2 Permeability of Superficial Ground

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

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

### 2.2.3 Landslip

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

Database searched and no data found.

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

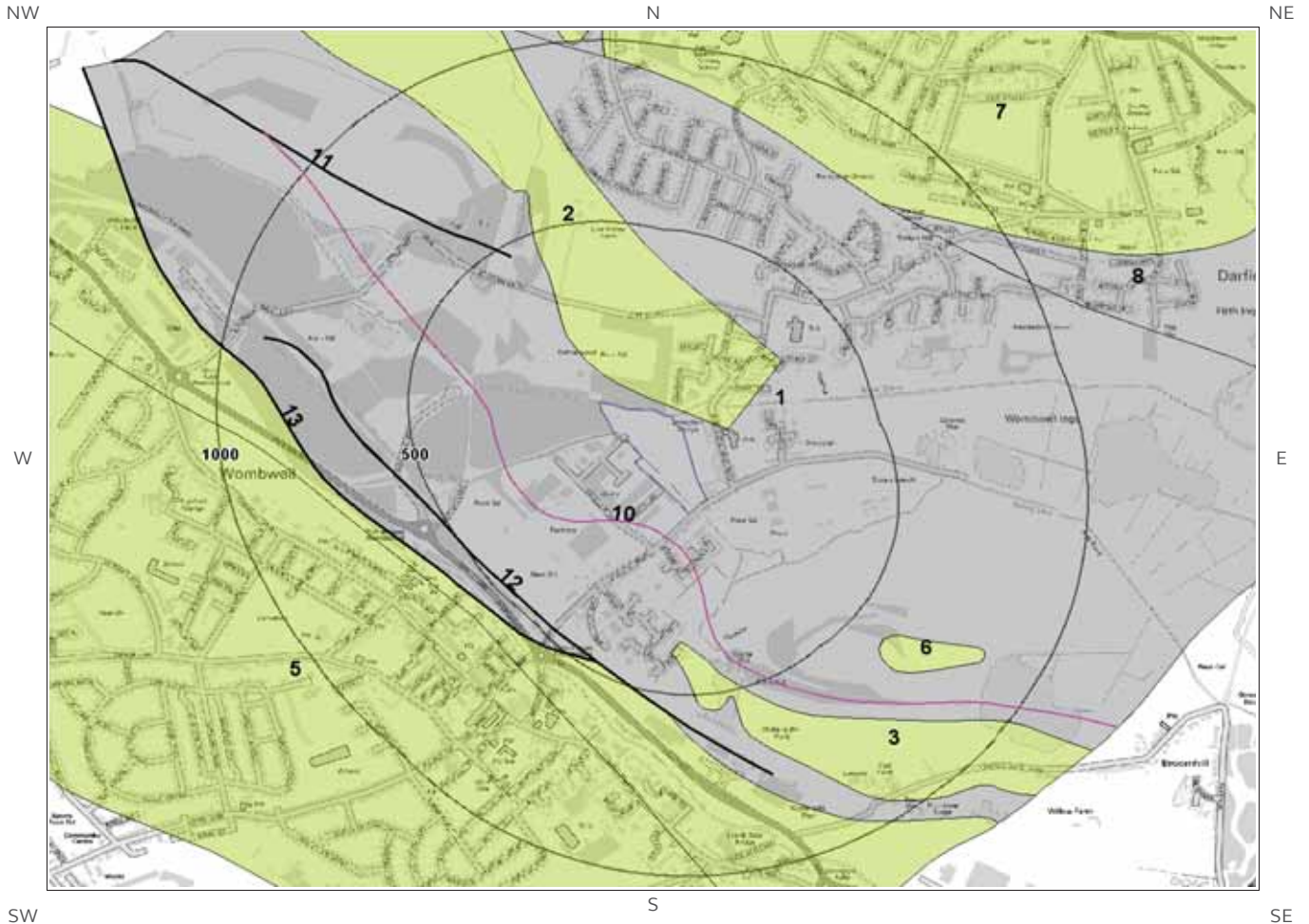
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

### 2.2.4 Landslip Permeability

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

Database searched and no data found.

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



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## 2.3 Bedrock, Solid Geology & linear features

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

### 2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	24.0	NE	ACR-SDST	ACKTON ROCK - SANDSTONE	WESTPHALIAN
3	353.0	S	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
4	474.0	SW	OR-SDST	OAKS ROCK - SANDSTONE	WESTPHALIAN

### 2.3.2 Permeability of Bedrock Ground

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

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

### 2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
10	88.0	SW	FOSSIL_HORIZON	Marine band
11	465.0	NW	FAULT	Fault, inferred
12	468.0	SW	FAULT	Fault, inferred
13	474.0	SW	FAULT	Fault, 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.

# 3 Radon Data

## 3.1 Radon Affected Areas

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

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

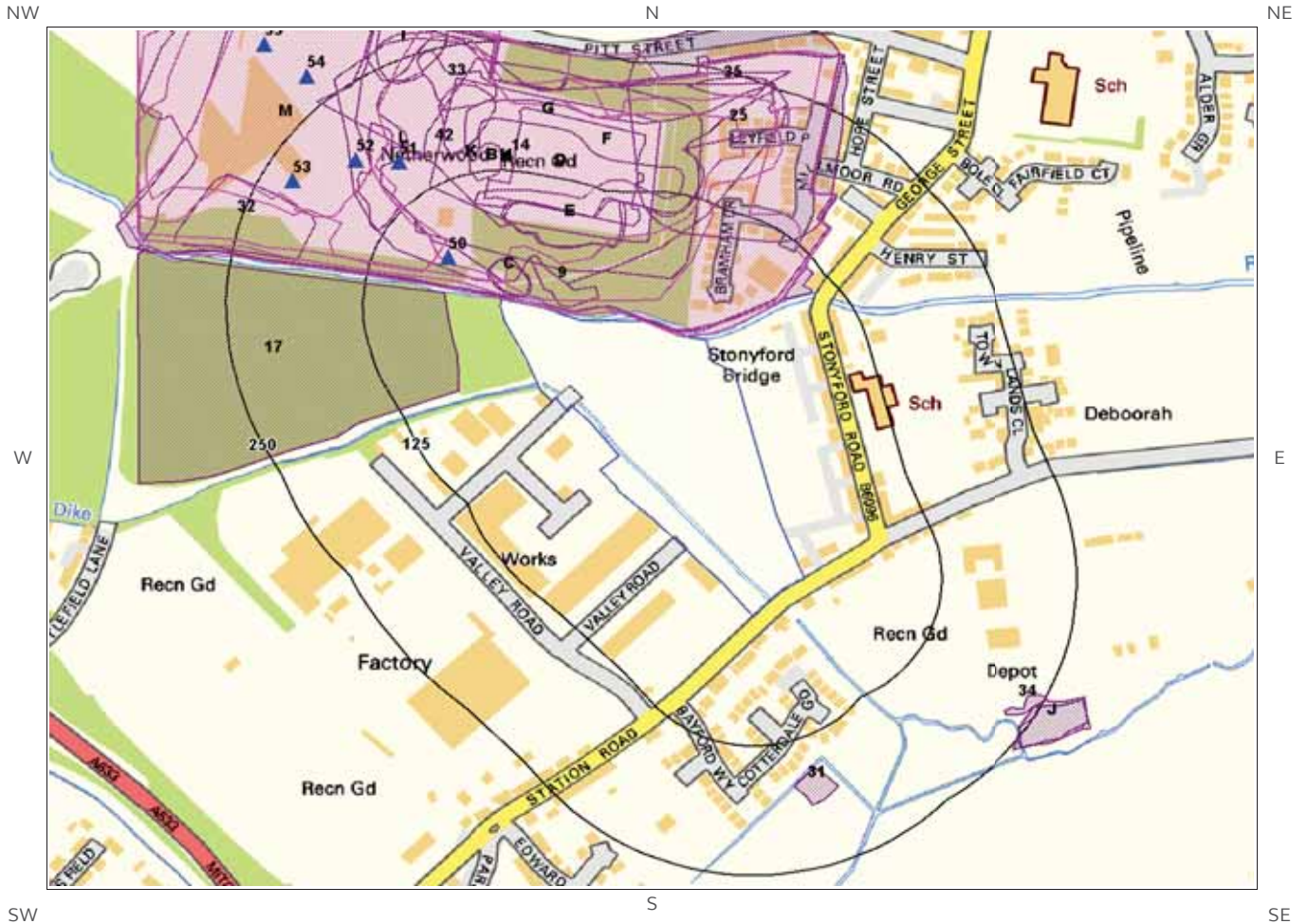
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## 3.2 Radon Protection

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



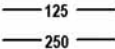


---

# 4 Ground Workings map



Ground Workings Legend

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-  Site Outline
-  Historic Surface Ground Workings
-  Search Buffers (m)
-  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
1H	0.0	On Site	440313 404008	Colliery	1948
2A	0.0	On Site	440320 403924	Colliery	1938
3K	0.0	On Site	440313 403939	Colliery	1977
4A	0.0	On Site	440320 403924	Colliery	1938
5B	0.0	On Site	440304 404021	Colliery	1938
6B	0.0	On Site	440304 404021	Colliery	1931
7C	5.0	N	440338 403801	Refuse Heap	1938
8C	5.0	N	440338 403801	Refuse Heap	1938
9	7.0	N	440377 403797	Pond	1948
10C	7.0	N	440340 403799	Refuse Heap	1938
11C	7.0	N	440340 403799	Refuse Heap	1931
12D	8.0	N	440399 403905	Refuse Heap	1967
13L	17.0	N	440276 404048	Colliery	1951
14	17.0	N	440376 403916	Refuse Heap	1951
15D	17.0	N	440386 403913	Refuse Heap	1948
16D	39.0	N	440368 403905	Unspecified Ground Workings	1977
17	48.0	W	440146 403715	Refuse Heap	1988
18E	59.0	N	440390 403852	Pond	1938
19E	59.0	N	440390 403852	Pond	1931
20E	59.0	N	440387 403853	Pond	1938
21F	70.0	N	440441 403918	Refuse Heap	1938

ID	Distance (m)	Direction	NGR	Use	Date
22F	70.0	N	440441 403918	Refuse Heap	1931
23M	73.0	NW	440140 403972	Colliery	1988
24D	75.0	N	440371 403913	Refuse Heap	1988
25	89.0	N	440548 403940	Old Colliery	1904
26G	89.0	N	440380 403957	Refuse Heap	1938
27G	89.0	N	440380 403957	Refuse Heap	1938
28D	91.0	N	440390 403907	Ponds	1977
29A	117.0	N	440317 403912	Pond	1904
30H	146.0	N	440300 403952	Unspecified Pit	1890
31	156.0	S	440620 403308	Pond	1988
32	184.0	NW	440097 403859	Refuse Heap	1904
33	189.0	N	440291 403991	Pond	1904
34	224.0	SE	440813 403387	Unspecified Pit	1904
35	226.0	N	440538 403985	Refuse Heap	1904
36I	226.0	N	440245 404021	Refuse Heap	1904
37I	230.0	NW	440249 404018	Refuse Heap	1890
38J	244.0	SE	440836 403368	Pond	1904
39J	244.0	SE	440838 403370	Pond	1951

## 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
40H	0.0	On Site	440313 404008	Colliery	1948
41K	0.0	On Site	440313 403939	Colliery	1977

ID	Distance (m)	Direction	NGR	Use	Date
42	8.0	N	440293 403957	Unspecified Mine	1967
43L	17.0	N	440276 404048	Colliery	1951
44M	73.0	NW	440140 403972	Colliery	1988
Not shown	314.0	N	440144 404173	Colliery	1904
Not shown	715.0	NW	439328 404262	Colliery	1951
Not shown	738.0	W	439328 404032	Colliery	1948
Not shown	964.0	W	439244 404135	Colliery	1890
Not shown	967.0	W	439244 404132	Colliery	1904

### 4.3 Current Ground Workings

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

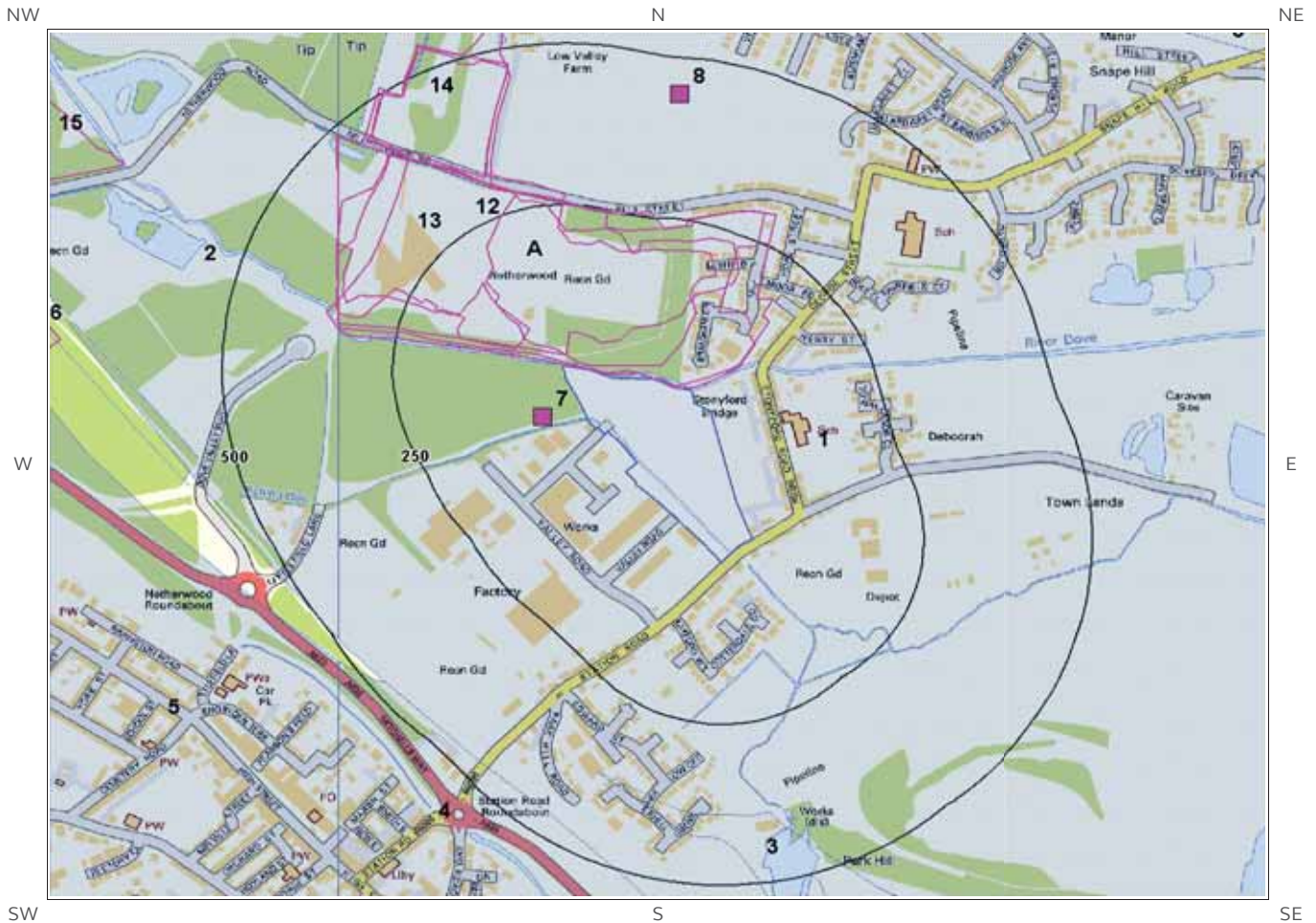
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

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

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
50	63.0	NW	440283 403819	Fireclay	South Yorkshire Sanitary Tube Works Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
51	162.0	NW	440238 403911	Clay & Shale	Nether Woodhall Mill Brickkiln	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
52	189.0	NW	440198 403913	Coal, Deep	Darfield Main Colliery, No 4 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
53	222.0	NW	440141 403893	Coal, Deep	Darfield Main Colliery, No 3 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
54	279.0	NW	440154 403994	Coal, Deep	Darfield Main Colliery, No 2 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
55	328.0	NW	440115 404025	Coal, Deep	Darfield Main Colliery, No 1 Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

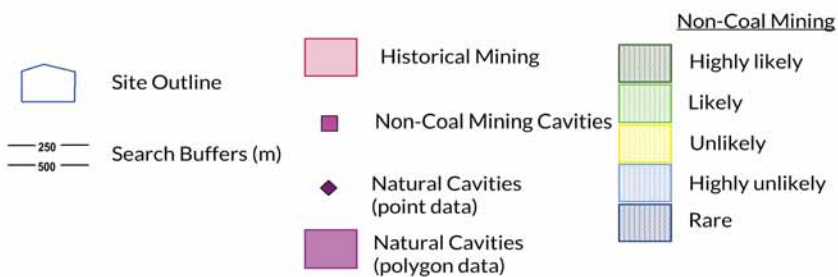
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	453.0	SE	440820 403100	Clay & Shale	Park Hill Brickworks	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	762.0	SW	439974 402986	Sandstone	Wombwell	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	873.0	NE	441078 404410	Sandstone	Woodhall	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
9A	0.0	On Site	440313 403939	Colliery	1977
10A	0.0	On Site	440313 404008	Colliery	1948
11A	8.0	N	440293 403957	Unspecified Mine	1967
12	17.0	N	440276 404048	Colliery	1951
13	73.0	NW	440140 403972	Colliery	1988
14	314.0	N	440144 404173	Colliery	1904
15	715.0	NW	439328 404262	Colliery	1951
16	738.0	W	439328 404032	Colliery	1948
Not shown	964.0	W	439244 404135	Colliery	1890
Not shown	967.0	W	439244 404132	Colliery	1904

## 5.2 Coal Mining

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

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

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

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

### 5.3 Johnson Poole and Bloomer

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

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

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

### 5.4 Non-Coal Mining

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

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

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

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
2	330.0	W	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
3	371.0	SW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
4	461.0	SW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
5	514.0	SW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
6	807.0	NE	Sheffield Area	Iron Ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

### 5.5 Non-Coal Mining Cavities

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

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

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

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
7	58.0	SW	440300 403700	DARFIELD, South Yorkshire	-	-	Fireclay

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
8	443.0	N	440500 404200	DARFIELD, South Yorkshire	-	-	Fireclay

---

## 5.6 Natural Cavities

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

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

Database searched and no data found.

---

## 5.7 Brine Extraction

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

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

Database searched and no data found.

---

## 5.8 Gypsum Extraction

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

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

Database searched and no data found.

---

## 5.9 Tin Mining

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

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

Database searched and no data found.

---

### 5.10 Clay Mining

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

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

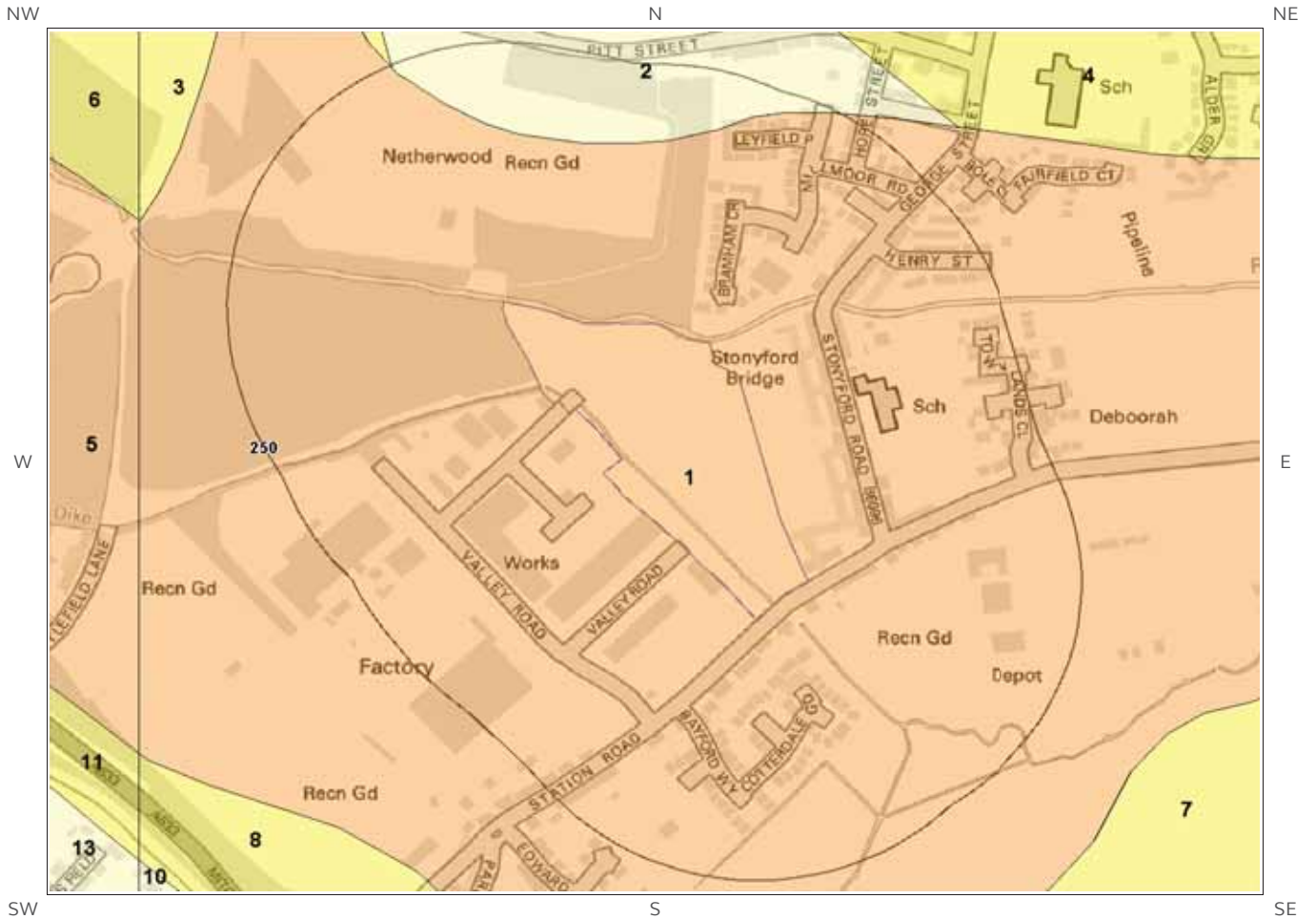
No

Database searched and no data found.

---

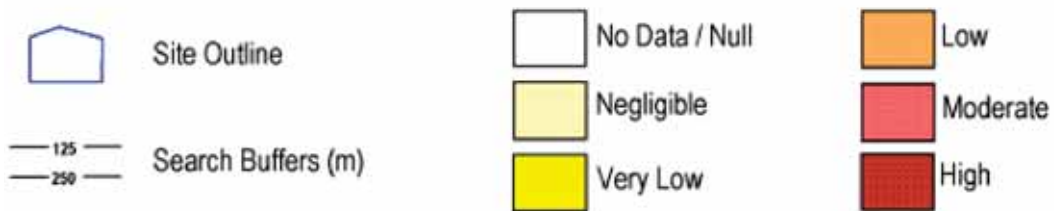
# 6 Natural Ground Subsidence

## 6.1 Shrink-Swell Clay map

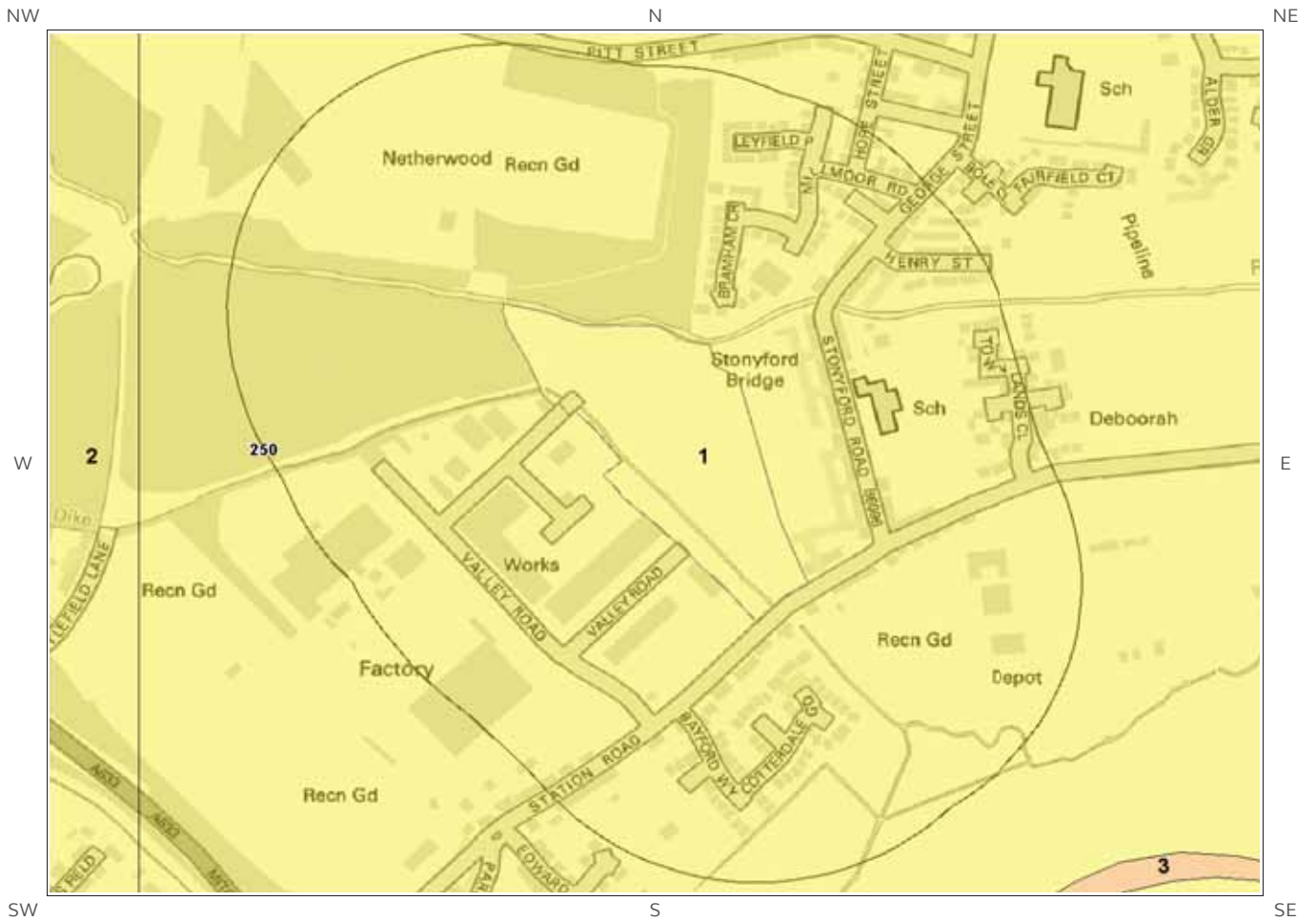


Shrink Swell Clay Legend

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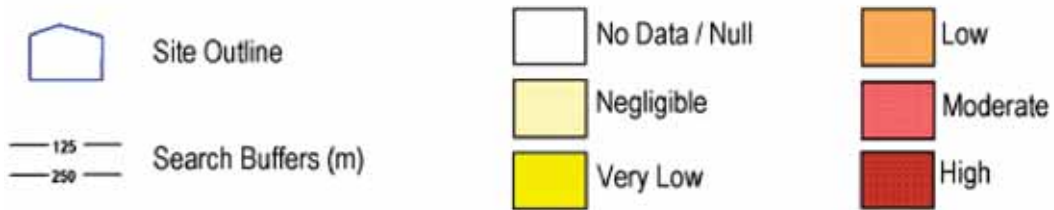


# 6.2 Landslides map

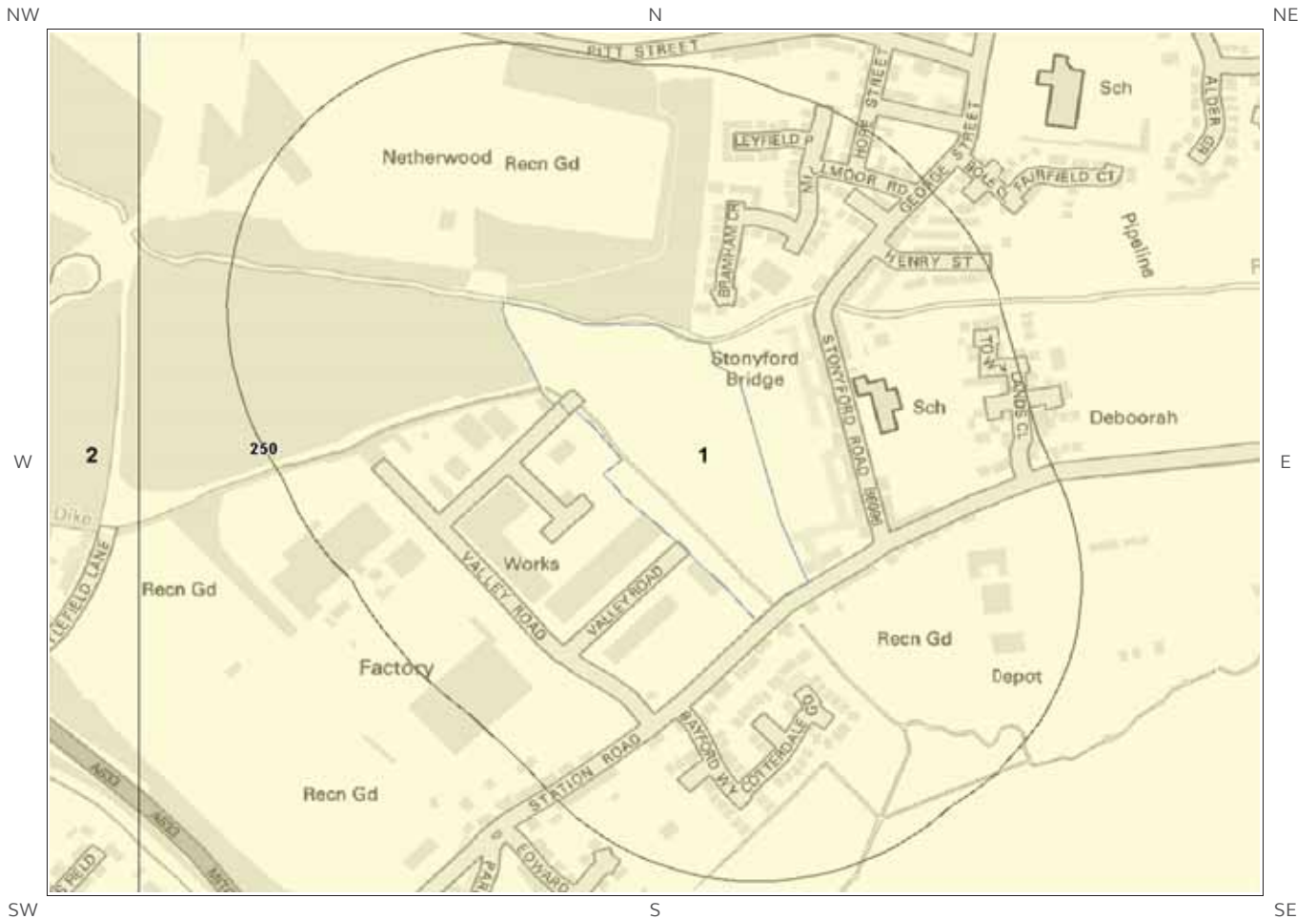


Landslides Legend

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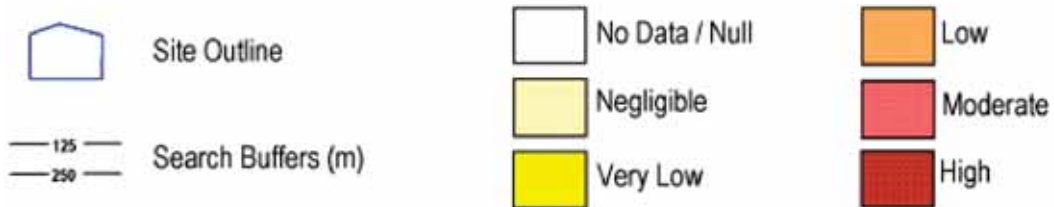


