



## Land Parcel H59 Monk Bretton

# Preliminary Land Contamination and Geotechnical Risk Assessment



On behalf of Barnsley Metropolitan  
Borough Council

Report 23-24-18-1-6013/DSR1  
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## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Site Location</b>	<b>3</b>
<b>3</b>	<b>Site Description</b>	<b>4</b>
<b>4</b>	<b>Environmental Setting</b>	<b>5</b>
<b>5</b>	<b>Contamination Risk Assessment</b>	<b>13</b>
<b>6</b>	<b>Conclusions and Recommendations</b>	<b>20</b>
<b>7</b>	<b>Limitations and Uncertainties</b>	<b>23</b>
<b>8</b>	<b>General Notes</b>	<b>25</b>

## Appendices

<b>A</b>	<b>Historic Maps</b>
<b>B</b>	<b>Groundsure EnviroInsight Report</b>
<b>C</b>	<b>Groundsure GeoInsight Report</b>
<b>D</b>	<b>Coal Authority and SYMAS Reports</b>



## Executive Summary

SITE INFORMATION	
Client	Barnsley Council.
Site	Land Parcel H59
Location	Monk Bretton, S71 2SD. NGR 436743,408710
Approximate area	1.2 Hectares
Topography	Elevations range from approximately 75m OD in the south east to 67m OD in the north west.
Current land use	Fields and rough ground used for horse grazing.
Proposed development	Low rise residential.

SITE SETTING	
Geology	Oaks Rock a sandstone flag of the Pennine Middle Coal Measures over the majority of the site, to the north Pennine Middle Coal Measures Formation comprising Mudstone, Siltstone And Sandstone
Radon	No radon protective measures are required.
Hydrogeology	Secondary A Aquifer. The site does not lie within a source protection zone.
Hydrology	No surface waters within 250m of the site
Landfill sites	No landfills located within 250m of the site.
History	No developments have been noted on site, since the first mapping of the site in 1854.
Previous site investigations	HBS has not been made aware of any previous investigations, which may have been undertaken at this site.
Anticipated ground conditions	Thin topsoil and clays overlying bedrock. Bedrock across the southern half of the site is likely to be dominated by sandstone (Oaks Rock). The northern half of the site is likely to be underlain by Middle Coal Measures mudstones, siltstones, sandstone and shales. Made Ground materials may be present behind No 30 to 42 Preston Road and near site entrance.



GEOTECHNICAL	
Foundations	Shallow spread foundations should be suitable. Bearing capacity to be determined from site investigation, but are likely to be sufficient for conventional low rise structures.
Shrinkable soils	Clays soils are likely to be present near surface. These cohesive soils may be shrinkable.
Buried concrete	Significant concrete protection measures unlikely to be required.
Floor slabs	Suspended slab may be required if clays are encountered.
Slope stability	Gradients are considered generally stable but careful assessment of changes of elevation or construction near existing slopes would still be needed.
Pavement	CBR values likely to be adequate for road and car park construction.
Soakaways	Underlying geology unlikely to be suitable for soakaway drainage, subject to full scale testing to confirm and calculate infiltration rates.
Natural cavities	None expected.
Mining	There are no record of any shallow working in the locality of the site and the likelihood of unchartered workings being present to affect the site is considered low to negligible. Consequently, no mining specific ground investigation is deemed necessary for future developments.

CONTAMINATION	
Land Contamination	No significant sources of soil or groundwater contamination noted. Risks associated with land contamination are therefore considered low.
Gas protection	No significant risks identified. The site is however underlain by coal measure strata, the risk from ground gas cannot therefore be discounted and monitoring is recommended as part of the intrusive investigation. No radon protective measures are required.



# 1 Introduction

In December 2017, Hamson Barron Smith (HBS) was commissioned by Barnsley Council to undertake a Preliminary Land Contamination and Geotechnical Risk Assessment of Land Parcel H59, Monk Bretton.

It is understood that the site is being considered for residential redevelopment. No proposed development plans were available at the time of reporting, it is assumed the development is to consist of two or three storey residential properties of traditional construction together with associated infrastructure.

The site comprises of open fields and rough ground. The location of the site is shown on Figure 1.

## 1.1 Project Requirements

The overall objectives of this Phase I assessment are to determine the potential risks from contamination and to identify potential geotechnical risks and constraints.

The objectives of the Phase I report are to:

- Establish the environmental setting, including sensitivity in relation to human health, surface water, groundwater and ecological receptors.
- Review historical and recent land uses to assess the potential for contamination to be present from past and current land-use.
- Quantitatively assess the potential nature and extent of contamination from those uses and the environmental risks and liabilities that may be posed to the identified receptors (human health and the environment).
- Assess any potential geotechnical risks.
- Develop a ground model for the site.

## 1.2 Information Sources

During the production of this report, the following sources have been reviewed:

- An EnviroInsight Report prepared by Groundsure (Report Reference: GS-4615474 dated 21 Dec 2017).



- A GeolInsight Report prepared by Groundsure (Report Number GS-4615475 dated 21 Dec 2017).
- A CON29M Non-Residential Mining Report prepared by the Coal Authority (Report Number GS-46154771 dated 21<sup>st</sup> December 2017).
- A Mineral Report prepared by South Yorkshire Mining Advisory Service (SYMAS) (Report Number M4150/4 dated 5<sup>th</sup> December 2017)
- Historic Ordnance Survey maps.
- British Geological Survey maps.
- British Geological Survey borehole records.
- Environment Agency landfill records.
- Environment Agency groundwater data.

### **1.3 Previous Investigations**

HBS has not been made aware of any previous investigations, which may have been undertaken at this site.

## 2 Site Location

Address: Land Parcel H59, Monk Bretton.

Post Code: S71 2SD

National Grid Reference: 436743,408710

The site location is shown on Figure 1 and a more detailed plan on Figure 2.

Full details of the site's features and land use are presented in Section 3.



Figure 1 Site location plan

### 3 Site Description

The site consists of a 1.2 hectare parcel of land in Monk Bretton, approximately 3.2km north east of Barnsley. The site comprises of rough ground and grassed fields that is currently used for horse grazing. The site is split into two sections by a north west to south east running tree line, the approximate centre of the site. The site slopes from the south to the south west from circa 75 OD m to 67m OD.

A site walk over was undertaken by HBS on the 22<sup>nd</sup> December 2017. However, due to horses within the site appearing aggressive no entry into the fields was available. The site was therefore inspected from outside along the fence line only.

Access to the site is via St Michaels Avenue to the north east of the site. At this entrance an earthworks bund has been constructed to stop vehicle access into the site. In the south of the site, behind Nos 30 to 42 Preston Way a break in slope was noted. This break in slope is circa 0.5m high and would appear to manmade feature.

#### 3.1 Adjacent land Use

The site is bound to the north, north east, south east and south by residential premises. Grassed open land lies to the south west, beyond which are industrial units.

Figure 2 shows the site setting.



Figure 2 Site layout



## 4 Environmental Setting

### 4.1 Geology

The 1:50,000 scale British Geological Survey (BGS) geological mapping indicates that the geology of the site can be split into two distinct areas. Two bedrock lithology's are shown beneath the site, the change between the two occurs approximately within the centre of the site, with the boundaries between the two units trending north east to south west.

The solid geology across the south eastern half of the site is shown as the Oaks Rock, a sandstone flag of the Pennine Middle Coal Measures.

The north western half is mapped as Pennine Middle Coal Measures, in which is mapped a Fossil Horizon. The Pennine Middle Coal Measures are described by the BGS as "*Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit*".

No Made Ground is mapped on site. The 1:10,000 scale mapping shows localised Made Ground is present beyond the northern boundary of the site.

The BGS hole records for a number of boreholes in the area. The nearest are located circa 180m west of the site within the industrial area. These boreholes are located within an area mapped as underlain by the Pennine Middle Coal Measures.

The boreholes indicate a thin layer of Made Ground (circa 0.4m) overlying a firm grey brown mottled silty Clay, to circa 1.1m to 1.8 m bgl. Beneath the Clay, strata described as very stiff grey brown mudstone, siltstone and shale were proven to 5.5m bgl.

### 4.2 Soil Geochemistry

BGS estimated soil geochemistry information is included as part of the Groundsure GeolInsight report. The BGS digital estimated soil chemistry data indicates the estimated geometric mean concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Nickel and Lead in topsoil derived by spatial interpolation of the point source soil chemistry data. The original samples were collected and analysed as part of the BGS Geochemical Baseline Survey of the Environment (G-BASE) project.



Table 1 summarises the typical estimated concentrations of each determinant in topsoil in the locality of the site.

**Table 1: Summary of BGS Estimated Soil Geochemistry**

Determinant	Concentration Range (mg/kg)
Arsenic	15 – 25
Cadmium	<1.8
Chromium	60 – 90
Lead	<100
Nickel	15 – 30

### 4.3 Hydrogeology

The Environment Agency classifies the Oaks Rock at the site to be Secondary A Aquifer. The site does not lie within a Source Protection Zone and there are no groundwater extractions within 2km of the site.

The depth to groundwater is not known

It is considered that groundwater would be of medium sensitivity to any potential sources of on-site contamination.

### 4.4 Hydrology

The nearest surface water is an unnamed stream circa 340m north west at its closest point. The distance to the site the surface water feature would suggest that surface water is considered to be of low sensitivity to any potential sources of on-site contamination.

### 4.5 Landfill Sites

There are no records of landfills / historic landfills within 500m of the site. Risks associated with gas / leachate migration sourced for landfills is considered negligible.

### 4.6 Radon

The Groundsure radon report states that the site is in an area where the estimated probability of homes being above the action level of 200Bqm<sup>-3</sup> is between 1% and 3%. No radon protective measures are required in the construction of new buildings.



Confirmation of any protection measures should be agreed with the local authority building control and / or NHBC.

## 4.7 Sensitive Land Uses and Designated Areas

The site lies in a Nitrate Vulnerable Zone.

There are no other Designated or Environmentally Sensitive Sites within 1000m of the study site.

## 4.8 Land Use History

The historical land uses of the site and its surrounding area have been established from superseded editions of Ordnance Survey maps and are detailed in Table 2.

Copies of the maps are included in Appendix A.

**Table 2: Summary of Historical Maps**

Date	On Site	Offsite
1854	The site comprises of two fields split east west by a tree line.	The general surrounding land use is agricultural. A tree lined track way is present along the northern boundary.
1892	No significant changes.	No significant changes.
1894	No significant changes.	No significant changes.
1904	No significant changes.	No significant changes. Distillery shown circa 400m southeast of site. Localised residential properties, along Fish Dam lane circa 350m southeast of site.
1906	No significant changes.	No significant changes.
1932	No significant changes.	No significant changes. Number of residential properties has increased.
1938	No significant changes.	No significant changes.
1948	No significant changes.	No significant changes. Number of residential properties has increased. Large unnamed structure is now shown south of distillery.
1955	No significant changes.	No significant changes.
1961	No significant changes.	Extensive residential development to the south / south east of the site.
1966	No significant changes.	No significant changes. A large works now occupies the location of the unnamed building and distillery to the south of the site.
1967	No significant changes.	Residential development to the north east .
1968	No significant changes.	No significant changes.
1974	No significant changes.	No significant changes.
1978	No significant changes.	Further residential development to north. Mapping indicates earthworks / slope have been constructed as part of development.



Date	On Site	Offsite
1982	No significant changes.	Charlton Industrial Estate now shown to the north west and west of the site occupied by depots / warehouses. Works 400m south of the site has expanded but is no longer identified as works.
1992	No significant changes.	No significant changes.
1993	No significant changes.	No significant changes.
2002	No significant changes.	No significant changes.
2010	No significant changes.	No significant changes.
2014	No significant changes.	No significant changes.

#### 4.8.1 Summary of Development History

##### On site

There is no evidence of any development on the site. During the walkover an earthworks bund was noted around the site entrance and an area of possible filling / earthworks was noted to the rear of properties 30 to 42 Preston Way.

##### Off Site

The surrounding land use was typically undeveloped farmland becoming principally residential properties during the early 1960s. The industrial estate towards the west was development in circa the early 1980s.

#### 4.9 Statutory Authority Records

A review of public registers contained within the Groundsure EnviroInsight report has been undertaken. These entries relate to trade directories, pollution control registers, hazardous sites, enforcement notices etc. A summary of those that might be of relevance to the site is presented below, for full details of all entries; reference should be made to the EnviroInsight report in Appendix B.

- Three electrical substations are recorded within 250m of the site. These are located circa 60 south, east, 140m north, and 245 m east. The substations to the south east and north can be dated back to the mid 1960s. The one the east is more recent.
- There are two records of pollution within 250m of the site. Both are recorded as minor to low impacts.



- There are two records of waste treatment, transfer or disposal sites within 250m of the site. They are located circa 105m and 135m north west of the site and are associated with waste transfer sites.
- There are two records of Environment Agency/Natural Resources Wales licensed waste sites within 250m of the study site. One of the licences has expired and they are associated with the same facility,
- There are records of two tanks with 250m of the site. They are located 127m south west and 193m north west of the site. The contents of the tanks is not known.



## 5 Geotechnical Assessment

The published geological information (Section 4.1) indicates that the site is likely to be underlain by a thin layer of clays dominated soils beneath solid bedrock strat is likely to be encountered. The bedrock geology is likely to be dominated by sandstones across the southern half of the site, while to the north mudstone, siltstone and shales may be present.

An assessment of potential geotechnical risks based on the information from the Groundsure GeolInsight Report and available geological information is presented in the following sections. The risks are summarised in Table 4. The report is reproduced in Appendix C.

### 5.1 Deep Made Ground

There is no evidence of significant development at the site. Deep Made Ground is therefore not envisaged. Made Ground may be present behind No 20 to 42 Preston Way, as in this location a break in slope was noted which may suggest an element of earthworks; most likely associated with the residential development of the area in the 1960s.

### 5.2 Buried Structures

No evidence of development has been noted on the site. Significant buried structures are therefore not envisage. Elements of land drainage may be present, associated with the agricultural use of the site.

### 5.3 Compressible Soils

The Groundsure GeolInsight report states that the Compressible Ground risk at the site is “negligible”. Based on the expected geology, compressible soils are not anticipated.

### 5.4 Shrinking / Swelling Clay

The Groundsure GeolInsight report states that the Shrinking or Swelling Clay risk at the site is “negligible to very low”. This is based on the anticipated Oaks Rock and Pennine Coal Measures. However, the near surface soils may include clays, which could be shrinkable.



## **5.5 Collapsible soils**

The Groundsure GeolInsight report states that the Collapsible Ground risk at the site is “very low”. Based on the anticipated ground conditions, collapsible soils are not expected.

## **5.6 Aggressive Ground Conditions for Concrete**

Based on the published geology, the anticipated soils are not expected to contain significantly elevated concentrations of soluble sulphates or pyritic materials which may oxidise to form soluble sulphates.

## **5.7 Running Sands / Excavation Instability**

The Groundsure GeolInsight report states that the Running Sand risk at the site is “negligible”. Based on the anticipated ground conditions, running sands are not expected.

## **5.8 Groundwater**

No evidence of a high water table (such as ponding water, hydrophilic plants, soft ground etc.) was noted during the site walkover.

## **5.9 Slope Stability**

The Groundsure GeolInsight report states that the Landslide risk at the site is “very low to low”.

The site slopes from the SE to the SW, and a break in slope is present behind No 30 to 42 Preston Way. Any proposed slopes or temporary cuttings for retaining systems associated with the development should be carefully assessed.

## **5.10 Solution Features / Natural Cavities**

The site is expected to be underlain by strata which are not prone to dissolution.

The Groundsure GeolInsight report states that the Ground Dissolution risk at the site is “negligible”.

## **5.11 Underground Mining**

The GeolInsight report states that the site is within an area affected by coal mining.



A Coal Authority Mining Report was obtained by HBS, this report confirmed:

- The property is in a surface area that could be affected by underground mining in six seams of coal at 100m to 330m depth, and last worked in 1958. Any movement in the ground due to coal mining activity should have stopped.
- There are no known mine entries on or within 20m of the site.
- The Authority is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.
- The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.
- The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994.
- The Coal Authority has no record of a mine gas emission requiring action.

The SYMAS Report indicates the following

- The site is located on the Oaks Rock sandstone and Middle Coal Measures. There no conjectured geological faulting is present within the site, however the report notes that the bedrock may contain natural fissures which may have been opened out from past deep mining.
- There are no workable coal seams at shallow depth.
- Made Ground is present to the north, and that given the visual appearance of the site that some ground working has taken place.
- That risk of uncharted shallow workings is Low.
- Deep mining operations have taken place beneath the site in various coal seams. The latest being in the Winter Coal Seam at circa 100m deep in the late 1950s. All subsidence movement will be long complete and as no deep coals remain it should not be affected for the foreseeable future.

The Coal Authority and Symas Reports are presented in Appendix D.



## 6 Contamination Risk Assessment

### 6.1 Legislative Background

The primary legislative mechanism for contaminated land management in the UK is Part 2A of the Environmental Protection Act, 1990 (EPA). Part 2A was introduced into the EPA under Section 57 of the Environment Act 1995 to help deal with the substantial legacy of land contamination. It focuses on the identification and remediation of land which is in such a condition by reason of contamination that it gives rise to significant harm or the significant possibility of significant harm to certain named receptors, or gives rise to pollution of controlled waters or the likelihood of such pollution. Part 2A applies where there is unacceptable risk, assessed on the basis of the current use and the relevant circumstances of the land. It is not directed to assessing risks in relation to a future use of the land that would require a specific grant of planning permission.

The control of development and land use in the future is the responsibility of the planning system. A fundamental principle of sustainable development is that the condition of land, its use and its development should be protected from potential hazards. The National Planning Policy Framework (NPPF) requires the developer to obtain adequate site information to confirm that the site is suitable for its proposed use.

#### *Part 2A*

Part 2A provides a regulatory regime for the identification and remediation of contaminated land and is the primary mechanism in the contaminated land regime. Local authorities are the principal regulator for inspection of land under Part 2A. In England, Part 2A is described fully in DEFRA Circular 01/2006, which also contains the statutory guidance (DEFRA, 2006). Part 2A defines contaminated land as:

*‘...any land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that*

- a. significant harm is being caused or there is a significant possibility of such harm being caused; or*
- b. Pollution of controlled waters is being, or is likely to be, caused.’*



Part 2A is designed to 'enable the identification and remediation of land on which contamination is causing unacceptable risks to human health or the wider environment. It does not necessarily include all land where contamination is present, even though such contamination may be relevant in the context of other regimes'.

In applying the definition of Contaminated Land, Part 2A states that 'the Local Authority must:

- Identify a 'Pollution Linkage'. That is, a linkage between a contaminant and a receptor, by means of a pathway(s).
- Determine if the contaminant is causing significant harm to that receptor, or there is a significant possibility of such harm being caused by that contaminant to that receptor.

If any one element of the pollutant linkage is not present then the land should not be identified as 'contaminated land'.

#### *NPPF*

NPPF States that 'to prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location.'

Planning policies and decisions should also ensure that:

- the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;

NPPF also states that after any required remediation, the land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990.

## **6.2 Preliminary Conceptual Site Model**

Following a review of the desk based geo-environmental information on the site and a site reconnaissance, a preliminary CSM has been formulated to identify potential



sources of contamination, likely receptors and potential pathways on and in the immediate vicinity of the site.

It should be noted that some uncertainties exist due to the limited site specific data available. However, potential contaminants and receptors have been identified based on this Phase 1 desk study review. Pathways have been established on reasonable scientific knowledge of the behaviour of the contaminants in the ground.

It should also be noted that because the assessment is based on documentary evidence contaminants may be identified, which in practice are not present and contaminants may be present which have not been identified.

The guidance provided in CLR11 indicates the CSM should identify those contaminants, pathways and receptors which are 'likely' to represent an 'unacceptable' risk either to human health or the surrounding environment.

## **6.3 Potential Contaminant Sources**

### **6.3.1 Onsite**

No significant areas of potential concern were identified from the site walkover. Some Made Ground may be present to the rear of No 30s to 42 Preston Way. A mound of earth was also noted at the site entrance.

### **6.4 Off site**

The surrounding land use was typically undeveloped farmland becoming principally residential properties during the early 1960s. The industrial estate towards the west was development in circa the early 1980s.

Within the industrial estate, there are facilities associated with waste management and two tanks. The industrial site is located down slope of the site. Consequently, the operations of the estate are unlikely to have a significant impact on the site. Small electrical substations present locally. The nearest is located 60 south of the site. While substations can act as localised sources of hydrocarbons, PAHs and subject to their age of operation poly chlorinated biphenyl's (PCBs). It is considered that given the low permeability soils present and the small localised nature of the substations that they are unlikely to have the potential to impact on the soils and groundwater's beneath the site.



#### **6.4.1 Potential Contaminants of Concern**

No significant sources of land contamination have been noted. Some man made soils may however be present locally on site. HBS consider that contaminants of concern are likely to be limited to those typically associated with a brownfield site, as follows:

- Suite of metals
- Polycyclic aromatic hydrocarbons
- Total Petroleum hydrocarbons
- Asbestos Containing Materials (ACM)

#### **6.5 Landfill gas**

No current or historical landfills are known to exist within 500m of the site. No organic soils are anticipated to lie beneath the site.

No other sources of ground gas on or in the vicinity of the site. Subject to the findings of an intrusive investigation it is currently envisaged that no gas protection measures will be required to be incorporated into the future development. However, as the site lies within an area where coal resources are present, it is recommended that a minimum of one round of gas monitoring is undertaken as part of the site investigation to validate this assumption.

##### **6.5.1 Radon**

The Groundsure GeoInsight report states that the site is in an area where the estimated probability of homes being above the action level of 200Bqm<sup>-3</sup> is between 1% and 3%. No radon protective measures are required in the construction of new buildings.

Confirmation of any protection measures should be agreed with the local authority building control and / or NHBC.

#### **6.6 Receptors**

It is understood that the site will be redeveloped with low rise residential properties. Future Residents are assumed therefore to occupy the site full time and may be



exposed directly to soils within the site. Construction workers would be directly exposed to soils; however, this would only be short term.

- Future Residents
- Construction workers
- Construction materials (including services)
- Groundwater – Secondary A Aquifer.
- Flora and fauna.

## **6.7 Preliminary Risk Assessment**

A preliminary risk assessment was undertaken based on a qualitative assessment of the likely presence of a pollutant linkage. A pollutant linkage is the relationship between a source (or contaminant), a pathway and a target (or receptor). Unless all three elements of a pollutant linkage are present, a significant risk is not considered to exist. The approach adopted is to screen each site based on assigning a simple low, medium or high category.

The preliminary risk assessment is shown in Table 3 overleaf.



**Table 3 Site Conceptual Model**

Potential Source and Pollutant	Receptor	Pathway	Potential Pollutant Linkage?	Probability of exposure, consequence and magnitude of risk.
Localised made ground with the potential to contain include heavy metals, TPH, PAHs and ACM.	Human Health – future residents.	Direct contact - Dermal contact, soil ingestion and dust inhalation.	Possible – limited sources identified.	Probability: Possible Consequence: Medium Magnitude: <b>Low Risk</b>
		Indirect Contact - Vapour inhalation.	Unlikely – limited historic on-site sources of contamination with potential to generate vapours noted.	Probability: Unlikely Consequence: Medium Magnitude: <b>Low Risk</b>
		Hydrocarbon tainting of potable water supply pipes.	Unlikely – limited historic on-site sources of hydrocarbon contamination noted.	Probability: Unlikely Consequence: Medium Magnitude: <b>Low Risk</b>
	Human Health – Construction workers	Direct contact - Dermal contact, soil ingestion and dust inhalation.	Possible – limited sources identified.	Probability: Possible Consequence: Medium Magnitude: <b>Low Risk</b>
		Indirect Contact - Vapour inhalation.	Unlikely – limited historic on-site sources of contamination with potential to generate vapours noted.	Probability: Unlikely Consequence: Medium Magnitude: <b>Low Risk</b>
	Controlled Waters – groundwater (Secondary A Aquifer)	Leaching and percolation.	Possible – limited sources identified.	Probability: Possible Consequence: Low Magnitude: <b>Low Risk</b>
	Buried structures – Aggressive ground conditions	Direct contact and/or leaching (sulphate, pH).	Unlikely – Underlying geology unlikely to be aggressive.	Probability: Unlikely Consequence: Medium Magnitude: <b>Low Risk</b>
	Ecology - existing trees and landscaping on site.	Plant uptake.	Unlikely – limited sources identified.	Probability: Unlikely Consequence: Low Magnitude: <b>Low Risk</b>



Potential Source and Pollutant	Receptor	Pathway	Potential Pollutant Linkage?	Probability of exposure, consequence and magnitude of risk.
Ground gases.	Human Health – future residents.	Permeation through ground and intrusion into buildings and structures.	Unlikely – no significant source identified.	Probability: Unlikely Consequence: High Magnitude: <b>Low Risk</b>
	Flora	Displacement of oxygen from root systems	Unlikely – no significant source identified.	Probability: Unlikely Consequence: Low Magnitude: <b>Low Risk</b>
Radon.	Human Health – future residents.	Permeation through ground floor.	Unlikely - No protection measures required.	Probability: Unlikely Consequence: Medium Magnitude: <b>Low Risk</b>



## 7 Conclusions and Recommendations

### 7.1 Geotechnical Risks

The potential for geotechnical hazards are summarised in Table 4.

**Table 4: Summary of Geotechnical Hazards.**

Potential Geological Hazard	Impact on proposed development	Likelihood of presence
Deep Made Ground	High	Unlikely
Buried structures	Moderate	Unlikely
Compressible ground	Moderate	Unlikely
Shrinking / swelling clay	Moderate	Possible
Collapsible ground	High	Unlikely
Aggressive ground conditions for concrete	Low	Unlikely
Running sands / excavation instability	Moderate	Unlikely
High water table / groundwater inflows.	High	Unlikely
Slope stability	Moderate	Unlikely
Underground mining	High	Unlikely
Ground dissolution / natural cavities	High	Unlikely

Based on the anticipated ground conditions, conventional spread foundations should be suitable for the proposed development.

The near surface soils are anticipated to be shrinkable and foundations are therefore likely to require deepening in the vicinity of existing, felled or proposed trees. A suspended ground floor slab may also be required. A tree survey to determine species and height will be required to calculate foundation depths in shrinkable soils.

The soils may not be sufficiently permeable to allow soakaway drainage to be used. The Local Authority are likely to require full scale testing in accordance with BRE 365 (2016) obtain infiltration rates for design.

### 7.2 Land Contamination

No developments have been recorded on the site. Some localised Made Ground may be present. Sources of land contamination are therefore limited

Therefore, the site is considered to be low risk with regards to contamination.



The potential risks are based on the worst case assumption that the sources may have caused fuels, oils and solvents to ingress into the underlying soils. It must be noted that there is no evidence to suggest that this may have occurred. The actual risks to the receptors would need to be determined by undertaking an intrusive ground investigation and laboratory analysis.

The scope of such an investigation should be discussed and agreed with the local authority.

## **7.3 Ground Gas**

### **7.3.1 Landfill gas**

No current or historical landfills are known to exist within 250m of the site. The site is underlain by Coal Measures strata, which have the potential to generate ground gases. While the risk of significant ground gas is considered low, risks cannot be discounted.

Subject to the findings of an intrusive investigation, it is currently envisaged that no gas protection measures will be required to be incorporated into the future development.

### **7.3.2 Radon**

No radon protective measures are required in the construction of new developments or extensions.

Confirmation of any protection measures should be agreed with the local authority building control and / or NHBC.

## **7.4 Coal Mining**

The report confirms that deep mining has occurred in the area, the latest being the workings at circa 100m depth in the 1950s. It has been concluded that the site can be regarded as stable from deep mine workings.

The report indicates that there are no record of any shallow working in the locality of the site and the likelihood of unchartered workings being present to affect the site is considered low to. Consequently, no mining specific ground investigation is deemed necessary for future developments.



## 7.5 Summary

The aim of this report was to assess the potential geotechnical and geo-environmental issues at the proposed development site. No significant sources of contamination have been identified from the Preliminary Risk Assessment. To enable the knowledge of the contaminating potential and land quality of this site to be developed further a Phase II Site Investigation would be required.

In general, where any new building is proposed an intrusive investigation should be carried out so that geotechnical parameters and sub-surface ground conditions can be determined to assist in the design of the structure. Any potential abnormal geotechnical risks identified in this report should be properly investigated so that the actual level of risk and any remedial measures required can be determined. While the provision of a detailed specification for any Phase II investigation was not part of the Client's brief for this report, it should be noted that any intrusive investigation should address any specific contamination and geotechnical risks highlighted in this report. Where any potential sources of contamination have been identified these should be thoroughly investigated to determine actual risks to any identified receptors. Even where no potential sources of contamination have been identified, it would be prudent to undertake confirmatory testing of soils during any geotechnical investigation.



## 8 Limitations and Uncertainties

### 8.1 General

It should be noted that the levels of risk identified in this report are perceived risks based on the information reviewed. No physical investigation or testing has been carried out; actual risks can only be assessed following a physical investigation of the site. Further work, including physical investigation, laboratory testing and ground gas monitoring may be required by the appropriate regulators to confirm actual conditions.

This report has been prepared by Hamson Barron Smith with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the Client.

The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true representative data with respect to site conditions.

The information reported herein is based on the interpretation of data collected during the site investigation, pertaining specifically to the soil samples retained from the identified locations. Should additional information become available that may influence the opinions expressed in this report, Hamson Barron Smith reserves the right to review such information and, if warranted, to alter the opinions accordingly.

The evaluation and conclusions do not preclude the existence of other site conditions and contamination, which could not reasonably have been revealed by the site investigation works undertaken at the time of writing. This report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions or potential contaminants.

This report has been prepared solely for the use of the client, and may not be relied upon by other parties without written consent from Hamson Barron Smith.

Hamson Barron Smith disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.



## 8.2 Site Specific

Due to horses present in the site, the site was inspected from the fence line only. HBS have not completed an inspection within the fence line.



## 9 General Notes

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The report and /or opinion will be prepared for the specific purpose stated in the document and in relation to the nature and extent of proposals made available to us at the time of your enquiry. The recommendations should not be used for other schemes on or adjacent to the site without further reference to Hamson Barron Smith Limited. The assessment of the factual data will be provided to assist the client and his Engineer and/or advisors in the preparation of their designs.

The report will be based on the conditions encountered in the context of the proposed development. There may be special conditions, appertaining to the site, however, which may not be revealed by the assessment, and which may not be taken into account in the report.

Methods of construction and/or design other than those proposed by the designers or referred to in the report may require consideration during the evolution of the proposals and further assessment of the geotechnical data would be required to provide discussion and recommendation appropriate to these methods.

The accuracy of the results reported will depend upon the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristic of the strata as a whole. Where such measurements are critical, the technique of the investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the company where necessary.

Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes, or on possible presence of a feature based on either



visual, verbal, written, cartographical, photographic or published evidence, this will be for guidance only and no liability can be accepted for its accuracy.

Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of these data by the supervising geotechnical engineers.

Any comments on groundwater conditions will be based on observations made at the time of the investigation, unless specifically stated otherwise. It should be noted, however, that the observations are subject to the method and speed of the boring, drilling or excavation and that groundwater levels will vary due to seasonal or other effects.

Unless specifically stated, the investigation will not take into account of possible effects of mineral extraction.

The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to geotechnical considerations hence its evaluation will be outside the scope of the report.



---

# Appendix A

## Historic Maps

**Site Details:**

ST MICHAELS AVENUE, MONK  
BRETTON, BARNSELY, S71 2SD

**Client Ref:** 18-1-6013\_Monk\_Bretton\_PO23002493  
**Report Ref:** GS-4615476  
**Grid Ref:** 436753, 408707

**Map Name:** County Series

**Map date:** 1892

**Scale:** 1:2,500

**Printed at:** 1:2,500



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Revised N/A  
Edition 1892  
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Levelled N/A

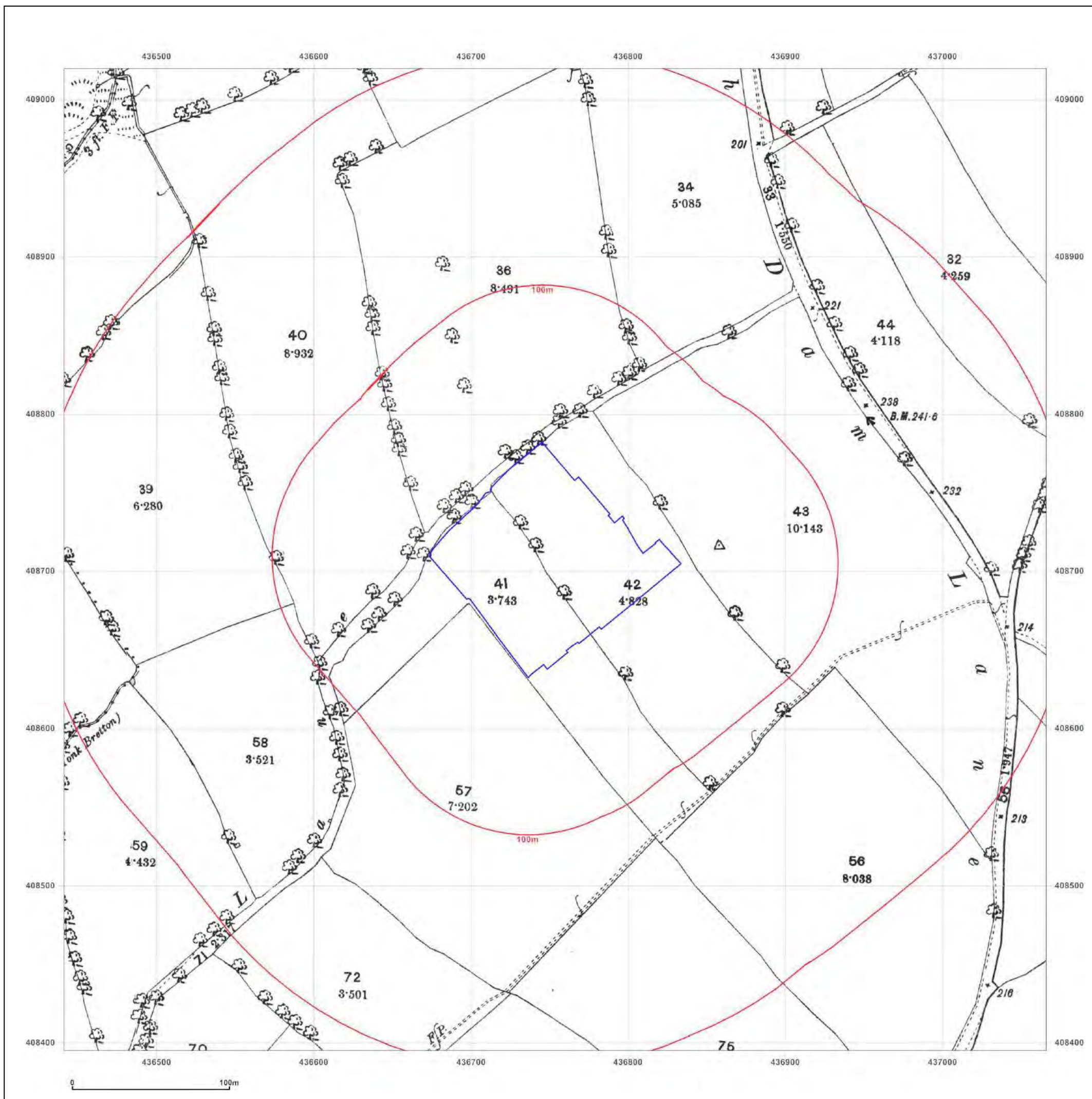


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Edition N/A  
Copyright N/A  
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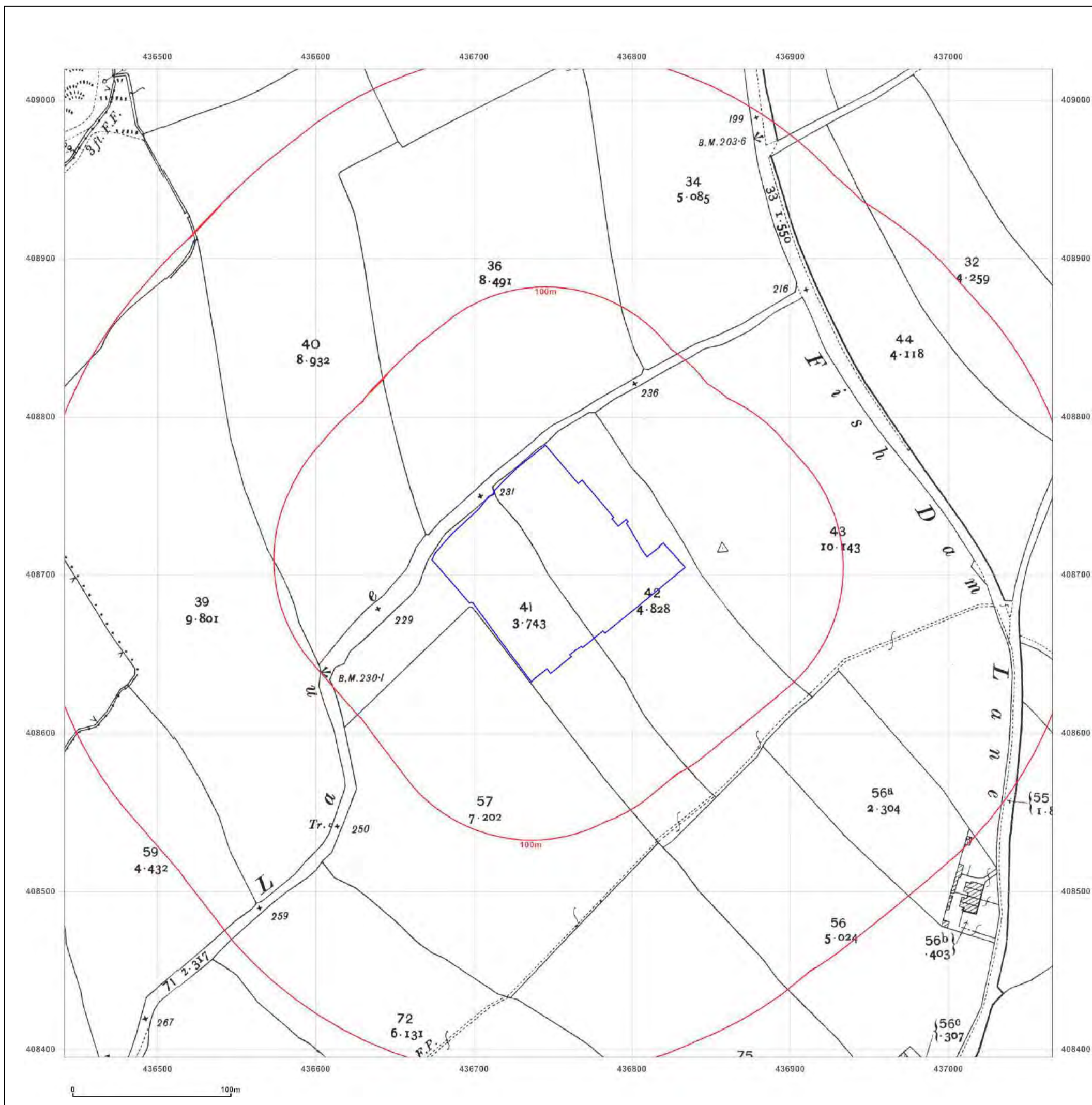


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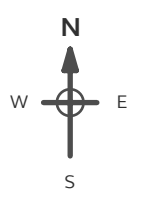


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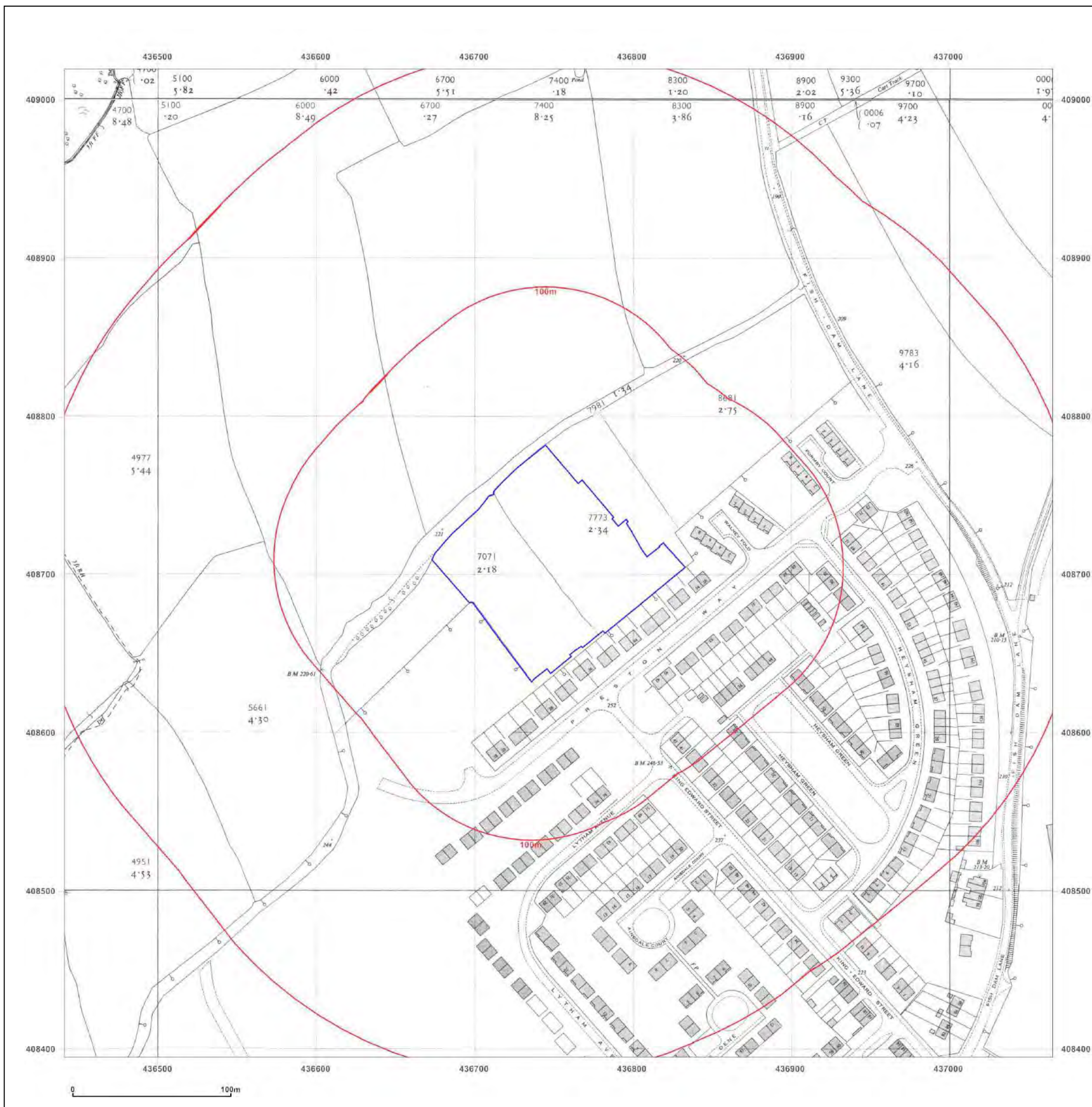


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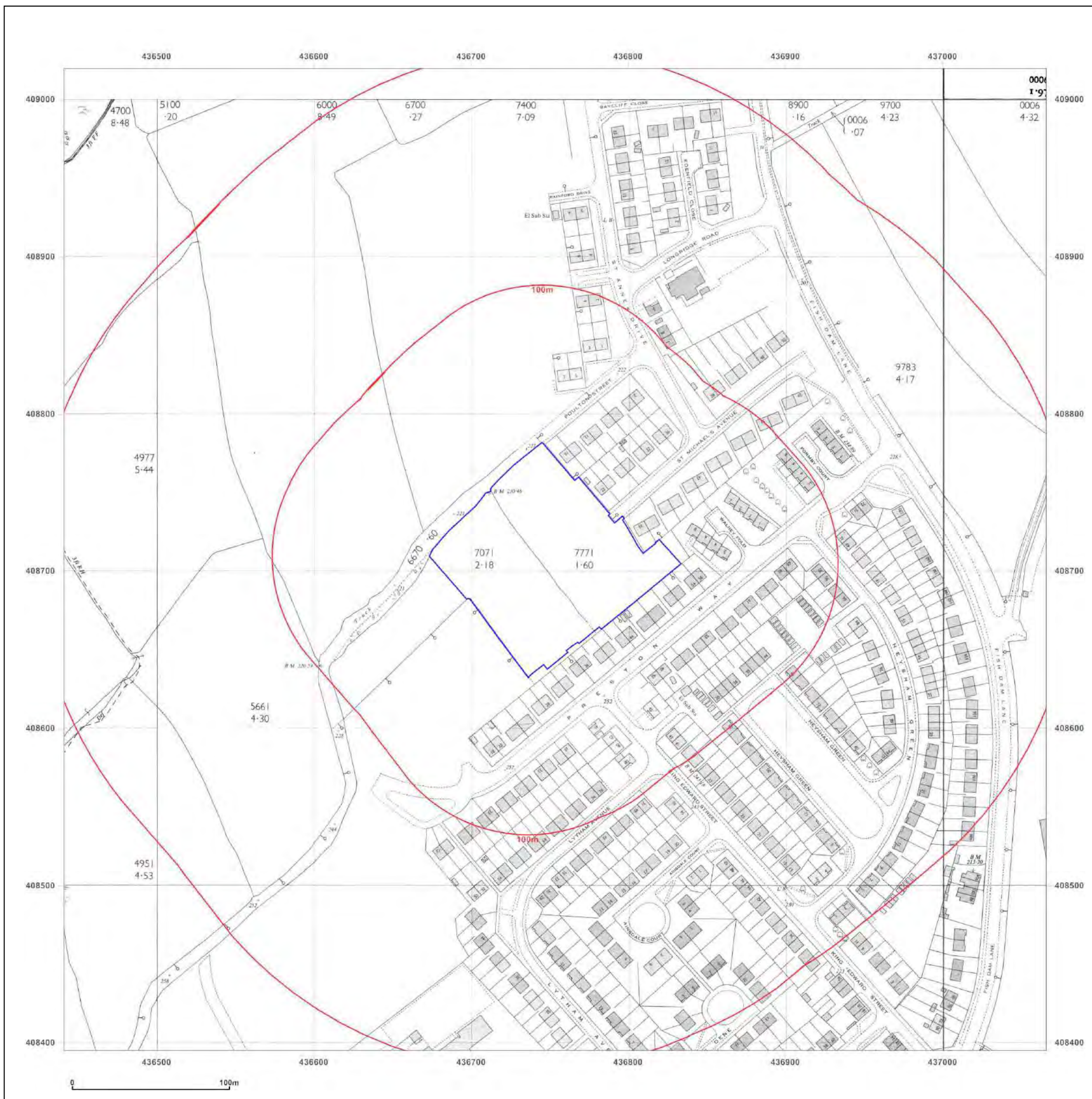


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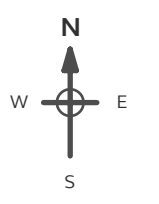
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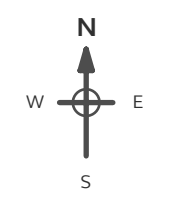
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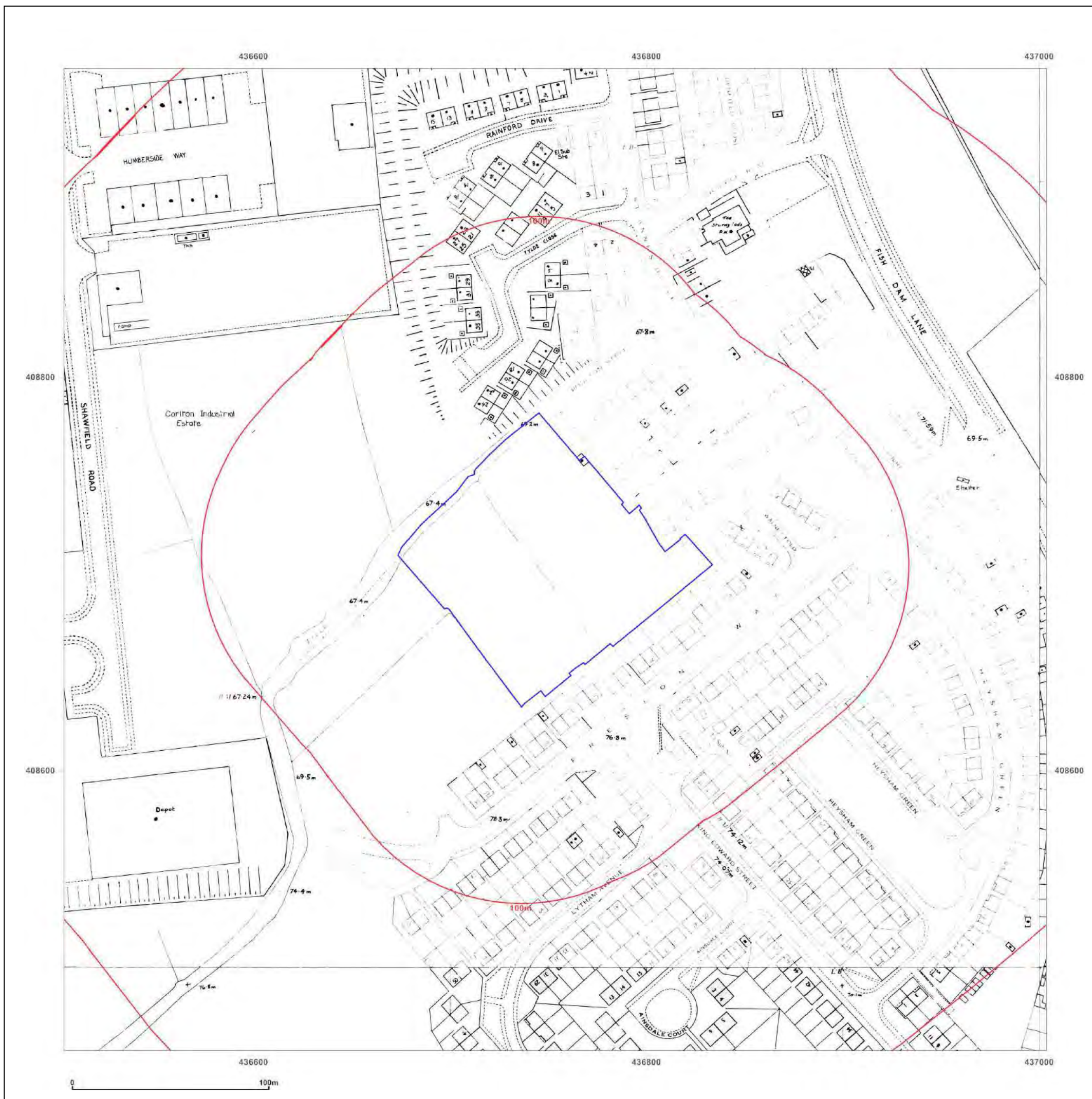