# 6.3 Ground Dissolution of Soluble Rocks map



Ground Dissolution Soluble Rocks Legend

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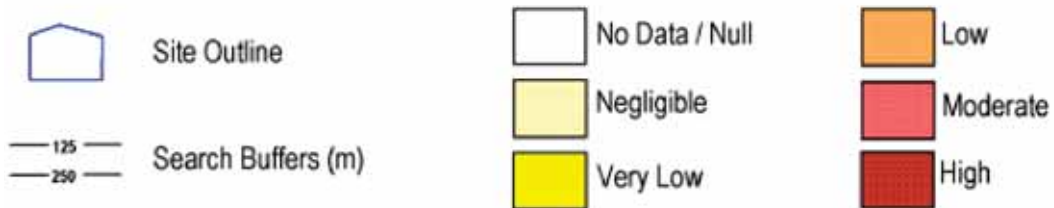


# 6.4 Compressible Deposits map

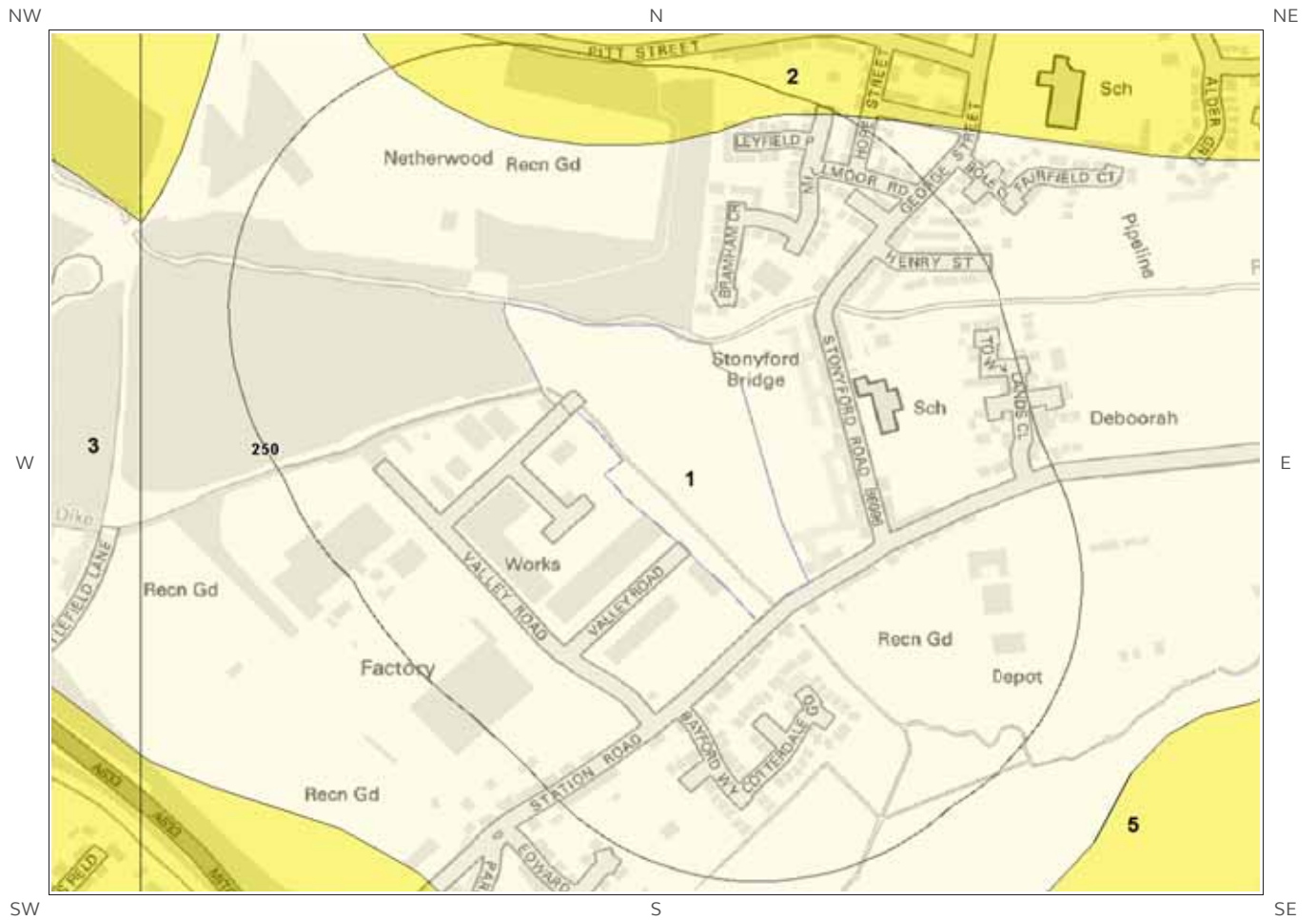


Compressible Deposits Legend

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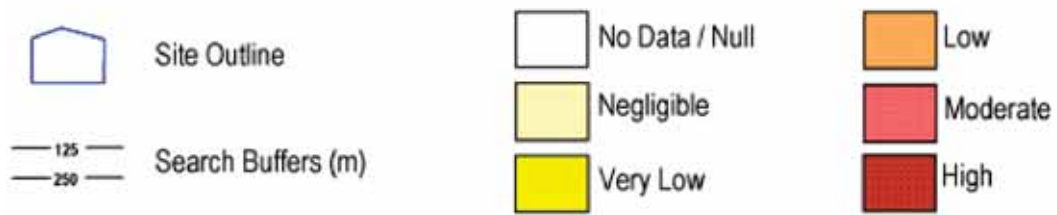


# 6.5 Collapsible Deposits map

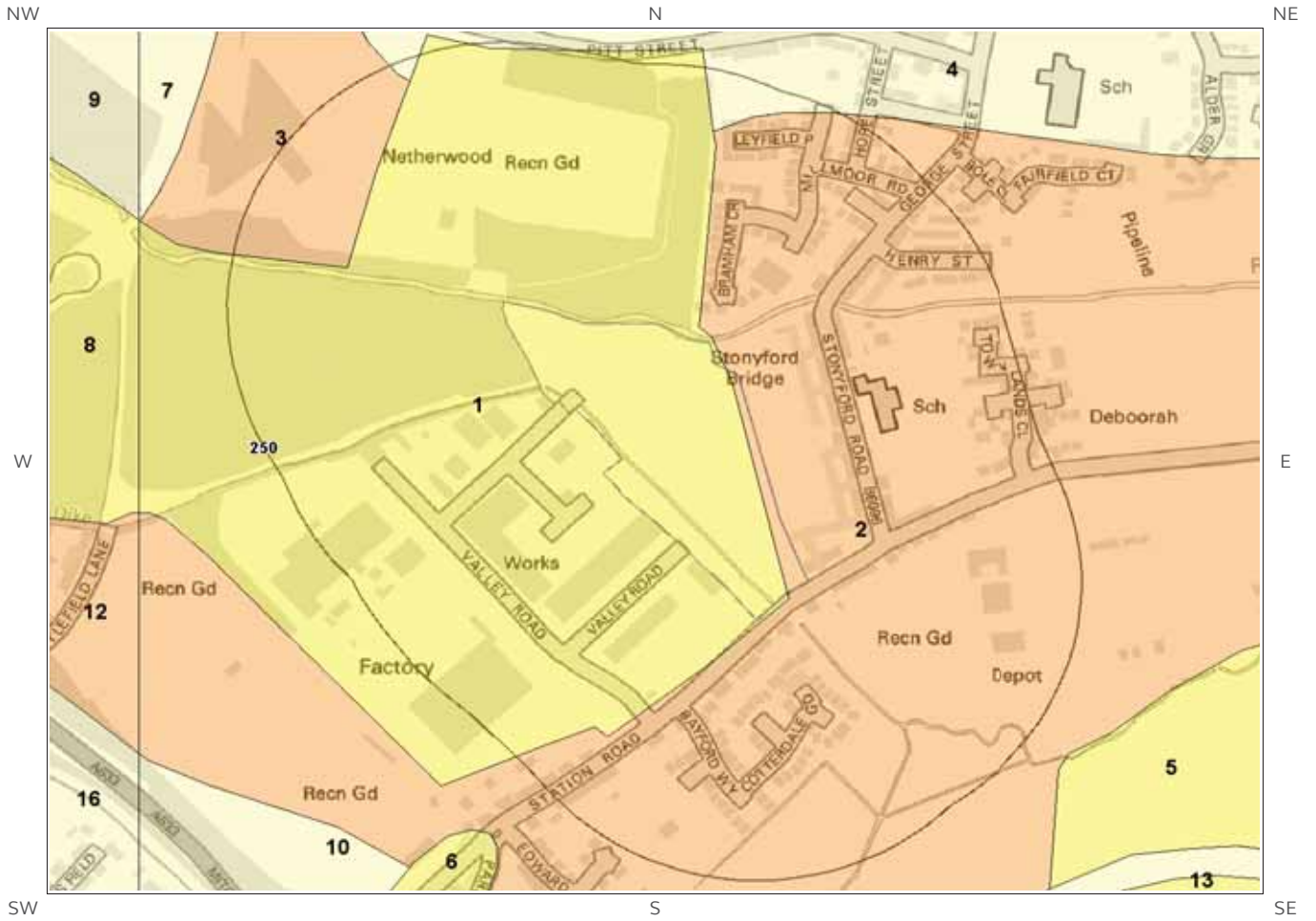


Collapsible Deposits Legend

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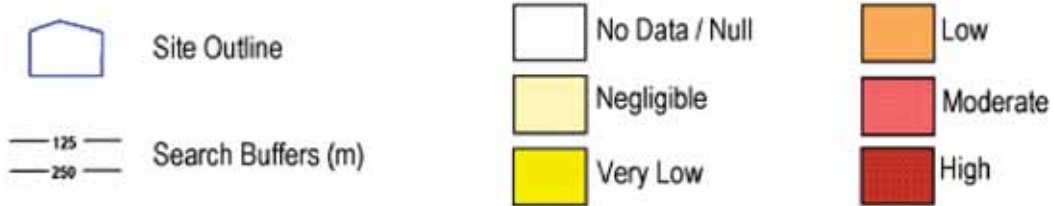


# 6.6 Running Sand map



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? Moderate

## 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	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

## 6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

### 6.3 Ground Dissolution of Soluble Rocks

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

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

### 6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

### 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	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

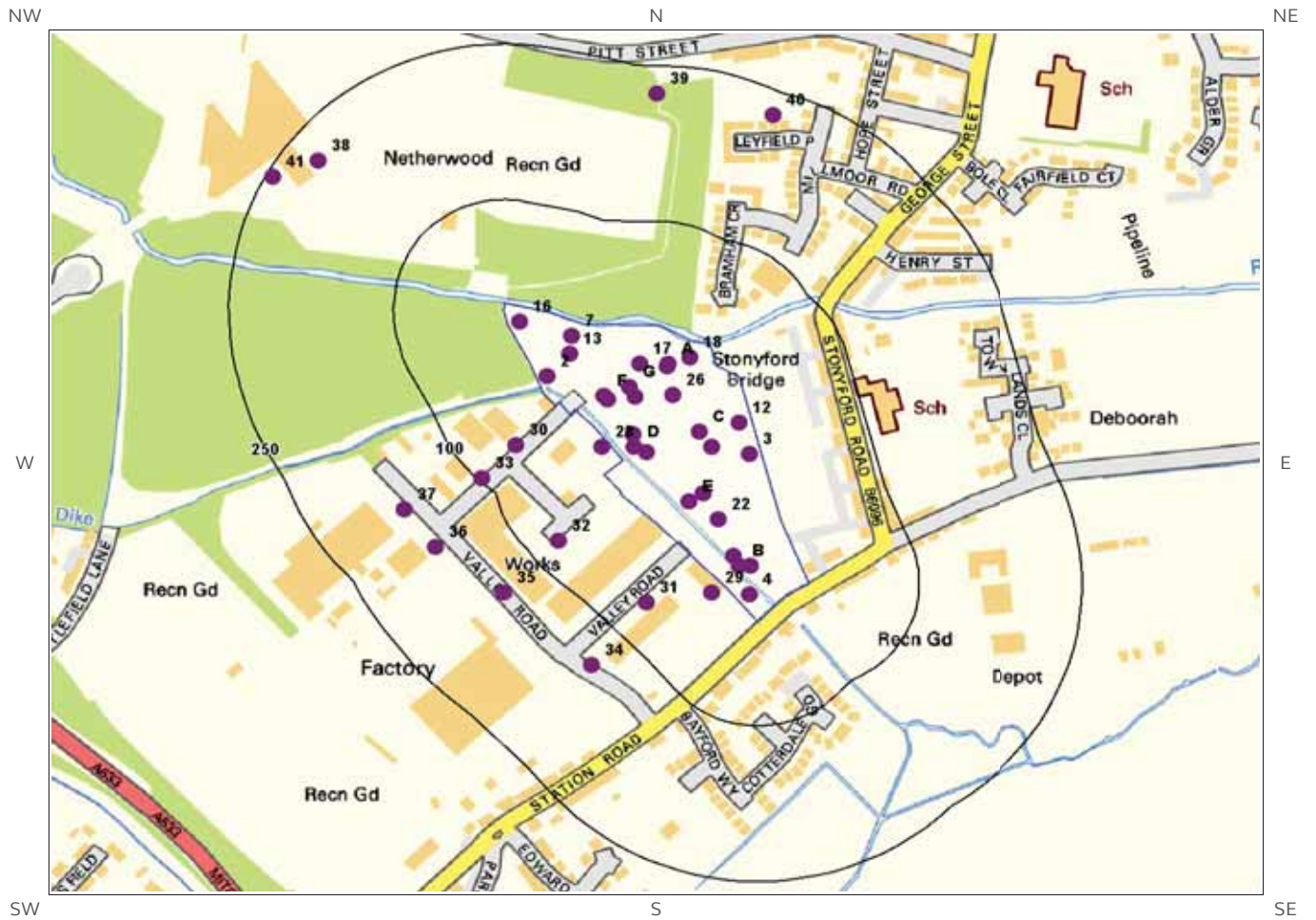
### 6.6 Running Sands

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.

ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Low	<p>Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.</p>

# 7 Borehole Records map



Borehole Records Legend

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# 7 Borehole Records

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

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

41

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	0.0	On Site	440480 403720	SE40SW223	20.55	BARNSELY-DONCASTER RD BH3A
2	0.0	On Site	440370 403708	SE40SW555	-1.0	STATION ROAD WOMBWELL TP110
3	0.0	On Site	440554 403633	SE40SW558	-1.0	STATION ROAD WOMBWELL TP113
4	0.0	On Site	440554 403498	SE40SW553	-1.0	STATION ROAD WOMBWELL 103
5F	0.0	On Site	440421 403689	SE40SW452	-1.0	LAND AT WOMBWELL BARNSELY 2A
6G	0.0	On Site	440445 403698	SE40SW554	-1.0	STATION ROAD WOMBWELL 104
7	0.0	On Site	440392 403747	SE40SW556	-1.0	STATION ROAD WOMBWELL TP111
8E	0.0	On Site	440499 403588	SE40SW565	-1.0	STATION ROAD WOMBWELL WS120
9A	0.0	On Site	440479 403718	SE40SW557	-1.0	STATION ROAD WOMBWELL TP112
10B	0.0	On Site	440545 403526	SE40SW563	-1.0	STATION ROAD WOMBWELL TP118
11C	0.0	On Site	440508 403655	SE40SW567	-1.0	STATION ROAD WOMBWELL WS122
12	0.0	On Site	440545 403663	SE40SW559	-1.0	STATION ROAD WOMBWELL TP114
13	0.0	On Site	440390 403730	SE40SW67/H	16.4	STATION ROAD WOMBWELL 8
14B	0.0	On Site	440539 403535	SE40SW562	-1.0	STATION ROAD WOMBWELL TP117
15B	0.0	On Site	440555 403526	SE40SW564	-1.0	STATION ROAD WOMBWELL TP119
16	0.0	On Site	440345 403761	SE40SW551	-1.0	STATION ROAD WOMBWELL 101
17	0.0	On Site	440454 403720	SE40SW453	-1.0	LAND AT WOMBWELL BARNSELY 3
18	0.0	On Site	440500 403726	SE40SW552	-1.0	STATION ROAD WOMBWELL 102
19D	0.0	On Site	440449 403640	SE40SW569	-1.0	STATION ROAD WOMBWELL WS124
20C	0.0	On Site	440520 403640	SE40SW67/J	15.5	STATION ROAD WOMBWELL 10
21D	0.0	On Site	440448 403652	SE40SW451	-1.0	LAND AT WOMBWELL BARNSELY 1
22	0.0	On Site	440526 403570	SE40SW561	-1.0	STATION ROAD WOMBWELL TP116

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23D	0.0	On Site	440460 403635	SE40SW566	-1.0	STATION ROAD WOMBWELL WS121
24E	0.0	On Site	440512 403595	SE40SW568	-1.0	STATION ROAD WOMBWELL WS123
25F	0.0	On Site	440425 403686	SE40SW560	-1.0	STATION ROAD WOMBWELL TP115
26	0.0	On Site	440484 403690	SE40SW455	-1.0	LAND AT WOMBWELL BARNLEY 5
27G	0.0	On Site	440450 403688	SE40SW454	-1.0	LAND AT WOMBWELL BARNLEY 4
28	7.0	SW	440420 403640	SE40SW67/I	14.0	STATION ROAD WOMBWELL 9
29	13.0	SW	440520 403500	SE40SW222	11.35	BARNLEY-DONCASTER RD BH3
30	53.0	SW	440341 403642	SE40SW67/B	6.9	STATION ROAD WOMBWELL 2
31	62.0	SW	440460 403490	SE40SW67/G	14.0	STATION ROAD WOMBWELL 7
32	73.0	SW	440380 403550	SE40SW67/E	20.0	STATION ROAD WOMBWELL 5
33	98.0	SW	440310 403610	SE40SW67/L	13.5	STATION ROAD WOMBWELL 12
34	140.0	SW	440410 403430	SE40SW67/F	16.0	STATION ROAD WOMBWELL 6
35	143.0	SW	440330 403500	SE40SW67/K	13.5	STATION ROAD WOMBWELL 11
36	169.0	SW	440268 403544	SE40SW67/C	6.95	STATION ROAD WOMBWELL 3
37	169.0	SW	440240 403580	SE40SW539	-1.0	WOMBWELL BARNLEY 4
38	219.0	NW	440161 403916	SE40SW79	637.88	DARFIELD COLLIERY NO.3
39	222.0	N	440470 403980	SE40SW221	7.0	BARNLEY-DONCASTER RD BH2A
40	227.0	N	440576 403960	SE40SW29	30.48	LOW VALLEY PUMPING STATION
41	244.0	NW	440120 403900	SE40SW47/B	573.63	DARFIELD MAIN COLLIERY 3

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.

#1A: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106386](https://scans.bgs.ac.uk/sobi_scans/boreholes/106386)  
#13: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106224](https://scans.bgs.ac.uk/sobi_scans/boreholes/106224)  
#20C: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106226](https://scans.bgs.ac.uk/sobi_scans/boreholes/106226)  
#28: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106225](https://scans.bgs.ac.uk/sobi_scans/boreholes/106225)  
#29: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106385](https://scans.bgs.ac.uk/sobi_scans/boreholes/106385)  
#30: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106218](https://scans.bgs.ac.uk/sobi_scans/boreholes/106218)  
#31: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106223](https://scans.bgs.ac.uk/sobi_scans/boreholes/106223)  
#32: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106221](https://scans.bgs.ac.uk/sobi_scans/boreholes/106221)  
#33: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106228](https://scans.bgs.ac.uk/sobi_scans/boreholes/106228)  
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#35: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106227](https://scans.bgs.ac.uk/sobi_scans/boreholes/106227)  
#36: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106219](https://scans.bgs.ac.uk/sobi_scans/boreholes/106219)  
#38: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106242](https://scans.bgs.ac.uk/sobi_scans/boreholes/106242)  
#39: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106384](https://scans.bgs.ac.uk/sobi_scans/boreholes/106384)  
#40: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106157](https://scans.bgs.ac.uk/sobi_scans/boreholes/106157)  
#41: [scans.bgs.ac.uk/sobi\\_scans/boreholes/106178](https://scans.bgs.ac.uk/sobi_scans/boreholes/106178)

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# 8 Estimated Background Soil Chemistry

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

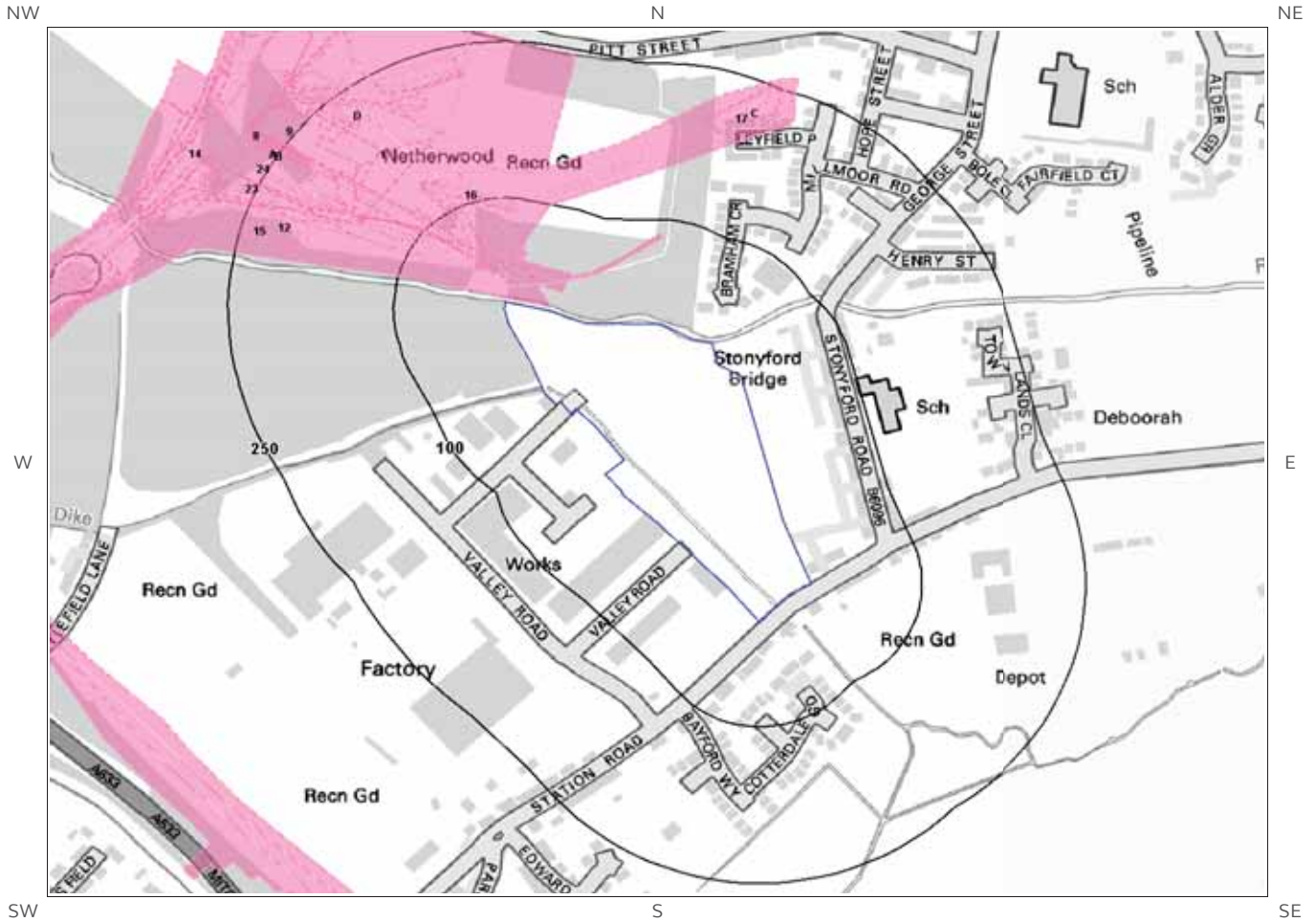
4

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

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













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

# 9 Railways and Tunnels map



Railways and Tunnels Legend

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- |   |                        |   |  |   |   |
|---|------------------------|---|--|---|---|
|  | Site Outline           |  | Underground or Partially Underground Railway / Subway System |  | Railway Track (OpenStreetMap)                         |
|  | 250 Search Buffers (m) |  | Railway Tunnel (OS Mapping)                                  |  | High Speed 2  |
|  | 500 Search Buffers (m) |  | Abandoned or Dismantled Railway (OpenStreetMap)              |  | High Speed 2 Revised Proposed Route                   |
|   |                        |  | Railway Track (OS Mapping)                                   |  | Crossrail 1   |
|   |                        |   |  |  | Railway and/or Tunnel Feature from Historical Mapping |

# 9 Railways and Tunnels

## 9.1 Tunnels

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

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

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

Database searched and no data found.

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

---

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

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

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

Database searched and no data found.

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

---

## 9.2 Historical Railway and Tunnel Features

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

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

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

ID	Distance (m)	Direction	NGR	Details	Date
1	3	N	440105 403905	Railway Sidings	1904
12	12	N	439865 403721	Railway Sidings	1906
2B	20	N	440177 404126	Railway Sidings	1977
13	26	N	439864 403719	Railway Sidings	1931
3A	31	N	440025 403891	Railway Sidings	1938
4A	31	N	440025 403891	Railway Sidings	1931

ID	Distance (m)	Direction	NGR	Details	Date
14	31	N	440045 403900	Railway Sidings	1961
5	35	N	439862 403721	Railway Sidings	1938
6A	39	N	440083 403900	Railway Sidings	1890
15	45	NW	439862 403716	Railway Sidings	1893
16	87	N	440297 403878	Tramway Sidings	1931
7B	123	N	440145 404067	Tramway Sidings	1951
8	147	NW	440102 403955	Railway Sidings	1967
9	150	NW	440057 403910	Railway Sidings	1948
10C	179	N	440556 403958	Railway Sidings	1948
17	186	N	440548 403951	Railway Sidings	1931
11C	190	N	440548 403964	Railway Sidings	1938
18D	212	NW	440197 403954	Railway Sidings	1982
19D	214	NW	440197 403954	Railway Sidings	1991
20E	219	NW	440109 403952	Railway Sidings	1982
21E	220	NW	440108 403952	Railway Sidings	1991
22	231	NW	440022 403876	Railway Sidings	1982
23	232	NW	440099 403882	Railway Sidings	1991
24	234	NW	440113 403903	Railway Sidings	1982

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

### 9.3 Historical Railways

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

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

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

Database searched and no data found.

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

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

## 9.4 Active Railways

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

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

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

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above  
*Any records that have been identified are represented on the Railways and Tunnels map.*

---

## 9.5 Railway Projects

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

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

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

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

---

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

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

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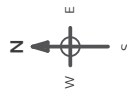
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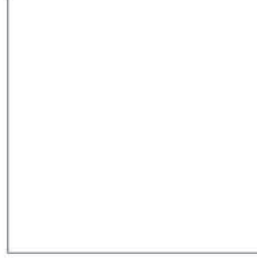
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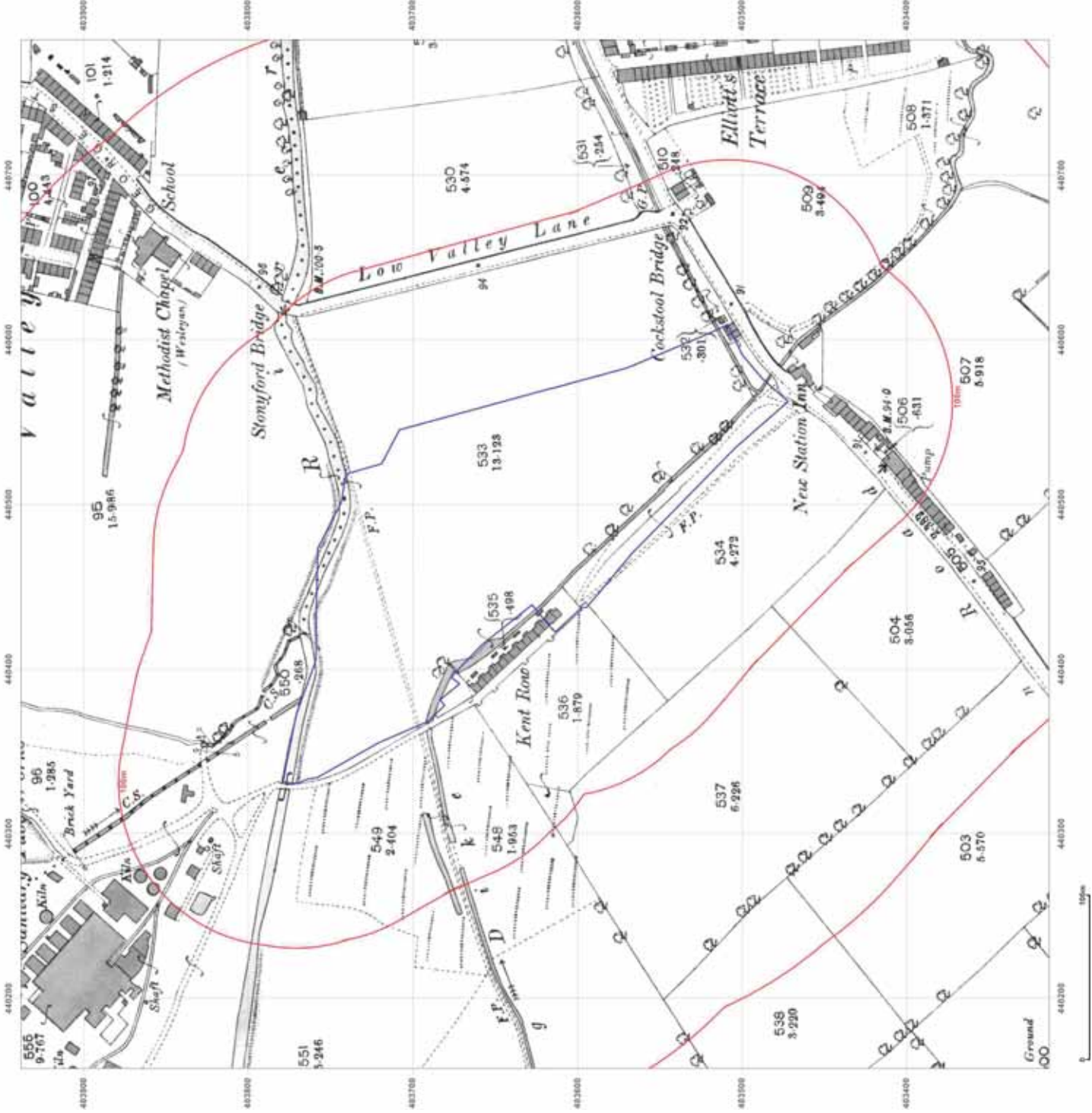


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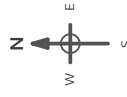
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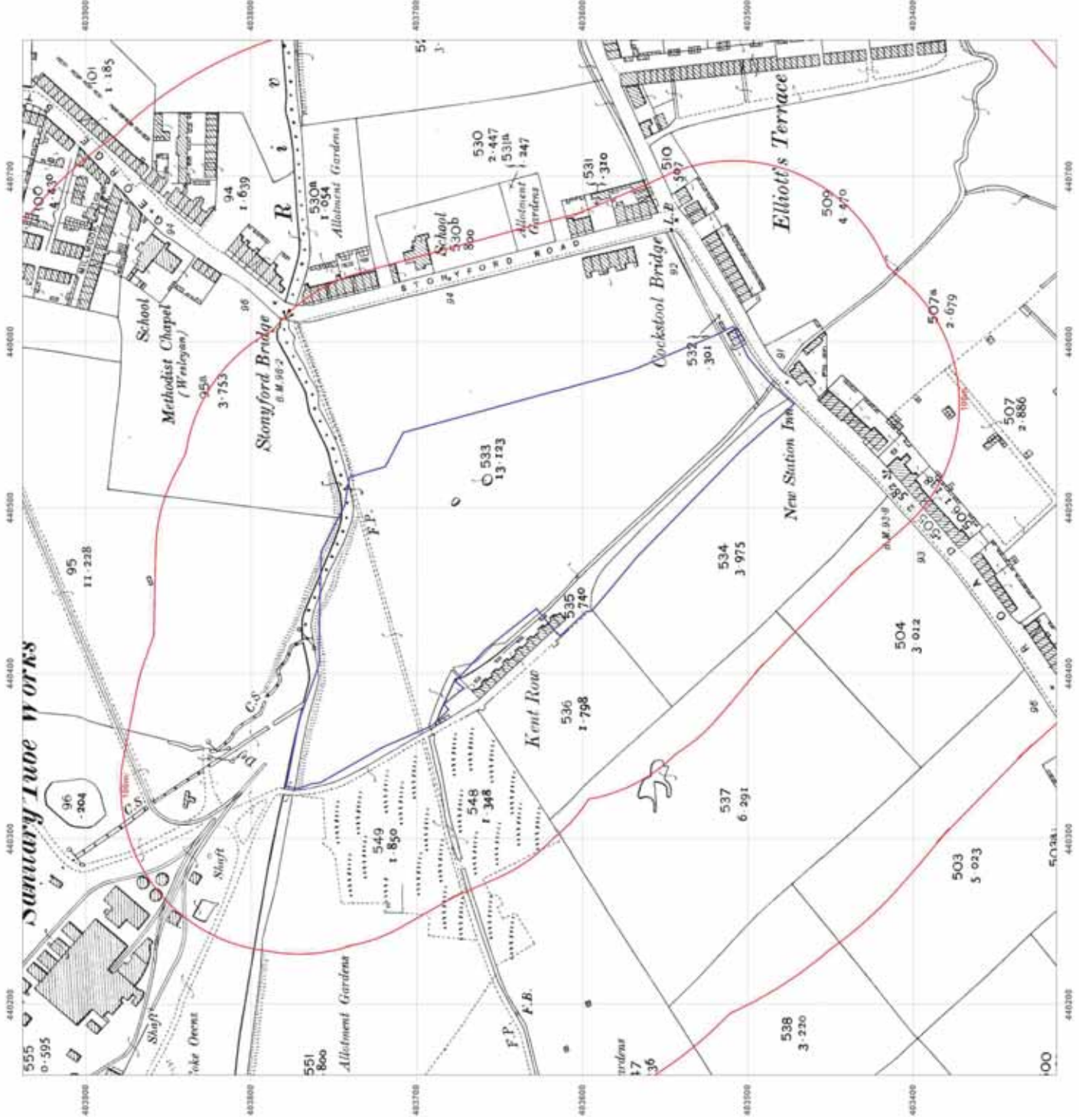