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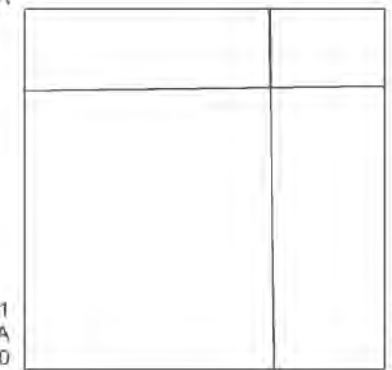
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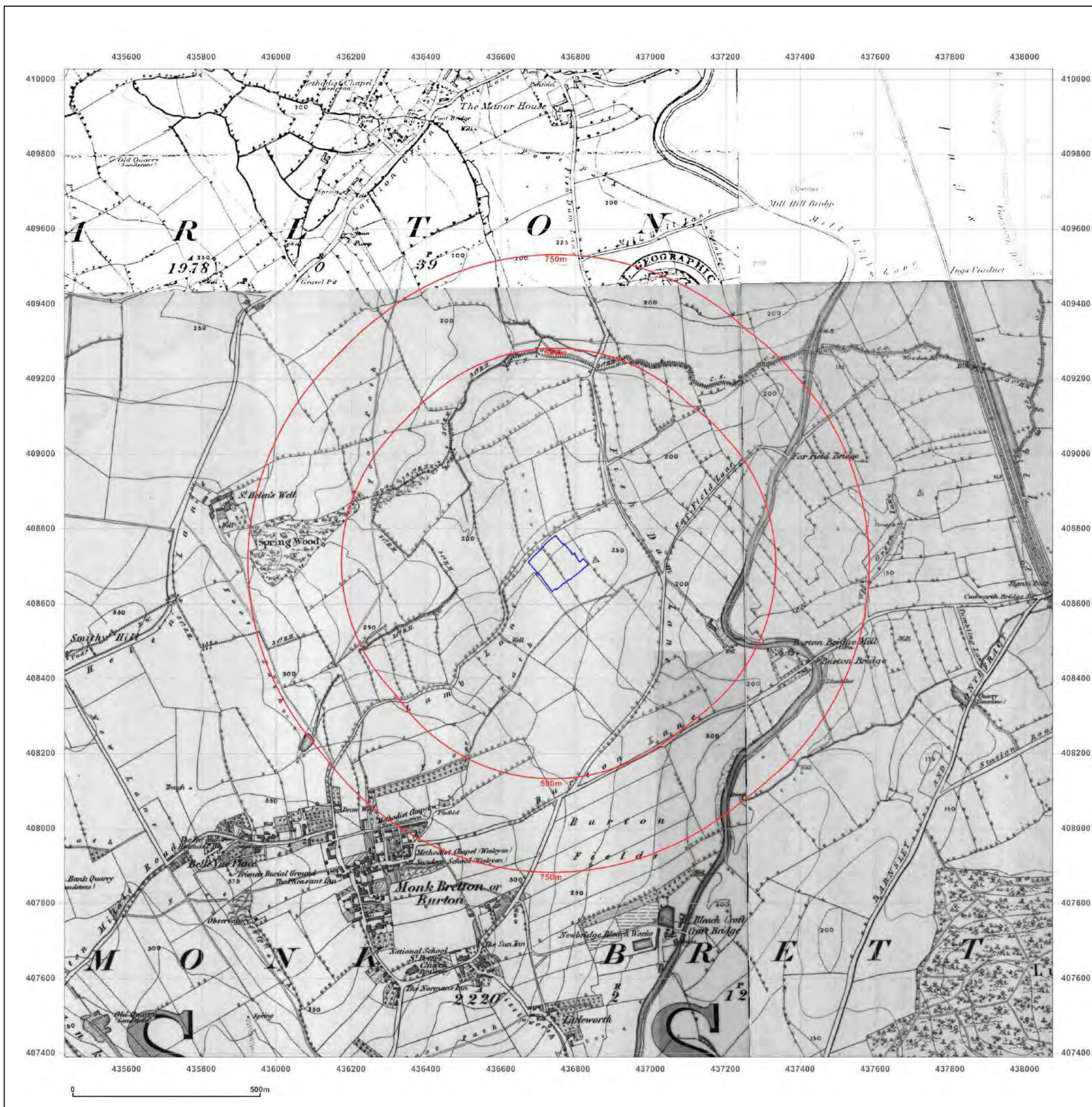


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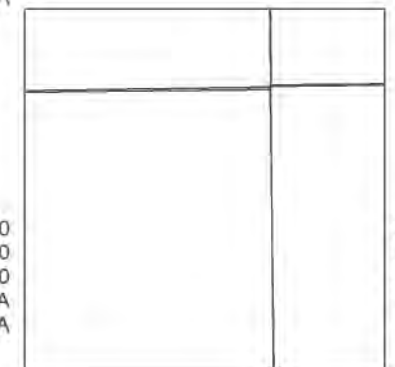


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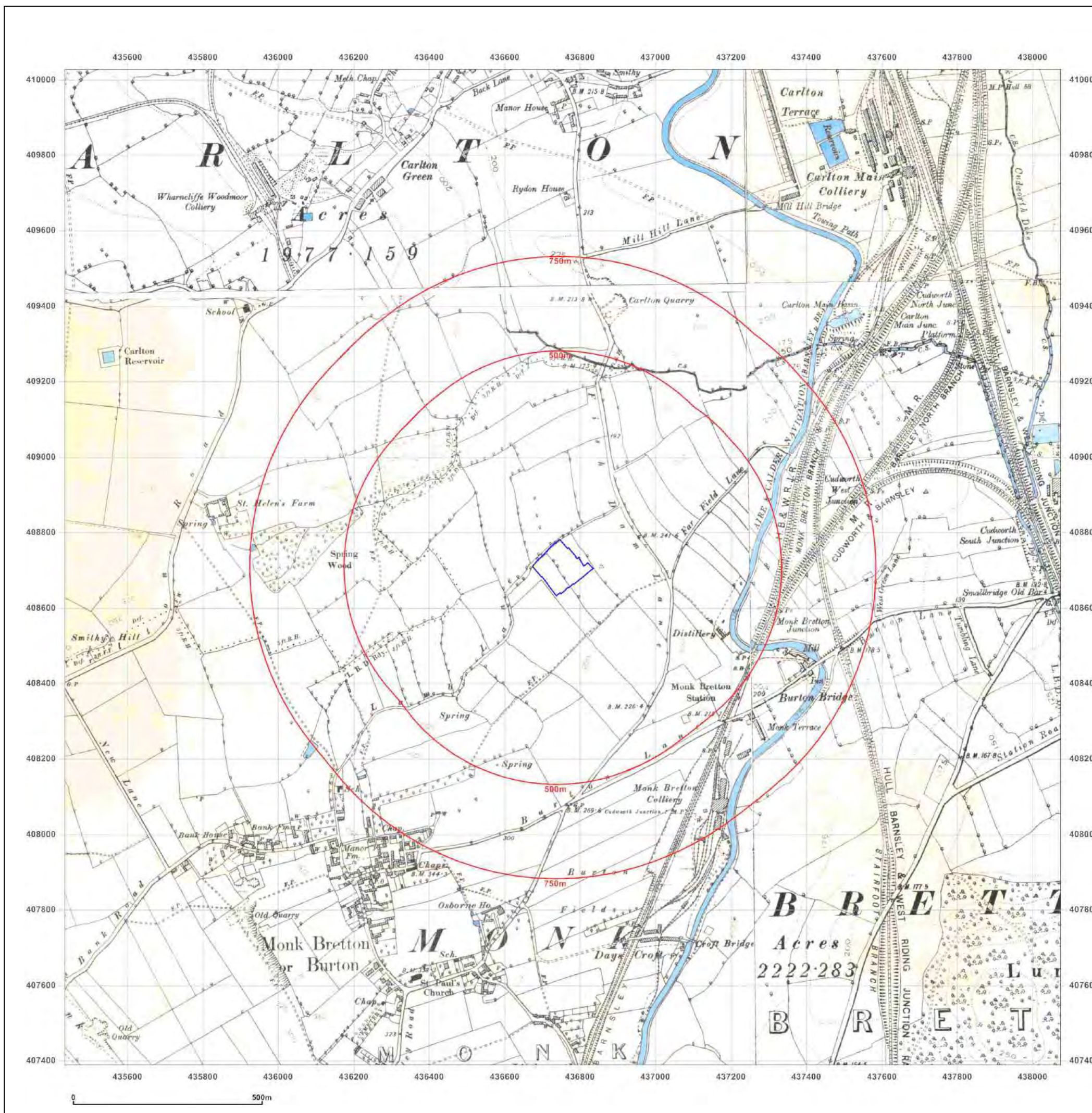


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**Report Ref:** GS-4615476  
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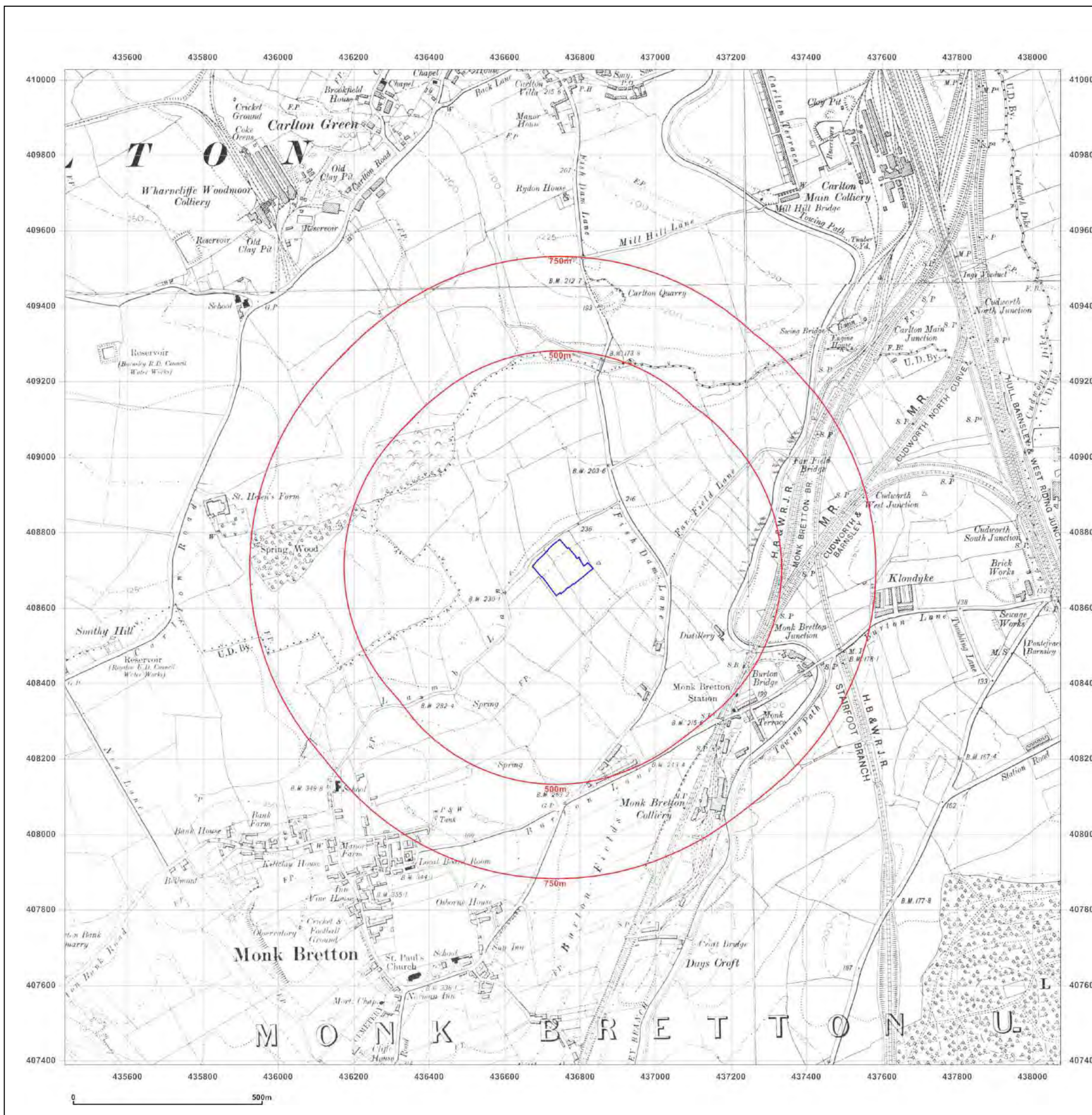


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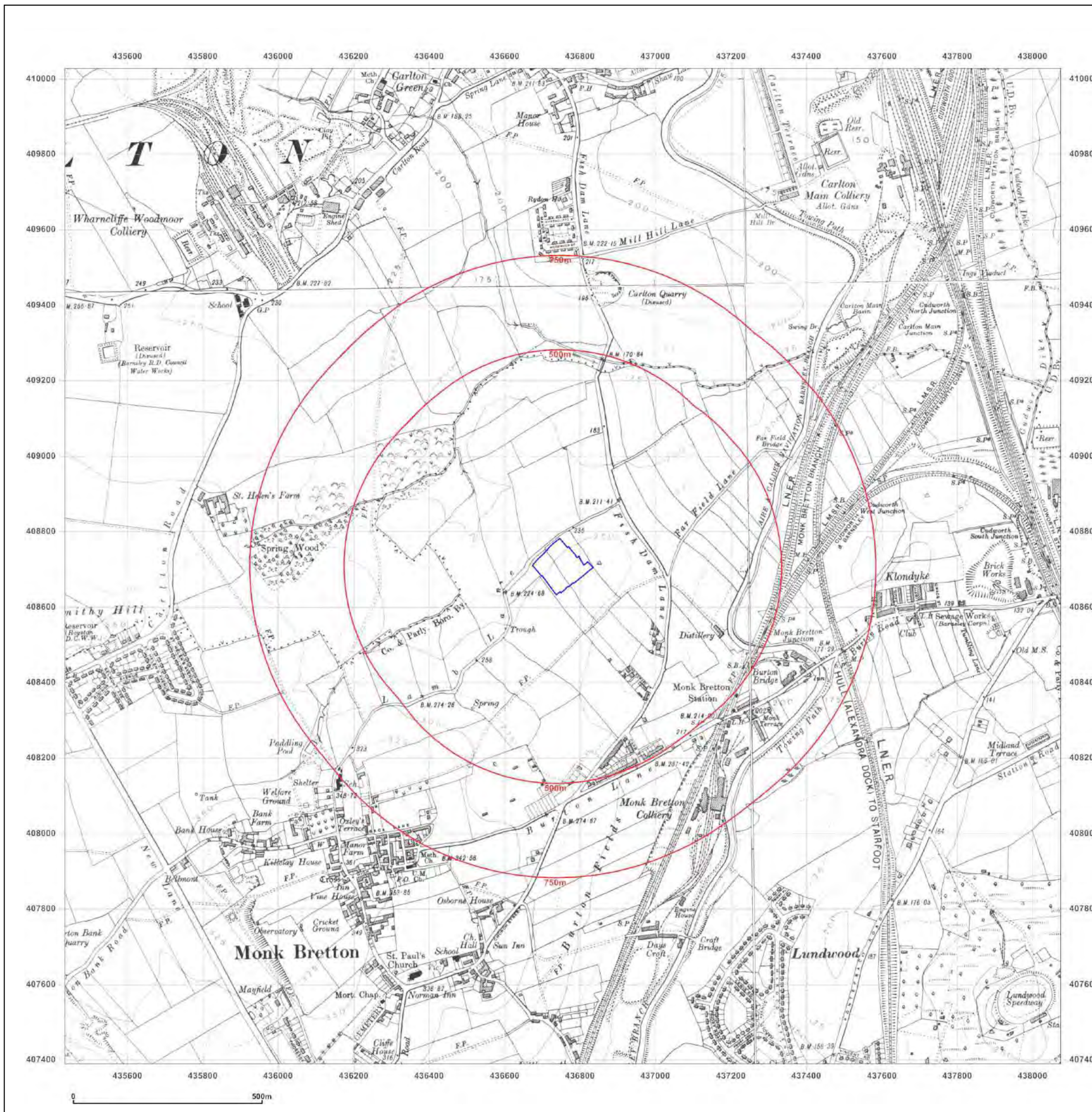


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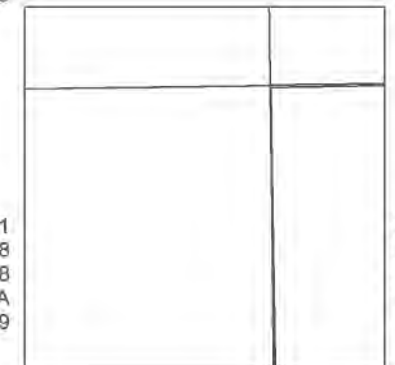


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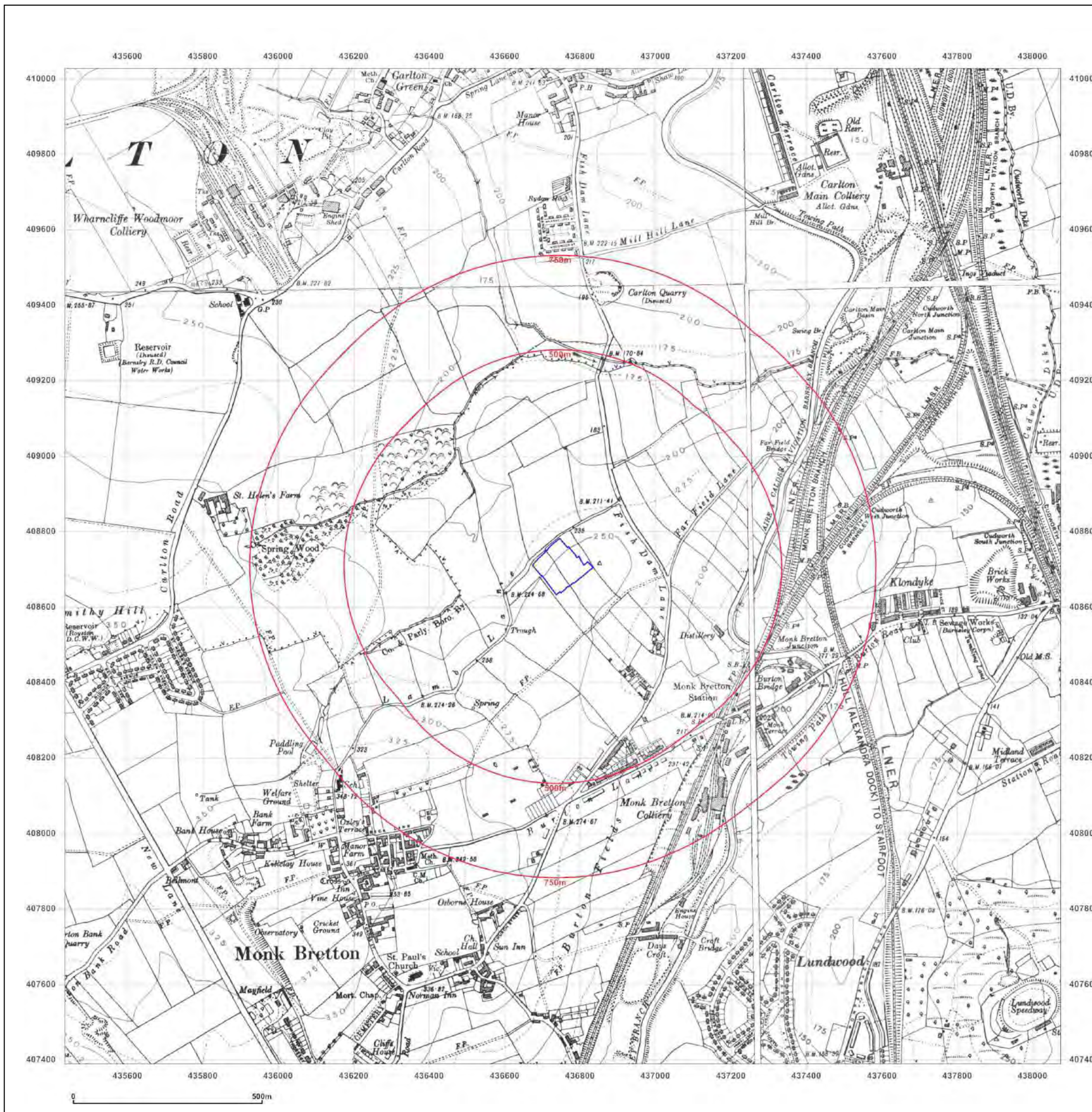


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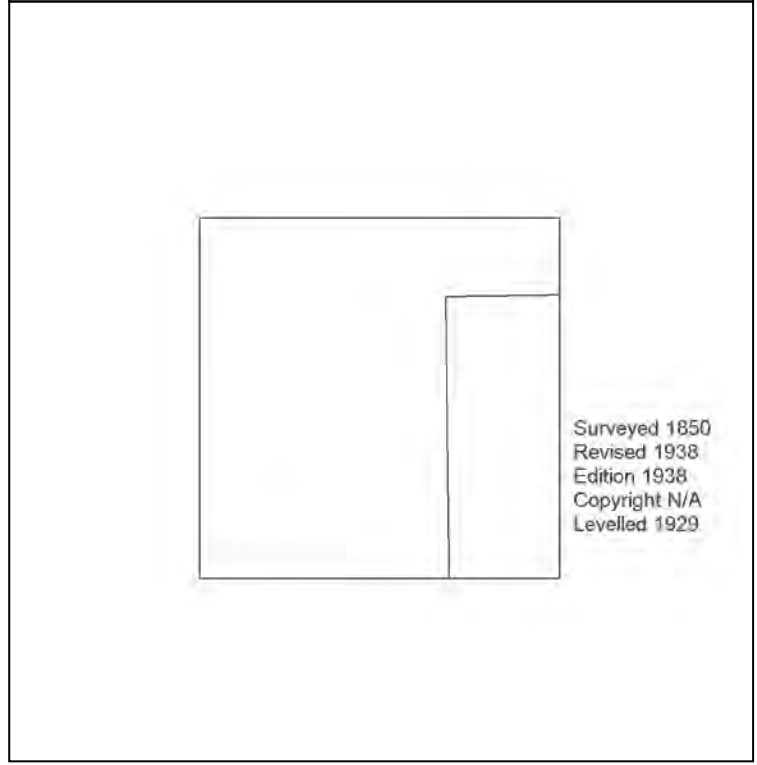
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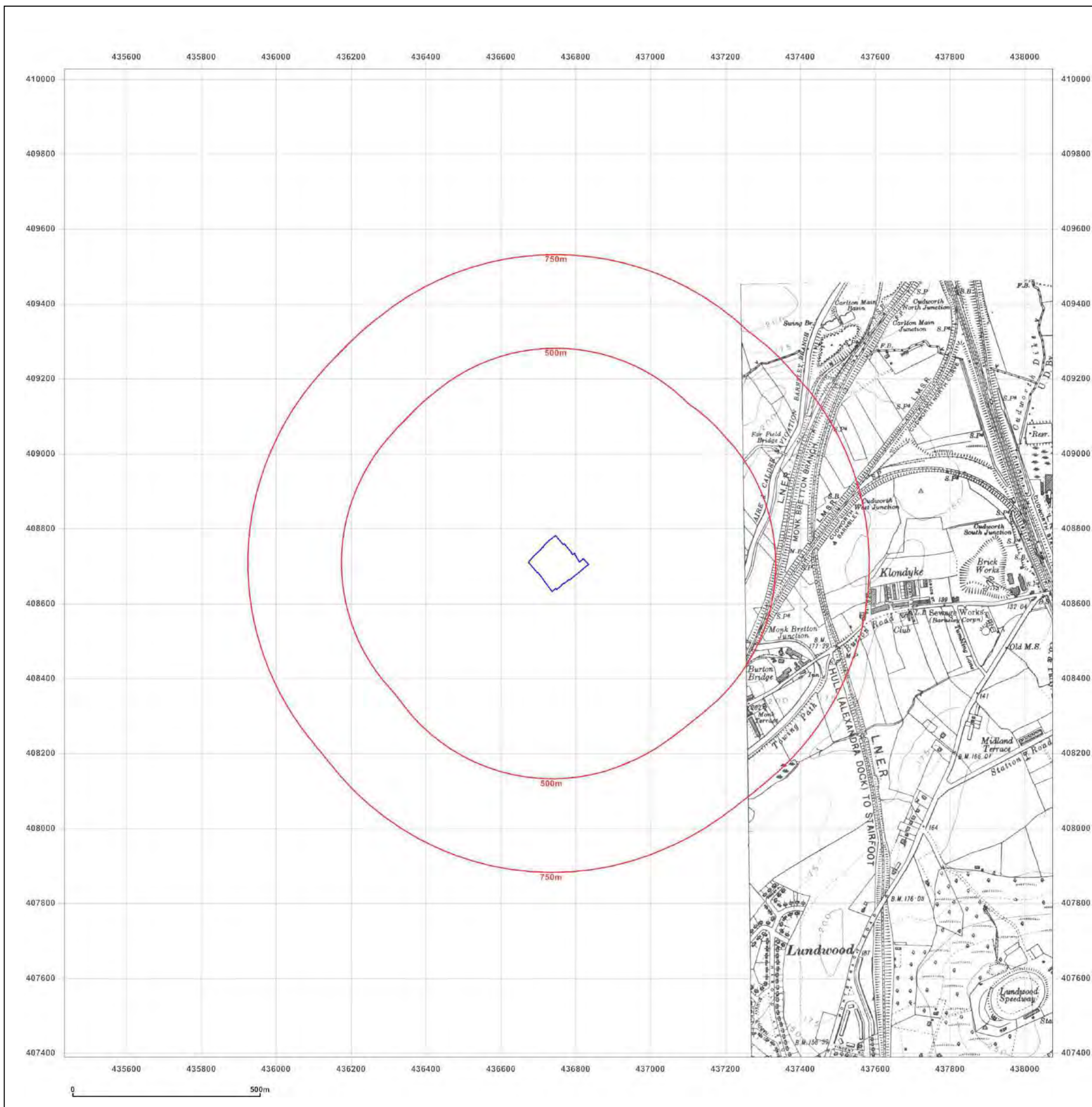


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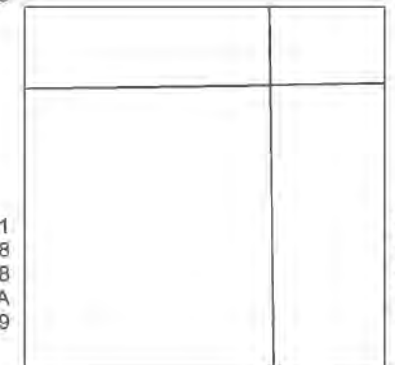


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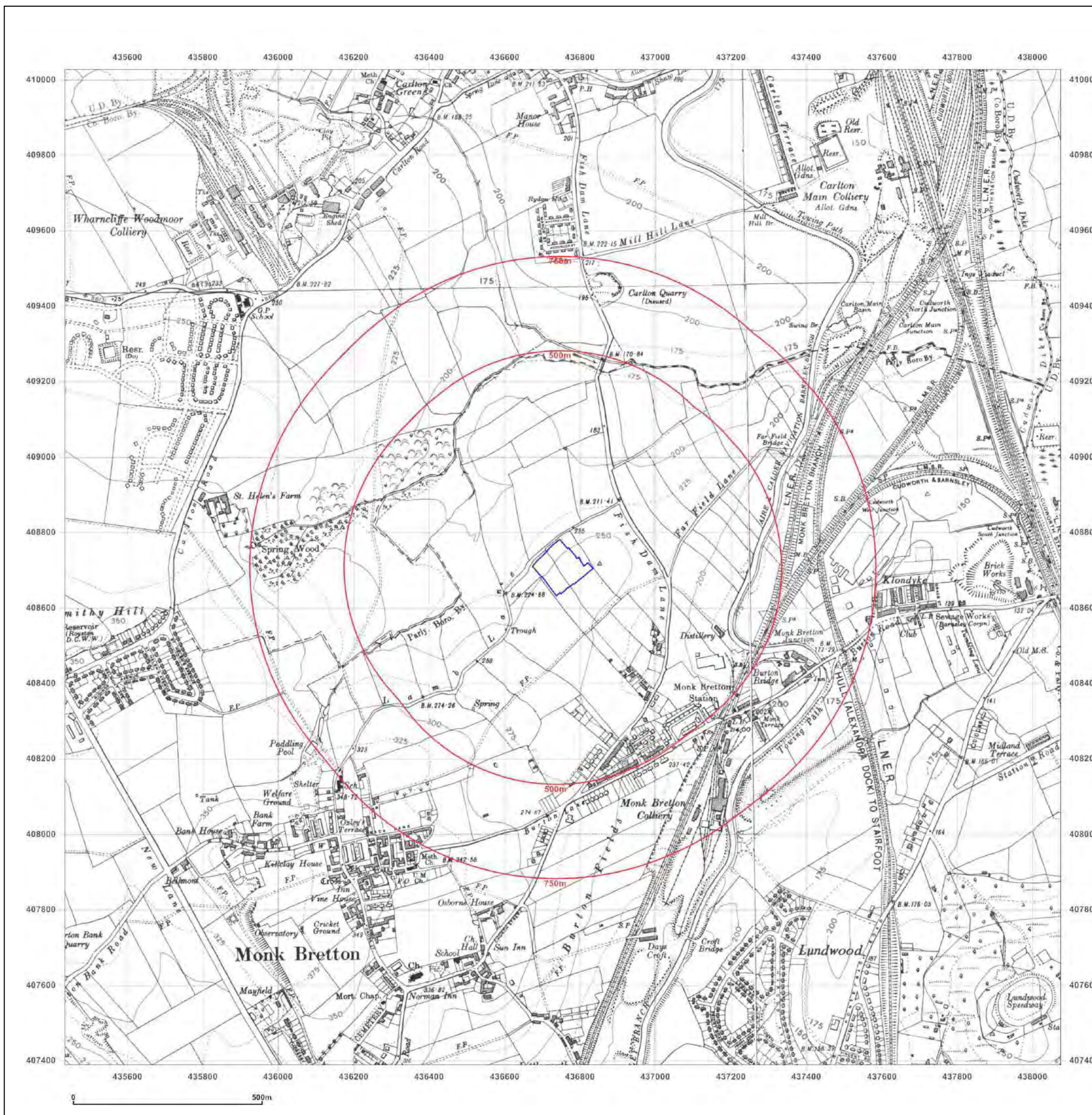


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**Grid Ref:** 436753, 408707

**Map Name:** Provisional

**Map date:** 1951-1955

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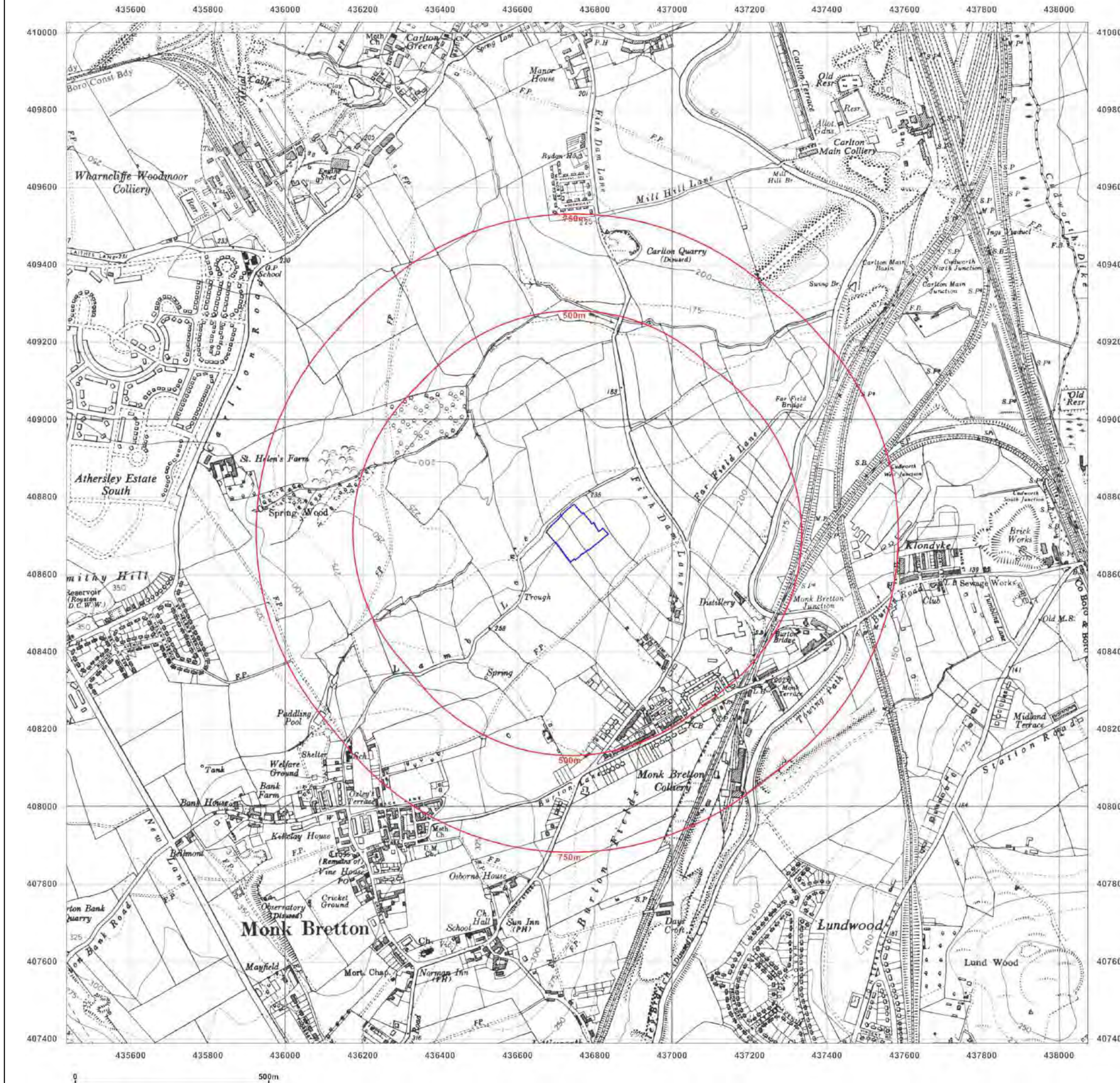


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**Report Ref:** GS-4615476  
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**Map Name:** Provisional

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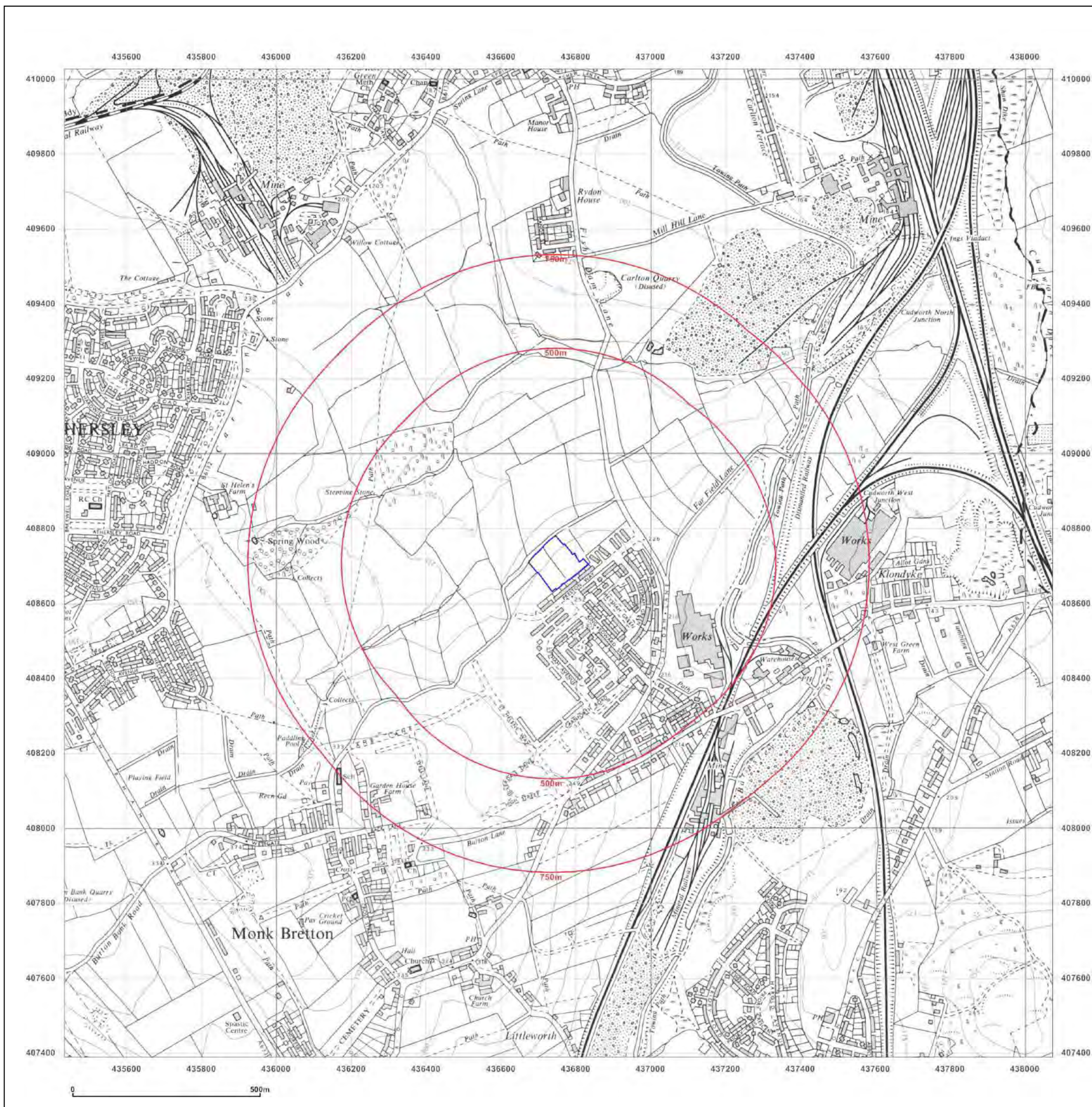


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**Report Ref:** GS-4615476  
**Grid Ref:** 436753, 408707

**Map Name:** National Grid

**Map date:** 1974

**Scale:** 1:10,000

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



Surveyed 1974  
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Edition N/A  
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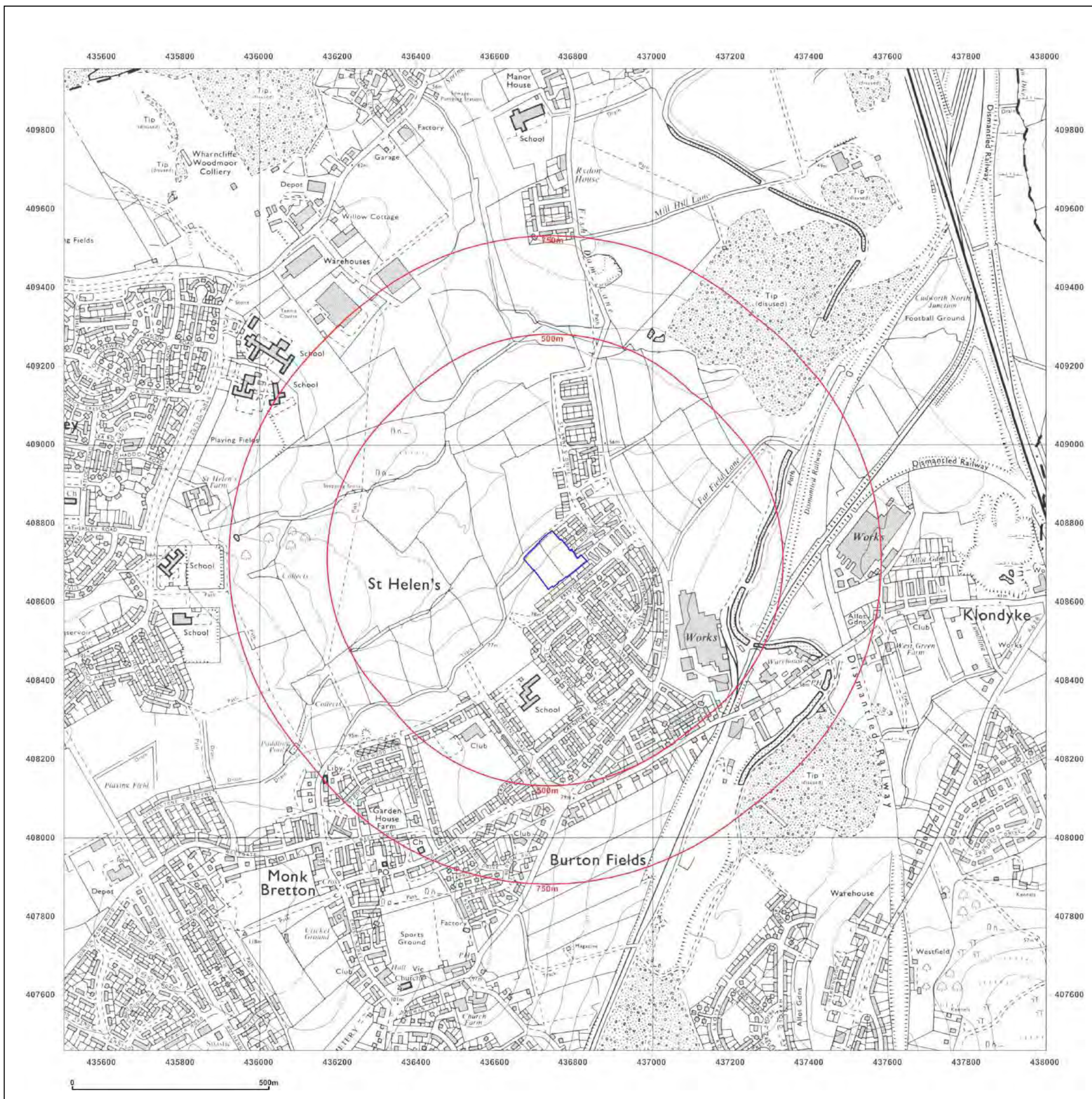


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**Map Name:** National Grid

**Map date:** 1982

**Scale:** 1:10,000

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Surveyed 1981  
Revised 1982  
Edition N/A  
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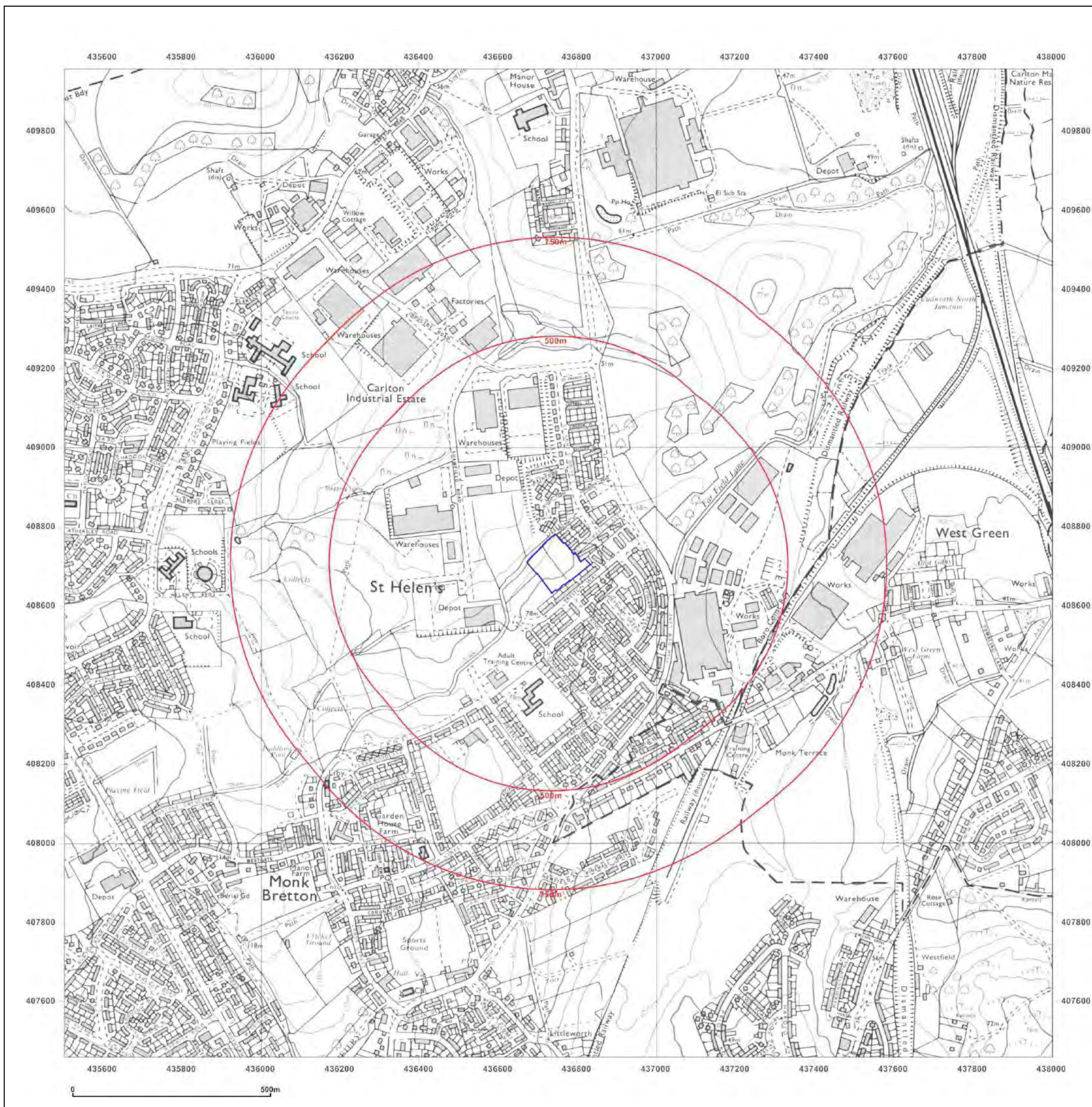


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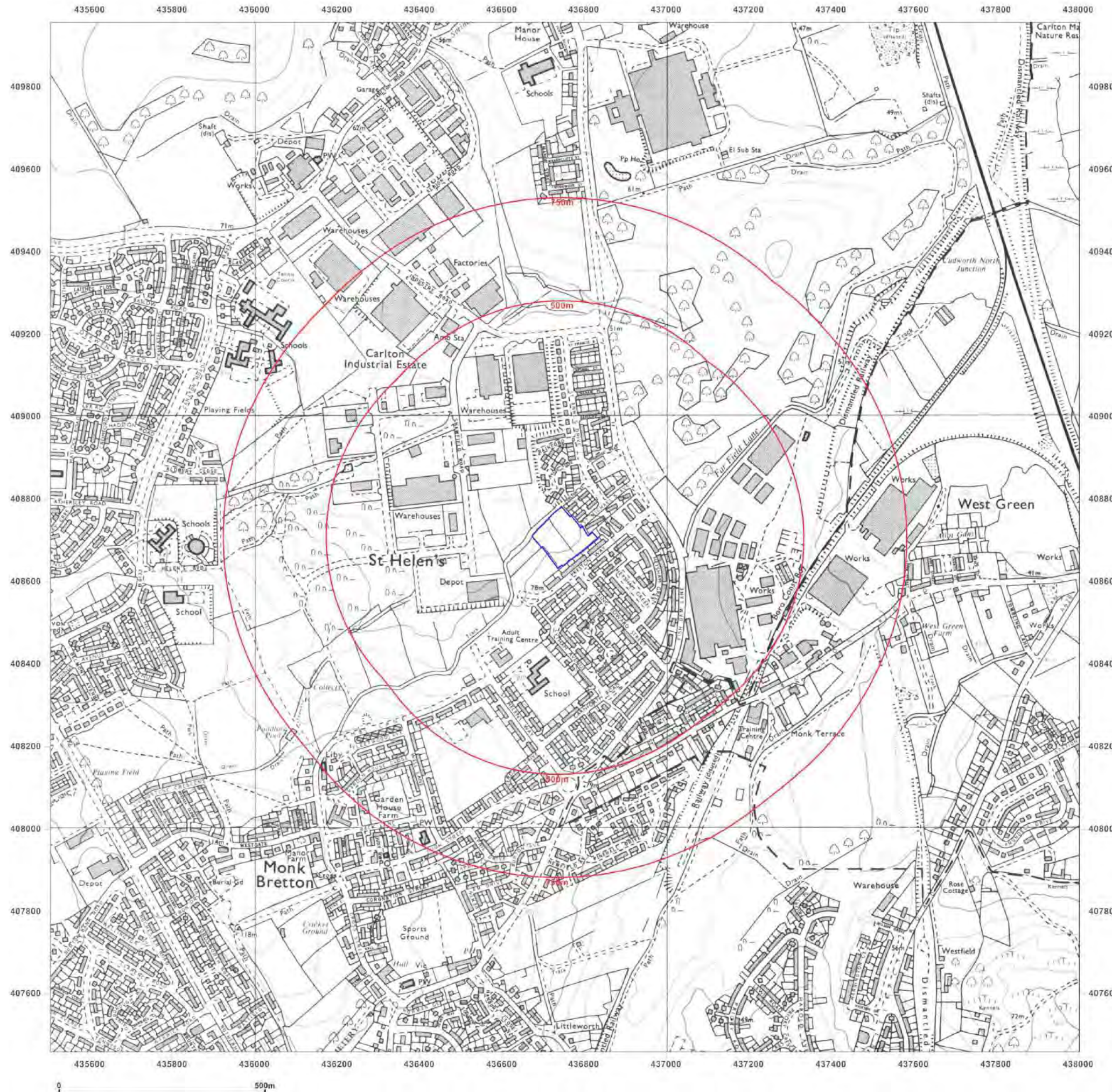
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**Report Ref:** GS-4615476  
**Grid Ref:** 436753, 408707

**Map Name:** National Grid

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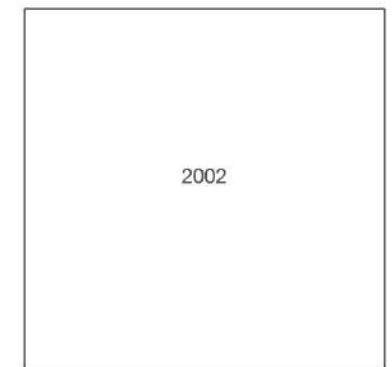
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**Map Name:** 1:10,000 Raster

**Map date:** 2002

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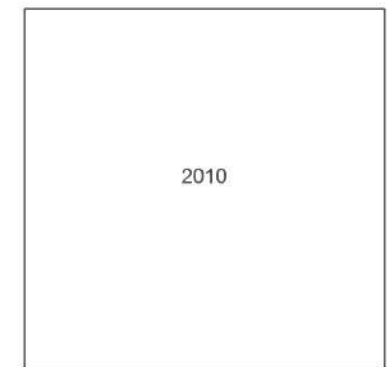
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**Report Ref:** GS-4615476  
**Grid Ref:** 436753, 408707