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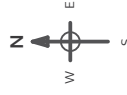
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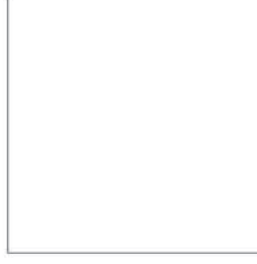
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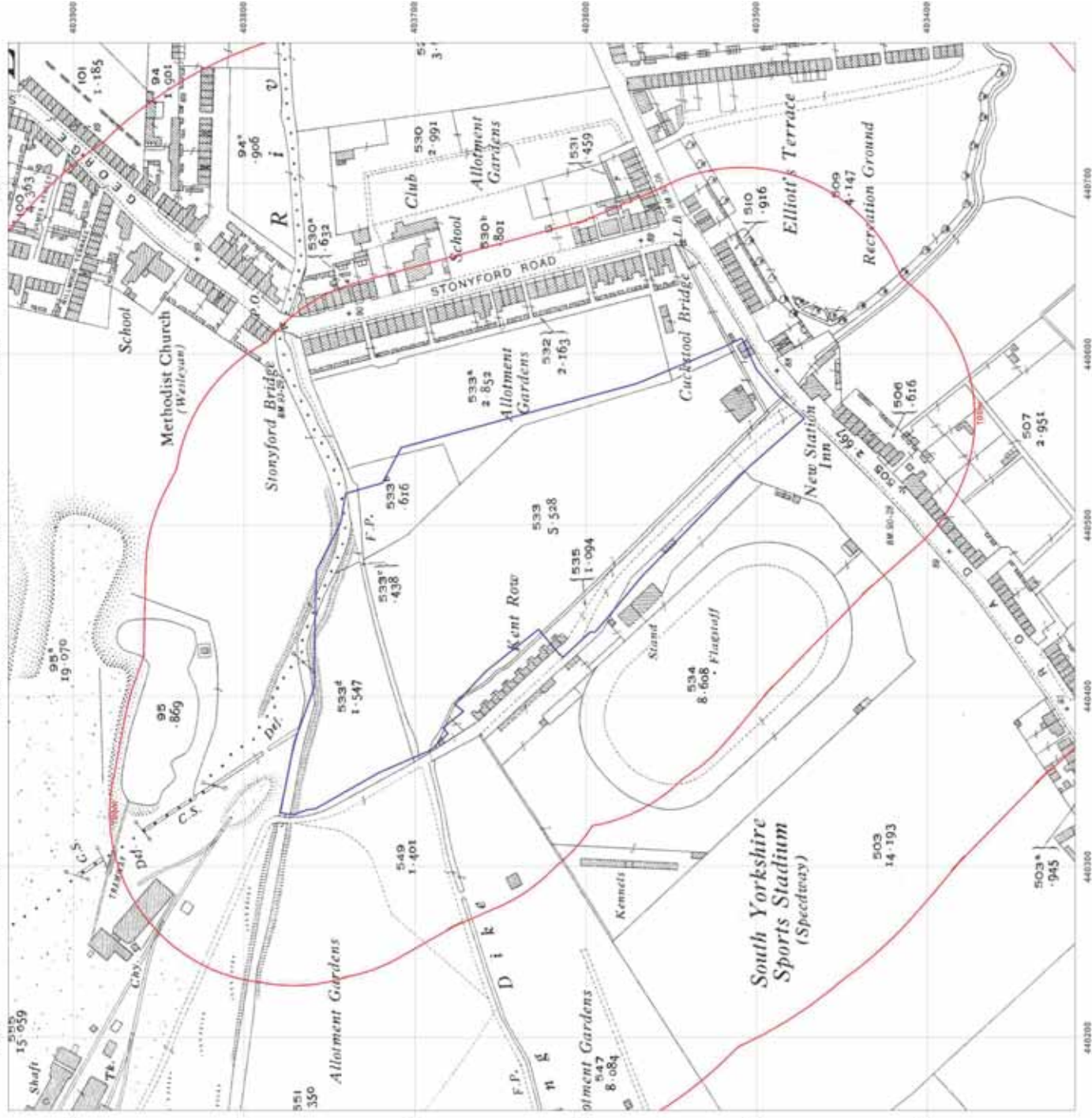


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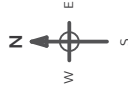
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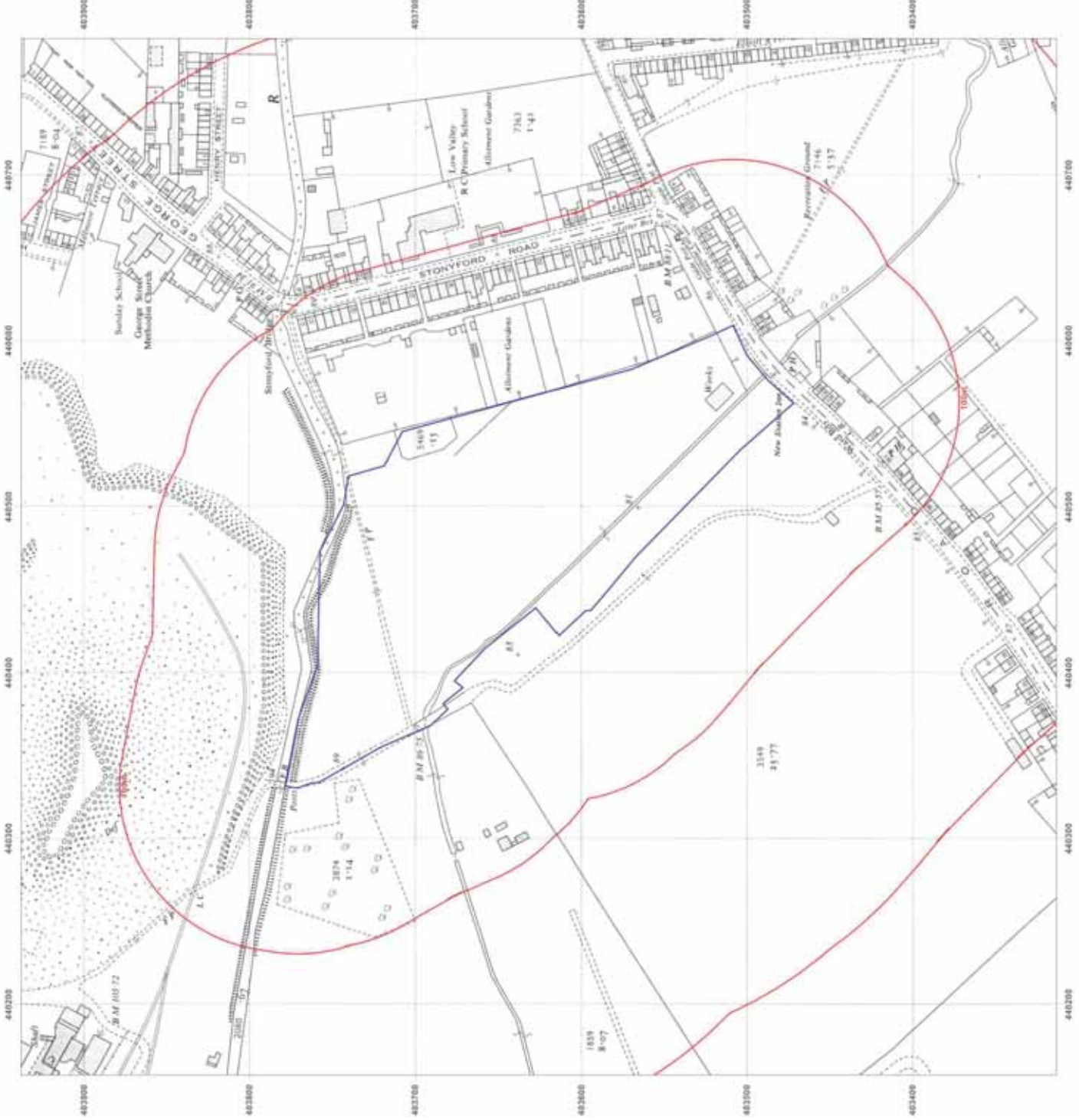


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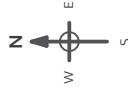
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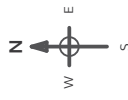
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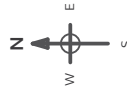
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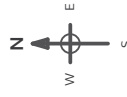
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# Overview of Findings

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

<b>Section 1: Historical Industrial Sites</b>	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	7	19	36	165
1.2 Additional Information – Historical Tank Database	0	0	13	45
1.3 Additional Information – Historical Energy Features Database	0	2	8	13
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	2	2
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	4	10	18	60

<b>Section 2: Environmental Permits, Incidents and Registers</b>	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	4
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	1	0	1
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	1	0	5
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	1
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	2	56
2.1.9 Records of Water Industry Referrals	1	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	1	0	14	2
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
<b>3.1 Landfill Sites</b>						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	1	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	2	0	0	1	6	8
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	1	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
<b>3.2 Landfill and Other Waste Sites Findings</b>						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	5	6	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	1	0	1	3	6

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	3	25	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	Identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

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

## Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	Yes	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	14	2	14	40	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

## Section 7: Flooding

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

## Section 8: Designated Environmentally Sensitive Sites

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

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

## Section 9: Natural Hazards

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

## Section 10: Mining

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

# Using this report

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

## 1. Historical Industrial Sites

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

## 2. Environmental Permits, Incidents and Registers

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

## 3. Landfills and Other Waste Sites

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

## 4. Current Land Uses

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

## 5. Geology

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

## 6. Hydrogeology and Hydrology

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

## 7. Flooding

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

## 8. Designated Environmentally Sensitive Sites

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

## 9. Natural Hazards

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

## 10. Mining

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

## 11. Contacts

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

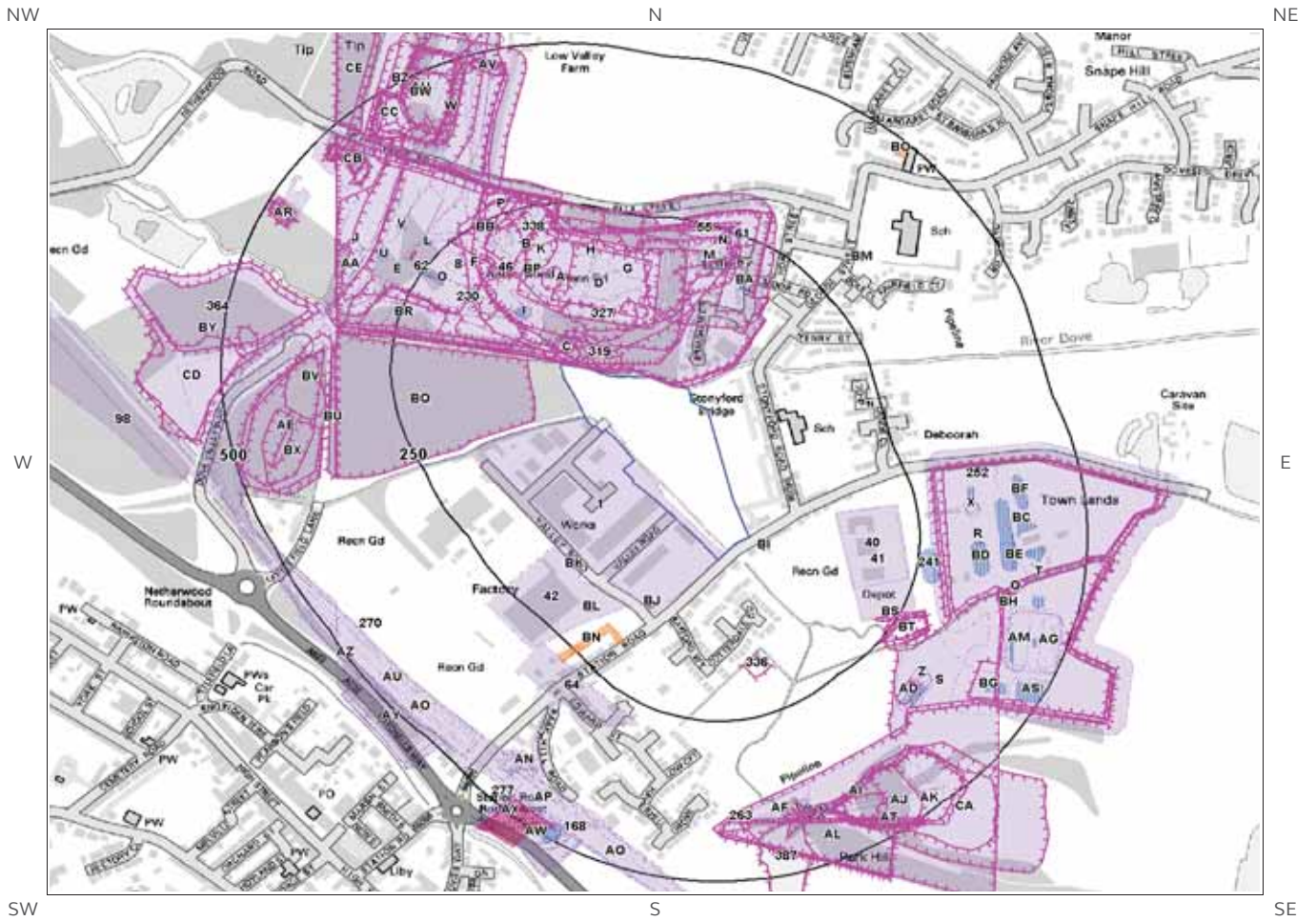
### Note: Maps

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

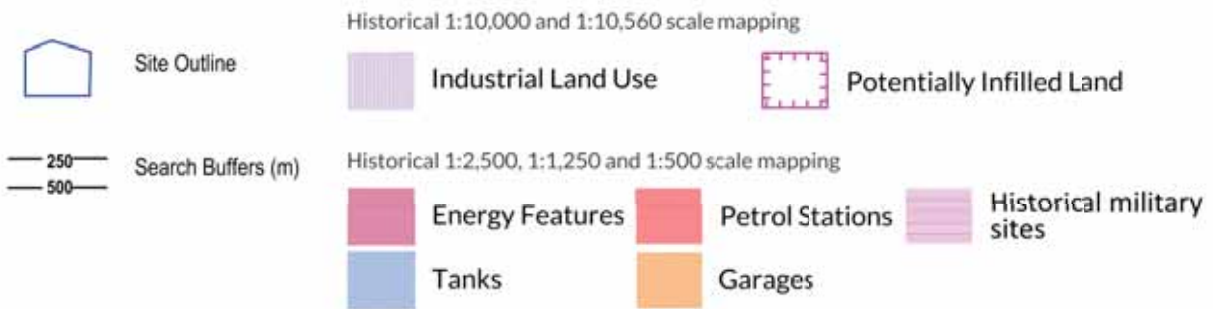
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

# 1. Historical Land Use



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# 1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 227

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Unspecified Works	1988
2K	0	On Site	Colliery	1948
3A	0	On Site	Colliery	1938
4A	0	On Site	Colliery	1938
5BP	0	On Site	Colliery	1977
6B	0	On Site	Colliery	1938
7B	0	On Site	Colliery	1931
8	3	N	Railway Sidings	1904
9F	3	N	Sanitary Tube Works	1904
10C	5	N	Refuse Heap	1938
11C	5	N	Refuse Heap	1938
12C	7	N	Refuse Heap	1938
13C	7	N	Refuse Heap	1931
14B	8	N	Unspecified Mine	1967
15D	8	N	Refuse Heap	1967
16BB	17	N	Colliery	1951
17A	17	N	Refuse Heap	1951
18D	17	N	Refuse Heap	1948
19J	20	N	Railway Sidings	1977
20E	31	N	Railway Sidings	1938
21E	31	N	Railway Sidings	1931
22	35	N	Railway Sidings	1938
23E	39	N	Railway Sidings	1890
24F	39	N	Sanitary Tube Works	1890
25D	39	N	Unspecified Ground Workings	1977
26BQ	48	W	Refuse Heap	1988
27G	70	N	Refuse Heap	1938
28G	70	N	Refuse Heap	1931
29L	73	NW	Colliery	1988
30D	75	N	Refuse Heap	1988
31M	89	N	Old Colliery	1904
32H	89	N	Refuse Heap	1938
33H	89	N	Refuse Heap	1938

34I	91	NW	Unspecified Tank	1890
35I	96	NW	Unspecified Tanks	1904
36I	100	NW	Unspecified Tank	1890
37I	101	NW	Unspecified Tank	1890
38J	123	N	Tramway Sidings	1951
39BA	130	N	Unspecified Works	1988
40	130	E	Unspecified Depot	1977
41	132	E	Unspecified Depot	1988
42	143	SW	Unspecified Factory	1988
43K	146	N	Unspecified Pit	1890
44E	147	NW	Railway Sidings	1967
45L	150	NW	Railway Sidings	1948
46	163	NW	Unspecified Tank	1890
47M	179	N	Railway Sidings	1948
48BR	184	NW	Refuse Heap	1904
49M	190	N	Railway Sidings	1938
50N	201	N	Pumping Station	1938
51N	201	N	Pumping Station	1931
52O	216	NW	Unspecified Tank	1890
53O	220	NW	Unspecified Tanks	1904
54BS	224	SE	Unspecified Pit	1904
55	226	N	Refuse Heap	1904
56N	226	N	Pumping Station	1938
57P	226	N	Refuse Heap	1904
58O	228	NW	Unspecified Tank	1890
59P	230	NW	Refuse Heap	1890
60O	239	NW	Unspecified Tank	1890
61	244	N	Pumping Station	1948
62	249	NW	Unspecified Tank	1890
63T	264	E	Unspecified Works	1977
64	268	SW	Railway Sidings	1904
65BC	274	E	Sewage Works	1904
66Q	279	E	Sewage Works	1938
67Q	279	E	Sewage Works	1938
68R	282	E	Sewage Works	1938
69R	282	E	Sewage Works	1931
70S	284	SE	Unspecified Industrial/Commercial	1931
71S	284	SE	Unspecified Industrial/Commercial	1938
72W	287	N	Colliery	1890
73T	289	E	Sewage Works	1988
74U	304	NW	Unspecified Tank	1977
75U	304	NW	Unspecified Tank	1988
76U	304	NW	Unspecified Tank	1967
77V	311	NW	Unspecified Tank	1967

78V	312	NW	Unspecified Tank	1977
79W	314	N	Colliery	1904
80X	318	E	Unspecified Tank	1951
81X	319	E	Unspecified Tank	1938
82Z	319	SE	Unspecified Tank	1951
83X	321	E	Unspecified Tank	1948
84X	323	E	Unspecified Tank	1938
85X	323	E	Unspecified Tank	1931
86AD	324	SE	Filter Beds	1904
87AA	324	NW	Unspecified Mill	1890
88Y	325	SW	Unspecified Ground Workings	1938
89Y	325	SW	Unspecified Ground Workings	1931
90Z	327	SE	Unspecified Tank	1938
91S	331	SE	Unspecified Tank	1938
92S	331	SE	Unspecified Tank	1931
93BU	332	W	Refuse Heap	1987
94S	332	SE	Unspecified Tank	1948
95AA	334	NW	Unspecified Mill	1904
96AB	334	N	Unspecified Ground Workings	1938
97AB	334	N	Unspecified Ground Workings	1931
98	335	W	Railway Sidings	1951
99AC	336	W	Railway Sidings	1977
100AC	336	W	Railway Sidings	1966
101AD	339	SE	Unspecified Ground Workings	1938
102AD	339	SE	Unspecified Ground Workings	1931
103BV	339	W	Unspecified Heap	1966
104BW	348	NW	Unspecified Disused Workings	1988
105AE	349	W	Refuse Heaps	1948
106AE	349	W	Refuse Heap	1951
107AJ	352	SE	Brick Works	1951
108BX	364	W	Refuse Heap	1966
109BY	366	W	Refuse Heap	1977
110AI	368	SE	Unspecified Commercial/Industrial	1938
111AF	371	S	Unspecified Industrial/Commercial	1938
112AF	371	S	Unspecified Industrial/Commercial	1931
113AG	373	E	Sewage Works	1951
114AG	373	E	Unspecified Works	1967
115AG	378	E	Sewage Works	1948
116AG	380	E	Unspecified Industrial/Commercial	1938

117AG	380	E	Unspecified Industrial/Commercial	1931
118BZ	383	NW	Unspecified Disused Tip	1977
119AH	385	NW	Unspecified Ground Workings	1967
120AH	387	NW	Refuse Heap	1938
121AH	387	NW	Refuse Heap	1931
122AI	387	S	Railway Sidings	1951
123AH	391	NW	Refuse Heap	1948
124AH	393	NW	Refuse Heap	1951
125AJ	393	SE	Unspecified Quarry	1951
126AH	395	NW	Refuse Heap	1938
127AH	395	NW	Refuse Heap	1938
128AJ	399	SE	Unspecified Quarry	1938
129AJ	400	SE	Unspecified Pit	1938
130AJ	400	SE	Unspecified Pit	1931
131CA	401	SE	Unspecified Disused Tip	1988
132AG	401	E	Unspecified Tanks	1951
133AG	401	E	Unspecified Tanks	1967
134AG	401	E	Unspecified Tanks	1977
135AG	401	E	Unspecified Tanks	1988
136AH	401	NW	Refuse Heap	1904
137AF	402	S	Unspecified Works	1977
138AF	402	S	Unspecified Works	1967
139AJ	402	SE	Unspecified Pit	1948
140AK	403	SE	Unspecified Quarry	1977
141AK	403	SE	Unspecified Quarry	1967
142AG	404	E	Unspecified Tanks	1938
143AG	406	E	Unspecified Tanks	1948
144AL	407	S	Brick Works	1938
145AL	407	S	Brick Works	1938
146AM	407	E	Unspecified Tanks	1938
147AM	407	E	Unspecified Tanks	1931
148AI	407	S	Unspecified Pit	1904
149AI	407	S	Railway Sidings	1938
150AH	409	NW	Refuse Heap	1890
151AL	409	S	Brick Works	1948
152AI	410	S	Railway Sidings	1938
153AI	410	S	Railway Sidings	1931
154AN	410	SW	Railway Station	1967
155AL	411	S	Brick Works	1901
156AI	411	S	Railway Sidings	1948
157AN	417	SW	Railway Station	1951
158AN	421	SW	Railway Station	1904
159AO	421	SW	Railway Sidings	1904
160AN	422	SW	Railway Station	1931

161AN	422	SW	Railway Station	1938
162AN	423	SW	Railway Station	1938
163AN	424	SW	Railway Station	1890
164AN	425	SW	Railway Station	1948
165AO	425	SW	Railway Sidings	1948
166CC	427	NW	Unspecified Pit	1904
167AP	432	SW	Railway Sidings	1938
168	437	SW	Railway Sidings	1951
169AQ	441	SW	Railway Sidings	1938
170AP	442	SW	Railway Sidings	1938
171AP	442	SW	Railway Sidings	1931
172AQ	445	SW	Railway Sidings	1948
173AQ	447	SW	Railway Sidings	1901
174AU	448	SW	Railway Sidings	1951
175CD	448	W	Refuse Heap	1966
176AR	450	NW	Unspecified Heap	1938
177AR	450	NW	Unspecified Heap	1931
178AS	450	SE	Unspecified Heap	1938
179AS	450	SE	Unspecified Heap	1931
180AT	450	SE	Unspecified Ground Workings	1938
181AT	450	SE	Unspecified Ground Workings	1938
182AR	453	NW	Unspecified Mill	1890
183AR	453	NW	Unspecified Heap	1948
184AR	454	NW	Unspecified Heap	1938
185AR	454	NW	Unspecified Heap	1938
186AU	454	SW	Railway Sidings	1938
187AU	454	SW	Railway Sidings	1931
188AG	454	E	Unspecified Tanks	1938
189AG	454	E	Unspecified Tanks	1931
190AR	457	NW	Unspecified Heap	1951
191AV	457	N	Unspecified Heap	1938
192AV	457	N	Unspecified Heap	1938
193AT	458	SE	Unspecified Pit	1901
194AV	461	N	Unspecified Heap	1948
195CE	465	NW	Refuse Heap	1988
196AV	467	N	Unspecified Heap	1951
197AW	470	SW	Unspecified Works	1967
198AW	471	SW	Unspecified Commercial/Industrial	1951
199AW	474	SW	Unspecified Commercial/Industrial	1938
200AX	475	SW	Gas Works	1904
201AX	476	SW	Gas Works	1890
202AX	476	SW	Unspecified Commercial/Industrial	1938

203AX	476	SW	Unspecified Industrial/Commercial	1938
204AX	476	SW	Unspecified Industrial/Commercial	1931
205AW	477	SW	Unspecified Commercial/Industrial	1948
206AX	477	SW	Unspecified Commercial/Industrial	1948
207AW	478	SW	Unspecified Tanks	1967
208AW	478	SW	Unspecified Tank	1938
209AX	480	SW	Unspecified Tank	1951
210AX	480	SW	Unspecified Tank	1951
211AW	480	SW	Unspecified Tank	1951
212AW	481	SW	Unspecified Tank	1948
213AX	481	SW	Gasometers	1904
214AX	483	SW	Unspecified Tanks	1938
215AX	483	SW	Unspecified Tanks	1931
216AX	483	SW	Unspecified Tanks	1938
217AX	485	SW	Gasometer	1890
218AX	486	SW	Unspecified Tank	1948
219AY	486	SW	Glass Bottle Works	1904
220AY	487	SW	Glass Bottle Works	1938
221AY	487	SW	Glass Bottle Works	1931
222AY	487	SW	Glass and Bottle Works	1938
223AX	488	SW	Unspecified Tank	1948
224AU	488	SW	Unspecified Works	1967
225AY	489	SW	Glass Bottle Works	1948
226AZ	490	SW	Railway Sidings	1938
227AZ	490	SW	Railway Sidings	1931

## 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:

58

ID	Distance (m)	Direction	Use	Date
228I	89	NW	Tanks	1893
229I	89	NW	Tanks	1906
230	165	NW	Unspecified Tank	1931
231BA	172	NE	Unspecified Tank	1994
232BA	172	NE	Unspecified Tank	1993
233BA	174	NE	Unspecified Tank	1982
234BA	175	NE	Unspecified Tank	1991

235O	215	NW	Tanks	1906
236O	226	NW	Tanks	1893
237N	230	NE	Unspecified Tank	1931
238BB	246	NW	Gasometer	1893
239BB	246	NW	Unspecified Tank	1931
240BB	246	NW	Gasometer	1906
241	253	E	Tanks	1993
242L	271	NW	Tanks	1931
243J	289	NW	Unspecified Tank	1961
244J	289	NW	Unspecified Tank	1970
245U	306	NW	Unspecified Tank	1961
246V	313	NW	Unspecified Tank	1961
247BD	326	E	Tanks	1993
248X	327	E	Humus Tanks	1931
249R	329	E	Unspecified Tank	1994
250AD	331	SE	Sludge Tanks	1931
251AD	340	SE	Disused Settling Tanks	1982
252	345	E	Unspecified Tank	1931
253BC	363	E	Tanks	1993
254BC	363	E	Tanks	1994
255BD	370	E	Tanks	1993
256BE	391	E	Tanks	1998
257BE	391	E	Tanks	1993
258BH	395	E	Unspecified Tank	1931
259BC	396	E	Tanks	1993
260BC	396	E	Tanks	1998
261BF	398	E	Tanks	1993
262BF	398	E	Tanks	1998
263	402	S	Unspecified Tank	1931
264BE	410	E	Tanks	1993
265BE	410	E	Tanks	1998
266BG	415	SE	Settling Tanks	1982
267AM	418	E	Tanks	1982
268BG	426	SE	Settling Tanks	1982
269BH	430	E	Humus Tanks	1931
270	443	SW	Unspecified Tank	1893
271AM	449	E	Dosing Tank	1931
272AS	456	SE	Humus Tanks	1931
273AX	476	SW	Gas Works	1906
274AX	476	SW	Gas Works	1893
275AX	479	SW	Tanks	1961
276AW	479	SW	Unspecified Tank	1961
277	479	SW	Unspecified Tank	1931
278AW	485	SW	Unspecified Tank	1930
279AX	485	SW	Unspecified Tank	1931
280AX	485	SW	Gasometers	1893

281AX	485	SW	Gasometers	1906
282AW	485	SW	Unspecified Tank	1931
283AW	485	SW	Gasometer	1906
284AW	495	SW	Gas Works	1892
285AW	495	SW	Gas Works	1903

### 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:

23

ID	Distance (m)	Direction	Use	Date
286BI	23	SE	Electricity Substation	1982
287BI	23	SE	Electricity Substation	1993
288BJ	115	SW	Gas Governor	1994
289BJ	117	SW	Gas Governor	1982
290BK	155	SW	Gas Governor	1994
291BK	156	SW	Gas Governor	1982
292BL	187	SW	Electricity Substation	1994
293BL	189	SW	Electricity Substation	1982
294BB	246	NW	Gasometer	1906
295BB	246	NW	Gasometer	1893
296L	274	NW	Electricity Substation	1982
297L	274	NW	Electricity Substation	1991
298BM	321	NE	Electricity Substation	1994
299BM	321	NE	Electricity Substation	1993
300BM	322	NE	Electricity Substation	1982
301BM	322	NE	Electricity Substation	1991
302AX	476	SW	Gas Works	1893
303AX	476	SW	Gas Works	1906
304AX	485	SW	Gasometers	1906
305AX	485	SW	Gasometers	1893
306AW	485	SW	Gasometer	1906
307AW	495	SW	Gas Works	1892
308AW	495	SW	Gas Works	1903

### 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: 4

ID	Distance (m)	Direction	Use	Date
309BN	185	SW	Garage	1994
310BN	186	SW	Garage	1982
311BO	474	NE	Depot and Destructor Works	1976
312BO	474	NE	Depot and Destructor Works	1970

## 1.6 Historical military sites

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

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

Database searched and no data found.