**Map Name:** National Grid

**Map date:** 2010

**Scale:** 1:10,000

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

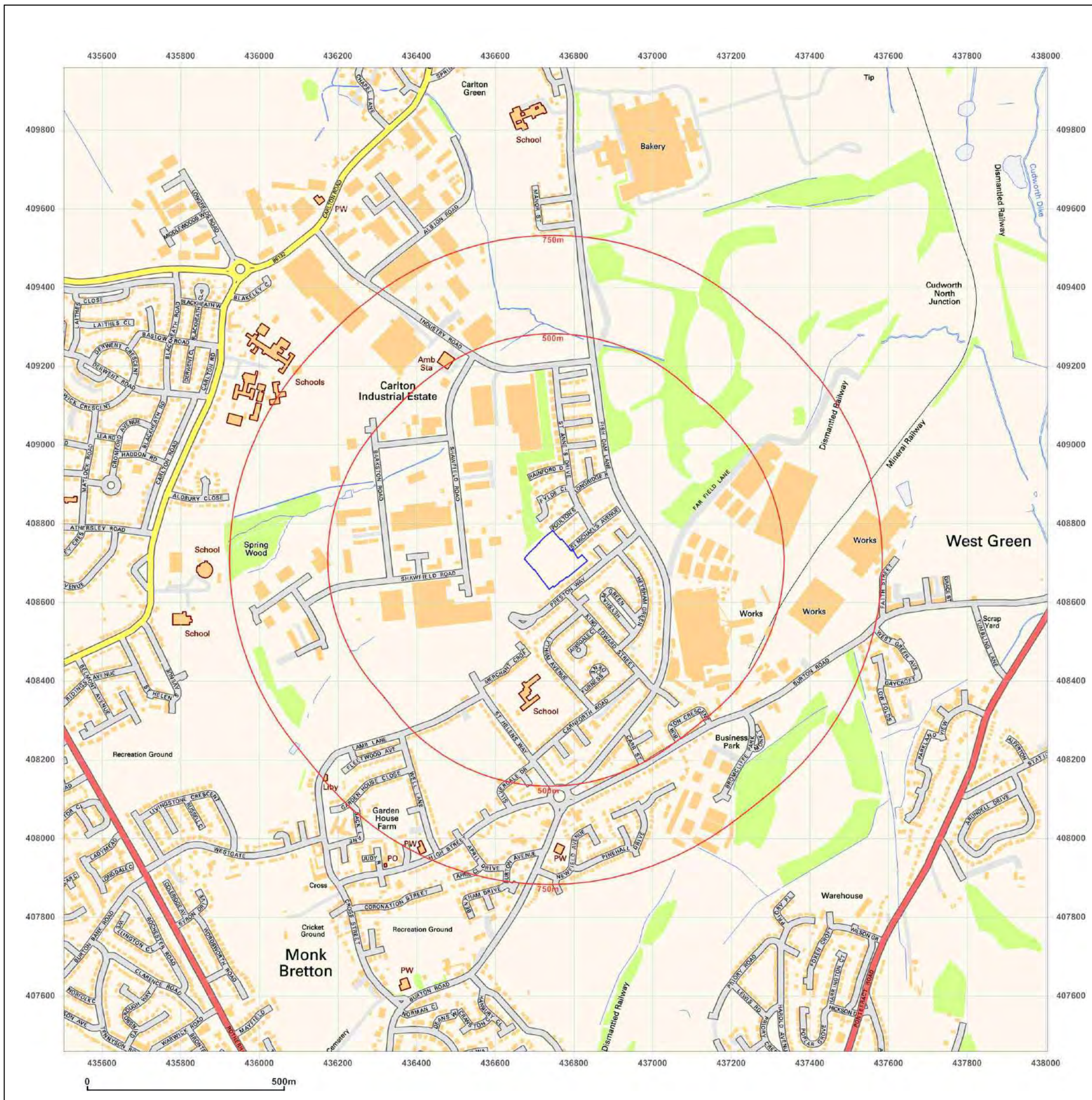


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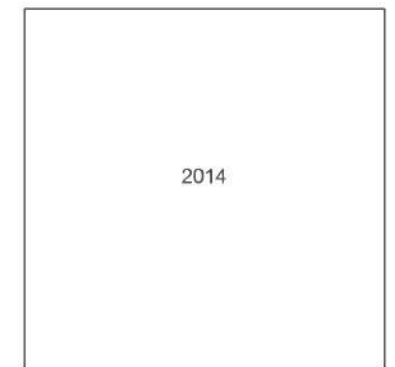
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**Report Ref:** GS-4615476  
**Grid Ref:** 436753, 408707

**Map Name:** National Grid

**Map date:** 2014

**Scale:** 1:10,000

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

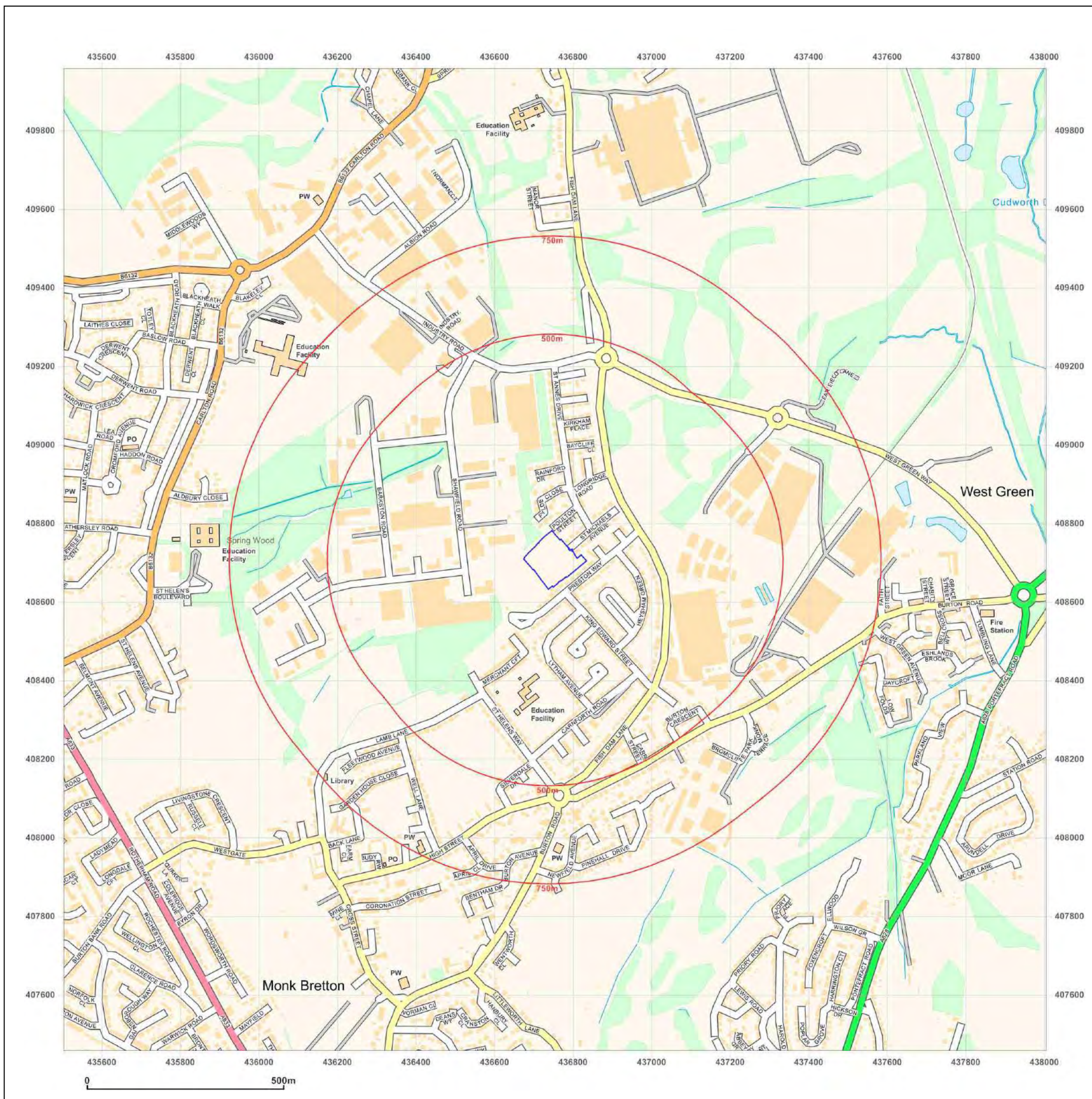


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## Appendix B

# Groundsure EnviroInsight Report



# Groundsure

LOCATION INTELLIGENCE

Hamson Barron Smith Ltd  
16 CENTRAL AVENUE, ST. ANDREWS  
BUSINESS PARK,  
NORWICH, NR7 0HR

Groundsure Reference: GS-4615474  
Your Reference: 18-1-6013\_Monk\_Bretton\_PO23002493  
Report Date: 21 Dec 2017  
Report Delivery Method: Email - pdf

## Enviro Insight

Address: ST MICHAELS AVENUE, MONK BRETTON, BARNSELY, S71 2SD

Dear Sir/ Madam,

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

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director  
Groundsure Limited

Enc.  
Groundsure Enviroinsight

**Address:** ST MICHAELS AVENUE, MONK BRETTON, BARNSELY, S71 2SD  
**Date:** 21 Dec 2017  
**Reference:** GS-4615474  
**Client:** Hamson Barron Smith Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 26-Mar-2012  
Grid Reference: 436743,408710  
Site Size: 1.19ha

Report Reference: GS-4615474  
Client Reference: 18-1-6013\_Monk\_Bretton\_PO23002493

# Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information – Historical Tank Database	13
1.3 Additional Information – Historical Energy Features Database	14
1.4 Additional Information – Historical Petrol and Fuel Site Database	15
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	15
1.6 Potentially Infilled Land	15
2. Environmental Permits, Incidents and Registers Map	16
2. Environmental Permits, Incidents and Registers	17
2.1 Industrial Sites Holding Licences and/or Authorisations	17
2.1.1 Records of historic IPC Authorisations within 500m of the study site	17
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	17
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	17
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	18
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	18
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	18
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	19
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	19
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	19
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	20
2.2 Dangerous or Hazardous Sites	20
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents	20
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	20
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	21
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	21
3. Landfill and Other Waste Sites Map	22
3. Landfill and Other Waste Sites	23
3.1 Landfill Sites	23
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site	23
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site	23
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	26
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	26
3.2 Other Waste Sites	27
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	27
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site	28
4. Current Land Use Map	33
4. Current Land Uses	34
4.1 Current Industrial Data	34
4.2 Petrol and Fuel Sites	34
4.3 National Grid High Voltage Underground Electricity Transmission Cables	35
4.4 National Grid High Pressure Gas Transmission Pipelines	35

5. Geology	36
5.1 Artificial Ground and Made Ground.....	36
5.2 Superficial Ground and Drift Geology .....	36
5.3 Bedrock and Solid Geology .....	36
6 Hydrogeology and Hydrology	37
6a. Aquifer Within Superficial Geology	37
6b. Aquifer Within Bedrock Geology and Abstraction Licences	38
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences	39
6d. Hydrogeology – Source Protection Zones within confined aquifer	40
6e. Hydrology – Detailed River Network and River Quality	41
6.Hydrogeology and Hydrology	42
6.1 Aquifer within Superficial Deposits.....	42
6.2 Aquifer within Bedrock Deposits.....	42
6.3 Groundwater Abstraction Licences.....	42
6.4 Surface Water Abstraction Licences.....	43
6.5 Potable Water Abstraction Licences.....	43
6.6 Source Protection Zones.....	43
6.7 Source Protection Zones within Confined Aquifer.....	43
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	44
6.9 River Quality.....	44
6.9.1 Biological Quality:.....	44
6.9.2 Chemical Quality:.....	44
6.10 Detailed River Network.....	44
6.11 Surface Water Features.....	45
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)	46
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map	47
7 Flooding	48
7.1 River and Coastal Zone 2 Flooding.....	48
7.2 River and Coastal Zone 3 Flooding.....	48
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	48
7.4 Flood Defences.....	48
7.5 Areas benefiting from Flood Defences.....	48
7.6 Areas benefiting from Flood Storage.....	49
7.7 Groundwater Flooding Susceptibility Areas.....	49
7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes.....	49
7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?.....	49
7.8 Groundwater Flooding Confidence Areas.....	49
8. Designated Environmentally Sensitive Sites Map	50
8. Designated Environmentally Sensitive Sites	51
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	51
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	51
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	51
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	51
8.5 Records of Ramsar sites within 2000m of the study site:.....	51
8.6 Records of Ancient Woodland within 2000m of the study site: .....	52
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	52
8.8 Records of World Heritage Sites within 2000m of the study site:.....	52
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site: .....	52

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: .....	52
8.11 Records of National Parks (NP) within 2000m of the study site: .....	52
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	53
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	53
8.14 Records of Green Belt land within 2000m of the study site:.....	53
<b>9. Natural Hazards Findings</b>	<b>54</b>
9.1 Detailed BGS GeoSure Data.....	54
9.1.1 Shrink Swell.....	54
9.1.2 Landslides.....	54
9.1.3 Soluble Rocks.....	54
9.1.4 Compressible Ground.....	55
9.1.5 Collapsible Rocks.....	55
9.1.6 Running Sand.....	55
9.2 Radon.....	56
9.2.1 Radon Affected Areas.....	56
9.2.2 Radon Protection.....	56
<b>10. Mining</b>	<b>57</b>
10.1 Coal Mining.....	57
10.2 Non-Coal Mining.....	57
10.3 Brine Affected Areas .....	57
Contact Details	58
Standard Terms and Conditions	60

# 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	0	0	15	25
1.2 Additional Information – Historical Tank Database	0	0	7	35
1.3 Additional Information – Historical Energy Features Database	0	0	8	27
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	0	0
1.6 Potentially Infilled Land	0	0	0	4
<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	2
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	1
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	7
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	1
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	2	0
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	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	10	6
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	3
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	1	2
<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	2	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	2	1	6	15

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	1	9	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 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

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

Section 6: Hydrogeology and Hydrology	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	0	14	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding						
7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No					
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site?	No					
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low					
7.4 Are there any Flood Defences within 250m of the study site?	No					
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No					
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No					
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential					
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low					

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	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	2
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	0	0	1
8.14 Records of Green Belt land	0	0	1	0	0	3

## Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?

Very Low

9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?

Very Low

9.1.2 What is the maximum Landslides hazard rating identified on the study site?

Low

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

Negligible

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

Negligible

9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?

Very Low

9.1.6 What is the maximum Running Sand hazard rating identified on the study site?

Negligible

9.2 Radon

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

The property is 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 Are there any coal mining areas within 75m of the study site?

Yes

10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?

Yes

10.3 Are there any brine affected areas within 75m of the study site?

No

# Using this report

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

## 1. Historical Industrial Sites

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

## 2. Environmental Permits, Incidents and Registers

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

## 3. Landfills and Other Waste Sites

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

## 4. Current Land Uses

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

## 5. Geology

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

## 6. Hydrogeology and Hydrology

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

## 7. Flooding

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

## 8. Designated Environmentally Sensitive Sites

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

## 9. Natural Hazards

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

## 10. Mining

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

## 11. Contacts

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

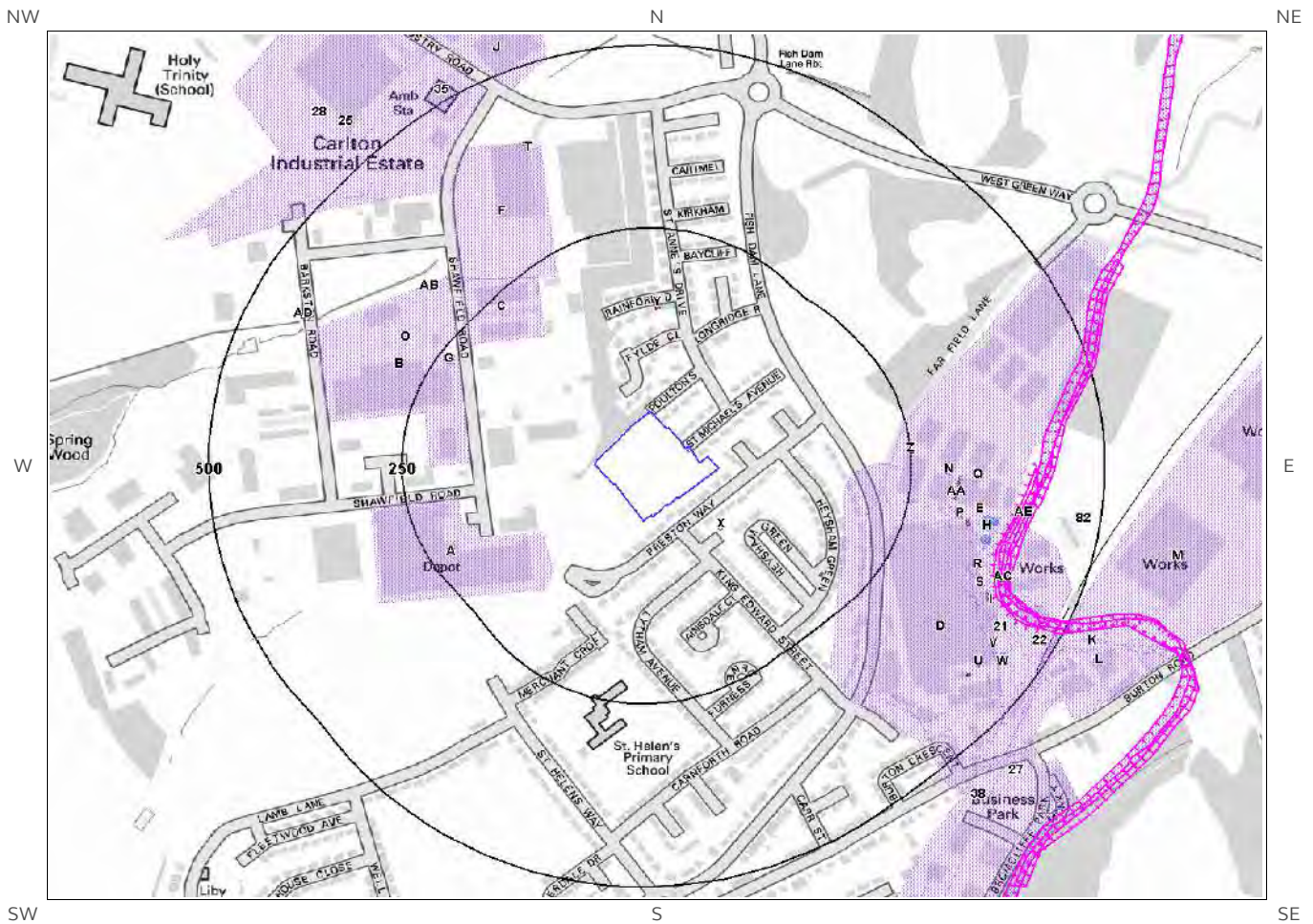
### Note: Maps

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

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

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

# 1. Historical Land Use



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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: 40

ID	Distance [m]	Direction	Use	Date
1A	112	SW	Unspecified Depot	1982
2A	112	SW	Unspecified Depot	1992
3B	161	W	Unspecified Warehouses	1992
4B	161	W	Unspecified Warehouses	1982
5D	165	E	Distillery	1951
6C	167	NW	Unspecified Depot	1992
7C	167	NW	Unspecified Depot	1982
8D	202	E	Unspecified Works	1966
9E	214	E	Unspecified Works	1982
10E	214	E	Unspecified Works	1992
11F	220	NW	Unspecified Warehouses	1992
12F	220	NW	Unspecified Warehouses	1982
13D	228	E	Unspecified Works	1974
14G	228	NW	Unspecified Tank	1992
15G	228	NW	Unspecified Tank	1982
16H	345	E	Unspecified Tanks	1992
17H	345	E	Unspecified Tanks	1982
18I	349	SE	Distillery	1890
19I	349	SE	Distillery	1904
20I	349	SE	Distillery	1948
21	350	SE	Railway Sidings	1974
22	350	SE	Railway Sidings	1966
23I	351	SE	Distillery	1938
24AE	381	E	Disused Canal	1966
25	402	NW	Industrial Estate	1982
26W	406	SE	Railway Sidings	1948
27	406	SE	Railway Sidings	1951
28	466	NW	Industrial Estate	1992
29J	474	N	Unspecified Factories	1992
30J	474	N	Unspecified Factories	1982
31K	486	SE	Railway Sidings	1890
32K	490	SE	Railway Sidings	1938
33K	490	SE	Railway Sidings	1948
34K	490	SE	Railway Sidings	1904

35	493	NW	Ambulance Station	1992
36L	494	SE	Unspecified Warehouses	1966
37L	494	SE	Unspecified Warehouses	1974
38	495	SE	Railway Sidings	1982
39M	496	SE	Unspecified Works	1982
40M	496	SE	Unspecified Works	1992

## 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:

42

ID	Distance (m)	Direction	Use	Date
41G	230	NW	Unspecified Tank	1993
42G	230	NW	Unspecified Tank	1995
43G	230	NW	Unspecified Tank	1995
44G	230	NW	Unspecified Tank	1994
45G	230	NW	Unspecified Tank	1980
46G	230	NW	Unspecified Tank	1980
47G	230	NW	Unspecified Tank	1991
48N	294	E	Tanks	1993
49N	294	E	Tanks	1995
50O	295	NW	Unspecified Tank	1993
51O	295	NW	Unspecified Tank	1995
52O	295	NW	Unspecified Tank	1994
53O	295	NW	Unspecified Tank	1980
54O	295	NW	Unspecified Tank	1980
55O	295	NW	Unspecified Tank	1991
56O	295	NW	Unspecified Tank	1974
57P	318	E	Unspecified Tank	1993
58P	320	E	Unspecified Tank	1993
59P	320	E	Unspecified Tank	1974
60Q	333	E	Unspecified Tank	1993
61Q	333	E	Unspecified Tank	1993
62E	349	E	Tanks	1974
63E	349	E	Tanks	1993
64E	349	E	Tanks	1993
65H	353	E	Unspecified Tank	1994
66H	353	E	Unspecified Tank	1994
67H	353	E	Unspecified Tank	1990
68R	360	E	Unspecified Tank	1983
69R	360	E	Unspecified Tank	1997

70S	373	SE	Unspecified Tank	1997
71S	373	SE	Unspecified Tank	1990
72T	388	NW	Tanks	1983
73T	392	NW	Unspecified Tank	1997
74U	425	SE	Tanks	1974
75U	425	SE	Tanks	1974
76U	426	SE	Tanks	
77V	428	SE	Unspecified Tank	
78V	429	SE	Unspecified Tank	
79V	429	SE	Unspecified Tank	
80U	431	SE	Tanks	
81W	444	SE	Tanks	
82	475	E	Tanks	

### 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:

35

ID	Distance (m)	Direction	Use	Date
83X	62	SE	Electricity Substation	1978
84X	62	SE	Electricity Substation	1968
85X	62	SE	Electricity Substation	1967
86Y	140	N	Electricity Substation	1978
87Y	141	N	Electricity Substation	1968
88Y	141	N	Electricity Substation	1967
89Z	245	E	Electricity Substation	1993
90Z	245	E	Electricity Substation	1993
91AA	307	E	Electricity Substations	1993
92AA	307	E	Electricity Substations	1991
93AA	310	E	Electricity Substations	1980
94AA	310	E	Electricity Substations	1980
95AB	316	NW	Electricity Substation	1995
96AB	316	NW	Electricity Substation	1993
97AB	316	NW	Electricity Substation	1994
98AB	317	NW	Electricity Substation	1995
99AB	317	NW	Electricity Substation	1993
100AB	317	NW	Electricity Substation	1993
101AB	317	NW	Electricity Substation	1993
102E	328	E	Electricity Substation	1994
103E	328	E	Electricity Substation	1994
104S	386	SE	Electricity Substation	1995

105S	386	SE	Electricity Substation	1993
106AC	394	SE	Electricity Substation	1995
107AC	394	SE	Electricity Substation	1974
108T	396	NW	Electricity Substation	1997
109AD	427	NW	Electricity Substation	1983
110AD	427	NW	Electricity Substation	1990
111AD	427	NW	Electricity Substation	1991
112AD	427	NW	Electricity Substation	
113U	427	SE	Electricity Substation	
114U	427	SE	Electricity Substation	
115U	427	SE	Electricity Substation	
116U	427	SE	Electricity Substation	
117AD	428	NW	Electricity Substation	

### 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: 0

Database searched and no data found.

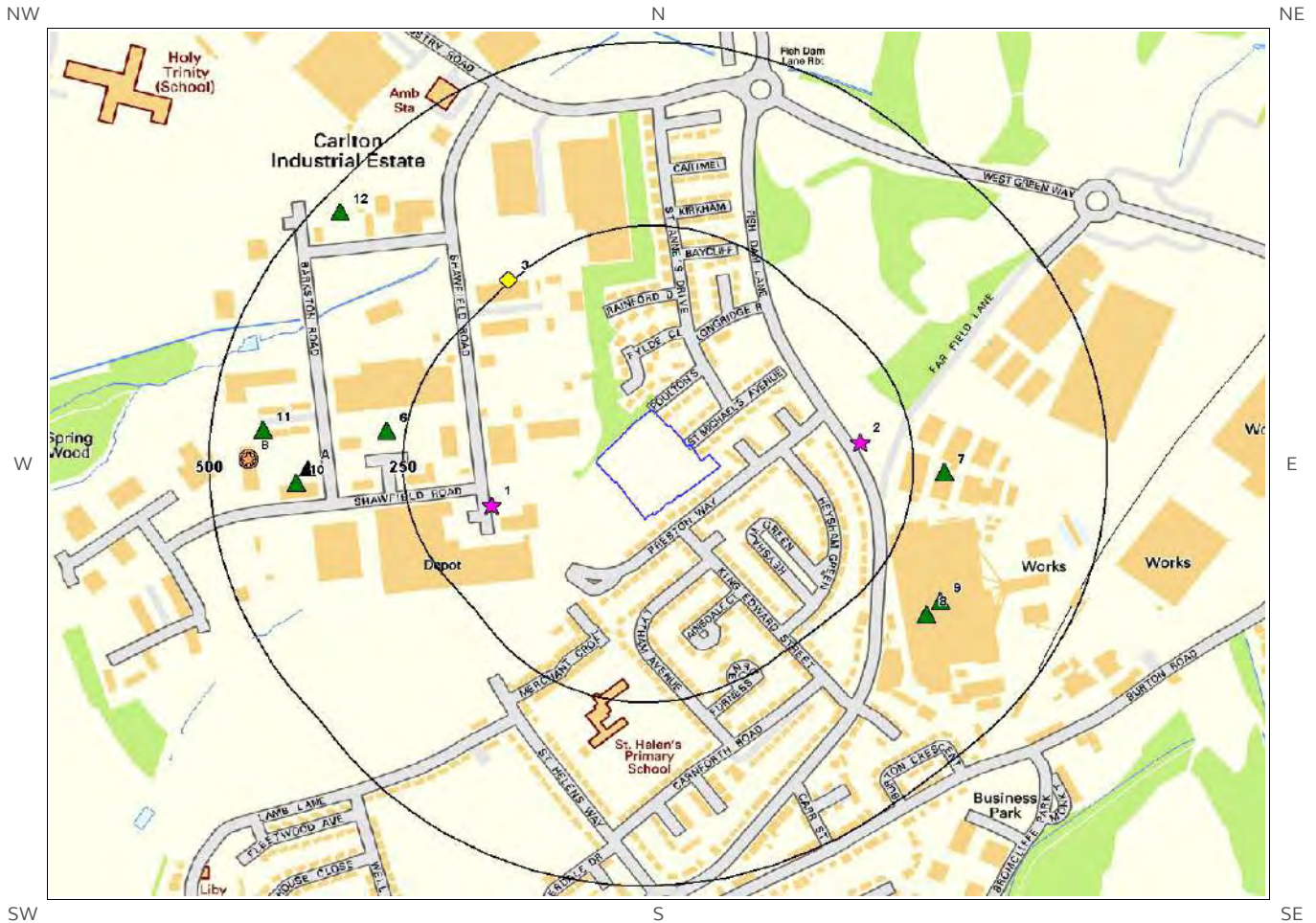
### 1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 4

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

ID	Distance(m)	Direction	Use	Date
118	377	E	Canal	1890
119AE	381	E	Disused Canal	1966
120AE	381	E	Canal	1951
121	387	E	Water Bodies	1974

# 2. Environmental Permits, Incidents and Registers Map



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

# 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:

2

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
14A	373	W	436300 408700	Operator: G K Enviro Limited Installation Name: G K Enviro Limited Eaeprp3930gba001 Process: OTHER WASTE DISPOSAL; WASTE OILS >10 T/D Permit Number: RP3930GB Original Permit Number: RP3930GB EPR Reference: EA/EPR/RP3930GB/A001 Issue Date: 3/3/2010 Effective Date: 13/9/2011 Last date noted as effective: 2017-11-30 Status: Revoked
15A	373	W	436300 408700	Operator: G K Enviro Limited Installation Name: G K Enviro Limited Eaeprp3930gba001 Process: OTHER WASTE DISPOSAL; HAZARDOUS WASTE >10T/D Permit Number: RP3930GB Original Permit Number: RP3930GB EPR Reference: EA/EPR/RP3930GB/A001 Issue Date: 3/3/2010 Effective Date: 13/9/2011 Last date noted as effective: 2017-11-30 Status: Revoked

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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
3	253	NW	436560 408958	Name: P&j Heat Exchanger,carlton,s71 3rn Status: Not Active Receiving Water: Unknown Authorised Substances: Copper, Zinc

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

7

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
6	274	W	436402 408750	Address: Hansons Quarry Product Europe, Carlton Industrial Estate, Shawfield Road, Barnsley, S71 3HS Process: Use of Bulk Cement Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
7	290	E	437123 408695	Address: Ardagh Glass Barnsley Limited, Burton Road, Monk Bretton, Barnsley, S71 2QG Process: Coating Processes; Glass Manufacture Status: Current Permit Permit Type: Part B; Part A2 Enforcement: Enforcement Notified Date of Enforcement: Enforcement Notified Comment: Enforcement Notified
8	336	SE	437099 408500	Address: Plm Redfearne Ltd, Burton Rd, Monk Bretton, Barnsley, S71 2QG Process: coating & enamelling process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
9	340	SE	437118 408519	Address: Plm Redfearn Ltd, Burton Rd, Monk Bretton, Barnsley, S71 2QG Process: glass manufacturing process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Distance (m)	Direction	NGR	Details
10	389	W	436286 408679	Address: A B Developments (Yorkshire) Ltd, Unit E2, Shawfield Drive, Carlton, Barnsley, S71 3BF Process: Use of Bulk Cement Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
11	432	W	436244 408753	Address: Rockware Glass Limited, Monk Bretton, Barsley, S71 2QG Process: Glass manufacturing process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
12	471	NW	436341 409048	Address: Appleton Concrete Ltd (formerly Appleton Mini Mix), Barkstoan Road, Carlton Industrial Estate, Carlton, Barnsley, S71 3HU Process: Use of Bulk Cement Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

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### 2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
16B	450	W	HSC/02/000 1/BA	436223 408713	Approved	20/05/2002	Calor Gas, Plot 3, Carlton Industrial Estate, Shawfield Road, Carlton, Barnsley, South Yorkshire, S71 3HS	Bottling And Distribution Of Lpg.	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

## 2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

## 2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

2

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

ID	Distance (m)	Direction	NGR	Details
1	148	SW	436537 408651	Incident Date: 03-Dec-2001 Incident Identification: 46250 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Food and Drink Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	183	E	437014 408737	Incident Date: 18-Sep-2002 Incident Identification: 108731 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

0

Database searched and no data found.

---

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

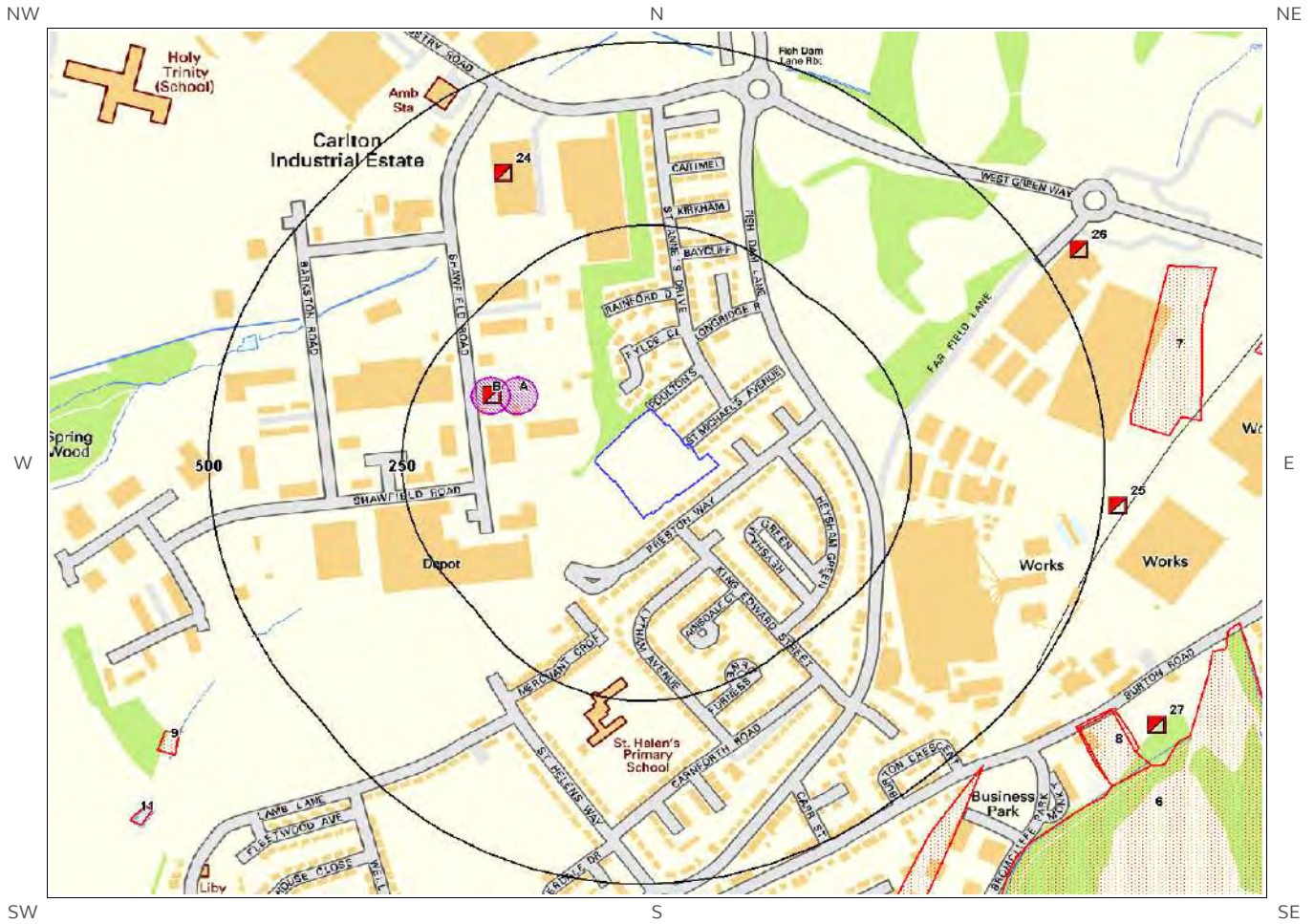
How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0










Database searched and no data found.

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# 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:

0

Database searched and no data found.

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

16

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	
6	534	SE	437200 407600	Site Address: Littleworth Lane, Monk Bretton, Barnsley Waste Licence: - Site Reference: (20)B Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: - Last Recorded: 31-Dec-1996
7	538	E	437400 408800	Site Address: P L M Redfearn Limited, Rear Of P L M Redfearn, Burton Road, Monk Bretton, Barnsley, South Yorkshire Waste Licence: Yes Site Reference: WD20/B771, 4400/B771, NE2111 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: YQ1/L/PLM001	Licence Issue: 31-Aug-1990 Licence Surrendered: 17-Feb-2000 Licence Holder Address: Burton Road, Monk Bretton, Barnsley, South Yorkshire Operator: P L M Redfearn Limited Licence Holder: P L M Redfearn Limited First Recorded: 31-Aug-1990 Last Recorded: -
8	589	SE	437300 408300	Site Address: Land at Burton Road, Monk Bretton, Barnsley Waste Licence: Yes Site Reference: WD20 B399, 4400/B399, 20B399(88) Waste Type: Inert, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 08-Nov-1983 Licence Surrendered: 29-Apr-1994 Licence Holder Address: Arunden House, Lund Lane, Burton Grange, Barnsley Operator: Mr E J Lidster Licence Holder: Mr E J Lidster First Recorded: 30-Nov-1983 Last Recorded: 31-Dec-1989

ID	Distance (m)	Direction	NGR	Details	
9	650	SW	436100 408200	<p>Site Address: Monk Bretton Recreation Ground, Lamb Lane, Monk Bretton, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: 20B328(12), 4400/B328, WD20 B328</p> <p>Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: 28-Jul-1981</p> <p>Licence Surrendered: 20-Apr-1983</p> <p>Licence Holder Address: Department of Amenities and Recreation, 12/18 Eldon Street, Barnsley</p> <p>Operator: Barnsley Metropolitan Borough Council</p> <p>Licence Holder: Barnsley Metropolitan Borough Council</p> <p>First Recorded: 31-Aug-1981</p> <p>Last Recorded: 20-Apr-1983</p>
10	711	E	437700 409000	<p>Site Address: Cudworth Tip Site, Off Burton Road, Monk Bretton, Barnsley</p> <p>Waste Licence: -</p> <p>Site Reference: -</p> <p>Waste Type: -</p> <p>Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: -</p> <p>Licence Surrendered: -</p> <p>Licence Holder Address: -</p> <p>Operator: Burnett and Hallamshire Fuel Limited</p> <p>Licence Holder: Neepsend / North Strip Mining / B and H Fuel Limited</p> <p>First Recorded: -</p> <p>Last Recorded: -</p>
11	744	SW	436100 408200	<p>Site Address: Monk Bretton Recreation Ground, Lamb Lane, Monk Bretton, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: 20B328(12), 4400/B328, WD20 B328</p> <p>Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: 28-Jul-1981</p> <p>Licence Surrendered: 20-Apr-1983</p> <p>Licence Holder Address: Department of Amenities and Recreation, 12/18 Eldon Street, Barnsley</p> <p>Operator: Barnsley Metropolitan Borough Council</p> <p>Licence Holder: Barnsley Metropolitan Borough Council</p> <p>First Recorded: 31-Aug-1981</p> <p>Last Recorded: 20-Apr-1983</p>
Not shown	775	E	437600 408400	<p>Site Address: Land adjacent to 480 - 502 Burton Road, Burton Road, Monk Bretton, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: -</p> <p>Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: 07-Dec-1984</p> <p>Licence Surrendered: 31-Dec-1988</p> <p>Licence Holder Address: West Green Testing Centre, Burton Road, Monk Bretton, Barnsley</p> <p>Operator: Mr D Higgs</p> <p>Licence Holder: Mr D Higgs</p> <p>First Recorded: 31-Dec-1984</p> <p>Last Recorded: 31-Dec-1988</p>
Not shown	801	N	436800 409500	<p>Site Address: Lyons Bakery, Fish Dam Lane, Carlton, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: WD20 B491, 4400/B491, 20B491(40)</p> <p>Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: 21-Oct-1985</p> <p>Licence Surrendered: 07-May-1986</p> <p>Licence Holder Address: Fish Dam Lane, Carlton, Barnsley</p> <p>Operator: Lyons Bakery</p> <p>Licence Holder: Lyons Bakery</p> <p>First Recorded: 31-Oct-1985</p> <p>Last Recorded: 07-May-1986</p>
Not shown	939	E	437800 408700	<p>Site Address: Cudworth Landfill Site, Burton Road, Monk Bretton, Barnsley</p> <p>Waste Licence: Yes</p> <p>Site Reference: WD20 B3, 4400/B3, 20B3(18)</p> <p>Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: 30-Mar-1981</p> <p>Licence Surrendered: 29-Jun-1994</p> <p>Licence Holder Address: Claydons Lane, Rayleigh, Essex</p> <p>Operator: Redland Purle (Cleanaway) Limited</p> <p>Licence Holder: Redland Purle (Cleanaway) Limited</p> <p>First Recorded: 31-Dec-1973</p> <p>Last Recorded: 31-Dec-1977</p>
Not shown	957	E	437800 408700	<p>Site Address: Klondyke Tip, Burton Road, Barnsley, South Yorkshire</p> <p>Waste Licence: -</p> <p>Site Reference: -</p> <p>Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -</p>	<p>Licence Issue: -</p> <p>Licence Surrendered: -</p> <p>Licence Holder Address: -</p> <p>Operator: Redland Purle Limited</p> <p>Licence Holder: -</p> <p>First Recorded: 04-Apr-1972</p> <p>Last Recorded: -</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	1004	SW	435600 408100	Site Address: Rotherham Road, Monk Bretton, Barnsley Waste Licence: Yes Site Reference: 20B456(94), WD20 B456, 4400/B456 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 13-Mar-1985 Licence Surrendered: 04-Jun-1986 Licence Holder Address: Department of Architecture and Planning, Regent House, Barnsley Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: 13-Mar-1985 Last Recorded: 04-Jun-1986
Not shown	1065	SW	435900 407800	Site Address: Land to the rear of Nos. 16 to 26 Byron Drive, Byron Drive, Monk Bretton, Barnsley Waste Licence: Yes Site Reference: 3(b), 20B395(37), 4400/B359, WD20 B359 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 15-Sep-1982 Licence Surrendered: 05-Apr-1992 Licence Holder Address: Westgate, Monk Bretton, Barnsley Operator: D Thackery Licence Holder: Mr D Thackery First Recorded: 30-Sep-1982 Last Recorded: 31-Dec-1987
Not shown	1201	E	438000 408800	Site Address: Bleach Croft Farm, Cudworth, Barnsley Waste Licence: Yes Site Reference: WD20 B330, WD20 B815, 4400/B330, 20B815, 20B330(43) Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 24-Nov-1981 Licence Surrendered: 04-Dec-1992 Licence Holder Address: Bleach Croft Farm, Cudworth, Barnsley Operator: R Armstrong Licence Holder: R Armstrong First Recorded: 30-Nov-1987 Last Recorded: 31-Dec-1994
Not shown	1202	SE	437200 407600	Site Address: Littleworth Lane, Monk Bretton, Barnsley Waste Licence: - Site Reference: (20)B Waste Type: Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Barnsley Metropolitan Borough Council Licence Holder: Barnsley Metropolitan Borough Council First Recorded: - Last Recorded: 31-Dec-1996
Not shown	1215	S	437100 407200	Site Address: Littleworth Lane Tip, Lundwood, Barnsley, Yorkshire Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Barnsley County Borough Council Licence Holder: - First Recorded: 31-Dec-1930 Last Recorded: 11-Jun-1972
Not shown	1398	E	438200 408100	Site Address: Former Cudworth Railway Station, Cudworth, Barnsley, South Yorkshire Waste Licence: Yes Site Reference: WD20 B1000, NE4240 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: YQ1/L/MES008	Licence Issue: 08-Sep-1994 Licence Surrendered: 17-May-2001 Licence Holder Address: 350, Midland Road, Royston, Barnsley, South Yorkshire Operator: Mr D Heeley Licence Holder: Messrs Heeley and Sanders First Recorded: 08-Sep-1994 Last Recorded: -

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

3

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1226	SE	437900.0 408100.0	Address: Klondyke Tip, Burton Rd, Barnsley, Yorks BGS Number: 1893.0	Risk: No risk to aquifer Waste Type: N/A
Not shown	1363	SE	438000.0 408000.0	Address: Wheetshaw Lane, Cudworth, Barnsley, S.Yorks BGS Number: 232.0	Risk: Risk to minor aquifer Waste Type: N/A
Not shown	1381	S	437100.0 407300.0	Address: Littlewood Lane Tip, Lundwood, Barnsley, Yorks BGS Number: 1889.0	Risk: No risk to aquifer Waste Type: N/A

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

3

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	939	E	437886 408744	Refuse Tip	1977 mapping	Polygon
Not shown	1077	E	437927 408555	Refuse Tip	1977 mapping	Polygon
Not shown	1086	S	437054 407547	Refuse Tip	1973 mapping	Polygon

## 3.2 Other Waste Sites

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

2

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

ID	Distance (m)	Direction	NGR	Details		
4A	107	NW	436573 408799	Type of Site: Storage Unit/Waste Transfer Station Site Address: Global Kleen Environmental, Ser, Shawfield Road, Carlton, Industrial Estate, BARNSLEY, South Yorkshire, S71 3HS	Planning Application Reference: B/03/1445/BA Date: -	Further Details: Scheme comprises of a industrial storage unit and formation of a waste transfer station. An application (ref: B/03/1445/BA) for Detailed Planning permission was submitted to Barnsley B.C. on 29th August 2003. Data Source: Historic Planning Application Data Type: Point
5B	136	NW	436538 408799	Type of Site: Waste Transfer Station Development Site Address: 1-3, Shawfield Road, Carlton Industrial Estate, BARNSLEY, South Yorkshire, S71 3HS	Planning Application Reference: 2011/0171 Date: 05/12/2011	Further Details: Scheme comprises change of use from general industry (Class B2) to a mixed use of general industry (Class B2) and waste transfer station. Construction - industrial doors (unspecified) doors. An application (ref: 2011/0171) for detailed planning permissn was granted by Barnsley B.C. A detailed planning application has been granted. Data Source: Historic Planning Application Data Type: Point

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

24

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
22A	161	NW	436540 408801	<p>Site Address: Unit 1-3, Shawfield Road, Carlton Industrial Estate, Barnsley, South Yorks, S71 3HS</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ALL128</p> <p>EPR reference: EA/EPR/TP3393VA/A001</p> <p>Operator: Allwayste Recycling Ltd</p> <p>Waste Management licence No: 102419</p> <p>Annual Tonnage: 4999.0</p> <p>Issue Date: 05/08/2011</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: Allwayste Recycling Ltd</p> <p>Correspondence Address: -</p>
23B	161	NW	436540 408801	<p>Site Address: Unit 1-3, Shawfield Road, Carlton Industrial Estate, Barnsley, South Yorkshire, S71 3HS</p> <p>Type: Household, Commercial &amp; Industrial Waste T Stn</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ALL142</p> <p>EPR reference: EA/EPR/AB3700FD/T001</p> <p>Operator: O' Donnell Waste Management Ltd</p> <p>Waste Management licence No: 102419</p> <p>Annual Tonnage: 4999.0</p> <p>Issue Date: 05/08/2011</p> <p>Effective Date: 21/10/2013</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Transferred</p> <p>Site Name: Allwayste Recycling Ltd</p> <p>Correspondence Address: -</p>
24	374	NW	436555 409104	<p>Site Address: Unit B, Brookfields Park, Manvers Way, Wath Upon Dearne, Rotherham, South Yorkshire, S63 5DJ</p> <p>Type: 75kte WEEE Treatment Facility</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: S2S002</p> <p>EPR reference: EA/EPR/AB3439AX/A001</p> <p>Operator: S 2 S Group</p> <p>Waste Management licence No: 103028</p> <p>Annual Tonnage: 74999.0</p> <p>Issue Date: 29/11/2011</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Unit B Brookfield Park</p> <p>Correspondence Address: -</p>
25	520	E	437350 408650	<p>Site Address: Rear Of P L M Redfearn, Burton Road, Monk Bretton, Barnsley, South Yorkshire, S71 2QG</p> <p>Type: Industrial Waste Landfill (Factory curtilage)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: PLM001</p> <p>EPR reference: EA/EPR/YP3090ZE/S002</p> <p>Operator: P L M Redfearn Ltd</p> <p>Waste Management licence No: 60587</p> <p>Annual Tonnage: 8501.0</p> <p>Issue Date: 31/08/1990</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: 17/02/2000</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Surrendered</p> <p>Site Name: P L M Redfearn Ltd</p> <p>Correspondence Address: -</p>