## 1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 92

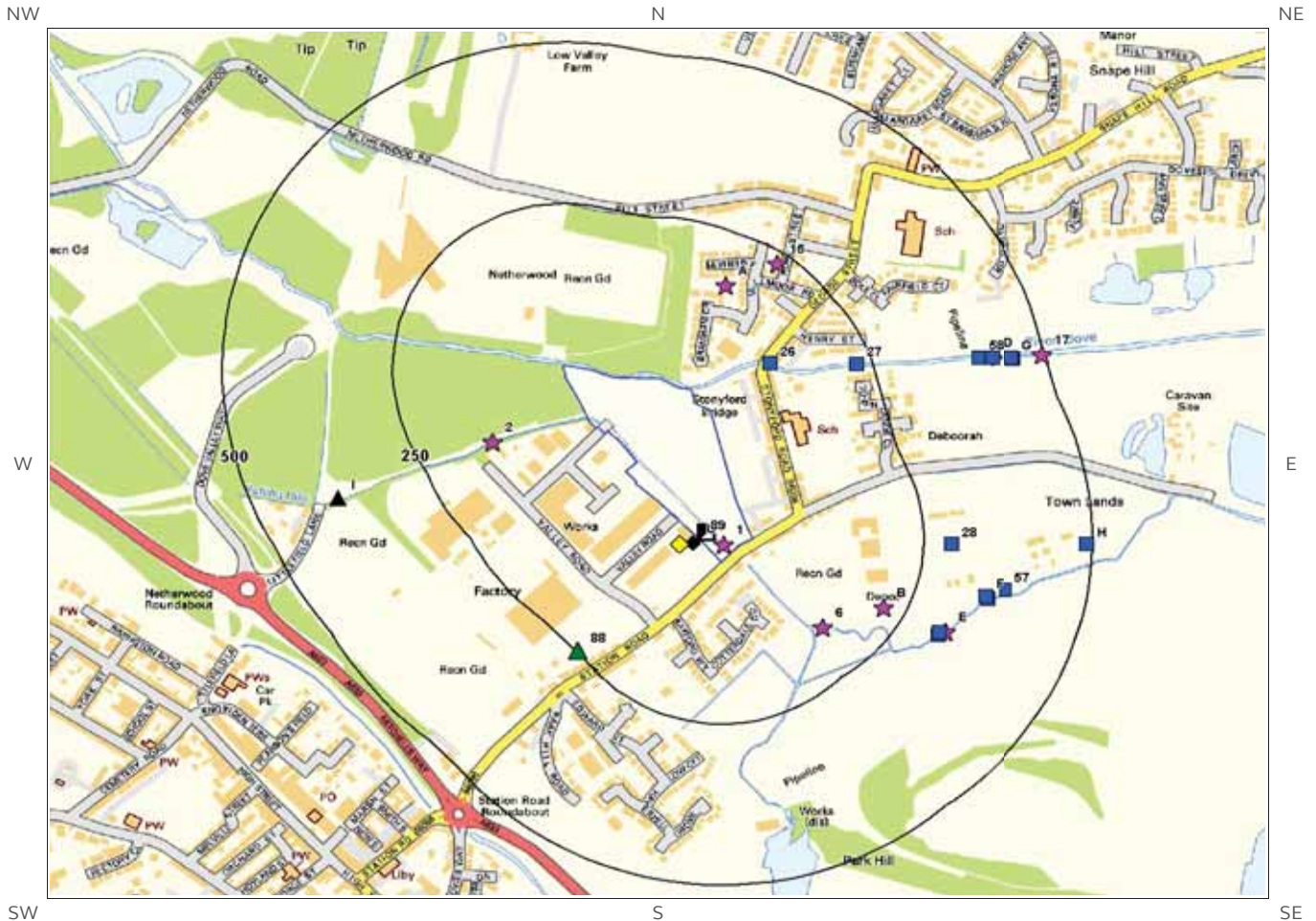
The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
313B	0	On Site	Colliery	1948
314A	0	On Site	Colliery	1938
315BP	0	On Site	Colliery	1977
316A	0	On Site	Colliery	1938
317C	5	N	Refuse Heap	1938
318C	5	N	Refuse Heap	1938
319	7	N	Pond	1948

320B	8	N	Unspecified Mine	1967
321D	8	N	Refuse Heap	1967
322BB	17	N	Colliery	1951
323A	17	N	Refuse Heap	1951
324D	17	N	Refuse Heap	1948
325D	39	N	Unspecified Ground Workings	1977
326BQ	48	W	Refuse Heap	1988
327	59	N	Pond	1938
328L	73	NW	Colliery	1988
329D	75	N	Refuse Heap	1988
330M	89	N	Old Colliery	1904
331H	89	N	Refuse Heap	1938
332H	89	N	Refuse Heap	1938
333G	91	N	Ponds	1977
334BP	117	N	Pond	1904
335B	146	N	Unspecified Pit	1890
336	156	S	Pond	1988
337BR	184	NW	Refuse Heap	1904
338	189	N	Pond	1904
339BS	224	SE	Unspecified Pit	1904
340N	226	N	Refuse Heap	1904
341P	226	N	Refuse Heap	1904
342P	230	NW	Refuse Heap	1890
343BS	244	SE	Pond	1904
344BS	244	SE	Pond	1951
345BT	253	SE	Pond	1938
346BT	254	SE	Pond	1948
347BC	274	E	Sewage Works	1904
348Q	279	E	Sewage Works	1938
349Q	279	E	Sewage Works	1938
350W	287	N	Colliery	1890
351T	289	E	Sewage Works	1988
352W	314	N	Colliery	1904
353AD	324	SE	Filter Beds	1904
354BU	332	W	Refuse Heap	1987
355BV	339	W	Unspecified Heap	1966
356BW	348	NW	Unspecified Disused Workings	1988
357AE	349	W	Refuse Heaps	1948
358AE	349	W	Refuse Heap	1951
359AJ	352	SE	Brick Works	1951
360BX	364	W	Refuse Heap	1966
361BY	366	W	Refuse Heap	1977
362AG	373	E	Sewage Works	1951
363AG	378	E	Sewage Works	1948

364	382	W	Pond	1977
365BZ	383	NW	Unspecified Disused Tip	1977
366AH	385	NW	Unspecified Ground Workings	1967
367AF	387	S	Pond	1951
368AH	391	NW	Refuse Heap	1948
369AH	393	NW	Refuse Heap	1951
370AJ	393	SE	Unspecified Quarry	1951
371AH	395	NW	Refuse Heap	1938
372AH	395	NW	Refuse Heap	1938
373AI	399	SE	Unspecified Quarry	1938
374CA	401	SE	Unspecified Disused Tip	1988
375AH	401	NW	Refuse Heap	1904
376AJ	402	SE	Unspecified Pit	1948
377AK	403	SE	Unspecified Quarry	1967
378AK	403	SE	Unspecified Quarry	1977
379CB	406	NW	Ponds	1890
380AL	407	S	Brick Works	1938
381AL	407	S	Brick Works	1938
382AI	407	S	Unspecified Pit	1904
383AH	409	NW	Refuse Heap	1890
384AL	409	S	Brick Works	1948
385CB	409	NW	Ponds	1904
386AL	411	S	Brick Works	1901
387	413	S	Ponds	1988
388CB	422	NW	Pond	1948
389CB	425	NW	Pond	1938
390CC	427	NW	Unspecified Pit	1904
391CB	437	NW	Pond	1988
392CD	448	W	Refuse Heap	1966
393AT	450	SE	Unspecified Ground Workings	1938
394AT	450	SE	Unspecified Ground Workings	1938
395AR	453	NW	Unspecified Heap	1948
396AR	454	NW	Unspecified Heap	1938
397AR	454	NW	Unspecified Heap	1938
398AR	457	NW	Unspecified Heap	1951
399AV	457	N	Unspecified Heap	1938
400AV	457	N	Unspecified Heap	1938
401AT	458	SE	Unspecified Pit	1901
402AV	461	N	Unspecified Heap	1948
403CE	465	NW	Refuse Heap	1988
404AV	467	N	Unspecified Heap	1951

# 2. Environmental Permits, Incidents and Registers Map



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

# 2. Environmental Permits, Incidents and Registers

## 2.1 Industrial Sites Holding Licences and/or Authorisations

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

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

0

Database searched and no data found.

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

4

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
90I	383	SW	440000 403570	Operator: FULTON HOLDINGS (LEEDS) LTD Installation Name: HILLSIDE POULTRY FARM Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: EP3535UM Original Permit Number: EP3535UM EPR Reference: - Issue Date: 29/08/2007 Effective Date: 29/08/2007 Last date noted as effective: 2018-12-03 Status: SUPERCEDED
91I	383	SW	440000 403570	Operator: FRAISER Installation Name: HILLSIDE POULTRY FARM Process: INTENSIVE FARMING; > 40,000 POULTRY Permit Number: KP3833WN Original Permit Number: KP3833WN EPR Reference: - Issue Date: 28/08/2014 Effective Date: 28/08/2014 Last date noted as effective: 2018-12-03 Status: SUPERCEDED
92I	383	SW	440000 403570	Operator: FULTON HOLDINGS (LEEDS) LTD Installation Name: HILLSIDE POULTRY FARM Process: ASSOCIATED PROCESS Permit Number: EP3535UM Original Permit Number: EP3535UM EPR Reference: - Issue Date: 29/08/2007 Effective Date: 29/08/2007 Last date noted as effective: 2018-12-03 Status: SUPERCEDED
93I	383	SW	440000 403570	Operator: FRAISER Installation Name: HILLSIDE POULTRY FARM Process: ASSOCIATED PROCESS Permit Number: KP3833WN Original Permit Number: KP3833WN EPR Reference: - Issue Date: 28/08/2014 Effective Date: 28/08/2014 Last date noted as effective: 2018-12-03

ID	Distance (m)	Direction	NGR	Details
				03 Status: SUPERCEDED

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:

2

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

ID	Distance (m)	Direction	NGR	Details
18C	11	SW	440520 403502	Name: Prestige Electroplating Station Rd Barnsley S73 0ah Status: Active Receiving Water: - Authorised Substances: Cadmium
19D	422	E	440960 403790	Name: Wombwell (new) Stw - Treated Sewage Status: Not Active Receiving Water: Any, Deve Authorised Substances: -

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

6

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

ID	Distance (m)	Direction	NGR	Details
20C	27	SW	440500 403500	Name: Prestige Electroplating, Barnsley. Status: Not Active Receiving Water: - Authorised Substances: Chromium, Copper, Cyanide, Lead, Nickel, Zinc
21D	422	E	440960 403790	Name: Barnsley Premier Leisure Hoyland Leisure Centre West Street Status: Not Active Receiving Water: None Authorised Substances: -
22D	422	E	440960 403790	Name: Barnsley Premier Leisure Wombwell Swimming Pool Hough Lane, Status: Not Active Receiving Water: None Authorised Substances: -
23D	422	E	440960 403790	Name: Watsons Anodising Ltd, Chambers Road Authorised Substances: Zinc

ID	Distance (m)	Direction	NGR	Details
				Status: Active Receiving Water: -
24D	422	E	440960 403790	Name: Wombwell Stw Status: Not Active Receiving Water: River Dearne Authorised Substances: -
25D	422	E	440960 403790	Name: Wombwell (new) Stw - Treated Sewage Status: Active Receiving Water: Deve Authorised Substances: Chromium, Copper, Lead, Nickel, Zinc

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

1

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
88	251	SW	440351 403332	Address: A & A Motors, 71 Station Road, Wombwell, Barnsley, S73 0BJ Process: Waste Oil Burner <0.4 MW Status: New Legislation Applies Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

### 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:

58

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

ID	Distance (m)	Direction	NGR	Details
26	114	NE	440633 403781	Address: GEORGE STREET DARFIELD NO 2 CSO, GEORGE STREET, WOMBWELL, BARNSELY, SOUTH YORKSHIRE, S73 8AQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: EPRUP3222GW Permit Version: 1 Receiving Water: RIVER DOVE Status: NEW ISSUED UNDER EPR 2010 Issue date: 29/09/2016 Effective Date: 29-Sep-2016 Revocation Date: -
27	227	E	440760 403780	Address: GERORGE STREET DARFIELD NO.1 CSO, GEORGE STREET, WOMBWELL, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - Receiving Water: RIVER DOVE Status: SURRENDERED UNDER EPR 2010 Issue date: 04/09/2007 Effective Date: 04-Sep-2007

ID	Distance (m)	Direction	NGR	Details	
				SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA9257 Permit Version: 1	Revocation Date: 09/01/2017
28	291	E	440900 403500	Address: FARM GAS LIMITED, WOMBWELL SEWAGE T, REATMENT WORKS, INGS ROAD, WOMBWE, LL Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: WRA6753 Permit Version: 1	Receiving Water: - Status: CONSENT REVOKED - DISCHARGE CEASED (WRA 91, SCHED 10 & 6) Issue date: 25/09/1992 Effective Date: 25-Sep-1992 Revocation Date: 22/07/1993
29E	308	SE	440881 403364	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
30E	308	SE	440881 403364	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
31E	308	SE	440881 403364	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
32E	308	SE	440881 403364	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
33E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 15	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000 Revocation Date: 30/03/2008
34E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009
35E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
36E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995

ID	Distance (m)	Direction	NGR	Details	
				Permit Version: 7	Revocation Date: 30/03/1996
37E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996
38E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 1	Receiving Water: RIVER DOVE AND BULLING DYKE Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 11/12/1990 Effective Date: 11-Dec-1990 Revocation Date: 05/03/1995
39E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 1	Receiving Water: RIVER DOVE AND BULLING DYKE Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 11/12/1990 Effective Date: 11-Dec-1990 Revocation Date: 05/03/1995
40E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 14	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
41E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
42E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 13	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998
43E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
44E	309	SE	440880 403360	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996 Revocation Date: 07/04/1998
45F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 15	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000

ID	Distance (m)	Direction	NGR	Details	
					Revocation Date: 30/03/2008
46F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009
47F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
48F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
49F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 7	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995 Revocation Date: 30/03/1996
50F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 1	Receiving Water: RIVER DOVE AND BULLING DYKE Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 11/12/1990 Effective Date: 11-Dec-1990 Revocation Date: 05/03/1995
51F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996
52F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 14	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
53F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 13	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998
54F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996

ID	Distance (m)	Direction	NGR	Details	
					Revocation Date: 07/04/1998
55F	352	E	440950 403420	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
56F	356	E	440952 403415	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
57	379	E	440980 403430	Address: BIWATER TREATMENT LTD, WOMBWELL STH, FINAL, BARNLEY - GROUNDWATER &, SURFACE WATER FROM OPERATIONS O, N SITE Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: WRA7379 Permit Version: 1	Receiving Water: DEARNE Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 24/12/1997 Effective Date: 24-Dec-1997 Revocation Date: 23/11/1998
58	403	E	440940 403790	Address: DOVESIDE DRIVE SPS, DOVESIDE DRIVE, LOW VALLEY, DARFIELD, BARNLEY, WF10 1LD Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WRA7001 Permit Version: 2	Receiving Water: RIVER DOVE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 27/02/2003 Effective Date: 27-Feb-2003 Revocation Date: -
59D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996
60D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 7	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995 Revocation Date: 30/03/1996
61D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 7	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY APPLICATION (WRA 91, SECTION 34(2)) Issue date: 06/03/1995 Effective Date: 06-Mar-1995 Revocation Date: 30/03/1996
62D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
63D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 8	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 18/03/1996 Effective Date: 31-Mar-1996 Revocation Date: 30/05/1996

ID	Distance (m)	Direction	NGR	Details	
64D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 9	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 31-May-1996 Revocation Date: 30/06/1996
65D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 1	Receiving Water: RIVER DOVE AND BULLING DYKE Status: TRANSFERRED FROM WATER ACT 1989 Issue date: 11/12/1990 Effective Date: 11-Dec-1990 Revocation Date: 05/03/1995
66D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996 Revocation Date: 07/04/1998
67D	422	E	440960 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 10	Receiving Water: RIVER DOVE AND BULLING DYKE Status: REVISED CONSENT, BY NOTICE (SECTION 37(1)) Issue date: 22/05/1996 Effective Date: 01-Jul-1996 Revocation Date: 07/04/1998
68G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 13	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998
69G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 14	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
70G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 14	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 09-Sep-1998 Revocation Date: 30/12/2000
71G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 15	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000 Revocation Date: 30/03/2008
72G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNSELY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009

ID	Distance (m)	Direction	NGR	Details	
73G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 16	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 25/02/2005 Effective Date: 31-Mar-2008 Revocation Date: 30/03/2009
74G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
75G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 18	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2009 Effective Date: 31-Mar-2009 Revocation Date: 31/03/2009
76G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
77G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 19	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/10/2009 Effective Date: 01-Apr-2009 Revocation Date: 31/03/2018
78G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 15	Receiving Water: RIVER DOVE AND BULLING DYKE Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 09/09/1998 Effective Date: 31-Dec-2000 Revocation Date: 30/03/2008
79G	451	E	440990 403790	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 13	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 08/04/1998 Effective Date: 08-Apr-1998 Revocation Date: 08/09/1998
80G	453	E	440993 403788	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -
81G	453	E	440993 403788	Address: WOMBWELL WWTW, INGS ROAD, BARNLEY, SOUTH YORKSHIRE Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: WA 6273 Permit Version: 20	Receiving Water: RIVER DOVE AND BULLING DYKE Status: VARIED UNDER EPR 2010 Issue date: 29/03/2018 Effective Date: 01-Apr-2018 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details	
82H	491	E	441100 403500	Address: WOMBWELL WPC WORKS STORM TANKS Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: E706(SS) Permit Version: 1	Receiving Water: BULLING DYKE Status: REVOKED - UNSPECIFIED Issue date: 16/11/1981 Effective Date: 16-Nov-1981 Revocation Date: 04/11/1992
83H	491	E	441100 403500	Address: WOMBWELL WPC WORKS STORM TANKS Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: E706 (SS) Permit Version: 1	Receiving Water: BULLING DYKE Status: REVOKED - UNSPECIFIED Issue date: 16/11/1981 Effective Date: 16-Nov-1981 Revocation Date: 04/11/1992

### 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
94C	0	On Site	PRESTIGE ELECTRO PLATING, UNIT 9 STATION ROAD INDUSTRIAL, WOMBWELL, BARNESLEY, SOUTH YORKSHIRE, S73 0AH	BY8292	SHEFFIELD CITY COUNCIL	06-Jan-2005	01-Jan-2015	RECEIVED

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

0

Database searched and no data found.

## 2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.



ID	Distance (m)	Direction	NGR	Details	
				Pollutant Description: Other Specific Waste Material	
11B	218	SE	440799 403402	Incident Date: 30-Apr-2003 Incident Identification: 155143 Pollutant: Specific Waste Materials Pollutant Description: Batteries	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
12B	218	SE	440799 403402	Incident Date: 30-Apr-2003 Incident Identification: 155143 Pollutant: Specific Waste Materials Pollutant Description: Metal Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
13B	218	SE	440799 403402	Incident Date: 30-Apr-2003 Incident Identification: 155143 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
14B	218	SE	440799 403402	Incident Date: 30-Apr-2003 Incident Identification: 155143 Pollutant: Specific Waste Materials Pollutant Description: Asbestos	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
15	231	NE	440642 403935	Incident Date: 04-Oct-2003 Incident Identification: 194315 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
16E	316	SE	440890 403365	Incident Date: 01-Aug-2002 Incident Identification: 96532 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
17	496	E	441035 403795	Incident Date: 06-Oct-2007 Incident Identification: 536392 Pollutant: Sewage Materials Pollutant Description: Final Effluent	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

0

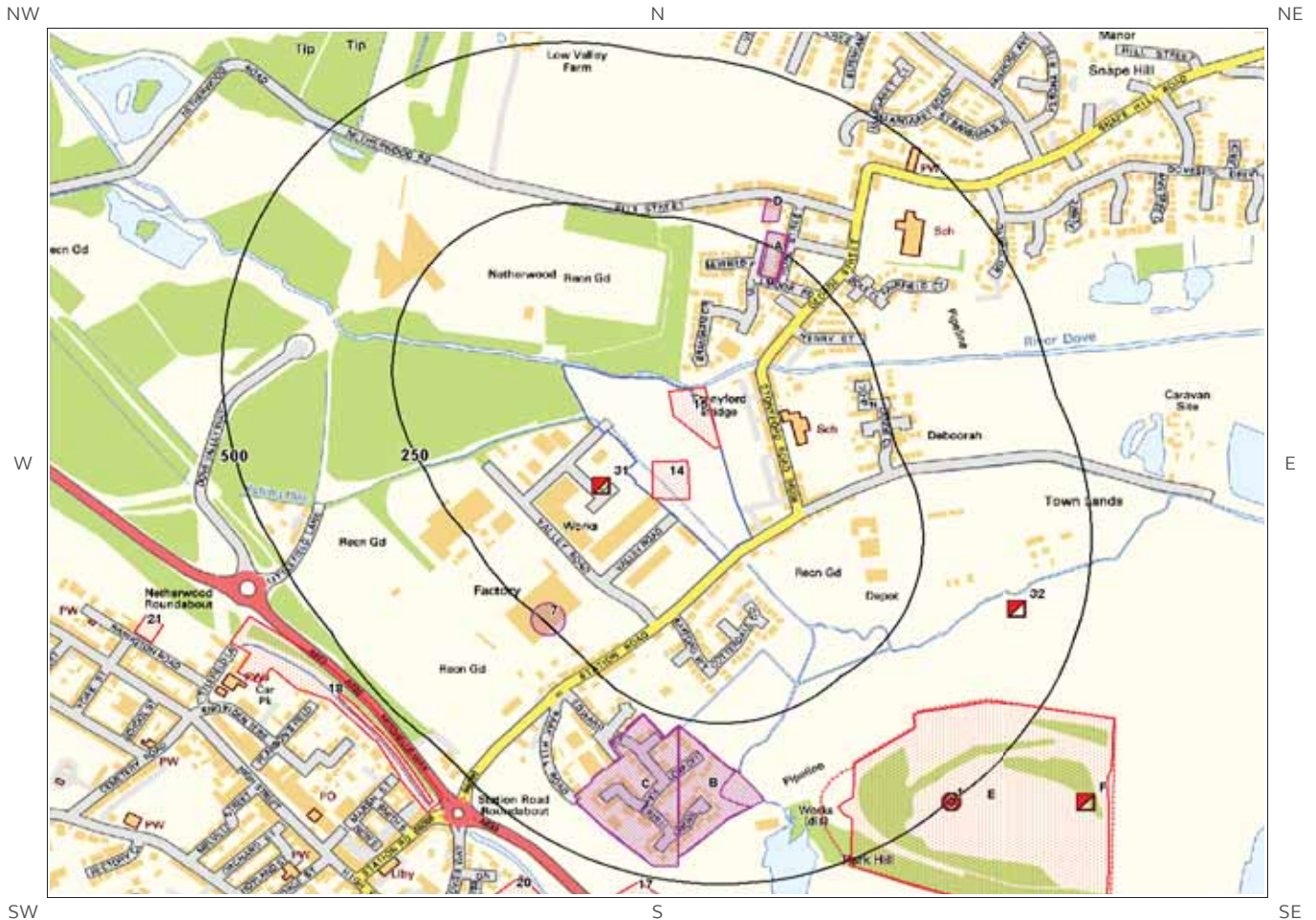
Database searched and no data found.

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










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

Database searched and no data found.

# 3. Landfill and Other Waste Sites Map



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- |   |                        |   |                           |   |   |
|---|------------------------|---|---------------------------|---|---|
|  | Site Outline           |  | EA/NRW Active Landfill    |  | Historic and Planned Waste Sites                    |
|  | 250 Search Buffers (m) |  | EA/NRW Historic Landfill  |  | EA/NRW Licensed Waste Site                          |
|  | 500 Search Buffers (m) |  | BGS / DoE Survey Landfill |  | 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
2E	361	SE	441100 403100	<p>Address: Land / Premises At, Everill Gate Lane, Wombwell, Barnsley, South Yorkshire, S73 0DX</p> <p>Landfill Reference: 60604.0</p> <p>Environmental Permitting Regulations (Waste) Reference: BDR009</p> <p>Landfill Type: A04: Household, Commercial &amp; Industrial Waste Landfill</p> <p>Operator: B D R Waste Disposal Ltd</p> <p>Status: Issued</p> <p>IPPC Reference:</p> <p>EPR Reference:</p>

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

17

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
14	0	On Site		<p>Site Address: Station Road Industrial Estate, Valley Road, Wombwell, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: 4400/(125), WD20/B803</p> <p>Waste Type: Inert</p> <p>Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 19-Dec-1990</p> <p>Licence Surrendered: 31-Dec-1993</p> <p>Licence Holder Address: -</p> <p>Operator: -</p> <p>Licence Holder: Rafahart Limited</p> <p>First Recorded: 31-Jan-1991</p> <p>Last Recorded: 31-Dec-1993</p>
15	0	On Site		<p>Site Address: Land North of Valley Road, Station Road, Industrial Estate, Wombwell, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: 20B803(110), WD20 B803, 4400/B803</p> <p>Waste Type: Inert, Commercial</p> <p>Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 19-Dec-1990</p> <p>Licence Surrendered: 28-Sep-1993</p> <p>Licence Holder Address: Hangmanstone Depot, Birdwell, Barnsley</p> <p>Operator: Rafahart Limited</p> <p>Licence Holder: Rafahart Project and Mangement Limited</p> <p>First Recorded: 01-Jan-1991</p> <p>Last Recorded: 31-Dec-1992</p>
16E	363	SE		<p>Site Address: Parkhill Quarry, Everill Gate Lane, Wombwell, Barnsley</p> <p>Licence Issue: 17-Nov-1976</p> <p>Licence Surrendered: 31-Dec-1990</p>

ID	Distance (m)	Direction	NGR	Details
				<p>Waste Licence: Yes Site Reference: 4400/B8, WD2 B8, WD2 B16, WD2 B24, 4400/B24, 4400/0410, 4400/0563 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Holder Address: Central Offices, Barnsley Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Dec-1948 Last Recorded: 31-Dec-1995</p>
17	510	S		<p>Site Address: Land To North of Wombwell Bypass, Wombwell, Barnsley Waste Licence: Yes Site Reference: WD20 B787, 4400/B787, 20B787(143) Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 13-Jun-1991 Licence Surrendered: 10-Feb-1995 Licence Holder Address: Pontefract Road, Broom Hill, Wombwell, Barnsley Operator: VHE Construction Limited Licence Holder: VHE Construction Limited First Recorded: 31-Dec-1991 Last Recorded: 10-Feb-1995</p>
18	519	SW		<p>Site Address: Disused canal between Station Road and Littlefield Road, Wombwell, Barnsley Waste Licence: Yes Site Reference: WD2 B19, WD20 B609, 4400/B609, 20B609(56) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 26-Sep-1988 Licence Surrendered: 22-Apr-1993 Licence Holder Address: Stanney Mill Road, Little Stanney, Chester Operator: Barnsley Metropolitan Borough Council Licence Holder: J L F Civil Engineering Limited First Recorded: 26-Sep-1988 Last Recorded: 22-Apr-1993</p>
19	537	SW		<p>Site Address: Disused Canal between Littlefield Lane and Station Road, Wombwell, Barnsley Waste Licence: Yes Site Reference: WD2 B17, 4400/B17 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 02-Mar-1988 Licence Surrendered: Licence Holder Address: Public Services Department, Central Offices, Kendray Street, Barnsley Operator: - Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Dec-1988 Last Recorded: 30-Nov-1990</p>
20	567	SW		<p>Site Address: Rear of Catholic Club, 23 Park Street, Wombwell, Barnsley Waste Licence: - Site Reference: (145)B, WD20 B185, 4400/(125) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: P J Burke Limited Licence Holder: Mr C W Hadfield First Recorded: 31-Dec-1979 Last Recorded: -</p>
21	700	SW		<p>Site Address: North Ferriby Tip, Church Road, North Ferriby Waste Licence: Yes Site Reference: 55/30/10, 4400/41B61 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: 13-Jul-1995 Licence Surrendered: Licence Holder Address: - Operator: Humberside County Council Licence Holder: Mr C Bell First Recorded: - Last Recorded: -</p>
Not shown	932	S		<p>Site Address: Section of disused canal between Everill Gate Lane, Wombwell Bypass, Barnsley Waste Licence: - Site Reference: 2B25(111), WD2 B25, 4400/B25 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: Public Services Department, Kendray Street, Barnsley Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 31-Oct-1990 Last Recorded: 31-Dec-1990</p>
Not shown	1050	E		<p>Site Address: End Of Ings Road, Wombwell, Barnsley Waste Licence: -</p> <p>Licence Issue: Licence Surrendered: Licence Holder Address: -</p>

ID	Distance (m)	Direction	NGR	Details
				<p>Site Reference: (123)B, 4400/(123)  Waste Type: -  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Operator: -  Licence Holder: -  First Recorded: -  Last Recorded: -</p>
Not shown	1114	SE		<p>Site Address: V H E Construction Plc,  Wath Road, Wombwell, Barnsley, South  Yorkshire  Waste Licence: Yes  Site Reference: WD20/B786, 4400/B197,  WD20/B197, 20B197, 4400/0574,  NE4238  Waste Type: Inert, Commercial, Liquid  sludge  Environmental Permitting Regulations  (Waste) Reference: YQ1/L/VHE001</p> <p>Licence Issue: 11-Jan-1978  Licence Surrendered: 10-May-1999  Licence Holder Address: Eastern Region,  British Rail, Sheaf House, Leadmill Road,  Sheffield  Operator: -  Licence Holder: Divisional Civil Engineer  First Recorded: 15-Jul-1993  Last Recorded: 31-May-1994</p>
Not shown	1114	SE		<p>Site Address: Former Clay Pit, Wath Road,  Wombwell  Waste Licence: -  Site Reference: (158)B, 4400/(158)  Waste Type: -  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue:  Licence Surrendered:  Licence Holder Address: -  Operator: British Rail  Licence Holder: British Rail/VHE  First Recorded: 31-Dec-1978  Last Recorded: 31-Dec-1994</p>
Not shown	1285	N		<p>Site Address: Land to the rear of  Brookfield, Doncaster Road, Ardsley,  Barnsley  Waste Licence: Yes  Site Reference: 4400/B568, 20B568(105),  WD20 B568  Waste Type: Inert, Commercial  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue: 11-Apr-1988  Licence Surrendered: 07-Apr-1991  Licence Holder Address: Brookfield,  Doncaster Road, Ardsley, Barnsley  Operator: S T Horrobin  Licence Holder: S T Horrobin  First Recorded: 11-Apr-1988  Last Recorded: 07-Aug-1989</p>
Not shown	1343	N		<p>Site Address: Upperwood Hall, Doncaster  Road, Darfield, Barnsley  Waste Licence: Yes  Site Reference: 4400/2B11, WD2 B11,  2B11(55)  Waste Type: Inert  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue: 04-Oct-1974  Licence Surrendered: 31-Dec-1990  Licence Holder Address: -  Operator: -  Licence Holder: South Yorkshire County  Council  First Recorded: 04-Oct-1974  Last Recorded: 31-Dec-1990</p>
Not shown	1408	S		<p>Site Address: Brampton Road, Wombwell  Waste Licence: -  Site Reference: 4400/(112)B, (112)B  Waste Type: -  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue:  Licence Surrendered:  Licence Holder Address: -  Operator: -  Licence Holder: -  First Recorded: -  Last Recorded: -</p>
Not shown	1488	SE		<p>Site Address: Land to East of A633 Road  adjacent to Knoll Beck, Broomhill,  Wombwell, Brampton, Barnsley  Waste Licence: Yes  Site Reference: WD20 B538, 4400/B538,  20B546(103), 20B538(103)  Waste Type: Inert, Commercial  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue: 03-Nov-1986  Licence Surrendered: 11-Feb-1993  Licence Holder Address: -  Operator: Wombwell Diesels Company  Limited  Licence Holder: VHE (Construction)  Limited  First Recorded: 03-Nov-1986  Last Recorded: 31-Oct-1990</p>
Not shown	1491	SE		<p>Site Address: Wath Road, Rotherham,  South Yorkshire  Waste Licence: -  Site Reference: -  Waste Type: Commercial, Household  Environmental Permitting Regulations  (Waste) Reference: -</p> <p>Licence Issue:  Licence Surrendered:  Licence Holder Address: -  Operator: Rotherham Rural District  Council  Licence Holder: -  First Recorded: 31-Dec-1969  Last Recorded: -</p>

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

1

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

ID	Distance (m)	Direction	NGR	Details	
1	502	SE	440900.0 403100.0	Address: Park Hill Tip, Wombwell, S.Yorks BGS Number: 184.0	Risk: Risk to major aquifer Waste Type: N/A

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

0

Database searched and no data found.

## 3.2 Other Waste Sites

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

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		
3A	202	NE	440638 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	202	NE	440638 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5A	203	NE	440637 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
6A	203	NE	440639 403947	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
7	219	SW	440309 403383	Type of Site: Recycling Facility Building Site Address: Station Road, Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Planning Application Reference: 2012/1211 Date: 26/06/2013	Further Details: Scheme comprises Use of site and building for a materials recycling facility including scrap metals. Data Source: Historic Planning Application Data Type: Point

ID	Distance (m)	Direction	NGR	Details		
8B	261	S	440562 403116	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
9C	261	S	440423 403118	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
10B	262	S	440553 403115	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1993	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
11C	262	S	440423 403117	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1981	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
12D	280	N	440637 404018	Type of Site: Scrap Metal Yard Site Address: N/A	Planning Application Reference: N/A Date: 1976	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
13D	280	N	440637 404018	Type of Site: Scrap Metal Yard Site Address: N/A	Planning Application Reference: N/A Date: 1970	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

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

11

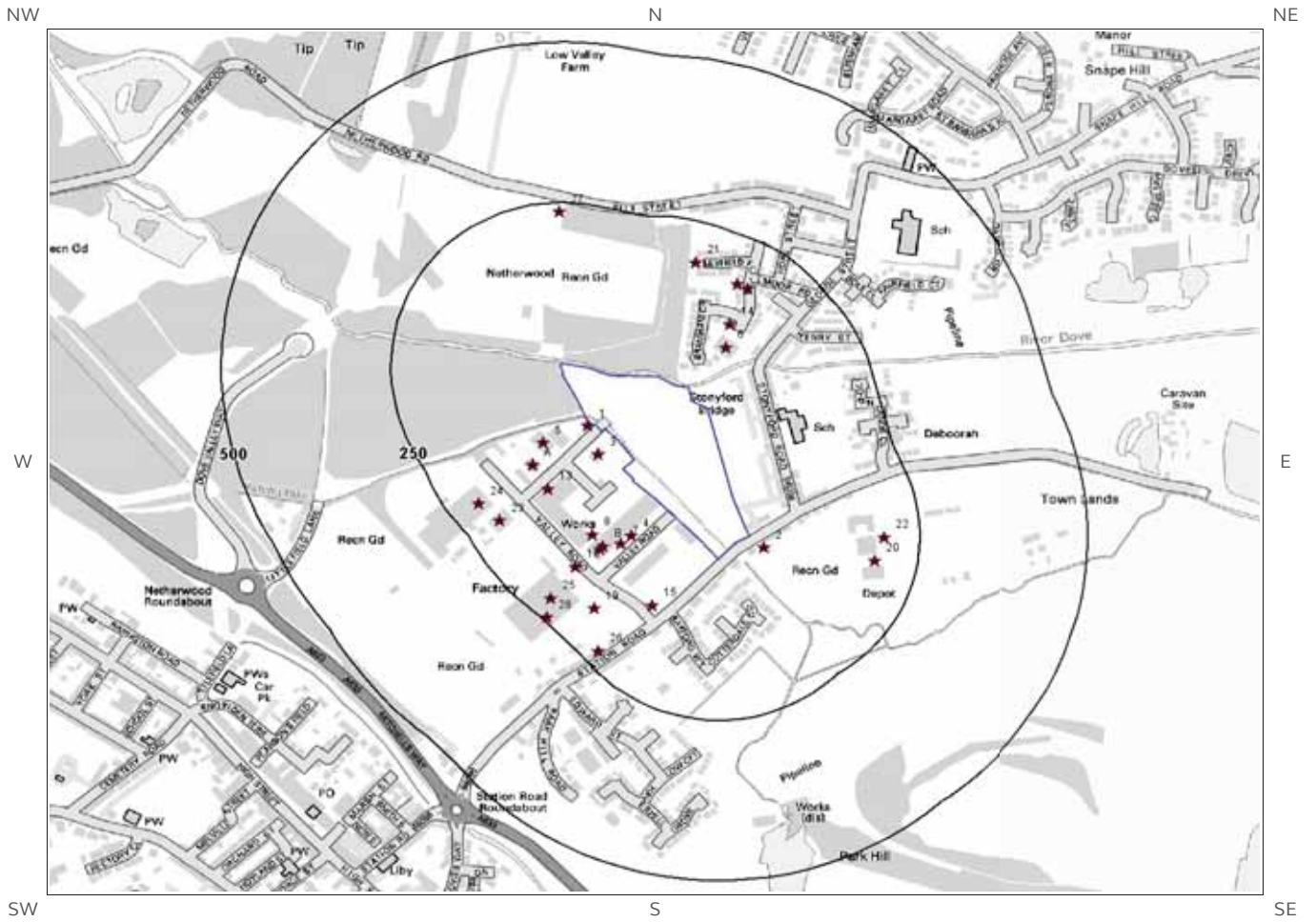
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
31	43	SW	440386 403591	Site Address: Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS Type: 75kte Metal Recycling Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GIL048 EPR reference: EA/EPR/CB3032RL/A001 Operator: Gillott Alloys Limited Waste Management licence No: 103352 Annual Tonnage: 74999.0	Issue Date: 09/01/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Gillott Alloys Ltd Correspondence Address: -
32	406	E	441000 403400	Site Address: Wombwell Wwtw, Ings Lane, Wombwell, Barnsley, South Yorkshire, S73 0BP Type: Biological Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR035 EPR reference: EA/EPR/DP3292ZS/A001 Operator: Yorkshire Water Services Ltd Waste Management licence No: 65470 Annual Tonnage: 4999.0	Issue Date: 17/05/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Wombwell Wwtw Correspondence Address: -
33F	639	SE	441100 403100	Site Address: Everhill Gate Lane, Wombwell, Barnsley, S Yorks	Issue Date: 31/03/1993 Effective Date: -

ID	Distance (m)	Direction	NGR	Details	
				Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: - Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 0.0	Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: Thurcroft Heritage Centre, Thurcroft, Rotherham, South Yorkshire, S66 9AB
34F	639	SE	441100 403100	Site Address: Land / Premises At, Everill Gate Lane, Wombwell, Barnsley, South Yorkshire, S73 0DX Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: EA/EPR/JP3490ZK/A001 Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 5000.0	Issue Date: 31/03/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: -
35F	639	SE	441100 403100	Site Address: Everhill Gate Lane, Wombwell, Barnsley, S Yorks Type: Co-Disposal Landfill Site Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR009 EPR reference: - Operator: B D R Waste Disposal Ltd Waste Management licence No: 60604 Annual Tonnage: 0.0	Issue Date: 31/03/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Parkhill Landfill Site Correspondence Address: Thurcroft Heritage Centre, Thurcroft, Rotherham, South Yorkshire, S66 9AB
Not shown	1154	SE	441200 402510	Site Address: Wath Road, Wombwell, Barnsley, S Yorks Type: Landfill taking Non-Biodegradable Wastes Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: VHE001 EPR reference: - Operator: V H E ( Construction ) Plc Waste Management licence No: 60590 Annual Tonnage: 0.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: 10/05/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: V H E Construction Plc Correspondence Address: Engine Lane, Shafton, Barnsley, S Yorks, S72 8SP
Not shown	1154	SE	441200 402510	Site Address: Wath Road, Wombwell, Barnsley, S Yorks Type: Landfill taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VHE001 EPR reference: - Operator: V H E ( Construction ) Plc Waste Management licence No: 60590 Annual Tonnage: 0.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: 10/05/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: V H E Construction Plc Correspondence Address: Engine Lane, Shafton, Barnsley, S Yorks, S72 8SP
Not shown	1154	SE	441200 402510	Site Address: Wath Road, Wombwell, Barnsley, South Yorkshire Type: Landfill taking Non-Biodegradable Wastes Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VHE001 EPR reference: EA/EPR/YP3890ZG/S002 Operator: V H E Construction Plc Waste Management licence No: 60590 Annual Tonnage: 150000.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: 10/05/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: V H E Construction Plc Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details
Not shown	1191	W	439200 404150	<p>Site Address: Mitchell's Enterprise Park, Off Bradbury Balk Lane, Wombwell, Barnsley, South Yorkshire, S73 8HR            Type: Physical Treatment Facility            Size: &gt;= 25000 tonnes &lt; 75000 tonnes            Environmental Permitting Regulations (Waste) Licence Number: CUL008            EPR reference: EA/EPR/CB3635RY/V002            Operator: G. B. Cullet Limited            Waste Management licence No: 103467            Annual Tonnage: 60000.0</p> <p>Issue Date: 28/02/2013            Effective Date: -            Modified: 11/12/2015            Surrendered Date: -            Expiry Date: -            Cancelled Date: -            Status: Modified            Site Name: The Cullet Yard            Correspondence Address: -</p>
Not shown	1191	W	439200 404150	<p>Site Address: Mitchell's Enterprise Park, Bradbury Balk Lane, Wombwell, Barnsley, South Yorks, S73 8HR            Type: Physical Treatment Facility            Size: &gt;= 25000 tonnes &lt; 75000 tonnes            Environmental Permitting Regulations (Waste) Licence Number: CUL008            EPR reference: EA/EPR/CB3635RY/A001            Operator: G B Cullet Ltd            Waste Management licence No: 103467            Annual Tonnage: 60000.0</p> <p>Issue Date: 28/02/2013            Effective Date: -            Modified: -            Surrendered Date: -            Expiry Date: -            Cancelled Date: -            Status: Issued            Site Name: The Cullet Yard            Correspondence Address: -</p>
Not shown	1191	W	439200 404150	<p>Site Address: Mitchell's Enterprise Park, Off Bradbury Balk Lane, Wombwell, Barnsley, South Yorkshire, S73 8HR            Type: Physical Treatment Facility            Size: &gt;= 25000 tonnes &lt; 75000 tonnes            Environmental Permitting Regulations (Waste) Licence Number: CUL008            EPR reference: EA/EPR/CB3635RY/V002            Operator: G B Cullet Limited            Waste Management licence No: 103467            Annual Tonnage: 60000.0</p> <p>Issue Date: 28/02/2013            Effective Date: -            Modified: 11/12/2015            Surrendered Date: -            Expiry Date: -            Cancelled Date: -            Status: Modified            Site Name: The Cullet Yard            Correspondence Address: -</p>

# 4. Current Land Use Map



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-  Site Outline
-  Current Industrial Sites
-  Electricity Transmission Cables
-  250 Search Buffers (m)
-  Petrol & Fuel Sites
-  Gas Transmission Pipelines
-  500 Search Buffers (m)

# 4. Current Land Uses

## 4.1 Current Industrial Data

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

28

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	5	SW	Europa Truck Parts Ltd	440369 403682	Unit 16 Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Vehicle Parts and Accessories	Motoring
2	26	SE	Electricity Sub Station	440629 403492	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
3	35	S	Benchmark Scaffolding	440384 403637	Max Derby House, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Construction and Tool Hire	Hire Services
4	66	SW	Works	440434 403510	South Yorkshire, S73	Unspecified Works Or Factories	Industrial Features
5	73	SW	Earlsmere Ltd	440304 403655	Unit 18 Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Office and Shop Equipment	Industrial Products
6	84	NE	Adria Glass	440573 403804	Unit 5, Low Valley Industrial Estate, Wombwell, Barnsley, South Yorkshire, S73 8AG	Glass	Industrial Products
7	86	SW	Works	440418 403498	South Yorkshire, S73	Unspecified Works Or Factories	Industrial Features
8	103	SW	Works	440376 403512	South Yorkshire, S73	Unspecified Works Or Factories	Industrial Features
9B	107	SW	G K Cars	440391 403494	Unit 1, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Secondhand Vehicles	Motoring
10A	107	SW	Watsons	440288 403620	Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Fuel Distributors and Suppliers	Household, Office, Leisure and Garden
11A	107	SW	C R S Plant	440288 403620	Unit 16 Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Construction and Tool Hire	Hire Services
12B	113	SW	Works	440387 403489	South Yorkshire, S73	Unspecified Works Or Factories	Industrial Features
13	115	W	Rouse Garage Ltd	440311 403583	Unit 1a Station Road Industrial Estate, Valley Road, Wombwell,	Vehicle Repair, Testing and Servicing	Repair and Servicing

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
Barnsley, South Yorkshire, S73 0BS							
14	116	NE	Industrial Estate	440578 403840	South Yorkshire, S73	Business Parks and Industrial Estates	Industrial Features
15	120	SW	Gas Governor Station	440464 403402	South Yorkshire, S73	Gas Features	Infrastructure and Facilities
16	157	SW	Gas Governor Station	440351 403462	South Yorkshire, S73	Gas Features	Infrastructure and Facilities
17C	177	NE	Bonjour Bake Shop	440589 403903	20, Millmoor Road, Wombwell, Barnsley, South Yorkshire, S73 8BD	Baking and Confectionery	Foodstuffs
18C	178	NE	Tank	440605 403896	South Yorkshire, S73	Tanks (Generic)	Industrial Features
19	185	SW	Electricity Sub Station	440379 403397	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
20	187	E	Depot	440792 403472	South Yorkshire, S73	Container and Storage	Transport, Storage and Delivery
21	187	N	Mr Interiors	440528 403936	20, Leyfield Place, Wombwell, Barnsley, South Yorkshire, S73 8BF	Building and Component Suppliers	Construction Services
22	197	E	Council Depot	440806 403508	South Yorkshire, S73	Container and Storage	Transport, Storage and Delivery
23	200	SW	Linac Services Ltd	440239 403534	Unit 22 Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Industrial Engineers	Engineering Services
24	206	SW	Naylor Amco Plastics	440209 403560	Unit 17, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	Construction Completion Services	Construction Services
25	218	SW	Factory	440315 403413	South Yorkshire, S73	Unspecified Works Or Factories	Industrial Features
26	226	SW	A & A Motors	440385 403331	71, Station Road, Wombwell, Barnsley, South Yorkshire, S73 0BJ	Vehicle Repair, Testing and Servicing	Repair and Servicing
27	236	N	Electricity Sub Station	440327 404015	South Yorkshire, S73	Electrical Features	Infrastructure and Facilities
28	244	SW	Safe Style	440309 403383	Station Road Industrial Estate, Valley Road, Wombwell, Barnsley, South Yorkshire, S73 0BS	General Construction Supplies	Industrial Products

## 4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

### 4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

Database searched and no data found.

---

### 4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

---

# 5. Geology

## 5.1 Artificial Ground and Made Ground

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

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

## 5.2 Superficial Ground and Drift Geology

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

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

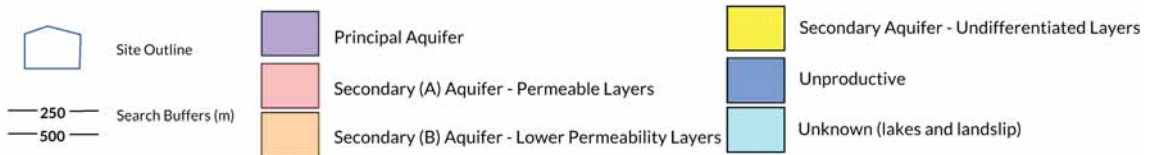
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

# 6 Hydrogeology and Hydrology

## 6a. Aquifer Within Superficial Geology

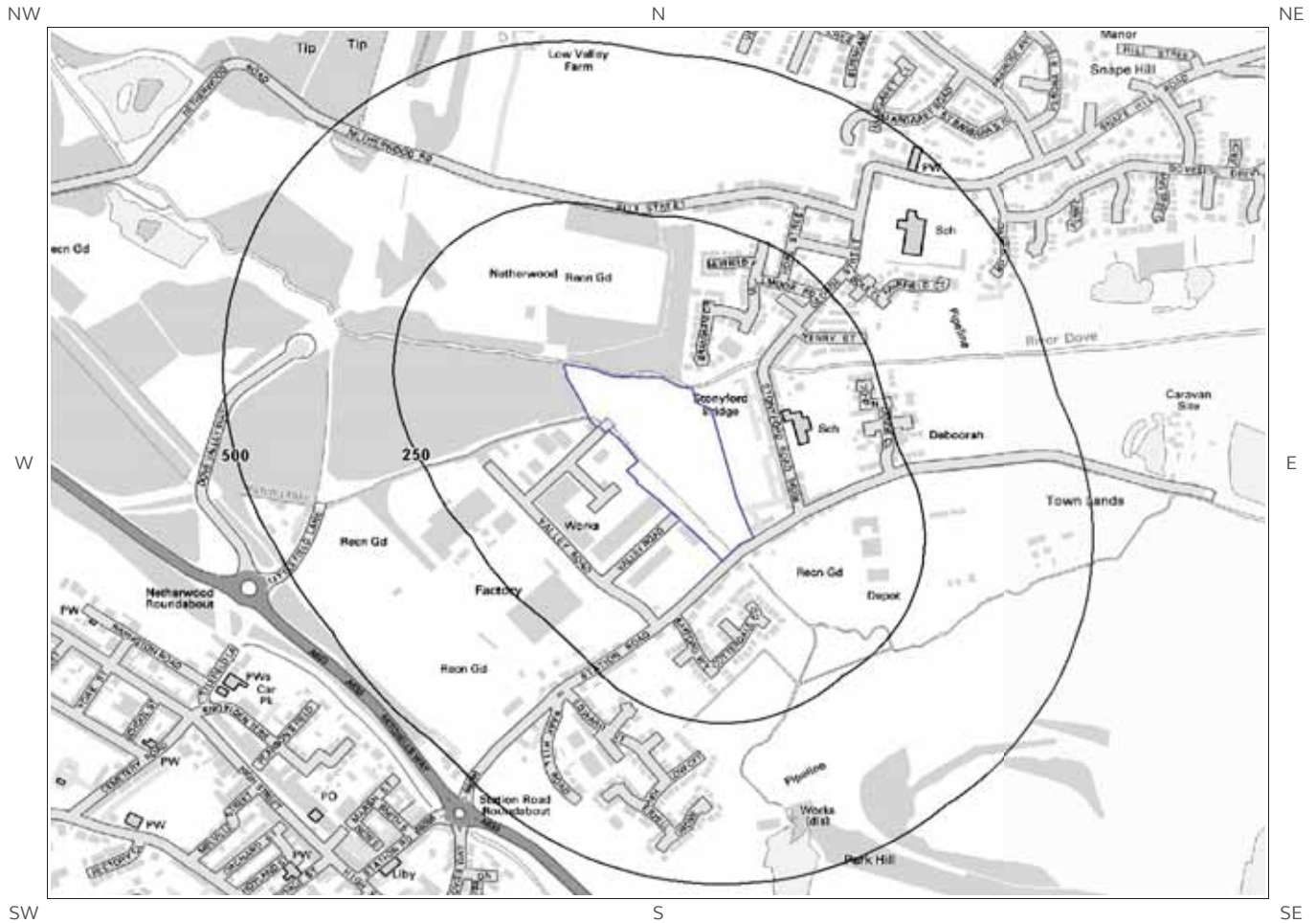


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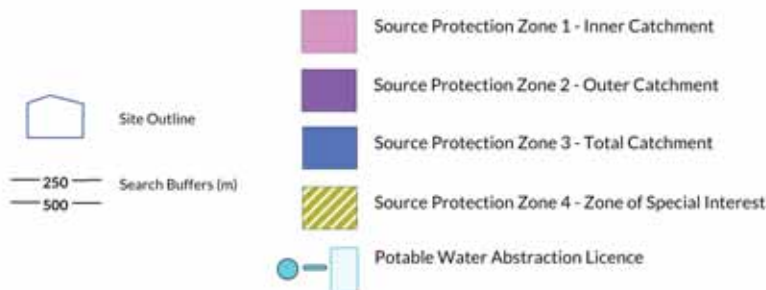




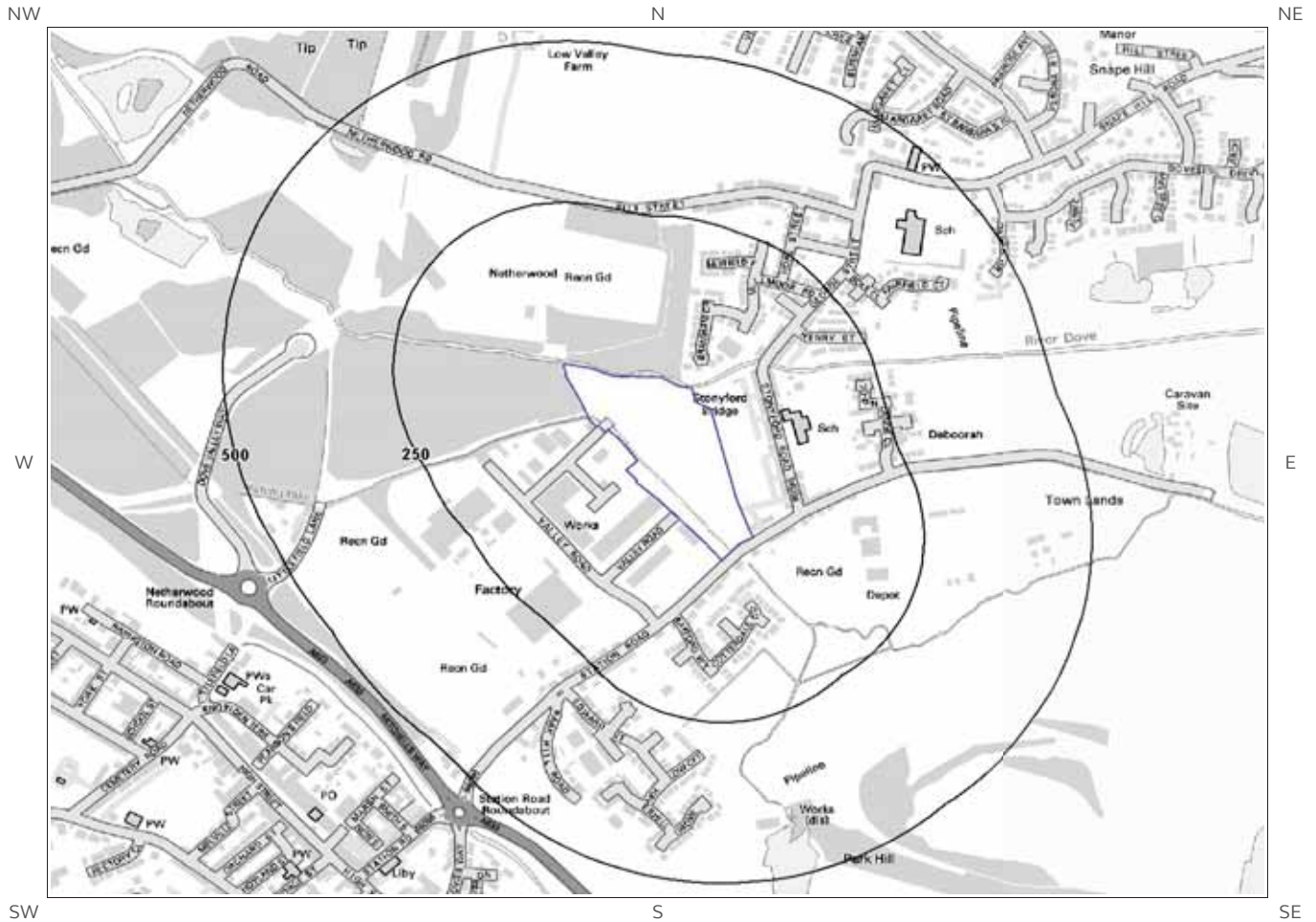
# 6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



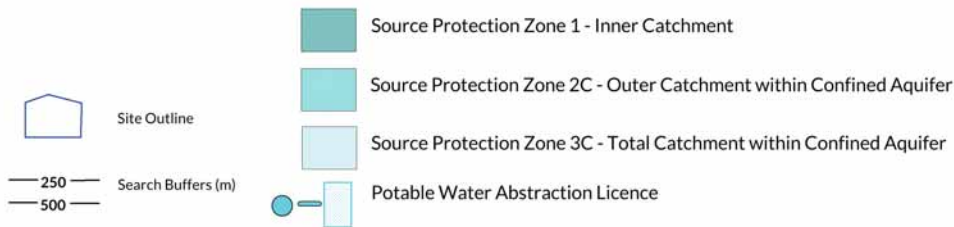
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# 6d. Hydrogeology – Source Protection Zones within confined aquifer



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# 6. Hydrogeology and Hydrology

## 6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	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	330	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

## 6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	330	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

## 6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details
Not shown	1806	NW	439100 405100	Status: Historical Licence No: 2/27/08/029 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING NO2 - LOW LAITHES Data Type: Point Name: LOW LAITHES DAIRY FARM LTD Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1990 Version End Date:
Not shown	1806	NW	439100 405100	Status: Historical Licence No: 2/27/08/029 Details: General Farming & Domestic Direct Source: GROUNDWATERS Point: SPRING NO2 Data Type: Point Name: LOW LAITHES DAIRY FARM LTD Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 09/01/1990 Version End Date:

## 6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

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	1862	E	442400 403000	Status: Historical Licence No: 2/27/08/119 Details: Lake & Pond Throughflow Direct Source: SURFACE WATER Point: RIVER DEARNE - OLD MOOR WETLANDS RESERVE Data Type: Point Name: BARNESLEY METROPOLITAN BOROUGH COUNCIL Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Application No: - Original Start Date: 23/05/1997 Expiry Date: - Issue No: 100 Version Start Date: 10/11/1999 Version End Date:
Not shown	1862	E	442400 403000	Status: Active Licence No: 2/27/08/119 Details: Lake & Pond Throughflow Direct Source: SURFACE WATER Point: RIVER DEARNE-OLD MOOR WETLANDS RESERVE Data Type: Point Name: ROYAL SOCIETY FOR THE PROTECTION OF BIRDS Annual Volume (m <sup>3</sup> ): 1.10376e+006 Max Daily Volume (m <sup>3</sup> ): 3024 Application No: - Original Start Date: 23/05/1997 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2003 Version End Date:

## 6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

---

## 6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

---

## 6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

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

Database searched and no data found.

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## 6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
280	E	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
330	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
407	N	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
410	SE	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.

## 6.9 River Quality

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

### 6.9.1 Biological Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
38	410	E	440950 403780	River Name: Dove Reach: Blacker Dyke Wombwell Stw End/Start of Stretch: End of Stretch NGR	D	D	D	C	C
Not shown	1371	E	441969 403683	River Name: Dearne Reach: River Dove Bulling Dike End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
Not shown	1371	E	441969 403683	River Name: Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: End of Stretch NGR	D	D	D	D	D
Not shown	1371	E	441969 403683	River Name: Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: End of Stretch NGR	D	D	D	C	C

### 6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (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
Not shown	1226	E	441800 403800	River Name: River Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: Sample Point NGR	B	B	B	B	B
Not shown	1371	E	441969 403683	River Name: River Dearne Reach: River Dove Bulling Dike End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C
Not shown	1371	E	441969 403683	River Name: River Dearne Reach: Billingley Dyke River Dove End/Start of Stretch: End of Stretch NGR	C	C	C	C	B
Not shown	1371	E	441969 403683	River Name: River Dove Reach: Wombwell Stw River Dearne End/Start of Stretch: End of Stretch NGR	B	B	B	B	B

## 6.10 Ordnance Survey MasterMap Water Network

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

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

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

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
2	0 On Site	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
3	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
4	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
6	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	0 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
47	0 On Site	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
48	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
49	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
50	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
51	0 On Site	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
52	0 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	1 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
9	1 N	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4
53	1 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
54	1 N	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.4
10	30 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
55	30 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
11	105 NE	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
56	105	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NE			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.0
12	149 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
57	149 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
13	161 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
14	161 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
58	161 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
59	161 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
15	217 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.1
60	217 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.1
16	218 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
17	218 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.6
61	218 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
62	218 SE	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 2.6
18	256 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
63	256 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	262 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
64	262 SE	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.2
20	287 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.0
65	287 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.0
21	348 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
66	348 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
22	353 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.8
67	353 E	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.8
23	357 E	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7
68	357 E	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
24	364 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
69	364 W	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	365 W	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
70	365 W	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
26	387 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	387 S	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	392 S	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	392 S	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
28	404 E	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
73	404 E	River Dove	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
29	420 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
74	420 SW	Bulling Dike	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	429	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
31	429 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
Not shown	429 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	429 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.2
32	438 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	438 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	438 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	438 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
34	474 NW	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
35	474 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	474 NW	Not Specified	Lake, loch or reservoir.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.3
Not shown	474 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
36	485 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
Not shown	485 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	497 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3
Not shown	497 NW	Not Specified	Inland river not influenced by normal tidal action.	Catchment Area: Don and Rother Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.3

## 6.11 Surface Water Features

Surface water features within 250m of the study site

Identified

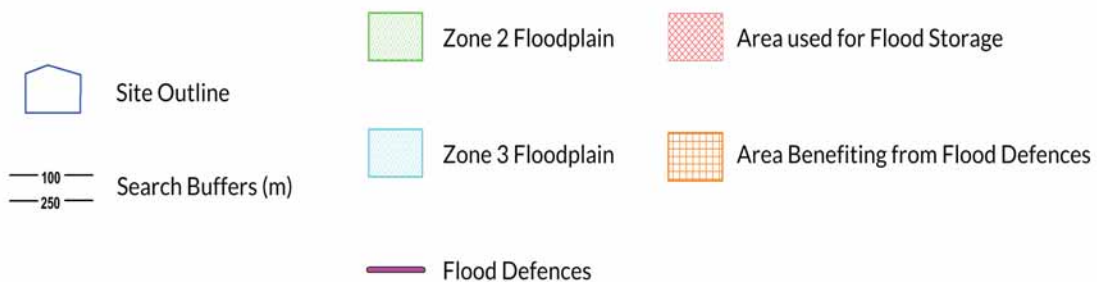
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
30	SE
109	NE

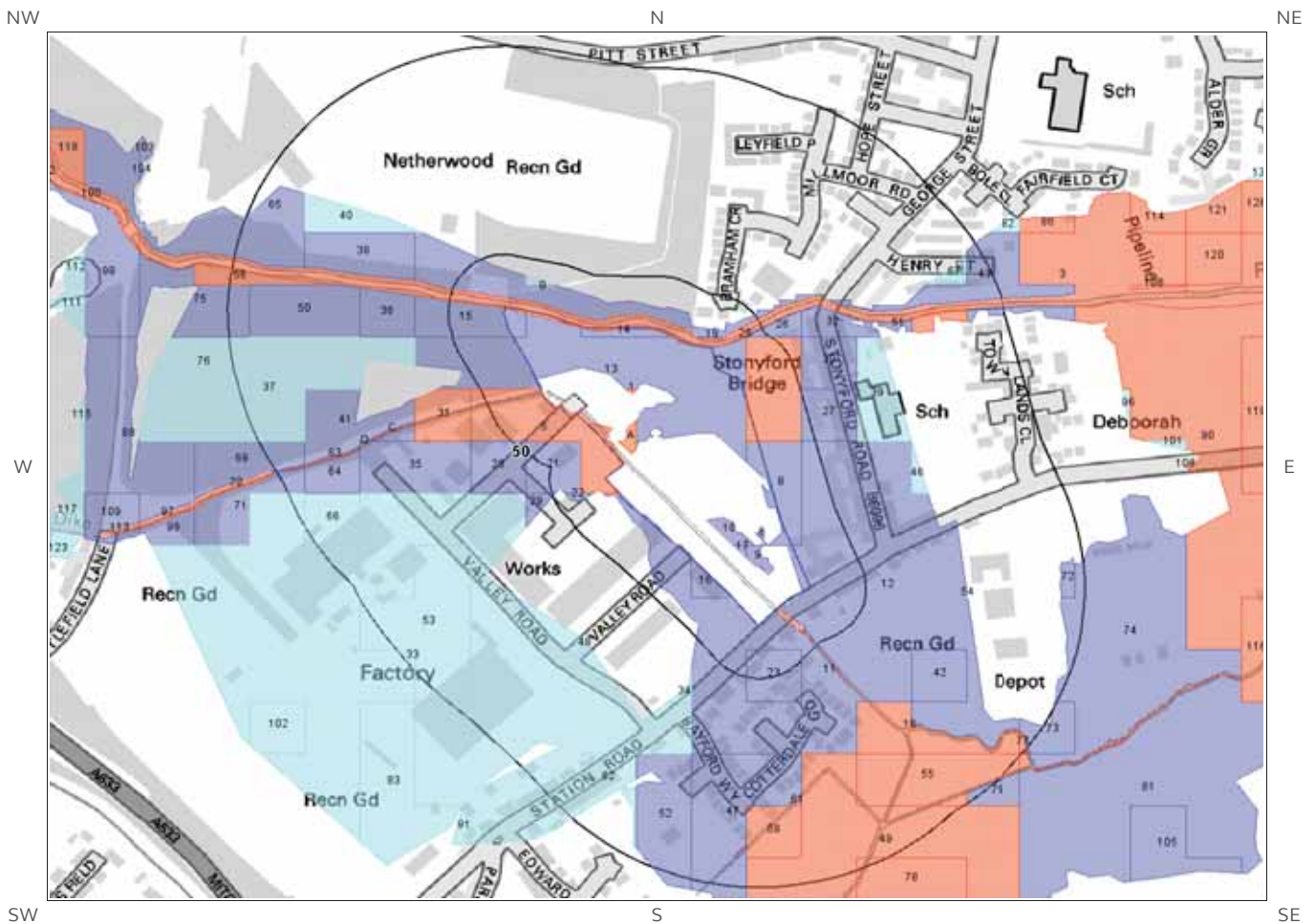
# 7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