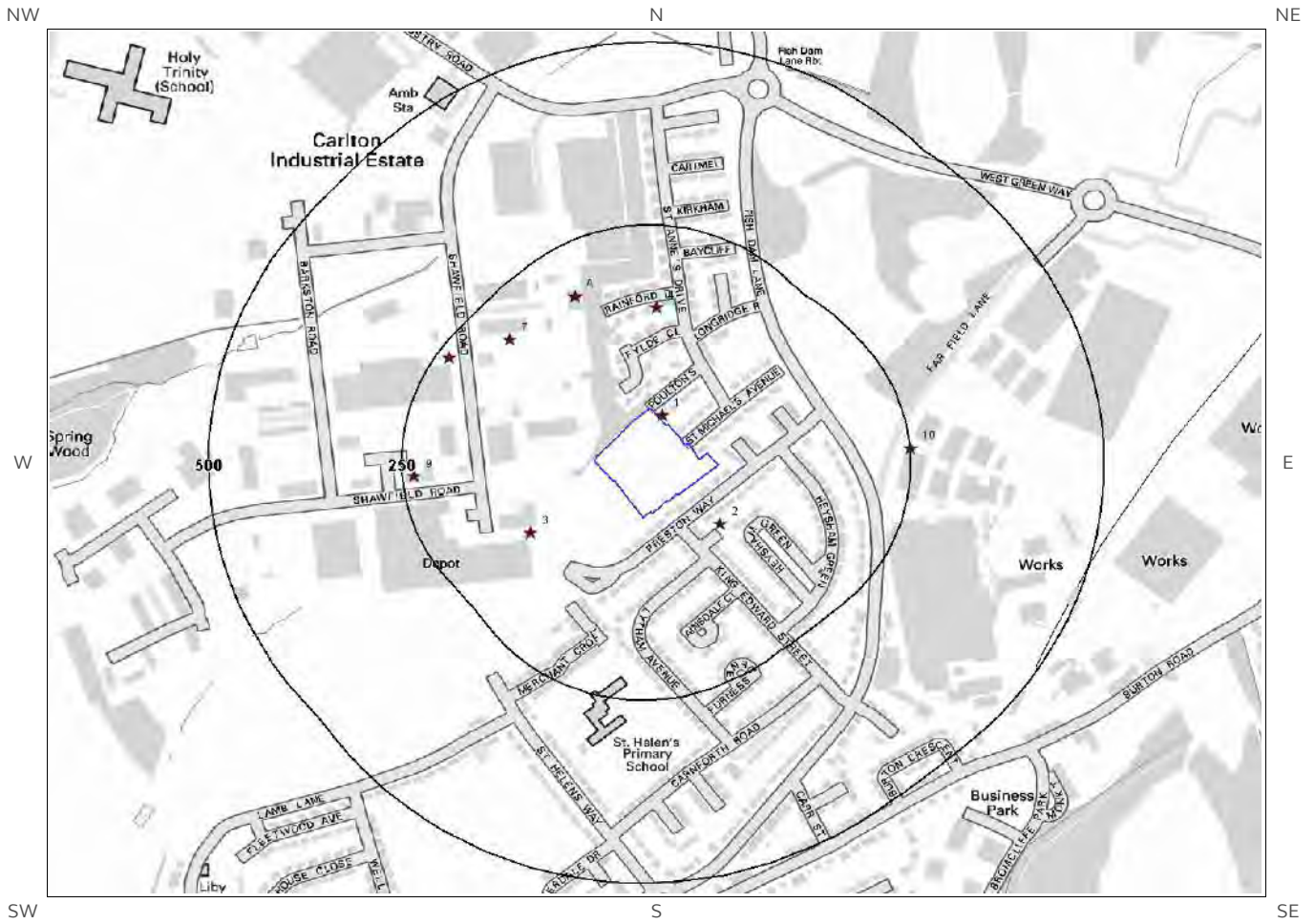
ID	Distance (m)	Direction	NGR	Details	
26	552	NE	437300 409000	<p>Site Address: Land Off Pools Lane, Royston, Barnsley, S Yorks</p> <p>Type: Household, Commercial &amp; Industrial Waste Landfill</p> <p>Size: &gt;= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: EJL001</p> <p>EPR reference: -</p> <p>Operator: E J Lidster Construction Ltd</p> <p>Waste Management licence No: 60560</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 16/05/1984</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: E J Lidster Construction Limited</p> <p>Correspondence Address: Arunden House, Lund Lane, Burton Grange, Barnsley, S Yorks, S71 5PA</p>
27	669	SE	437400 408350	<p>Site Address: Unit 1, The Brick Yard, Burton Road, Barnsley, South Yorkshire, S71 5RP</p> <p>Type: ELV Facility</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: 000152</p> <p>EPR reference: EA/EPR/TP3792ZM/A001</p> <p>Operator: Roddis Francis Lee</p> <p>Waste Management licence No: 65337</p> <p>Annual Tonnage: 2.5</p>	<p>Issue Date: 24/06/2004</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: Ford Salvage Centre</p> <p>Correspondence Address: -</p>
Not shown	681	SE	437056 408030	<p>Site Address: Unit L12 Bromcliffe Park, Burton Road, Monk Bretton, Barnsley, South Yorkshire, S71 5RN</p> <p>Type: Vehicle Depollution Facility &lt;5000 tps</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: SRS011</p> <p>EPR reference: EA/EPR/AB3602TC/S002</p> <p>Operator: S R S Automotive Ltd</p> <p>Waste Management licence No: 400730</p> <p>Annual Tonnage: 0.0</p>	<p>Issue Date: 08/11/2013</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: 18/01/2016</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Surrendered</p> <p>Site Name: S R S Automotive Ltd</p> <p>Correspondence Address: -</p>
Not shown	712	N	436560 409470	<p>Site Address: Albion Road, Carlton, Barnsley, South Yorkshire, S71 3PL</p> <p>Type: Physico-Chemical Treatment Facility</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: NOV001</p> <p>EPR reference: EA/EPR/YP3790ZU/S003</p> <p>Operator: Noveon U K Limited</p> <p>Waste Management licence No: 60597</p> <p>Annual Tonnage: 700.0</p>	<p>Issue Date: 21/07/1992</p> <p>Effective Date: -</p> <p>Modified: 27/05/2002</p> <p>Surrendered Date: 19/07/2004</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Surrendered</p> <p>Site Name: Noveon U K Ltd</p> <p>Correspondence Address: -</p>
Not shown	794	E	437600 408500	<p>Site Address: West Green Testing Centre, Burton Road, Monk Bretton, Barnsley, South Yorkshire, S71 5RS</p> <p>Type: Metal Recycling Site (mixed MRS's)</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: DHI001</p> <p>EPR reference: EA/EPR/JP3990ZA/A001</p> <p>Operator: Dennis Higgs &amp; Son Ltd</p> <p>Waste Management licence No: 60601</p> <p>Annual Tonnage: 30000.0</p>	<p>Issue Date: 17/12/1992</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Expired</p> <p>Site Name: Dennis Higgs &amp; Son Ltd</p> <p>Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	1072	NW	436187 409697	Site Address: 418, Carlton Road, Carlton, Barnsley, S71 3HX Type: Physical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000094 EPR reference: - Operator: Glass Recycling (uk) Ltd Waste Management licence No: 65300 Annual Tonnage: 0.0	Issue Date: 18/05/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Carlton Road Site Correspondence Address: Mr R England, 418, Carlton Road, Carlton, Barnsley, S71 3HX
Not shown	1072	NW	436187 409697	Site Address: 418, Carlton Road, Carlton, Barnsley, South Yorkshire, S71 3HX Type: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000094 EPR reference: EA/EPR/GP3792ZE/V003 Operator: Glass Recycling ( U K ) Ltd Waste Management licence No: 65300 Annual Tonnage: 400000.0	Issue Date: 18/05/2005 Effective Date: - Modified: 08/07/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Carlton Road Site Correspondence Address: -
Not shown	1072	NW	436187 409697	Site Address: 418, Carlton Road, Carlton, Barnsley, South Yorkshire, S71 3HX Type: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000094 EPR reference: EA/EPR/GP3792ZE/V003 Operator: Glass Recycling ( U K ) Ltd Waste Management licence No: 65300 Annual Tonnage: 400000.0	Issue Date: 18/05/2005 Effective Date: - Modified: 08/07/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Carlton Road Site Correspondence Address: -
Not shown	1072	NW	436187 409697	Site Address: 418, Carlton Road, Carlton, Barnsley, S71 3HX Type: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000094 EPR reference: - Operator: Glass Recycling (uk) Ltd Waste Management licence No: 65300 Annual Tonnage: 0.0	Issue Date: 18/05/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Carlton Road Site Correspondence Address: 418, Carlton Road, Carlton, Barnsley, S71 3HX
Not shown	1111	NW	436300 409800	Site Address: 418, Carlton Road, Carlton, Barnsley, South Yorkshire, S71 3HX Type: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GLA001 EPR reference: EA/EPR/YP3190ZW/V002 Operator: Glass Recycling ( U K ) Ltd Waste Management licence No: 60596 Annual Tonnage: 5000.0	Issue Date: 24/03/1992 Effective Date: - Modified: 22/04/2010 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Glass Recycling U K Correspondence Address: -
Not shown	1167	E	438000 408700	Site Address: Land At Junction Of, Pontefract Road & Burton Road, West Green, Barnsley, South Yorkshire Type: Inert & excavation Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SEA001 EPR reference: EA/EPR/BB3702UV/T001 Operator: Sealquest Limited Waste Management licence No: 60546 Annual Tonnage: 74999.0	Issue Date: 31/01/1994 Effective Date: 14/06/2014 Modified: 23/08/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Land At Junction Of Pontefract Road And Burton Road Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details
Not shown	1167	E	438000 408700	<p>Site Address: The Brickyard, Burton Road, West Green, Barnsley, South Yorkshire, S71 4RP</p> <p>Type: Transfer Station taking Non-Biodegradable Wastes</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: EJL002</p> <p>EPR reference: EA/EPR/AP3390ZY/A001</p> <p>Operator: E J Lidster Construction Ltd</p> <p>Waste Management licence No: 60546</p> <p>Annual Tonnage: 30000.0</p> <p>Issue Date: 31/01/1994</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: E. J. Lidster</p> <p>Correspondence Address: -</p>
Not shown	1167	E	438000 408700	<p>Site Address: Land At Junction Of, Pontefract Road &amp; Burton Road, West Green, Barnsley, South Yorkshire</p> <p>Type: Inert &amp; excavation Waste TS + treatment</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: EJL002</p> <p>EPR reference: EA/EPR/AP3390ZY/V003</p> <p>Operator: E J Lidster ( Construction) Ltd</p> <p>Waste Management licence No: 60546</p> <p>Annual Tonnage: 74999.0</p> <p>Issue Date: 31/01/1994</p> <p>Effective Date: -</p> <p>Modified: 23/08/2013</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Modified</p> <p>Site Name: Land At Junction Of Pontefract Road And Burton Road</p> <p>Correspondence Address: -</p>
Not shown	1282	E	438100 408900	<p>Site Address: Bleachcroft Farm, Cudworth, Barnsley, S Yorks, S72 8UX</p> <p>Type: Landfill taking Non-Biodegradeable Wastes</p> <p>Size: &gt;= 25000 tonnes &lt; 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ARM001</p> <p>EPR reference: -</p> <p>Operator: Armstrong Ralph</p> <p>Waste Management licence No: 60593</p> <p>Annual Tonnage: 0.0</p> <p>Issue Date: 15/04/1991</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: R. Armstrong</p> <p>Correspondence Address: Bleachcroft Farm, Cudworth, Barnsley, S Yorks, S72 8UX</p>
Not shown	1282	E	438100 408900	<p>Site Address: Bleachcroft Farm, Barnsley Road, Cudworth, Barnsley, South Yorkshire, S72 8UX</p> <p>Type: Landfill taking Non-Biodegradeable Wastes</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ARM001</p> <p>EPR reference: EA/EPR/YP3290ZR/A001</p> <p>Operator: Armstrong Mr R</p> <p>Waste Management licence No: 60593</p> <p>Annual Tonnage: 125000.0</p> <p>Issue Date: 15/04/1991</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: R. Armstrong</p> <p>Correspondence Address: -</p>
Not shown	1282	E	438100 408900	<p>Site Address: Bleachcroft Farm, Barnsley Road, Cudworth, Barnsley, S Yorks, S72 8UX</p> <p>Type: Landfill taking Non-Biodegradeable Wastes</p> <p>Size: &lt; 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: ARM001</p> <p>EPR reference: -</p> <p>Operator: Armstrong Ralph</p> <p>Waste Management licence No: 60593</p> <p>Annual Tonnage: 0.0</p> <p>Issue Date: 15/04/1991</p> <p>Effective Date: -</p> <p>Modified: -</p> <p>Surrendered Date: -</p> <p>Expiry Date: -</p> <p>Cancelled Date: -</p> <p>Status: Issued</p> <p>Site Name: R. Armstrong</p> <p>Correspondence Address: Bleachcroft Farm, Barnsley Road, Cudworth, Barnsley, S Yorks, S72 8UX</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1309	NW	435787 409679	<p>Site Address: Units 27 &amp; 28 Wharnccliffe Business Park, Longfields Road, Carlton, Barnsley, South Yorkshire, S71 3HT Type: 75kte Metal Recycling Site Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: JBL002 EPR reference: EA/EPR/EB3532RE/A001 Operator: J Blackburn &amp; Sons Ltd Waste Management licence No: 103797 Annual Tonnage: 74999.0</p> <p>Issue Date: 23/03/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: J Blackburn &amp; Sons Ltd Correspondence Address: -</p>
Not shown	1355	NE	437471 409926	<p>Site Address: Former Carlton Colliery Site, Shaw Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ Type: Deposit of waste to land as a recovery operation Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: POR079 EPR reference: EA/EPR/BB3103FE/A001 Operator: Portward Homes Limited Waste Management licence No: 401087 Annual Tonnage: 330000.0</p> <p>Issue Date: 19/11/2014 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Former Carlton Colliery Site Correspondence Address: -</p>
Not shown	1433	W	435300 408300	<p>Site Address: Rotherham Road, Carlton, Barnsley, South Yorkshire, S27 2AG Type: Household, Commercial &amp; Industrial Waste T Stn Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR007 EPR reference: EA/EPR/AP3090ZE/S002 Operator: Yorkshire Water Services Ltd Waste Management licence No: 60547 Annual Tonnage: 39521.0</p> <p>Issue Date: 31/01/1994 Effective Date: - Modified: - Surrendered Date: 01/11/2000 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Carlton Road Depot Correspondence Address: -</p>
Not shown	1433	W	435300 408300	<p>Site Address: Rotherham Road, Carlton, Barnsley, South Yorkshire, S27 2AG Type: Household, Commercial &amp; Industrial Waste T Stn Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR007 EPR reference: - Operator: Yorkshire Water Services Waste Management licence No: 60547 Annual Tonnage: 0.0</p> <p>Issue Date: 31/01/1994 Effective Date: - Modified: - Surrendered Date: 01/11/2000 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Carlton Road Depot Correspondence Address: Western House, Western Way, Halifax Road, Bradford, West Yorkshire, BD6 2LZ</p>

# 4. Current Land Use Map



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

# 4. Current Land Uses

## 4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 10

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	6	NE	Pica Logo	436760 408772	16, Poulton Street, Barnsley, S71 2SE	Clothing, Components and Accessories	Consumer Products
2	64	SE	Electricity Sub Station	436835 408624	S71	Electrical Features	Infrastructure and Facilities
3	127	SW	Tank	436590 408612	S71	Tanks (Generic)	Industrial Features
4	138	N	Electricity Sub Station	436753 408920	S71	Electrical Features	Infrastructure and Facilities
5A	182	NW	Royston Glass Ltd	436647 408935	Unit 3 Plot 21 Carlton Industrial Estate, Humberside Way, Barnsley, S71 3RN	Glass	Industrial Products
6A	182	NW	H & H Storage	436647 408935	Unit 21, Shawfield Road, Barnsley, S71 3HS	Container and Storage	Transport, Storage and Delivery
7	193	NW	Tank	436563 408876	S71	Tanks (Generic)	Industrial Features
8	235	NW	Tank	436485 408851	S71	Tanks (Generic)	Industrial Features
9	235	W	Geoff Clegg Ltd	436438 408689	Unit 5 Carlton Industrial Estate, Shawfield Road, Barnsley, S71 3HS	Lifting and Handling Equipment	Industrial Products
10	250	E	Electricity Sub Station	437082 408728	S71	Electrical Features	Infrastructure and Facilities

## 4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

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

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

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

Database searched and no data found.

---

### 4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

---

# 5. Geology

## 5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

## 5.2 Superficial Ground and Drift Geology

Database searched and no data found.

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

## 5.3 Bedrock and Solid Geology

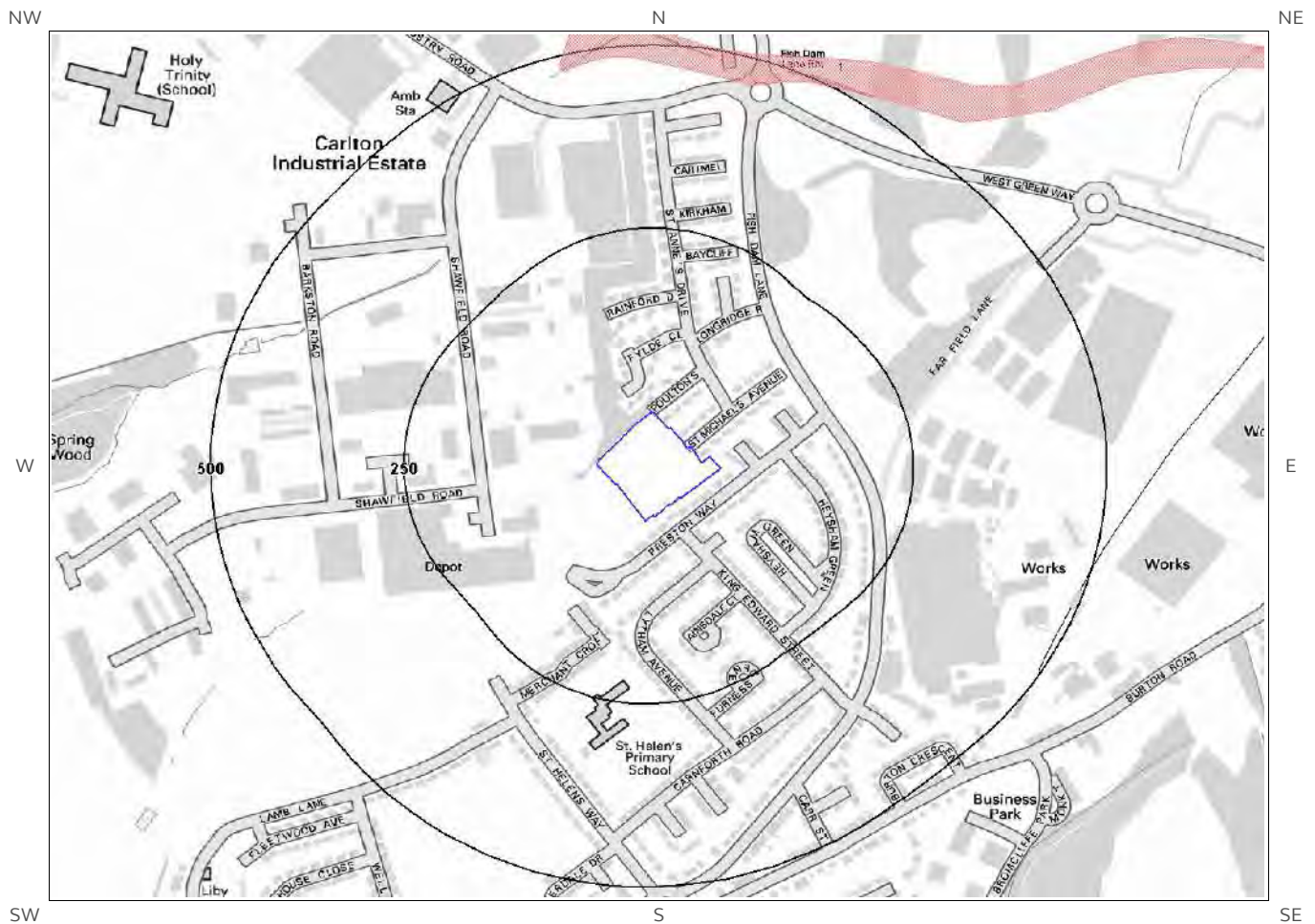
The database has been searched on site, including a 50m buffer.

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

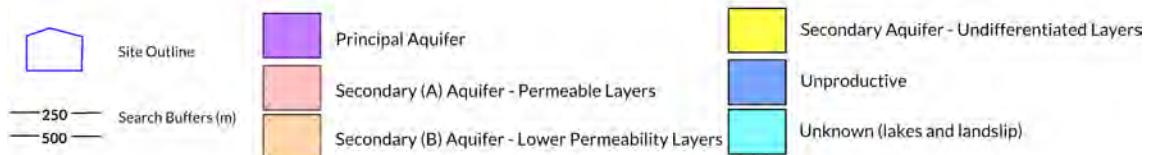
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

# 6 Hydrogeology and Hydrology

## 6a. Aquifer Within Superficial Geology



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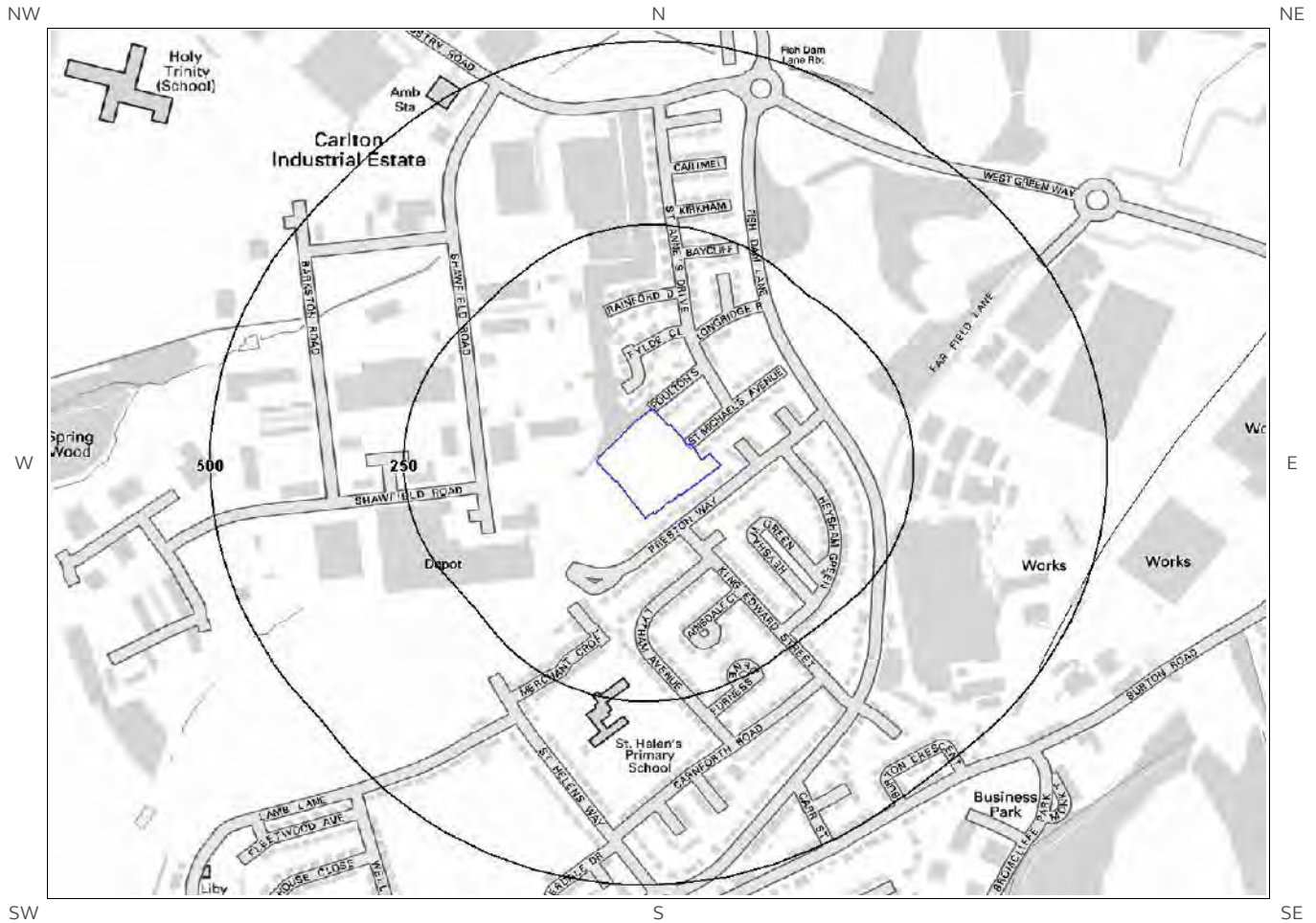
# 6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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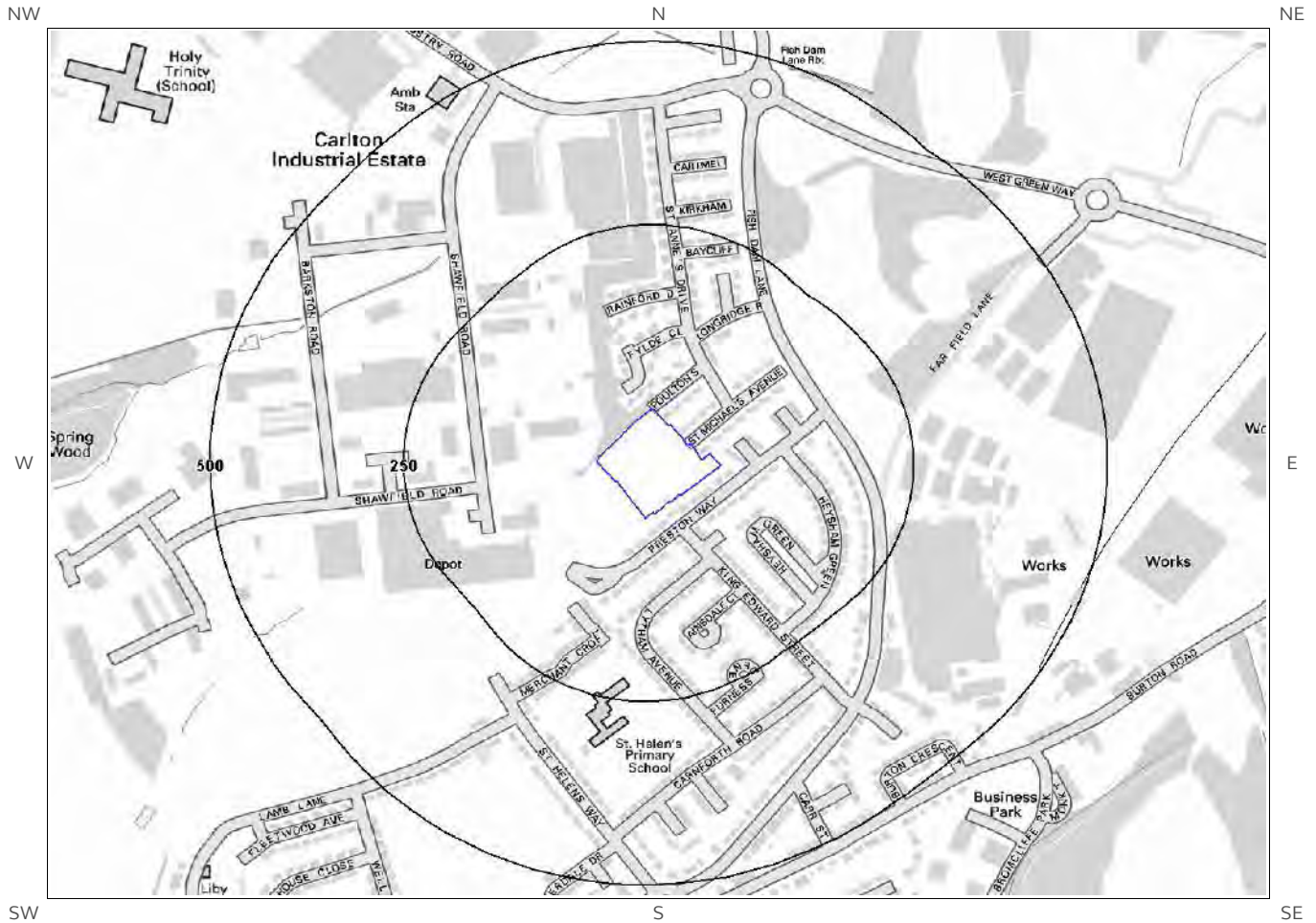
# 6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



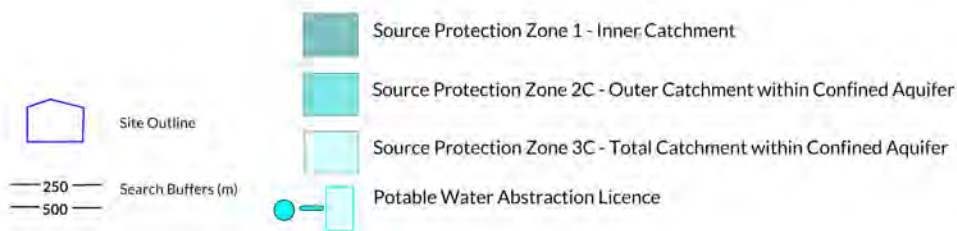
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# 6d. Hydrogeology – Source Protection Zones within confined aquifer



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# 6e. Hydrology – Detailed River Network and River Quality



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# 6. Hydrogeology and Hydrology

## 6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	463	N	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

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

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

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

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

## 6.3 Groundwater Abstraction Licences

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

Database searched and no data found.

## 6.4 Surface Water Abstraction Licences

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

Database searched and no data found.

---

## 6.5 Potable Water Abstraction Licences

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

Database searched and no data found.

---

## 6.6 Source Protection Zones

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

Database searched and no data found.

---

## 6.7 Source Protection Zones within Confined Aquifer

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

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

Database searched and no data found.