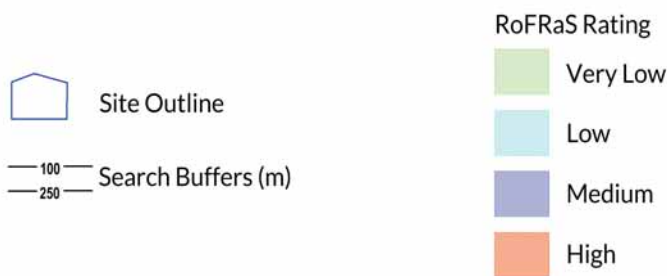
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# 7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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# 7 Flooding

## 7.1 River and Coastal Zone 2 Flooding

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

Identified

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

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
2A	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
3	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
4B	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
5B	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
6	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
7	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
8	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
9	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
10	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
11	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
12B	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
13A	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
14	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
15	0	On Site	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
16A	3	SW	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
17	4	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
18C	7	N	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
19C	8	N	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

20	9	N	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
21	81	E	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
22D	148	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
23	155	NE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
24D	169	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
25D	172	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
26E	195	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
27E	197	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
28G	198	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
29E	199	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
30F	199	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
31E	200	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
32F	200	S	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
33G	201	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
34G	201	SE	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)
35K	250	E	12-Oct-2018	Zone 2 - (Fluvial /Tidal Models)

## 7.2 River and Coastal Zone 3 Flooding

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

Identified

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

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	12-Oct-2018	Zone 3 - (Fluvial Models)
2A	0	On Site	12-Oct-2018	Zone 3 - (Fluvial Models)
3	7	N	12-Oct-2018	Zone 3 - (Fluvial Models)

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

Highest risk of flooding onsite

High

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 High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	High
2	0.0	On Site	High
3	0.0	On Site	High
4A	0.0	On Site	High
5	0.0	On Site	High
6	0.0	On Site	Medium
7A	0.0	On Site	Medium
8	0.0	On Site	Medium
9	0.0	On Site	Medium
10	0.0	On Site	Medium
11	0.0	On Site	Medium
12	0.0	On Site	Medium
13	0.0	On Site	Medium
14	0.0	On Site	Medium
15	0.0	On Site	Medium
16	0.0	On Site	Medium
17	0.0	On Site	Medium
18	3.0	SE	High
19	7.0	N	Medium
20B	7.0	N	Medium
21	16.0	SW	Medium
22	17.0	SW	Medium
23	22.0	S	Medium
24B	24.0	N	Low
25	30.0	E	High
26	33.0	E	Medium
27	38.0	E	Medium
28	41.0	SW	Medium
29	47.0	W	Medium

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

---

### 7.5 Areas benefiting from Flood Defences

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

---

### 7.6 Areas benefiting from Flood Storage

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

---

### 7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified  
Clearwater Flooding or Superficial Deposits Flooding 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 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

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

---

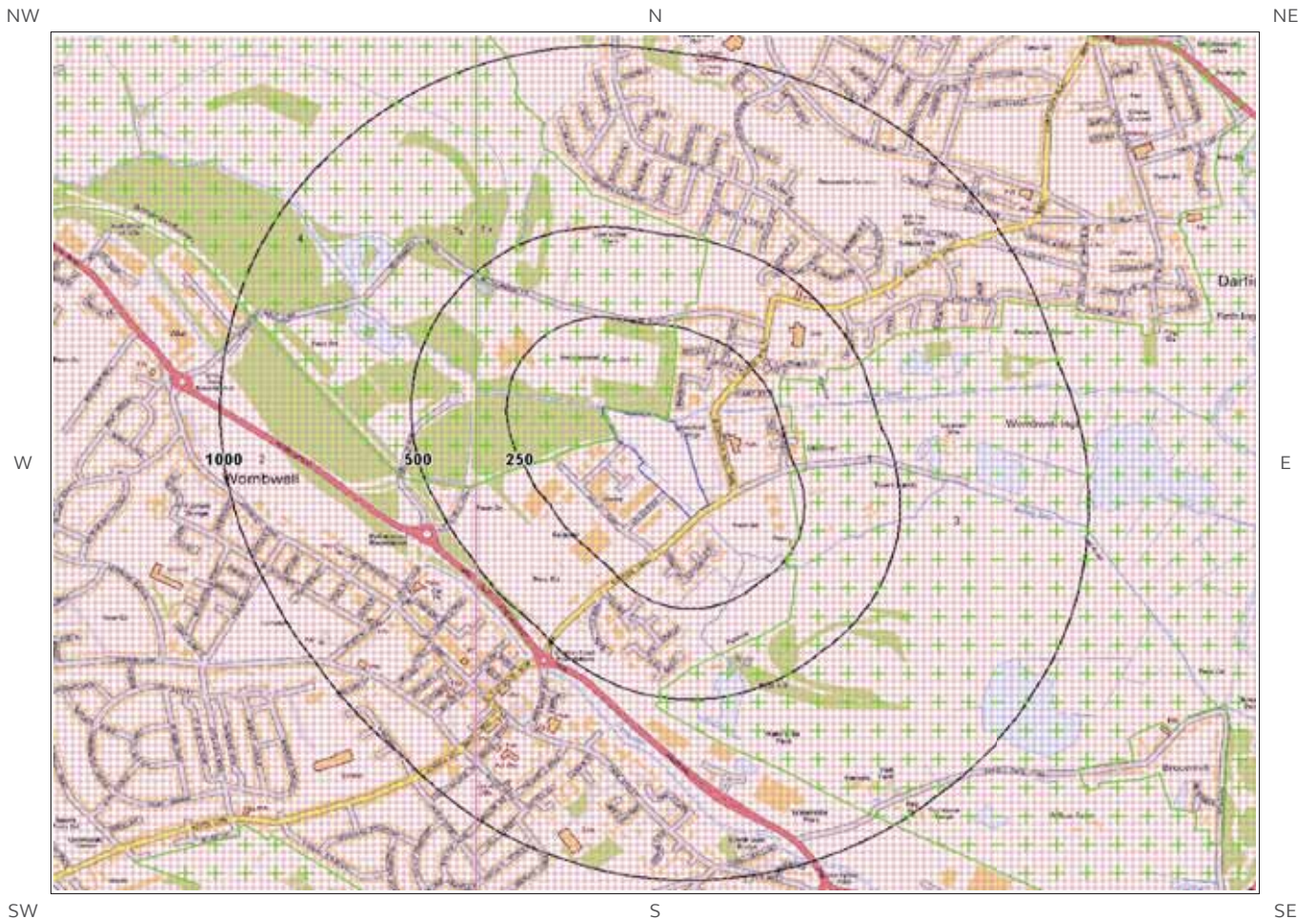
### 7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result Moderate

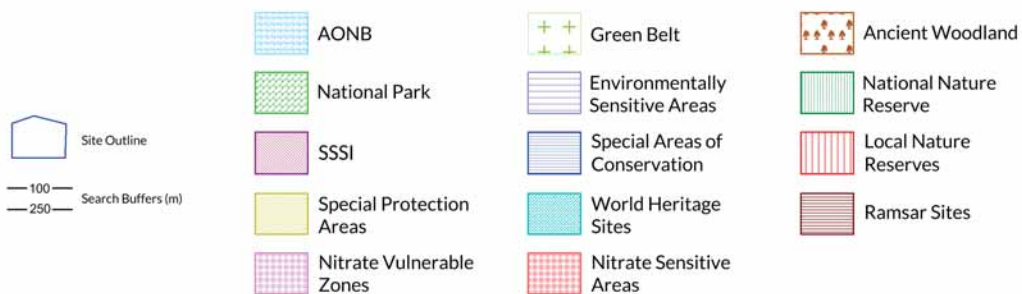
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

# 8. Designated Environmentally Sensitive Sites Map



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# 8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

Database searched and no data found.

---

0

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

2

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	0	On Site	Existing	DEFRA
2	330	W	Existing	DEFRA

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

3

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ID	Distance	Direction	Green Belt Name	Local Authority Name
3	0	On Site	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
4	330	W	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1173	SE	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)

# 9. Natural Hazards Findings

## 9.1 Detailed BGS GeoSure Data

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

### 9.1.1 Shrink Swell

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

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

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

### 9.1.2 Landslides

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

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

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

### 9.1.3 Soluble Rocks

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

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

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

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

### 9.1.4 Compressible Ground

Maximum Compressible Ground\* hazard rating identified on the study site

Moderate

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

---

**Hazard**

Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

---

### 9.1.5 Collapsible Rocks

Maximum Collapsible 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**

No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

---

### 9.1.6 Running Sand

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

Low

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

---

**Hazard**

Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

---



---

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

## 9.2 Radon

### 9.2.1 Radon Affected Areas

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

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

---

### 9.2.2 Radon Protection

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

# 10. Mining

## 10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

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

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

## 10.2 Non-Coal Mining

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

Identified

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

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

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

## 10.3 Brine Affected Areas

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

None identified

# Contact Details

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

Web: [www.bgs.ac.uk](http://www.bgs.ac.uk)

BGS Geological Hazards Reports and general geological enquiries:  
[enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

## Environment Agency

National Customer Contact Centre, PO Box 544  
Rotherham, S60 1BY  
Tel: 03708 506 506

Web: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

## Public Health England

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

Email: [enquiries@phe.gov.uk](mailto:enquiries@phe.gov.uk)  
Main switchboard: 020 7654 8000

## The Coal Authority

200 Lichfield Lane  
Mansfield  
Notts NG18 4RG  
Tel: 0345 7626 848  
DX 716176 Mansfield 5  
[www.coal.gov.uk](http://www.coal.gov.uk)

## Ordnance Survey

Adanac Drive, Southampton  
SO16 0AS  
Tel: 08456 050505

## Local Authority

Authority: Barnsley Metropolitan Borough Council  
Phone: 01226 770770  
Web: <http://www.barnsley.gov.uk/>  
Address: PO Box 634, Barnsley, South Yorkshir, S70 9GG

## Gemapping PLC

Virginia Villas, High Street, Hartley Witney,  
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LOCATION INTELLIGENCE

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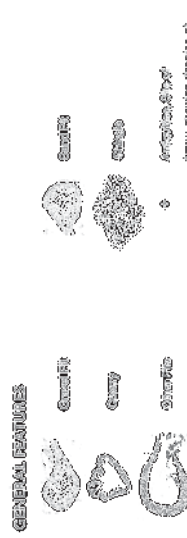
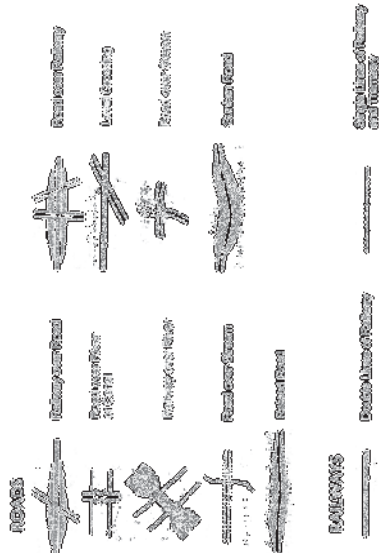
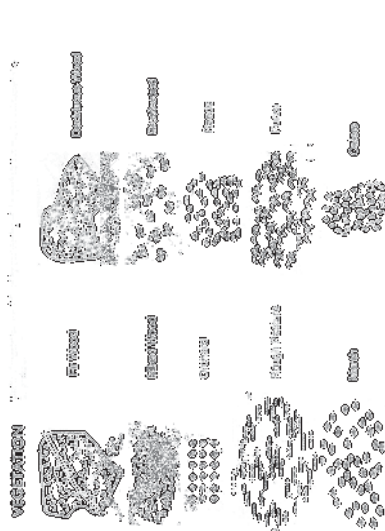
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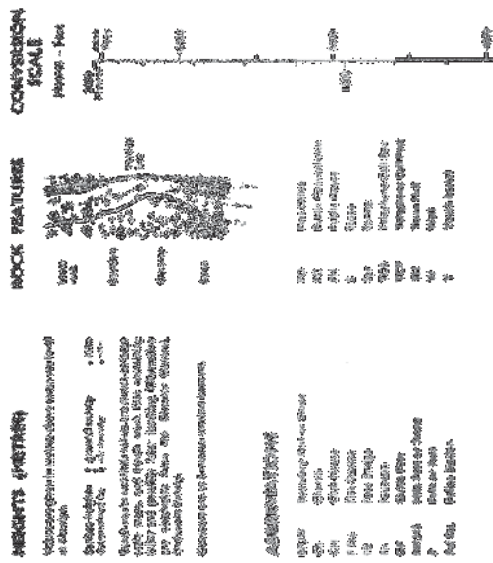
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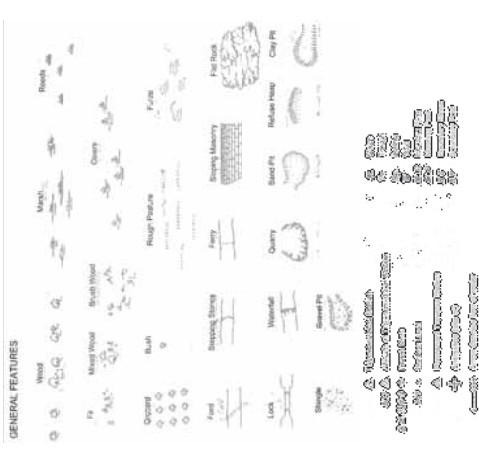
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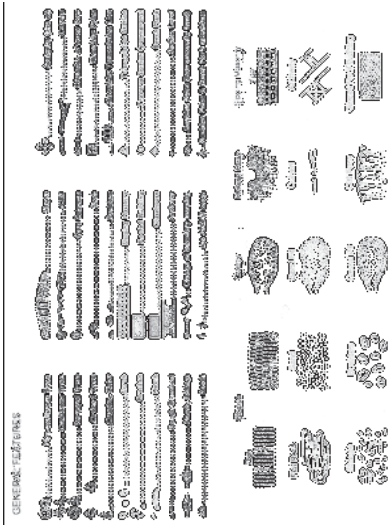
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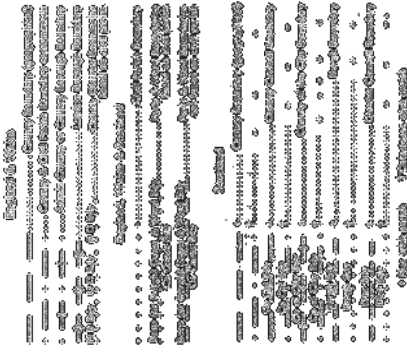
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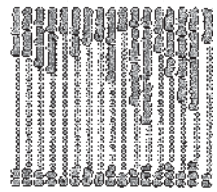
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### Boundaries



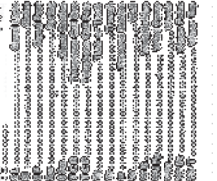
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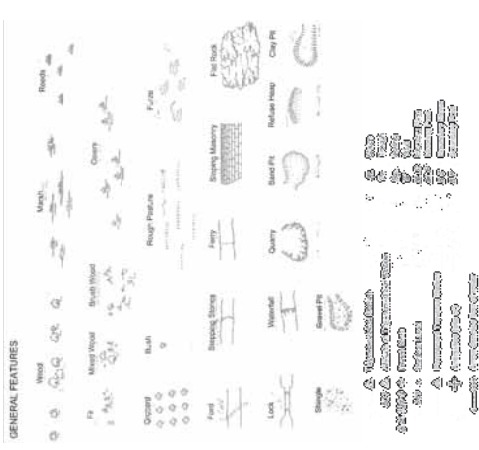
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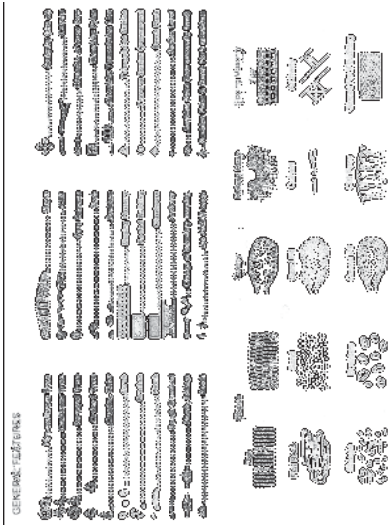
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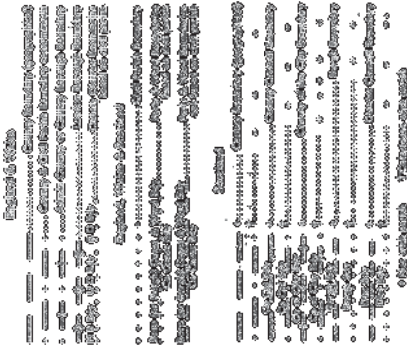
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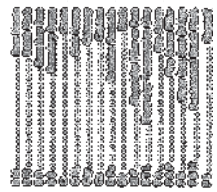
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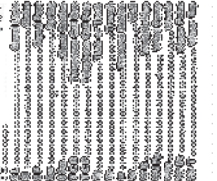
### Water



### Other



### Other



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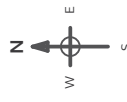
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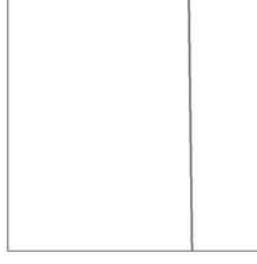
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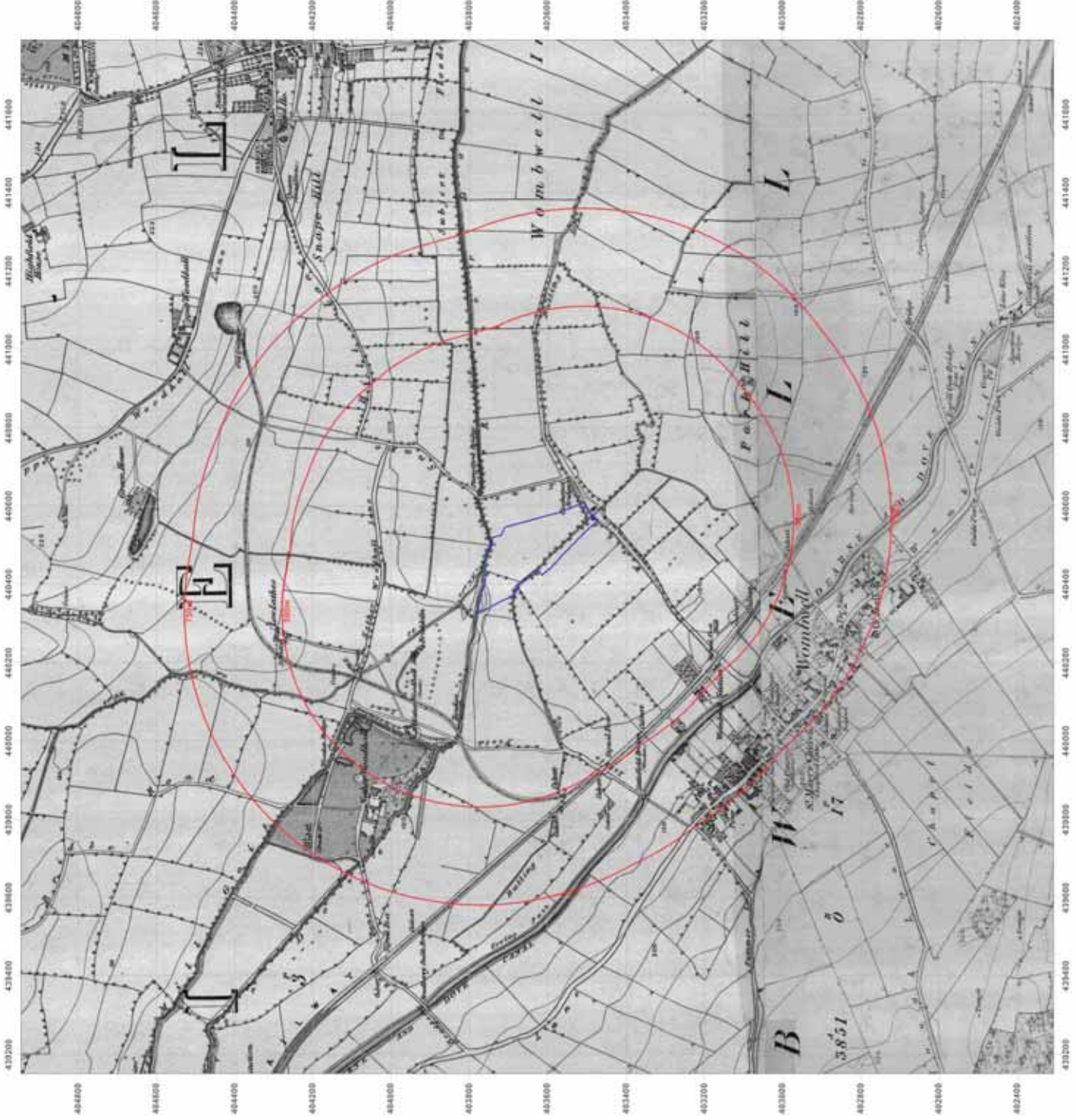


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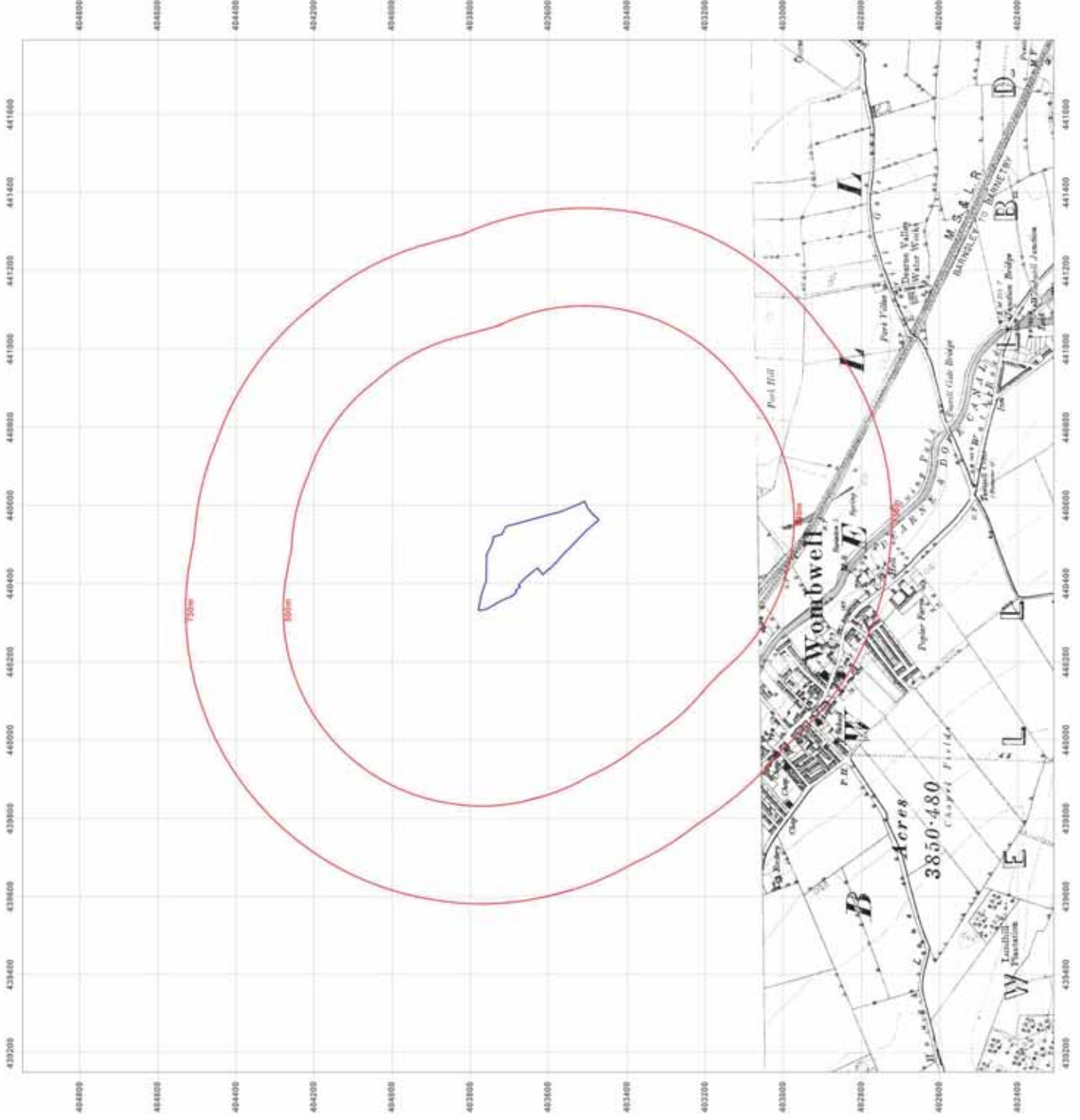
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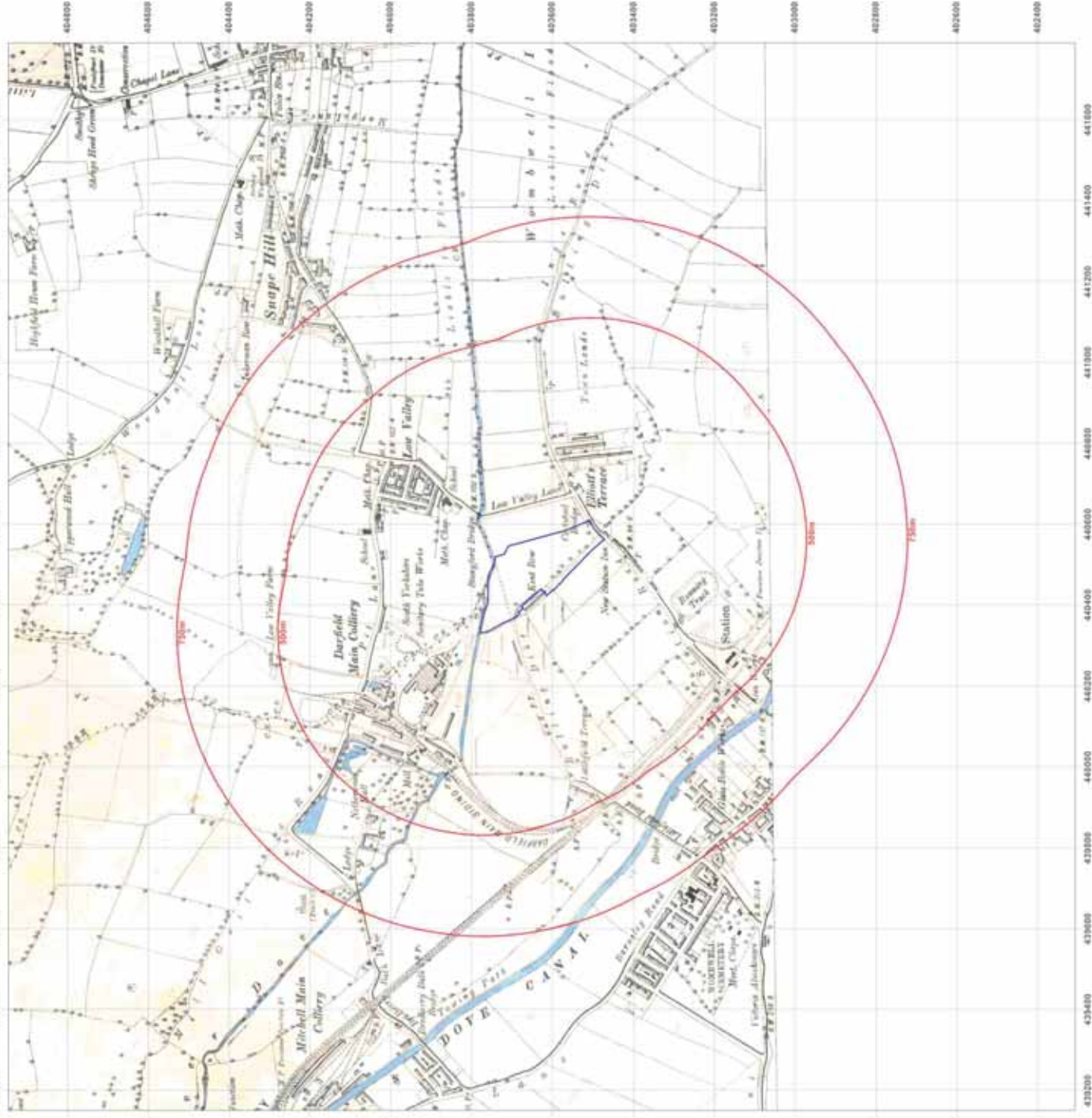
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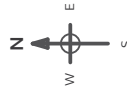
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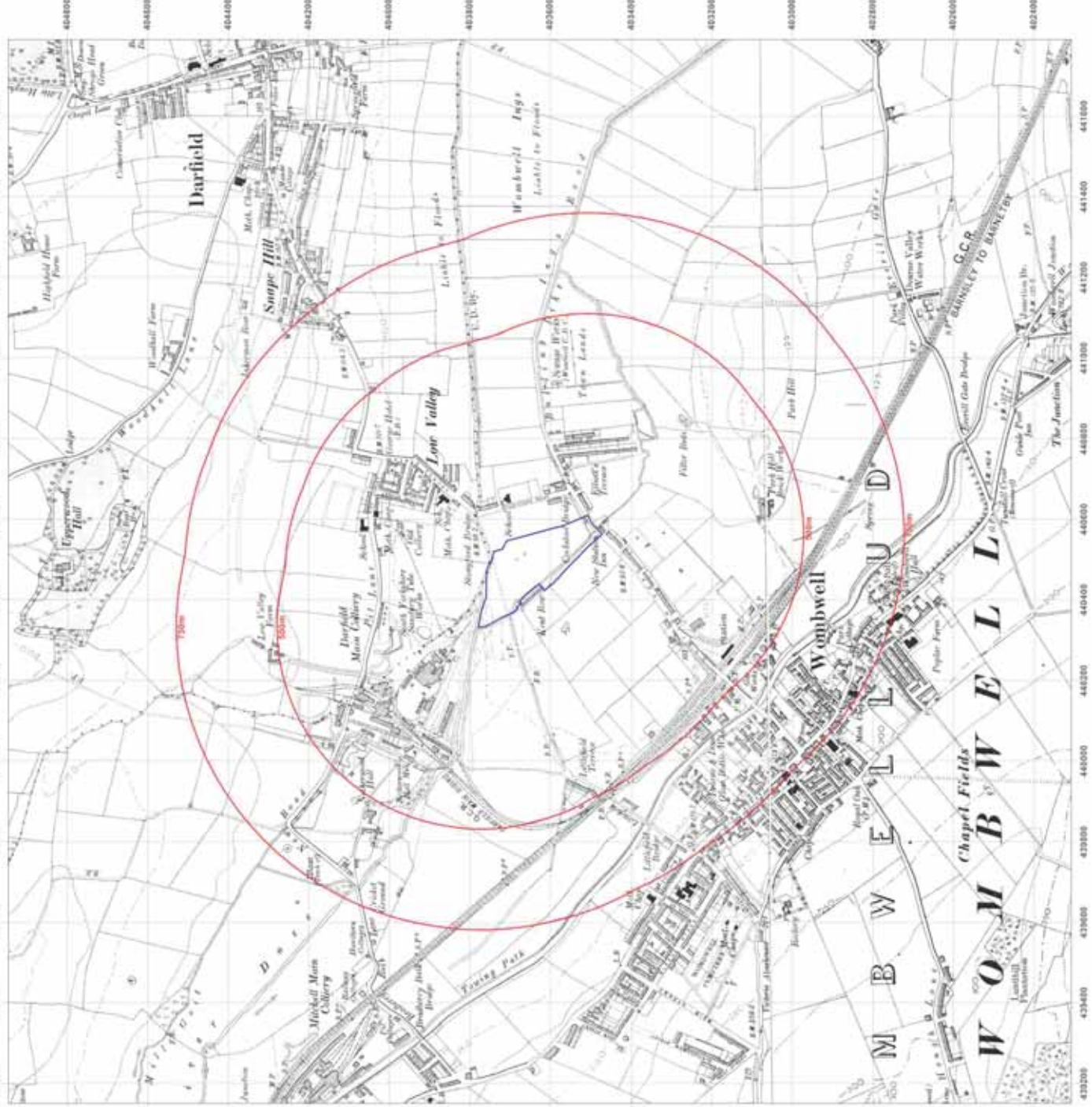
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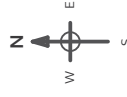
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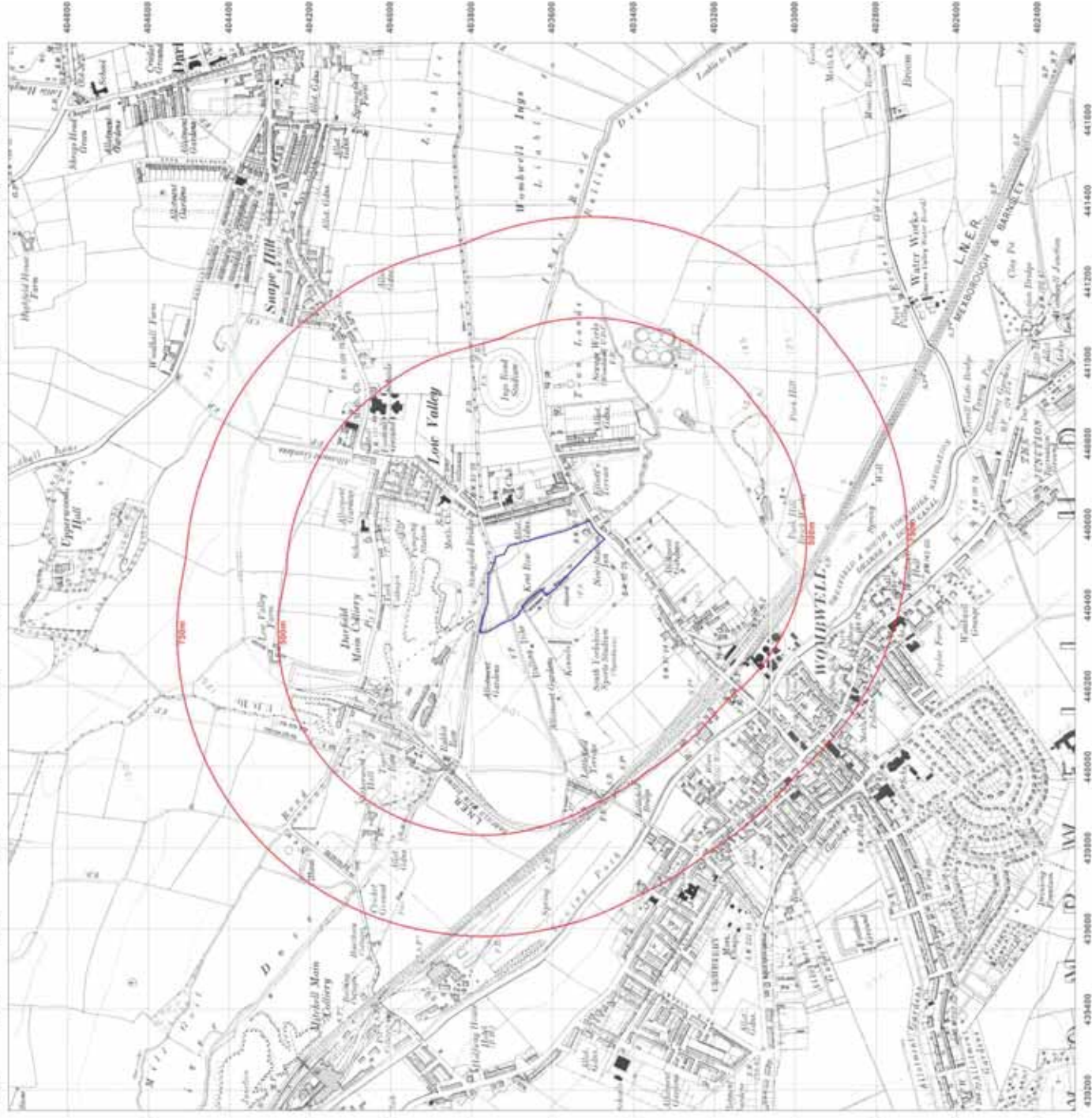
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50m

**Site Details:**

land off Station Road,  
Wombwell, S73 0BN, land off  
Station Road, Wombwell, S73  
0BN, S73 0BN

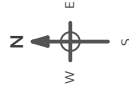
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**Map Name:** County Series

**Map date:** 1938

**Scale:** 1:10,560

**Printed at:** 1:10,560



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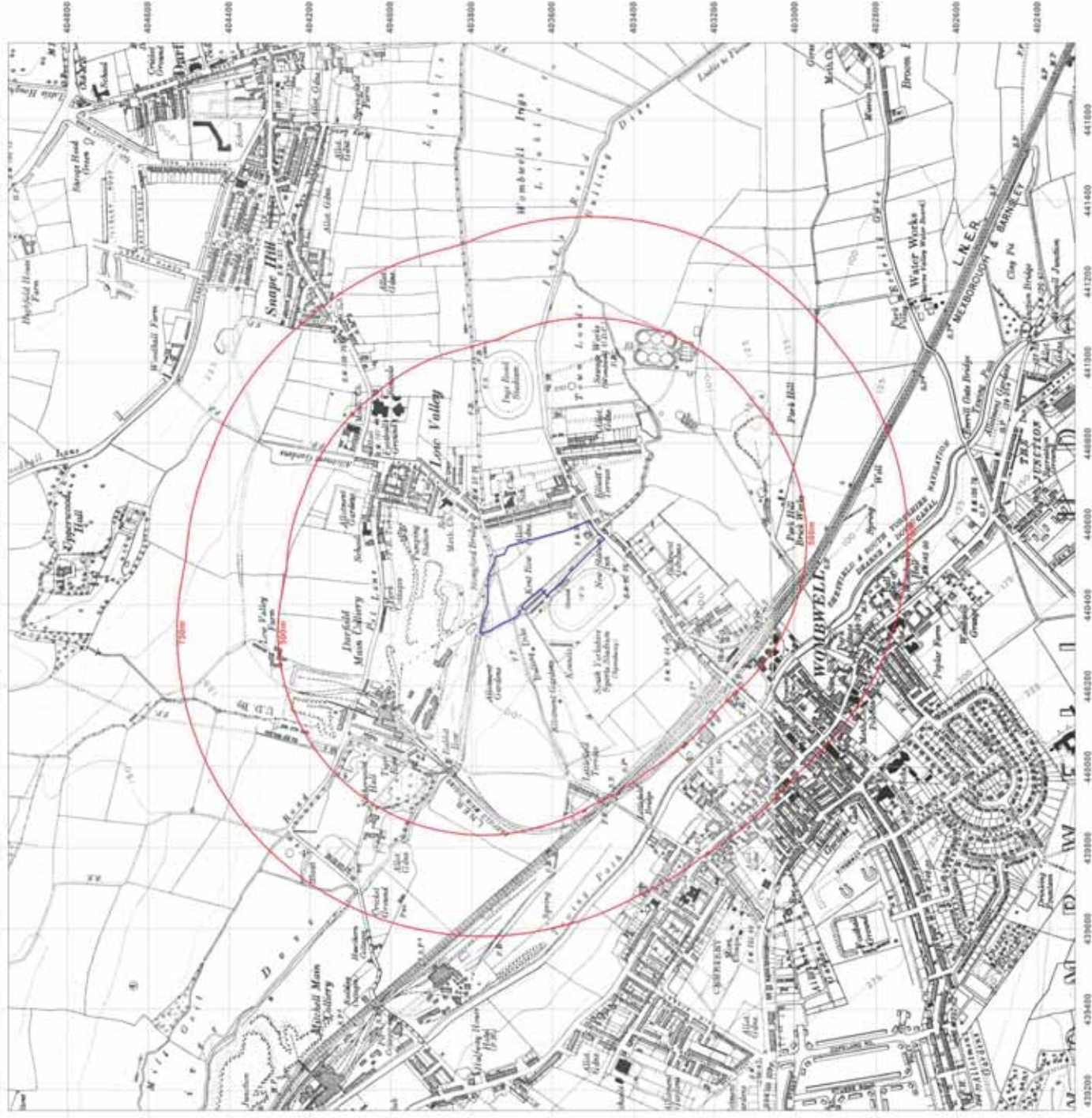
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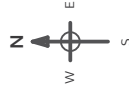
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**Map Name:** County Series

**Map date:** 1948

**Scale:** 1:10,560

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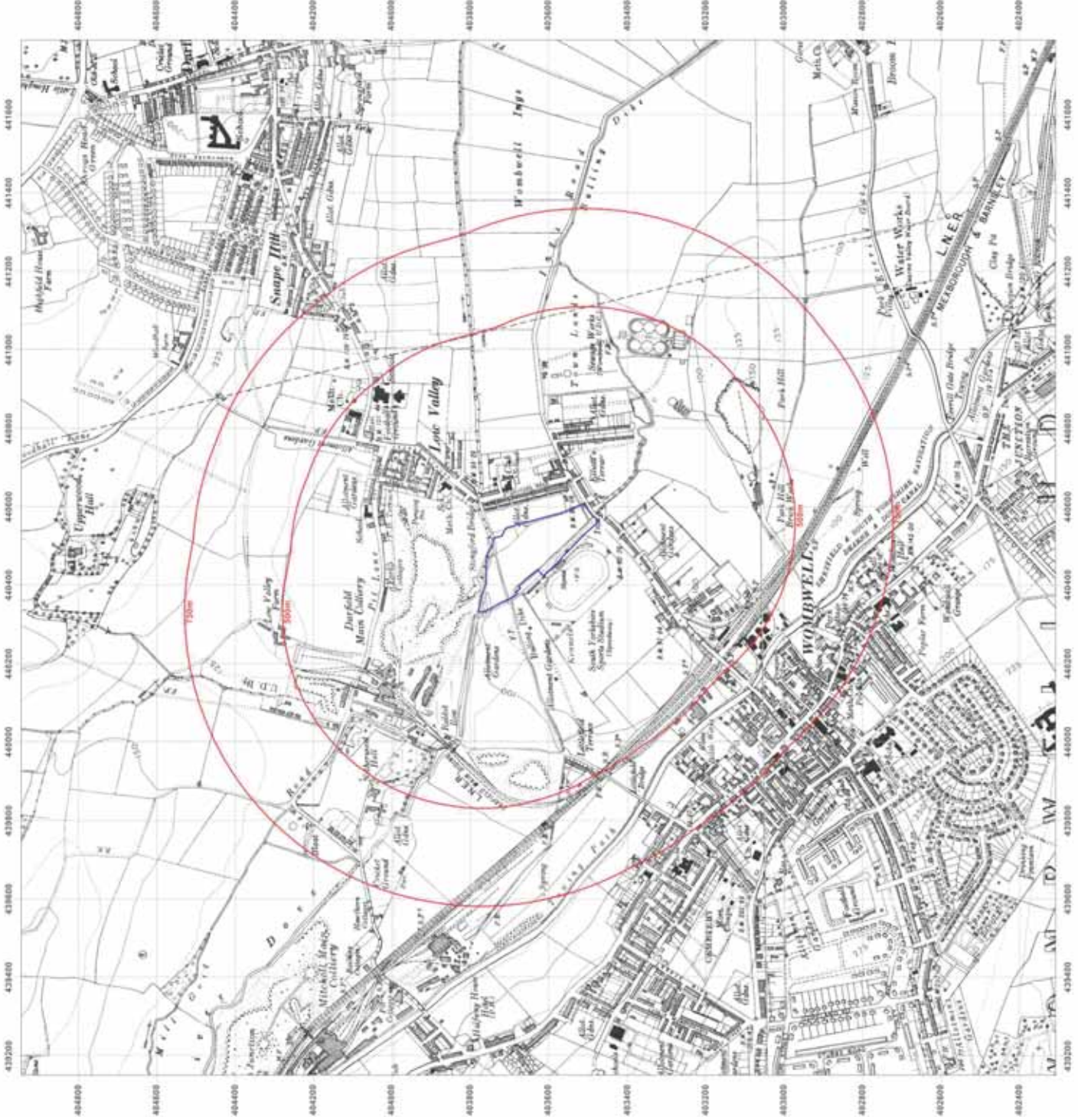
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Station Road, Wombwell, S73  
0BN, S73 0BN

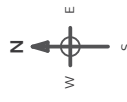
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**Map Name:** Provisional

**Map date:** 1951

**Scale:** 1:10,560

**Printed at:** 1:10,560



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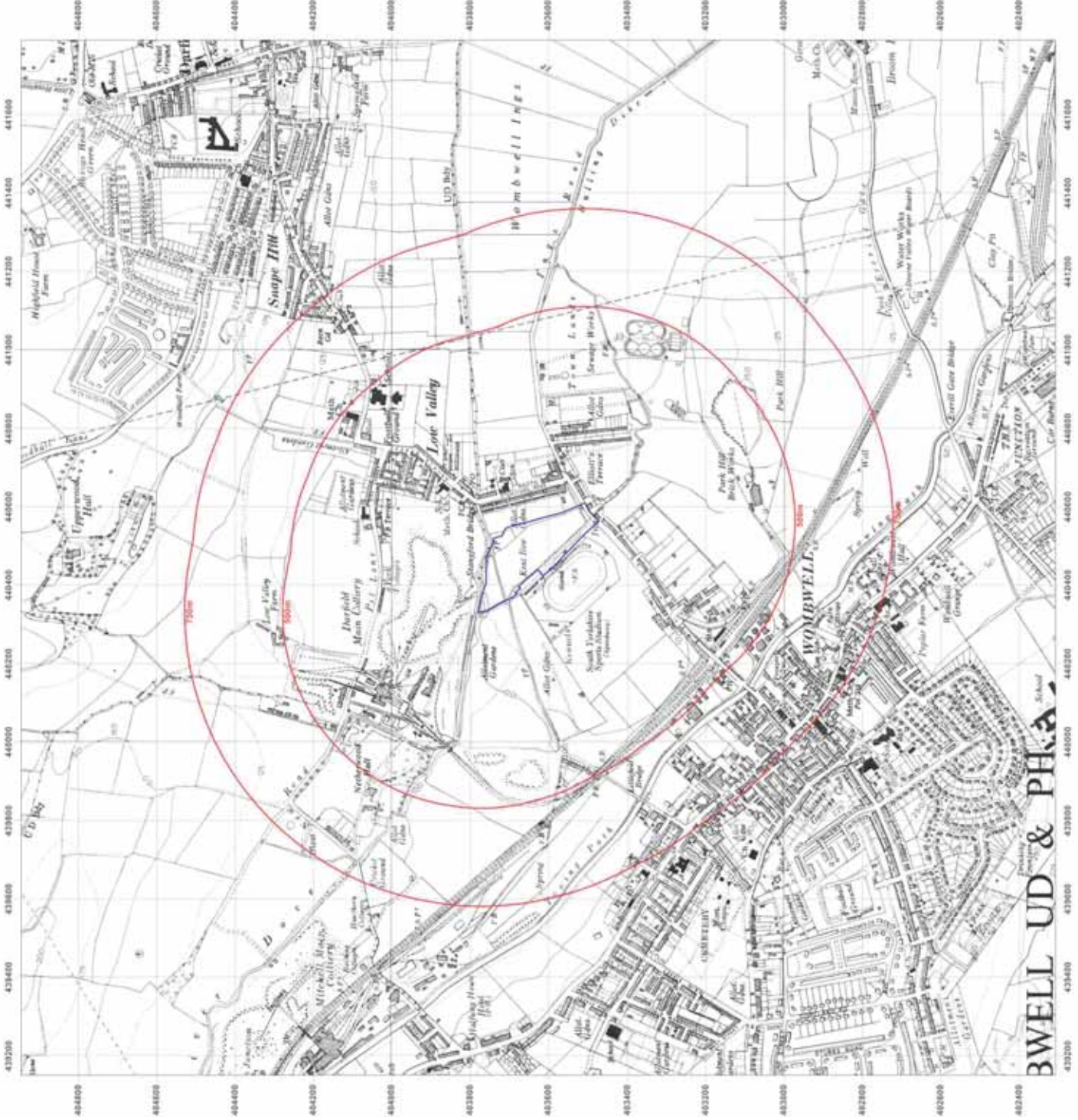
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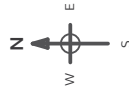
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**Map Name:** Provisional

**Map date:** 1966-1967

**Scale:** 1:10,560

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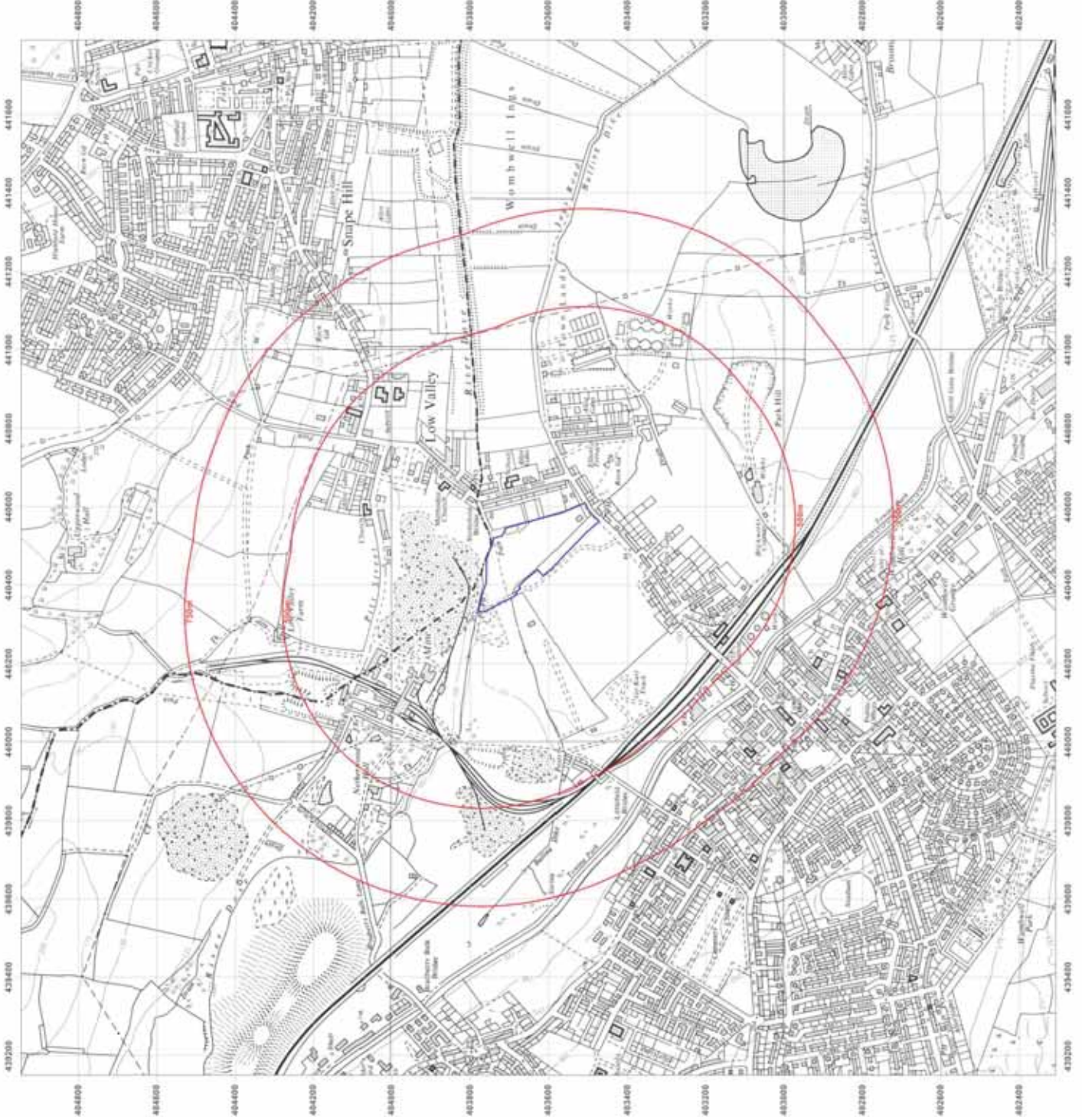


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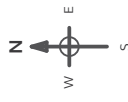
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**Grid Ref:** 440470, 403625

**Map Name:** National Grid

**Map date:** 1977

**Scale:** 1:10,000

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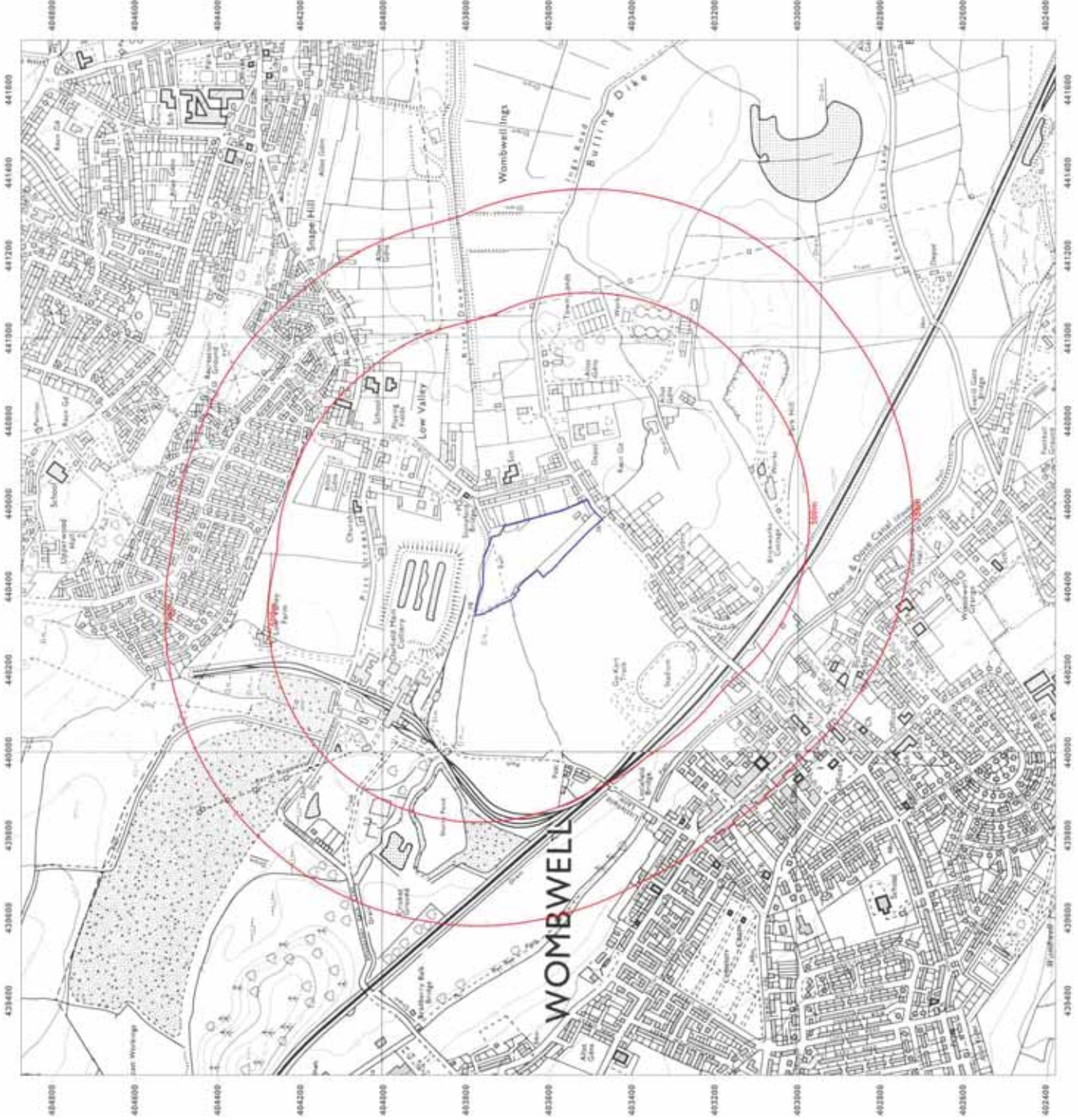


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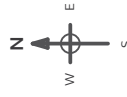
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**Report Ref:** EMS-522961\_703402  
**Grid Ref:** 440470, 403625

**Map Name:** National Grid

**Map date:** 1987-1988

**Scale:** 1:10,000

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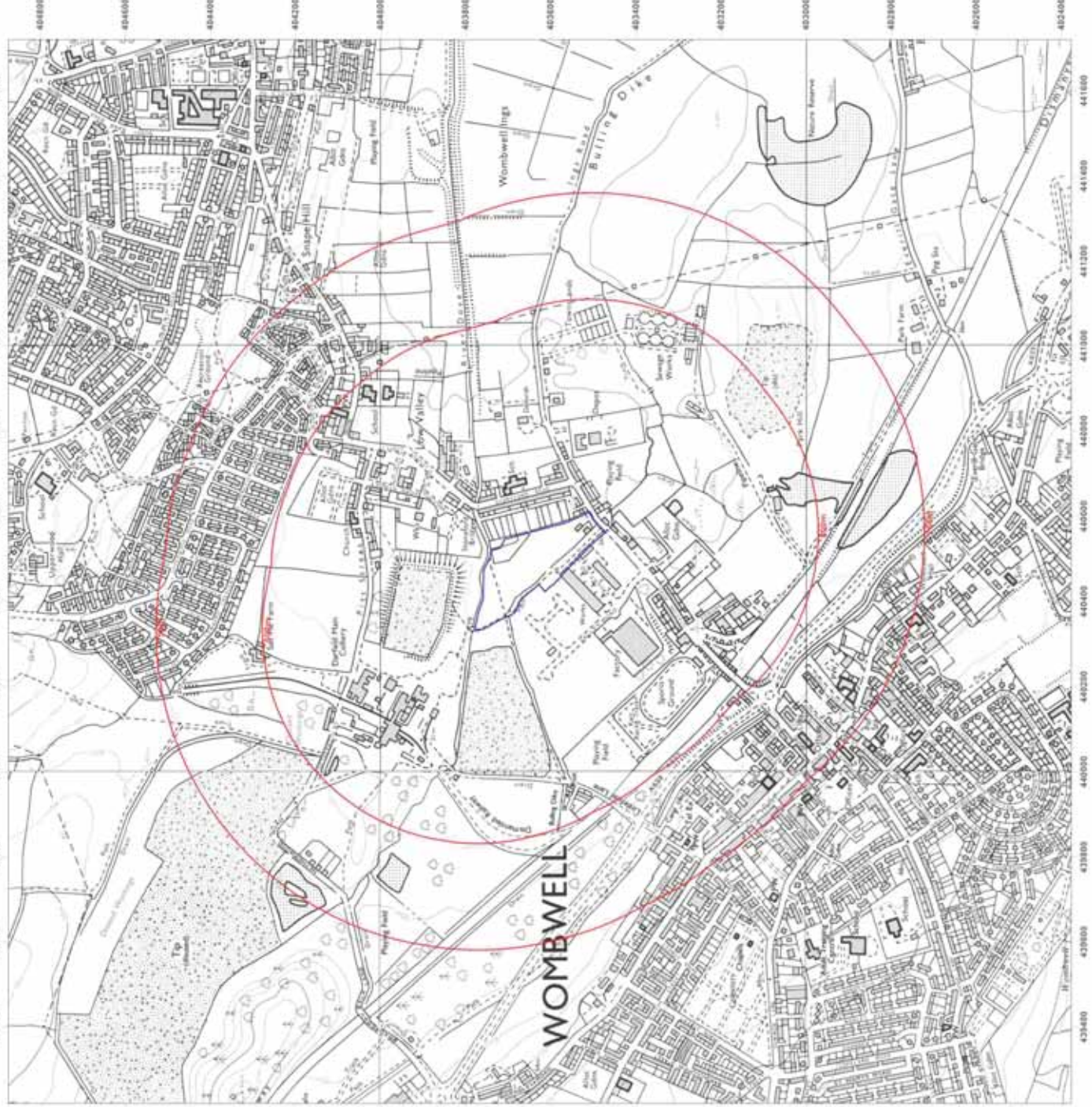


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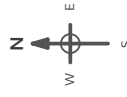
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**Grid Ref:** 440470, 403625

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

**Printed at:** 1:10,000



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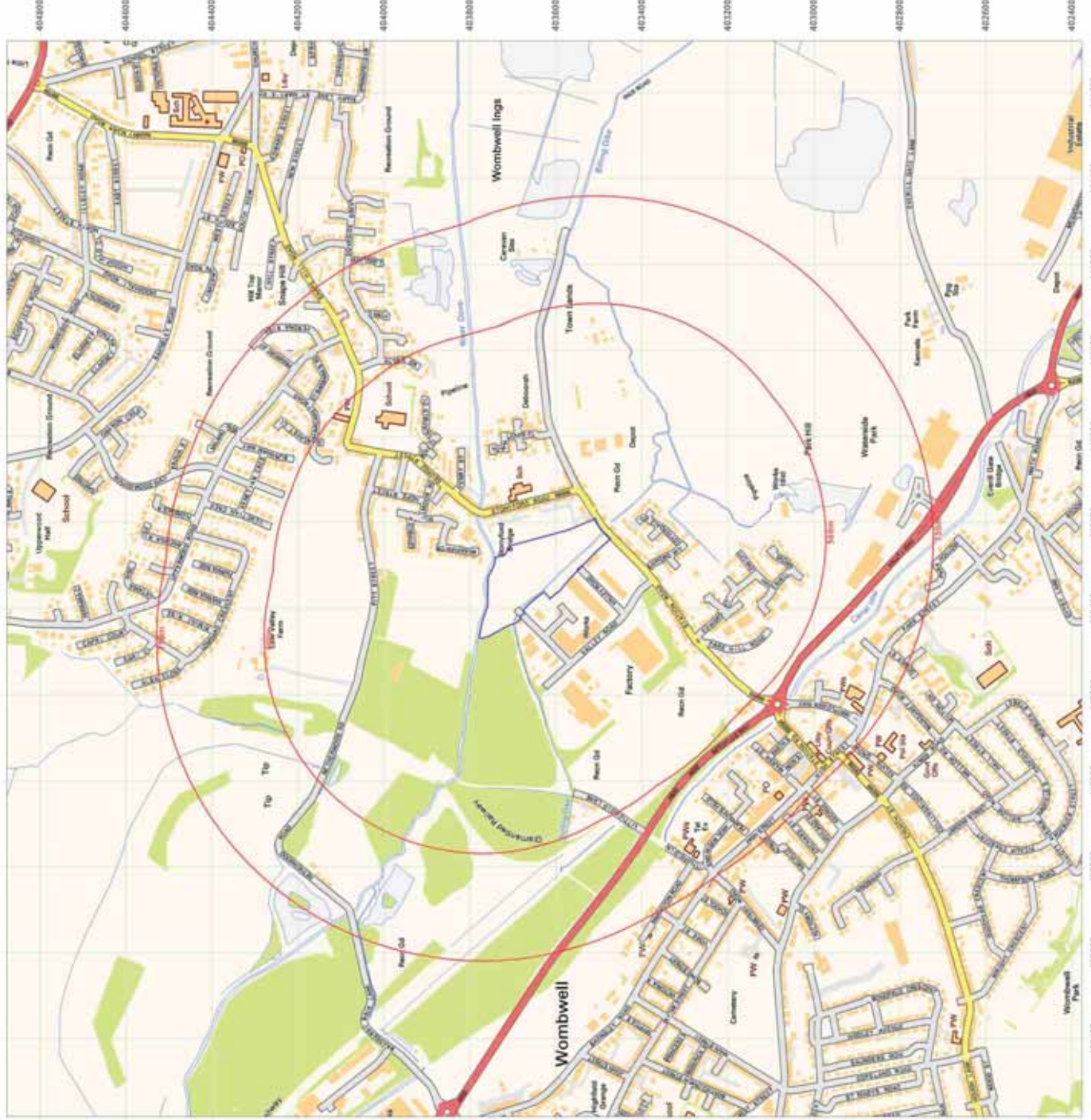


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0BN, S73 0BN

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**Map Name:** National Grid

**Map date:** 2014

**Scale:** 1:10,000

**Printed at:** 1:10,000



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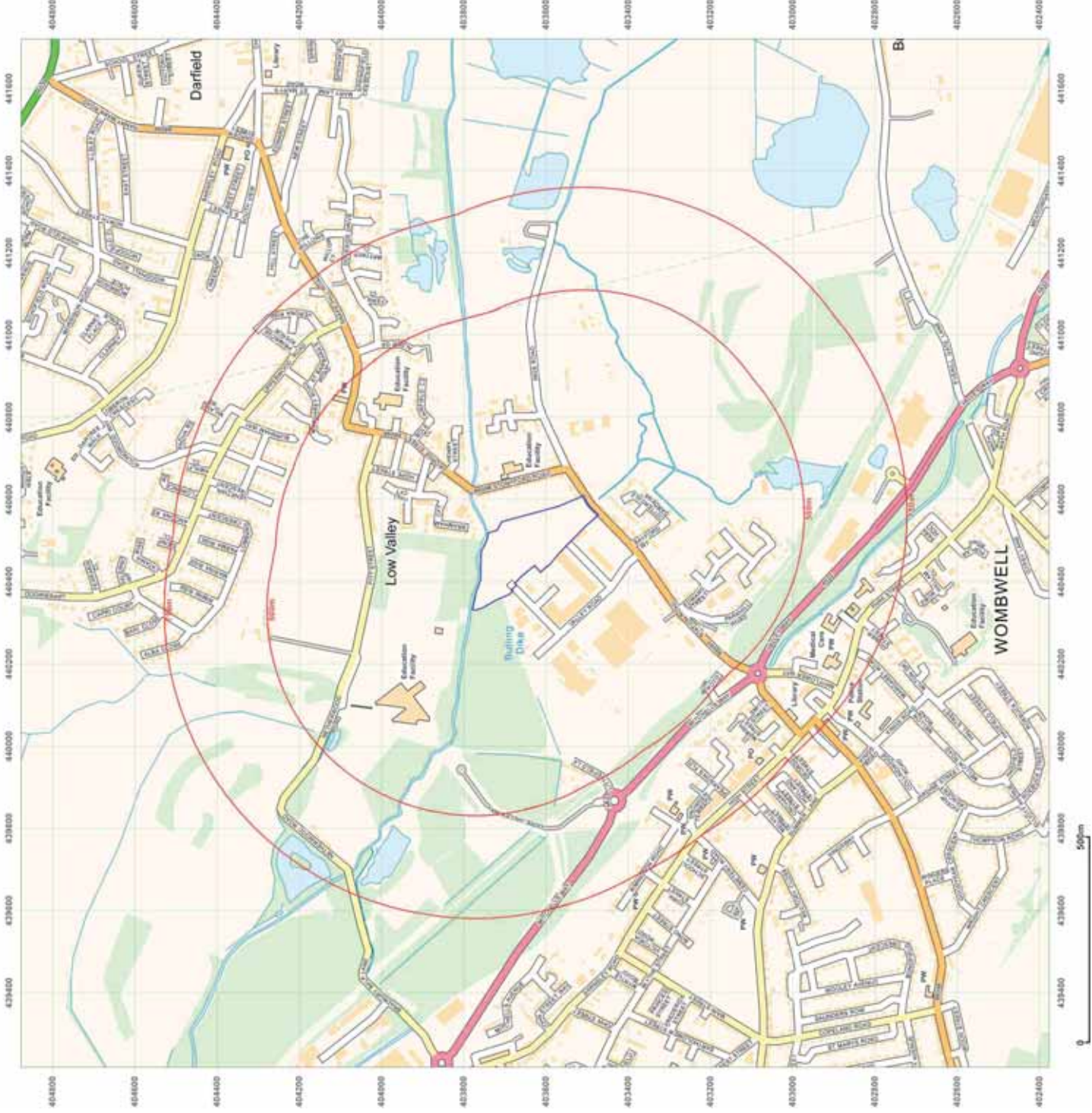


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The Coal  
Authority

Resolving the **impacts** of mining

# CON29M Non-Residential Mining Report

SITE OFF STATION ROAD  
STATION ROAD  
WOMBWELL  
BARNESLEY  
S73 0BJ

Date of enquiry: 24 January 2019  
Date enquiry received: 24 January 2019  
Issue date: 24 January 2019

Our reference: 51001991827001  
Your reference: CRM.1122.005.RH.001





# Summary

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

Further recommended reports
Coal mining subsidence claims 50m buffer report
Coal mining subsidence claims history

**For detailed findings, please go to page 4.**

# Detailed findings

## 1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 10 seams of coal at 140m to 640m depth, and last worked in 1989.

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

## 2. Present underground coal mining

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

## 3. Future underground coal mining

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

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

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

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

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

## 4. Mine entries

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

## 5. Coal mining geology

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

## **6. Past opencast coal mining**

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

## **7. Present opencast coal mining**

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

## **8. Future opencast coal mining**

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

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

## **9. Coal mining subsidence**

A damage notice or claim for alleged subsidence damage was made in February 1995 for STONEYFORD JOINERY WORKS STATION ROAD, WOMBWELL, BARNESLEY, SOUTH YORKSHIRE. However, the claim was rejected.

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

There are a further 2 claim(s) within 50 metres of the property boundary that do not match the property address. These are shown on the enquiry boundary plot.

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.

If further subsidence damage claims information is required, please visit [www.groundstability.com](http://www.groundstability.com).

## **10. Mine gas**

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

## **11. Hazards related to coal mining**

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

## **12. Withdrawal of support**

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

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

### **13. Working facilities order**

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

### **14. Payments to owners of former copyhold land**

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

## Additional remarks

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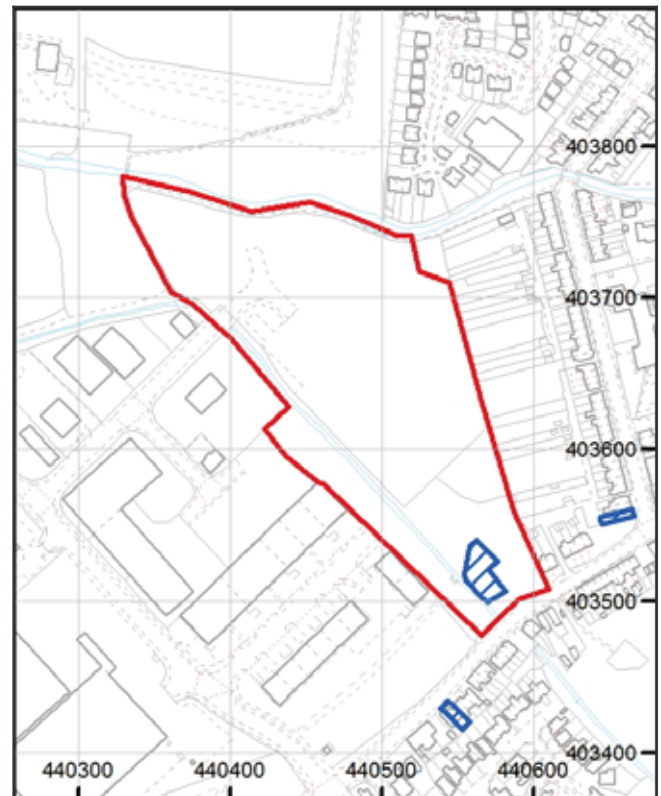
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# Enquiry boundary

**Key**

Approximate position of enquiry boundary shown 

Coal claims 




## How to contact us


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+44 (0)1623 637 000 (International)

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

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**BOREHOLE RECORD**

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 5
CUT/FILL(M)	CHAINAGE(M)	OFFSET(M)
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary coring - 98mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'R' RQD	wf
17/10/77			0.00			0.00	27.18			
			0.10	U4		0.10	27.08	TOPSOIL		
			0.55	SPT				MADE GROUND		8.3
			1.00					Well compacted dark grey mudstone with red and black shale, and coal fragments	23	9.7
			1.30	U4						12
	1.70		1.75	SPT		1.75	25.43	MADE GROUND		
			2.20					Well compacted dark grey-black-brown mudstone with black shale, coal and sandstone fragments	19	13
		26/10 a.m. v	2.40-2.80	B						24
			2.80	SPT		2.90	24.28			
	3.20	3/11 a.m. v	3.25			3.30	23.88	MADE GROUND Black ash, coal and shale	7	34
		26/10 a.m. v	3.60	U4				Medium brown very sandy, very gravelly CLAY		20
		water struck	4.05			4.00	23.18			
	4.70		4.90	SPT				Medium dense medium brown fine to coarse grained clayey SAND and GRAVEL		
17/10/77			5.35							2
25/10/77			6.00	SPT						
	6.20		6.45							11
			7.45	SPT						
	7.70		7.90							8
			8.00-8.30	B						8.3
	9.00		9.00	SPT						
25/10/77			9.45							13
26/10/77										16

**REMARKS** Groundwater encountered at 4.00m casing at 3.20m  
Borehole dry on completion of shell and auger drilling  
Slow water seepage into borehole overnight of the 26/10/77  
Rotary coring commenced at 12.20m using water flush  
Final standing water level in openhole was 3.25m

BOREHOLE RECORD

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 5
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rtoary Coring - 98mm		
SHEET 2 OF 2		

BORING		SAMPLES			STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' RQD	wt
			10.25	SPT		10.55	16.63	Medium dense, medium brown fine to coarse grained clayey SAND and GRAVEL	11 for 150mm 104 for 150mm	15
	10.70		10.70	B				Medium grey-brown silty shaly weathered MUDSTONE		18
			10.70-11.00	SPT		11.20	15.98	Light grey silty MUDSTONE (Fireclay)	136	8.4
	11.60		11.45							
			12.05	SPT		12.20	14.98	Light grey medium bedded slightly fractured, silty, slightly weathered MUDSTONE	100 blws for 150mm	5.4
26/10/77 31/10/77			12.20						>300 R.Q.D.	
				Core 1 (100%)		12.70	14.48	Light grey white, thickly bedded weak MUDSTONE		36%
						13.30	13.88	(Fireclay)		
						13.60	13.58	Medium grey silty shaly strong MUDSTONE		
						13.74	13.44	Light grey thinly bedded, fresh SILTSTONE		
						14.05	13.13	Medium grey well bedded slightly fractured silty fresh MUDSTONE		
						14.55	12.63	Medium grey thinly bedded, laminated, fractured fresh SILTSTONE, strong, brittle		
						15.30	11.88	Medium to dark grey, medium bedded, fractured silty fresh MUDSTONE, strong, brittle		
31/10/77 1/11/77			15.50	Core 2 (100%)		15.90	11.28	Medium grey, medium bedded, laminated, fractured, fresh SILTSTONE, strong		19%
								Medium grey, medium bedded, laminated, fractured, fresh SILTSTONE, strong, with thin bands of dark grey MUDSTONE		
						17.40	9.78	Light to medium grey, medium bedded, laminated fresh SILTSTONE, strong with occasional thin mudstone bands		46%
			17.40	Core 3 (100%)						
			20.00			20.00	7.18	End of borehole		

REMARKS

**BOREHOLE RECORD**

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7
CMT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 98mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA			TESTING		
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'M' RQD	m/s
31/10/77			0.00			0.00	26.00			
			0.30	U4		0.30	25.70	TOPSOIL		
			0.75					MADE GROUND		12
			0.90	SPT				Well compacted dark grey mudstone with red and black shale and traces of coal fragments		
			1.35	SPT					12	14
	1.70									
		water struck								
		1/11 am	2.40	SPT		2.40	23.60	MADE GROUND		
			2.85	SPT				Loosely compacted dark grey mudstone with black shale, coal, clay and limestone, concrete and glass	7	41
	3.20									
31/10/77	4.00		4.00	SPT						
1/11/77			4.45	SPT					11	19
	5.00		5.00	SPT						
			5.45	SPT					9	17
	6.20									
			6.45	SPT		6.45	19.55			
			6.90	SPT				Medium dense, medium brown, fine to coarse grained clayey SAND and GRAVEL	21	12
	7.70									
			7.90	SPT						
			8.35	SPT					17	13
	9.20									
			9.20	SPT						
1/11/77			9.65	SPT		9.65	16.30		9	14
2/11/77								Medium grey silty weathered MUDSTONE		

REMARKS Groundwater encountered in openhole at 2.40m

SE 40 SW / 67G  
 SOUTH YORKSHIRE COUNTY COUNCIL  
 DEPARTMENT OF ENGINEERING  
 ENGINEERING SERVICES LABORATORY

# BOREHOLE RECORD

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 98mm		SHEET 2 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' R90	MS
	10.00							Medium grey silty weathered MUDSTONE		
			10.75			10.90	15.10			
	11.20		11.20	SPT		11.10	14.90	Light grey silty CLAY (Fireclay)	14	13
2/11/77			11.20-11.50	B	X	11.35	14.65	Pieces of wood Probably old pit props and workings	80 blors for 150mm	
3/11/77			11.50	SPT				Medium grey silty fracture, medium bedded slightly weathered MUDSTONE, moderately strong	No 240 R.Q.D.	8.8
				Core 1 (100%)		12.50	13.50			565
								Light grey-white silty thickly bedded slightly weathered weak MUDSTONE (Fireclay)		
						13.50	12.50			
3/11/77						13.90	12.10	Light grey thinly bedded, fractured fresh SILTSTONE, strong		
			14.00			14.00	12.00	Medium grey silty thinly bedded shaly fresh MUDSTONE, strong, brittle End of borehole		

REMARKS

SE 40 SW/67C

SOUTH YORKSHIRE COUNTY COUNCIL  
 DEPARTMENT OF ENGINEERING: Geological Survey  
 ENGINEERING SERVICES LABORATORY

# BOREHOLE RECORD

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7A
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Rotary Openhole 100mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'R' RQD	%
3/11/77						0.00	26.00			
					▨	0.20	25.80	TOPSOIL		
					▩			MADE GROUND Dark grey mudstone with red shale and coal fragments		
					▩	2.30	23.70	MADE GROUND Dark grey mudstone, brown clay and black shale		
					▩	6.50	19.50	Brown SAND and GRAVEL		
					▨	9.50	16.50	Light grey MUDSTONE		

REMARKS Good water returns all the way down  
 No cavities detected

SE40SW/67G

SOUTH YORKSHIRE COUNTY COUNCIL  
 DEPARTMENT OF ENGINEERING  
 ENGINEERING SERVICES LABORATORY

# BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7A
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Rotary Openhole - 100mm		
SHEET 2 OF 2		

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'M' RQD	%
					[Key Pattern]			Light grey MUDSTONE		
						10.50	15.50	Soft light grey MUDSTONE		
						11.00	15.00	Soft light grey-white MUDSTONE (Fireclay)		
						11.50	14.50	Light grey-white MUDSTONE (Fireclay)		
						14.00	12.00	End of borehole		

REMARKS

SE 40 SW 1676

SOUTH YORKSHIRE COUNTY COUNCIL  
 DEPARTMENT OF ENGINEERING  
 ENGINEERING SERVICES LABORATORY

# BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7 B
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Rotary Openhole - 100mm/73mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'H' ROD	MS
4/11/77						0.00	26.00			
						0.30	25.70	TOPSOIL		
						3.00	23.00	MADE GROUND Medium grey mudstone with coal, red and black shale		
						6.00	20.00	MADE GROUND Black shale, red shale, mudstone and ash		
						7.00	19.00	Brown clayey SAND and GRAVEL		
								Loss of returns very soft drilling		

**REMARKS** Loss of water returns at 7.00m  
 No cavities detected

SE 40 SW/67G

FORM 407

SOUTH YORKSHIRE COUNTY COUNCIL  
DEPARTMENT OF ENGINEERING  
ENGINEERING SERVICES LABORATORY

## BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 7 B
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Rotary Openhole - 100mm/73mm		SHEET 2 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' ROD	Wt.
						10.60	15.40	Loss of returns very soft drilling		
						11.00	15.00	Hard drilling No returns		
						12.40	13.60	Very hard drilling No returns		
4/11/77								End of borehole		

REMARKS

# BOREHOLE RECORD

SITE: Station Road Industrial Estate	LOCATION: Horwell	BOREHOLE No. 8
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 100mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA			TESTING		
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' RQD	MS
16/11/77			0.00			0.00	27.13			
			0.20			0.20	27.13	TOPSOIL		
			0.35	U4		0.50	26.83	MADE GROUND Red shale		11
			0.80	SPT				MADE GROUND Well compacted medium grey mudstone with black and red shale, brown clay and black ashes	24	17
16/11/77	1.25		1.25							
17/11/77			1.70							
			1.80	U4						15
			2.20							
			2.25	SPT		2.50	24.83			
			2.30							
			2.75					Firm medium brown silty sandy CLAY with sandstone fragments	9	25
			3.00-3.30	B						32
			3.60			3.50	23.83			
			3.75	U4				Firm medium brown mottled silty sandy stony CLAY with sandstone pebbles		17
			4.10							
			4.20	SPT						
		water struck	4.65			4.65	22.68			16
			5.00	B				Medium dense, medium brown, fine to coarse grained clayey SAND and GRAVEL		17
			5.20	SPT						21
			5.65							
			5.90	SPT						
			6.00							
			6.45	SPT						23
			6.70	B						9.7
			6.80-7.10							
17/11/77	7.20	21/11 a.m.	7.20							
18/11/77			7.60	SPT						33
			8.05							
			8.60							
			8.75	SPT						
			9.20			9.10	18.23			27
			9.40	B		9.40	17.93	Soft medium grey-brown silty sandy CLAY with sandstone pebbles		22
			9.25-9.55							
			9.55	SPT				Medium grey silty shaly weathered MUDSTONE		39
			10.00							14

REMARKS Groundwater struck at 4.65m, casing at 4.10m  
Borehole continually topped up with water to maintain stability in gravel

**BOREHOLE RECORD**

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 8
CUT/FILL(M) ---	CHAINAGE(M) ---	OFFSET(M) ---
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 100mm		SHEET 2 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'B' RQD	w%
	10.10		10.15	SPT B	[Key]	10.60	16.73	Medium grey silty shaly weathered MUDSTONE	26	13
	10.60		10.20-10.60							
18/11/77	11.00		11.05	SPT				Medium to dark grey silty shaly weathered MUDSTONE	27	15
21/11/77			11.10	SPT						
			11.55						36	15
21/11/77			12.35	SPT						
22/11/77			12.80	Core 1 (40%)	[Key]	12.80	14.53		58	13
			13.20	Core 2 (40%)	[Key]			Dark grey-black silty carbonaceous thinly bedded highly fractured moderately weathered MUDSTONE, weak	11%	0%
			13.50			13.50	13.83			
				Core 3 (50%)	[Key]	14.20	13.13	Dark grey-black silty carbonaceous thinly bedded shaly fresh MUDSTONE, strong with ironstained joints	5%	
					[Key]	14.50	12.83	Hard light grey laminated medium bedded SILTSTONE		
					[Key]	15.30	12.03	Lost water returns soft medium grey mudstone with pit props MADE GROUND - Backfilled workings		
22/11/77			15.40	Core 4 (75%)	[Key]	15.80	11.53	Medium grey shaly broken mudstone and pit props MADE GROUND - Backfilled workings	0%	
23/11/77			15.80		[Key]	16.10	11.23	Broken medium grey mudstone - cavities	0%	
23/11/77			16.40	Core 5 (100%)	[Key]	16.40	10.93	Light to medium grey silty medium bedded fractured weak MUDSTONE (Fireclay)		
								End of borehole		

REMARKS

BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 9
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 98mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' RQD	%
27/10/77			0.00			0.00	25.77			
			0.20			0.20	25.57	TOPSOIL		
			0.60	U4				MADE GROUND		18
			1.05	SPT		1.00	24.77	Well compacted medium grey mudstone with red and black shale, ash, glass and coal fragments	16	20
		28/10 a.m. v				1.60	24.17	MADE GROUND		
								Well compacted black ashes with mudstone, black shale, and coal fragments		
			2.30	U4				Firm medium grey-brown mottled silty sandy stony CLAY		19
			2.75			2.80	22.97			
	3.00	water struck v	3.25	SPT				Firm dark grey-brown mottled very sandy pebbly CLAY with sandstone and traces of coal fragments	18	13
		27/10 p.m. v	3.85			4.30	21.47			
	4.30		4.30	SPT				Firm medium to dark brown mottled very sandy very pebbly CLAY with sandstone fragments and traces of coal fragments	19	12
			5.30	SPT						
			5.75			5.80	19.97			
27/10/77	6.00		6.55	W				Medium dense, medium brown fine to coarse grained clayey SAND and GRAVEL		
28/10/77			6.55-7.00	B						
	7.00		7.10			7.45	18.32			
			7.55	SPT				Dark grey silty shaly weathered MUDSTONE		
			8.00			8.15	17.77			
28/10/77	8.15		8.15	SPT				Hard light grey SILTSTONE	35 blows for zero penetration	
2/11/77						8.40	17.37	Hard black carboniferous very shaly brittle MUDSTONE	R.Q.D.	
				Core 1 (100%)		8.90	16.87	Medium grey, medium bedded, shaly fresh SILTSTONE, strong		
						9.20	15.97	Dark grey-black thinly bedded fractured, fresh MUDSTONE, strong, brittle	30%	
	8.15							Light grey-white silty MUDSTONE (Fireclay)		

REMARKS Groundwater encountered in open borehole at 3.25m  
 Rotary coring commenced at 8.15m using water flush

# BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 9
CUT/FILL(M) --	CHAINAGE(M) --	OFFSET(M) --
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 98mm		SHEET 2 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'M' RQD	%
2/11/77			11.10	Core 2 (100%)	[Key: Horizontal lines]	10.80	14.97	Light grey-white thickly bedded silty slightly weathered MUDSTONE, weak. (Fireclay)	69%	
					[Key: Horizontal lines]	12.40	13.37	Light grey-white silty slightly shaly, slightly weathered MUDSTONE, weak, blocky. (Fireclay)		
					[Key: Horizontal lines]	13.05	12.72	Medium grey, medium bedded fractured fresh MUDSTONE, strong		
					[Key: Horizontal lines]	13.30	12.47	Hard medium grey fractured silty MUDSTONE		
					[Key: Vertical lines]	14.00	11.77	Light grey, medium bedded slightly fractured fresh SILTSTONE, strong		
End of borehole										

REMARKS

BOREHOLE RECORD

SITE: Station Road Industrial Estate	LOCATION: Wombwell	BOREHOLE No. 10
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 100mm		SHEET 1 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N'	Wt
10/11/77			0.00			0.00	26.58			
		water struck	0.20			0.20	26.38	TOPSOIL		
			0.50-0.70	B				MADE GROUND		
			0.70	SPT				Medium grey mudstone with black and red shale	14	6.4
	1.20		1.15							
			1.35	U4						11
			1.65	SPT					19	13
	2.40		2.10							
			2.60	U4		2.50	24.08	Soft medium to dark brown silty CLAY		36
			3.05			2.75	23.83	Soft dark grey-brown-green silty organic CLAY		
			3.10	SPT					6	42
	3.90		4.05							
			4.50	U4		4.20	22.38	Medium brown fine to coarse grained very clayey SAND and GRAVEL		30
	4.70	water struck	4.50	SPT					8	16
10/11/77			4.95			5.00	21.58			8.6
14/11/77		15/11 p.m.	5.00-5.30	B				Medium dense, medium brown fine to coarse grained SAND and GRAVEL		
			5.30	SPT					16	14
	5.80		5.75			5.90	20.68			10
	6.10		5.95-6.25	B				Medium dense, medium brown fine to medium grained SAND and GRAVEL with sub-angular sandstone fragments		
			6.25	SPT					7	14
14/11/77			6.70							7.7
15/11/77	7.00		7.15-7.45	B						
			7.50	SPT					20	16
			7.95							
			8.20-8.50	B						10
			8.50	SPT					17	22
			8.95			8.90	17.68			
	9.20		9.00			9.00	17.58	Soft medium grey silty CLAY with mudstone fragments		23
			9.45					Dark grey silty highly weathered MUDSTONE		
			9.90	SPT					22	16
15/11/77			10.00			10.00	16.58			

REMARKS Groundwater struck in open borehole at 0.30m  
Groundwater again struck at 4.95m, casing at 3.90m  
Rotary coring commenced at 11.80m using water flush

# BOREHOLE RECORD

British Geological Survey

SITE: Station Road Industrial Estate	LOCATION: Wortwell	BOREHOLE No. 10
CUT/FILL(M) —	CHAINAGE(M) —	OFFSET(M) —
BORING METHOD/SIZE(MM) Shell and Auger - 150mm/Rotary Coring - 100mm		SHEET 2 OF 2

BORING			SAMPLES		STRATA				TESTING	
DATE	CASING (M)	WATER (M)	DEPTH (M)	TYPE	KEY	DEPTH (M)	LEVEL (M)	DESCRIPTION	'N' RQD	%
16/11/77			10.00			10.00	16.58			
	10.30		10.45	SPT				Dark grey-black silty shaly highly weathered MUDSTONE	26	11
			10.45-10.65	B		10.50	16.08			27
			10.65	SPT				Dark grey-black silty shaly weathered MUDSTONE	53	13
	11.30		11.10	SPT						
			11.45	SPT						
16/11/77			11.80	SPT		11.80	14.78		110 for 200mm N=165	
17/11/77						12.10	14.48	Weak dark grey-black silty carbonaceous highly fractured shaly MUDSTONE	R.Q.D.	
					Core 1 (30%)	12.20	14.38			0%
								Medium grey laminated interbedded thinly bedded silty MUDSTONE and SILTSTONE		
								Medium grey shaly broken mudstone. MADE GROUND - Backfilled cavities Lost water returns		
			14.15			14.20	12.38			
					Core 2 (100%)			Light to medium grey silty fractured MUDSTONE (Fireclay)		52%
						14.75	11.83			
								Light grey medium bedded fractured fresh SILTSTONE, strong with occasional thin MUDSTONE bands		
17/11/77			15.50			15.50	11.08	End of borehole		

REMARKS

SE40SW/222

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION 4054, 0350	SAMPLES		
	From	To		Depth	Test and Result	
Borehole 3 9.7.73.	0	0.2	Grass and topsoil.			
	0.2	0.35	Light brown very clayey sand.			
	0.35	1.45	Dark grey weathered mudstone with fragments of burnt colliery shale, sandstone and clay. (Fill.)	1.0-	m	18
				1.3		
				1.3-	m	44
				1.6	LL FL	63 49
	1.45	1.6	Black sandy topsoil with fragments of mudstone and brick.			
	1.6	1.7	Firm dark brown very clayey sand with fragments of mudstone.	1.7-	m	28
				1.95	LL FL	40 26
	1.7	2.45	Firm to stiff rusty brown and light grey mottled sandy clay with occasional fragments of mudstone.	2.0-	M	26
				2.45	LL	28
					FL	21
					DD	1750
				dJ dU	20 7	
2.45	7.1	Loose brown medium and coarse grained sand with fine to coarse subrounded gravel and with some soft thin clayey bands.	3.1-	m	16	
			3.55	N	6	
			3.5-	m	14	
			4.5	P1 P2 P7 P36 P200	100 83 48 15 7	
			4.5-	m	16	
			5.05	N	4	
			4.6-	m	17	
5.6						
5.7-	m	5				
6.1						
6.4-	m	14				
6.85	N	10				
6.4-	m	12				
7.1						

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION	SAMPLES	
	From	To		Depth	Test and Result
Borehole 3 (Cont .... )	7.1	7.25	Firm to stiff dark brown and grey very sandy silty clay with fragments of sandstone, mudstone and subrounded gravel.	7.1-	m 13
				7.25	LL 24 PL 17
	7.25	7.45	Brown medium and coarse grained sand with fine to coarse sub-rounded gravel.	7.25-	m 14
				7.7	PL <sub>1/2</sub> 100 P <sub>1</sub> 87 P7 66 P36 24 P200 9
	7.45	9.2	Dark grey highly weathered shaly ironstained mudstone.	7.7-	m 14
				7.8	LL 36 PL 25
	9.2	9.9	Old workings containing abundant water and mudstone fragments.	7.3-	m 14
				8.25	N 66
	9.9	11.05	Fragments of dark grey ironstained water bearing shaly mudstone with a piece of timber showing saw marks.	9.9-	m 21
				10.35	Non Plastic
	11.05	11.35	Light grey very sandy mudstone.	10.5-	m 16
				10.7	
				10.7-	LL 25
				11.1	PL 18
				11.1-	m 7
				11.25	
				11.25-	m 5
				11.35	125 blows for 110mm initial penetration. N > 350
		11.35	End of Borehole. Water from old workings rose to with 1.5m of ground level.		

SE40SW/223

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION 4048/0372	SAMPLES	
	From	To		Depth	Test and Result
Borehole 3A	0	0.2	Grass and topsoil.		
	0.2	1.0	Light brown clayey sand.	0.6- 1.3	m LL FL 33 25 34
	1.3	1.65	Firm light brown very sandy clay.	1.35- 1.7	m LL FL DD dJ dU 38 50 33 1330 7 4
	1.65	2.25	Very soft rusty brown and grey mottled sandy clay with occasional fragments of weathered mudstone.	1.7- 1.3 1.9- 2.35	m m LL FL DD dJ dU 38 34 43 29 1370 20 0
	2.25	2.9	Soft dark grey clayey silt and silty clay with veins of iron-staining, fragments of mudstone and peat.	2.35- 2.45 2.5- 2.95	m LL FL DD dJ dU 41 14 56 36 1220 19 0
	2.9	3.1	Soft clayey organic silt with fragments of mudstone and pieces of rotter wood.	2.95- 3.05 3.1- 3.55	m m N 86 17 16
	3.1	5.05	Dark brown medium and coarse grained slightly clayey sand and fine to coarse gravel with occasional fragments of mudstone.	3.5- 4.1 4.7- 5.15 5.2- 5.4	m P1 P2 P7 P36 P200 m N m 16 100 69 39 12 6 21 13 14

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION	SAMPLES		
	From	To		Depth	Test and Result	
Borehole 3A (cont .... ) <small>British Geological Survey</small>	5.05	5.4	Fine dark grey sandy clay and clayey sand with occasional fine gravel and fragments of mudstone.	5.4-	m	24
				5.8		
				6.0-	m	13
				6.3	P2 P2 P7 P36 P200	100 4.6 33 19 8
	5.4	5.6	Dark brown medium grained sand. <small>British Geological Survey</small>			
	5.6	6.8	Dark brown medium and coarse grained sand with fine to coarse subrounded gravel. <small>British Geological Survey</small>	6.8-	m	23
				7.0		
	6.8	6.85	Fine dark brown very sandy clay with occasional subrounded gravel. <small>British Geological Survey</small>	7.0-	m	14
				7.35	LL FL DD dU sU	4.6 23 2000 120 0
	6.35	7.0	Fine grey very silty clay with occasional gravel. <small>British Geological Survey</small>	7.35-	m	16
			7.45			
7.0	7.6	Stiff light grey silty clay with fragments of mudstone. <small>British Geological Survey</small>	7.65-	m	13	
			8.3	LL FL DD dU sU	31 22 2090 4.5 24	
7.6	8.3	Light grey weathered mudstone with bands of dark grey silty shaly mudstone.	8.3-	m	10	
			8.4			
8.3	11.5	Dark grey weathered mudstone with some silty shaly bands. <small>British Geological Survey</small>	8.5-	m	10	
			8.95	H	41	
			8.9-	L	14	
			9.4			
			9.5-	m	10	
			9.95	LL FL	29 22	
11.5	12.4	Light grey weathered mudstone. <small>British Geological Survey</small>	9.95-	m	10	
			10.05			
			10.9-	m	8	
			11.35	H	43	
12.4	13.15	Dark grey weathered mudstone, silty in parts. <small>British Geological Survey</small>	12.0-	m	8	
			12.45	LL FL DL dU sU	22 16 2130 65 28	
			12.45-	m	7	
			12.55			

SE40SW/223

BOREHOLE No. AND LOCATION	DEPTH		SOIL DESCRIPTION	SAMPLES	
	From	To		Depth	Test and Result
Borehole 3a (cont .... )  British Geological Survey	13.15	16.2	Light grey sandy ironstained weathered mudstone becoming less weathered below 15m.  British Geological Survey	13.1-	n 6
				13.55	F 113 British Geological Survey
British Geological Survey	16.2	17.5	Light grey fractured very sandy mudstone.	14.4-	n 5
				14.85	F 222
British Geological Survey	17.5	13.0	Light grey fine to medium grained sandstone.	14.7-	Core 1.
				15.55	Recovery 95% R&D 15%
British Geological Survey	13.0	19.7	Dark grey fractured silty mudstone with some weathered bands, sandy below 19.4m.	15.55-	Core 2
				17.0	Recovery 55% R&D 15%
British Geological Survey	19.7	19.3	Light grey fine grained sandstone	17.0-	Core 3
				17.95	Recovery 75% R&D 50%
British Geological Survey	19.8	19.9	Dark grey fractured sandy mudstone	17.95-	Core 4
				19.1	Recovery 65% R&D 20%
British Geological Survey	19.9	20.55	Light grey fine grained sandstone with some silty mudstone bands.	19.1-	Core 5
				20.55	Recovery 100% R&D 50%
British Geological Survey	20.55	20.55	End of Borehole.		

**General View**



**Bulling Dike**



**Hardstanding on site and spoil heaps**



**Smaller spoil heap and general view across site.**





**Enzygo specialise in a wide range of technical services:**

**Property and Sites**

**Waste and Mineral Planning**

**Waste Technologies and Renewables**

**Landscape and Visual Impact**

**Environmental Assessment Co-ordination**

**Hydrology and Flood Risk**

**Waste Contract Procurement**

**Noise and Vibration**

**Environmental Permitting and Regulation**

**Development Planning & Policy**

**Ecology Services**

**Contaminated Land and Geotechnical**

**Traffic and Transportation**

**Planning Services**

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