---

## 6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
241	NE	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.
468	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.

## 6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? No

### 6.9.1 Biological Quality:

Database searched and no data found.

### 6.9.2 Chemical Quality:

Database searched and no data found.

## 6.10 Detailed River Network

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

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

ID	Distance (m)	Direction	Details
1	339	NW	River Name: - Welsh River Name: - Alternative Name: -  River Type: Secondary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
2	340	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3A	411	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4A	411	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5	426	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	431	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
7	466	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
8	471	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	476	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
10	488	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
11	489	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
12	492	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
13	492	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
14	497	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

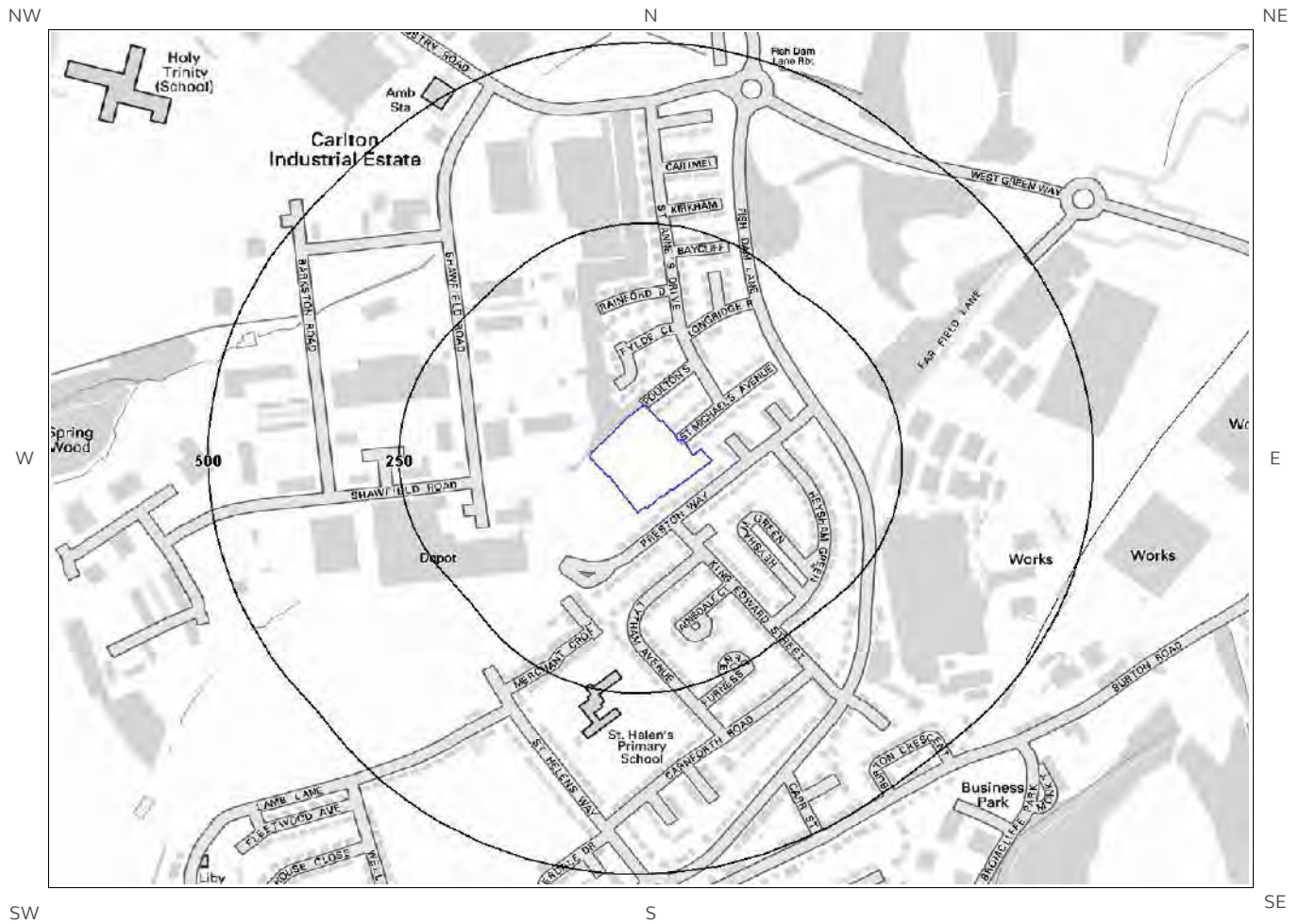
## 6.11 Surface Water Features

Are there any surface water features within 250m of the study site?

No

Database searched and no data found.

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



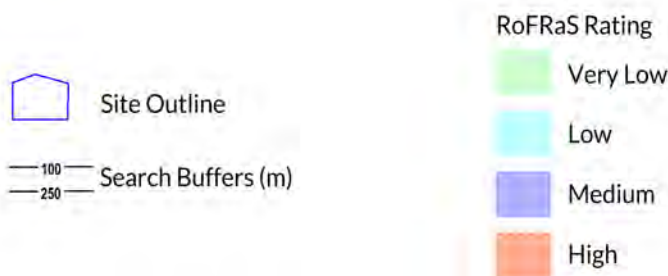
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# 7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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# 7 Flooding

## 7.1 River and Coastal Zone 2 Flooding

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

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

Database searched and no data found.

---

## 7.2 River and Coastal Zone 3 Flooding

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

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

Database searched and no data found.

---

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

What is the highest risk of flooding onsite? Very Low

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

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

---

## 7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No  
Database searched and no data found.

---

## 7.5 Areas benefiting from Flood Defences

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

---

## 7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

## 7.7 Groundwater Flooding Susceptibility Areas

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

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

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

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

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

## 7.8 Groundwater Flooding Confidence Areas

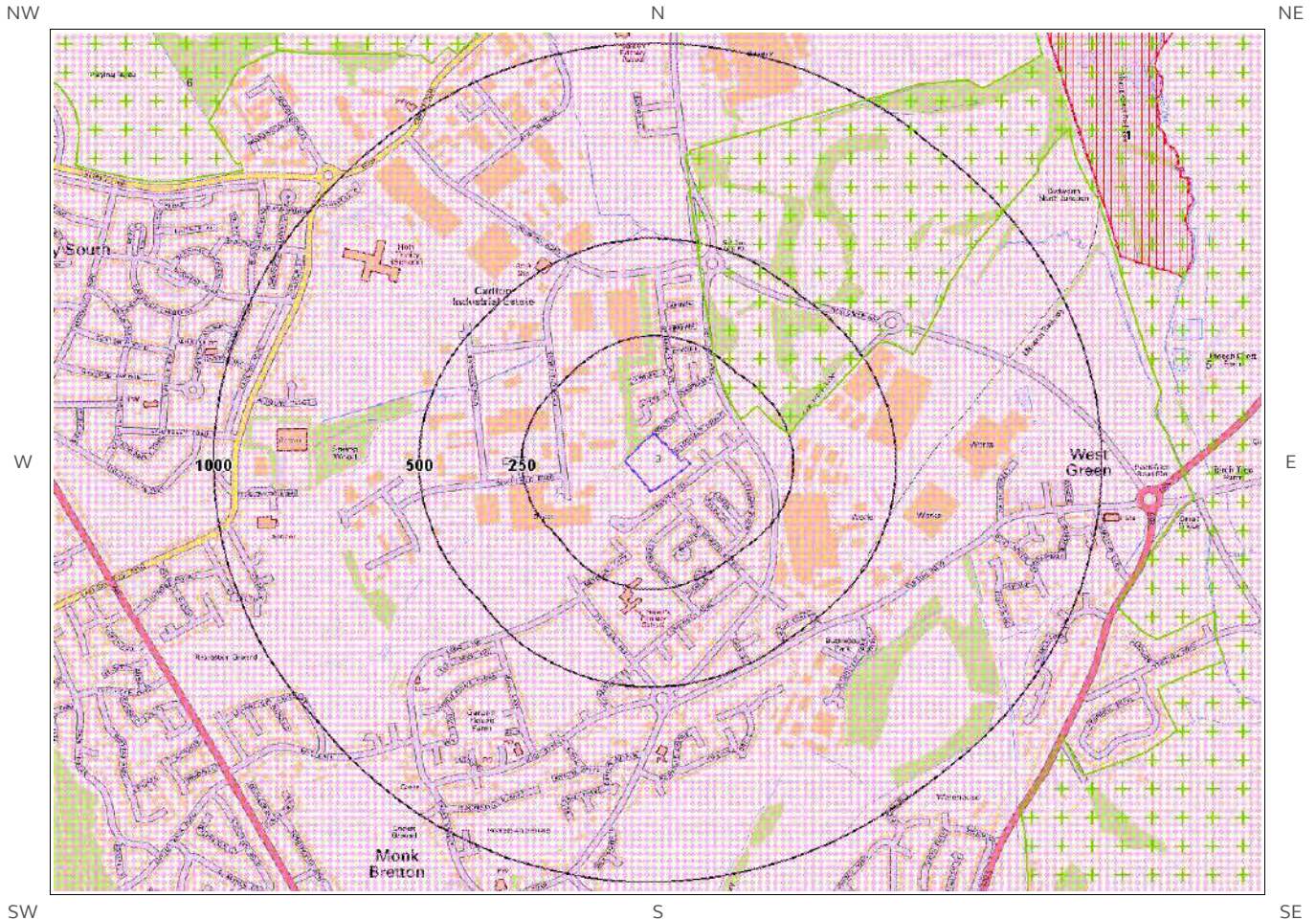
What is the British Geological Survey confidence rating in this result?

Low

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

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

# 8. Designated Environmentally Sensitive Sites Map



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# 8. Designated Environmentally Sensitive Sites

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

---

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

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:

0

Database searched and no data found.

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

2

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	1173	NE	Carlton Marsh	Natural England
Not shown	1542	S	Dearne Valley Park	Natural England

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

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
3	0	On Site	Existing	DEFRA
Not shown	1218	N	Existing	DEFRA

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

4

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

ID	Distance	Direction	Green Belt Name	Local Authority Name
5	167	NE	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
6	1084	NW	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1225	N	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1229	N	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

What is the maximum Shrink-Swell\* hazard rating identified on the study site? Very Low

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

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

### 9.1.2 Landslides

What is the maximum Landslide\* 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 slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property no significant increase in insurance risk due to natural slope instability problems.

### 9.1.3 Soluble Rocks

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

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

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

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

### 9.1.4 Compressible Ground

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

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

---

**Hazard**

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

---

### 9.1.5 Collapsible Rocks

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

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

---

**Hazard**

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

---

### 9.1.6 Running Sand

What is the maximum Running Sand\*\* hazard rating identified on the study site? Negligible

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

---

**Hazard**

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

---



---

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

## 9.2 Radon

### 9.2.1 Radon Affected Areas

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

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

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

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

## 10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

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

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	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
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

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

# Contact Details

**Groundsure Helpline**  
Telephone: 08444 159 000  
info@groundsure.com

**British Geological Survey Enquiries**

Kingsley Dunham Centre  
Keyworth, Nottingham NG12 5GG  
Tel: 0115 936 3143.  
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,  
Hampshire RG27 8NW  
Tel: 01252 845444



**Groundsure**  
LOCATION INTELLIGENCE



**Public Health  
England**



**The Coal  
Authority**



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

# Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:  
<https://www.groundsure.com/terms-and-conditions-sept-2016>



---

# Appendix C

## Groundsure GeoInsight Report



# Groundsure

LOCATION INTELLIGENCE

Hamson Barron Smith Ltd  
16 CENTRAL AVENUE, ST. ANDREWS  
BUSINESS PARK,  
NORWICH, NR7 0HR

Groundsure Reference: GS-4615475  
Your Reference: 18-1-6013\_Monk\_Bretton\_PO23002493  
Report Date: 21 Dec 2017  
Report Delivery Method: Email - pdf

## Geo Insight

Address: ST MICHAELS AVENUE, MONK BRETTON, BARNSLEY, S71 2SD

Dear Sir/ Madam,

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

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director  
Groundsure Limited

Enc.  
Groundsure Geo Insight

**Address:** ST MICHAELS AVENUE, MONK BRETTON, BARNSELY, S71 2SD  
**Date:** 21 Dec 2017  
**Reference:** GS-4615475  
**Client:** Hamson Barron Smith Ltd

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 26-Mar-2012  
Grid Reference: 436743,408710  
Site Size: 1.19ha

# Contents Page

Contents Page.....	3
Overview of Findings.....	5
1:10,000 Scale Availability.....	8
Availability of 1:10,000 Scale Geology Mapping.....	9
1 Geology (1:10,000 scale).....	10
1.1 Artificial Ground map (1:10,000 scale).....	10
1. Geology 1:10,000 scale.....	11
1.1 Artificial Ground.....	11
1.2 Superficial Deposits and Landslips map (1:10,000 scale).....	12
1.2 Superficial Deposits and Landslips.....	13
1.2.1 Superficial Deposits/ Drift Geology.....	13
1.2.2 Landslip.....	13
1.3 Bedrock and linear features map (1:10,000 scale).....	14
1.3 Bedrock and linear features.....	15
1.3.1 Bedrock/ Solid Geology.....	15
1.3.2 Linear features.....	15
2 Geology 1:50,000 Scale.....	16
2.1 Artificial Ground map.....	16
2. Geology 1:50,000 scale.....	17
2.1 Artificial Ground.....	17
2.1.1 Artificial/ Made Ground.....	17
2.1.2 Permeability of Artificial Ground.....	17
2.2 Superficial Deposits and Landslips map (1:50,000 scale).....	18
2.2 Superficial Deposits and Landslips.....	19
2.2.1 Superficial Deposits/ Drift Geology.....	19
2.2.2 Permeability of Superficial Ground.....	19
2.2.3 Landslip.....	19
2.2.4 Landslip Permeability.....	19
2.3 Bedrock and linear features map (1:50,000 scale).....	20
2.3 Bedrock, Solid Geology & linear features.....	21
2.3.1 Bedrock/Solid Geology.....	21
2.3.2 Permeability of Bedrock Ground.....	21
2.3.3 Linear features.....	21
3 Radon Data.....	22
3.1 Radon Affected Areas.....	22
3.2 Radon Protection.....	22
4 Ground Workings map.....	23
4 Ground Workings.....	24
4.1 Historical Surface Ground Working Features derived from Historical Mapping.....	24
4.2 Historical Underground Working Features derived from Historical Mapping.....	24
4.3 Current Ground Workings.....	25
5 Mining, Extraction & Natural Cavities.....	27
5.1 Historical Mining.....	27
5.2 Coal Mining.....	27
5.3 Johnson Poole and Bloomer.....	28
5.4 Non-Coal Mining.....	28
5.5 Non-Coal Mining Cavities.....	28
5.6 Natural Cavities.....	29
5.7 Brine Extraction.....	29
5.8 Gypsum Extraction.....	29
5.9 Tin Mining.....	29
5.10 Clay Mining.....	29
6 Natural Ground Subsidence.....	30
6.1 Shrink-Swell Clay map.....	30
6.2 Landslides map.....	31
6.3 Ground Dissolution of Soluble Rocks map.....	32
6.4 Compressible Deposits map.....	33
6.5 Collapsible Deposits map.....	34
6.6 Running Sand map.....	35

6 Natural Ground Subsidence.....	36
6.1 Shrink-Swell Clays.....	36
6.2 Landslides.....	36
6.3 Ground Dissolution of Soluble Rocks.....	37
6.4 Compressible Deposits.....	37
6.5 Collapsible Deposits.....	37
6.6 Running Sands.....	37
7 Borehole Records.....	39
8 Estimated Background Soil Chemistry.....	40
9 Railways and Tunnels map.....	41
9 Railways and Tunnels.....	42
9.1 Tunnels .....	42
9.2 Historical Railway and Tunnel Features .....	42
9.3 Historical Railways.....	43
9.4 Active Railways.....	43
9.5 Railway Projects.....	43

# Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes
Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

## Section 2: Geology 1:50,000 Scale

### 2.3 Bedrock, Solid Geology and linear features

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

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

Yes

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

Yes

## Section 3: Radon

### 3. Radon

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

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

3.2 Radon Protection

No radon protective measures are necessary.

## Section 4: Ground Workings

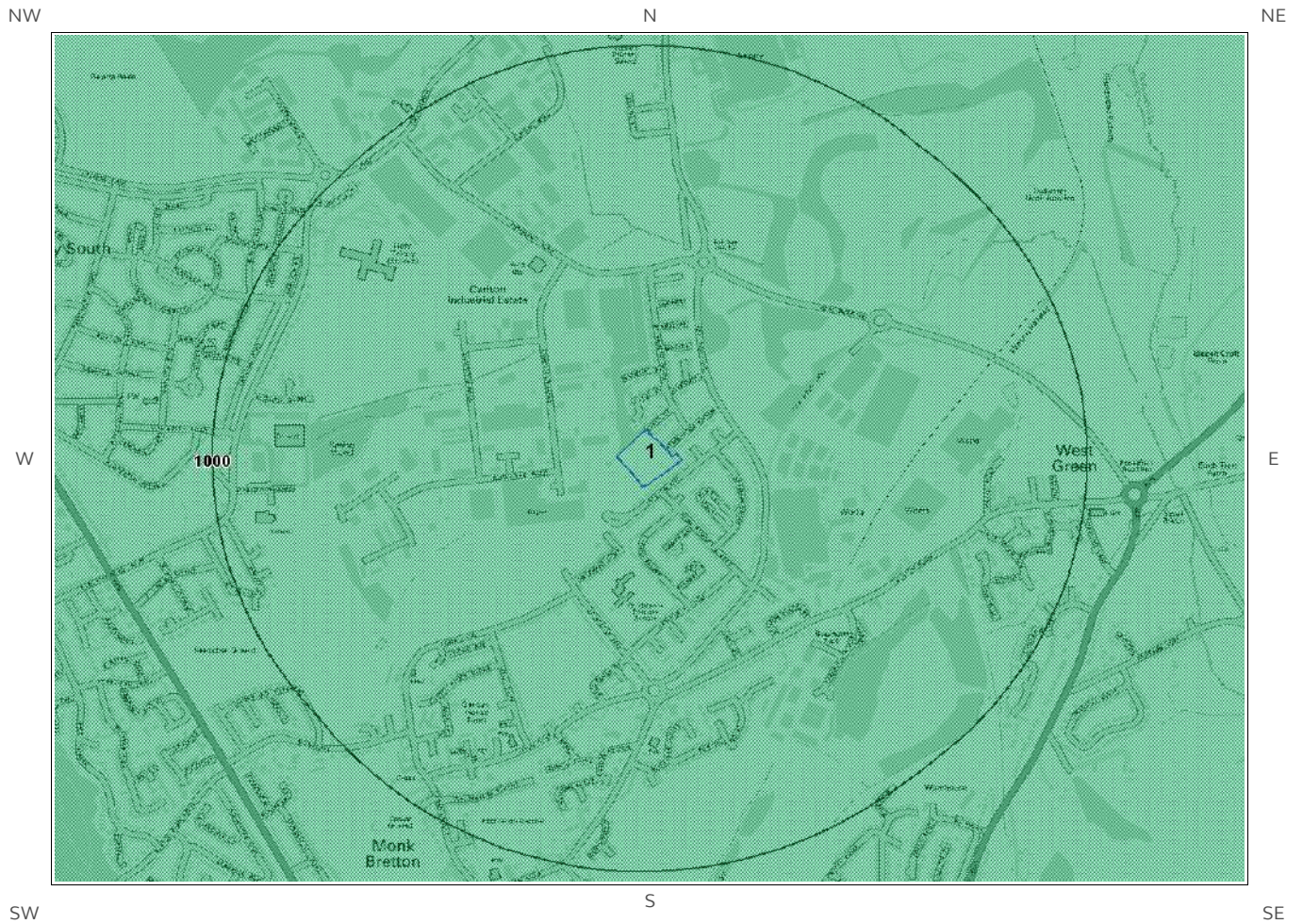
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	7
4.3 Current Ground Workings	0	0	0	0	4

## Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	7
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*	2	0	0	1	3
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

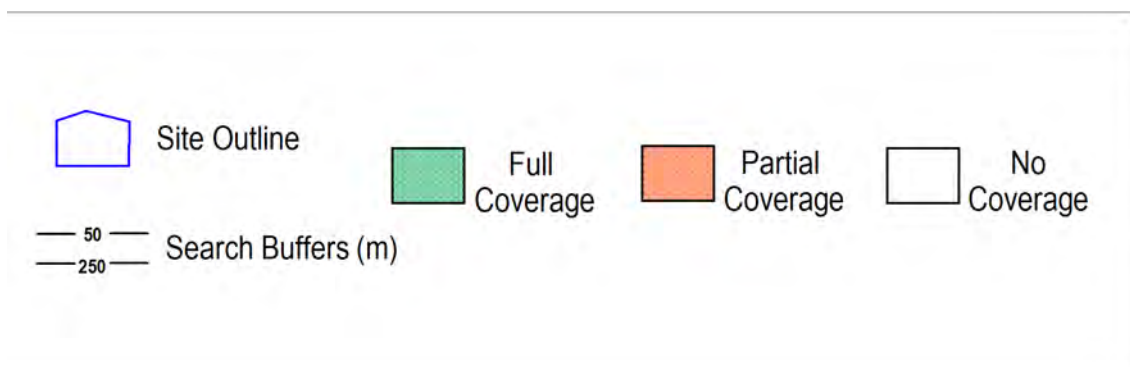
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
<b>Section 6: Natural Ground Subsidence</b>					
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Negligible				
<b>Section 7: Borehole Records</b>					
7 BGS Recorded Boreholes	On-site	0-50m	51-250		
	0	0	5		
<b>Section 8: Estimated Background Soil Chemistry</b>					
8 Records of Background Soil Chemistry	On-site	0-50m	51-250		
	2	0	0		
<b>Section 9: Railways and Tunnels</b>					
9.1 Tunnels	On-site	0-50m	51-250	250-500	
	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	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
N2	1218.0	Some deposits are mapped	Full	Full	No coverage
N3	1673.0	Some deposits are mapped	Full	Full	Some deposits are mapped

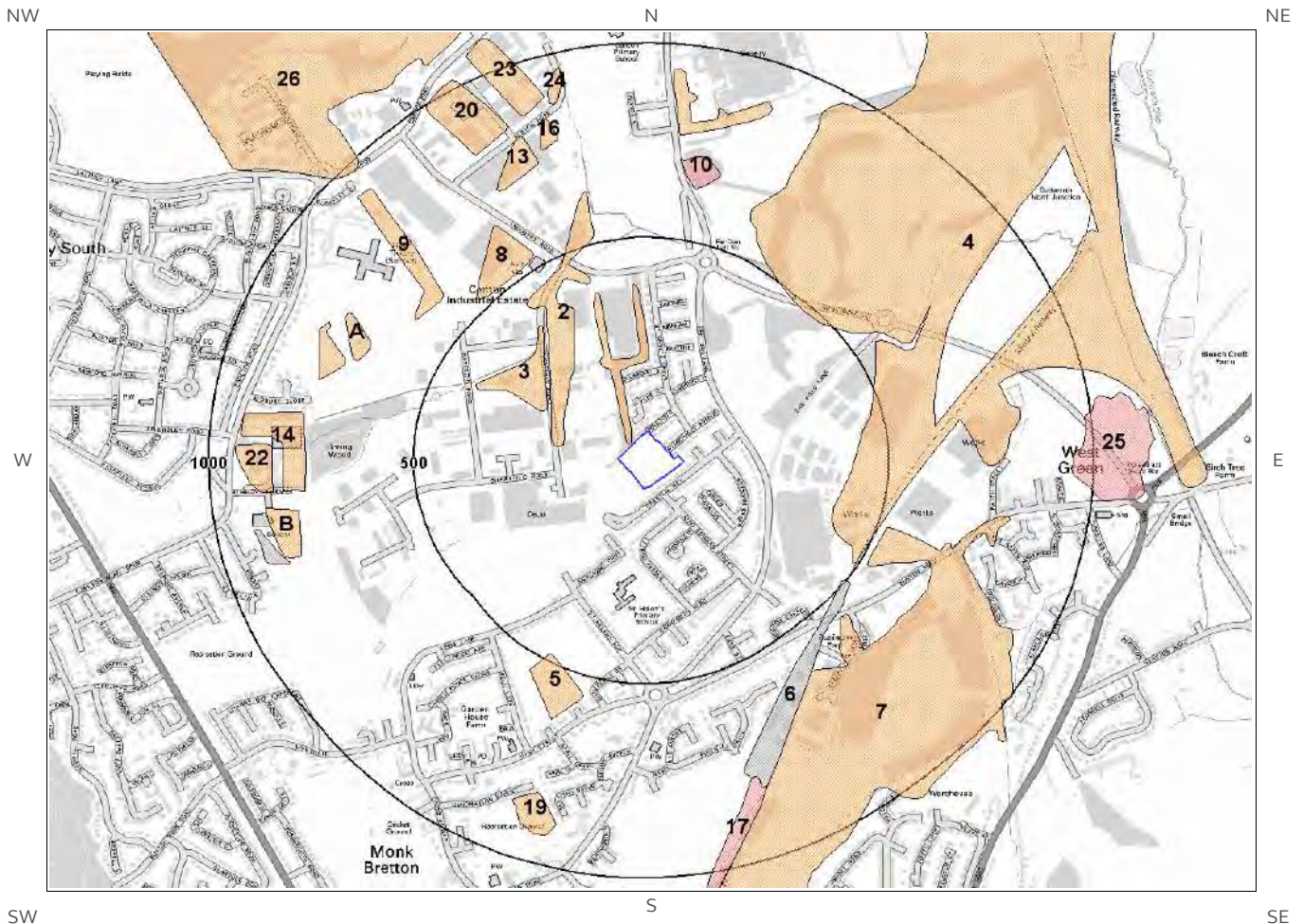
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

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

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



**Artificial Ground Legend**

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# 1. Geology 1:10,000 scale

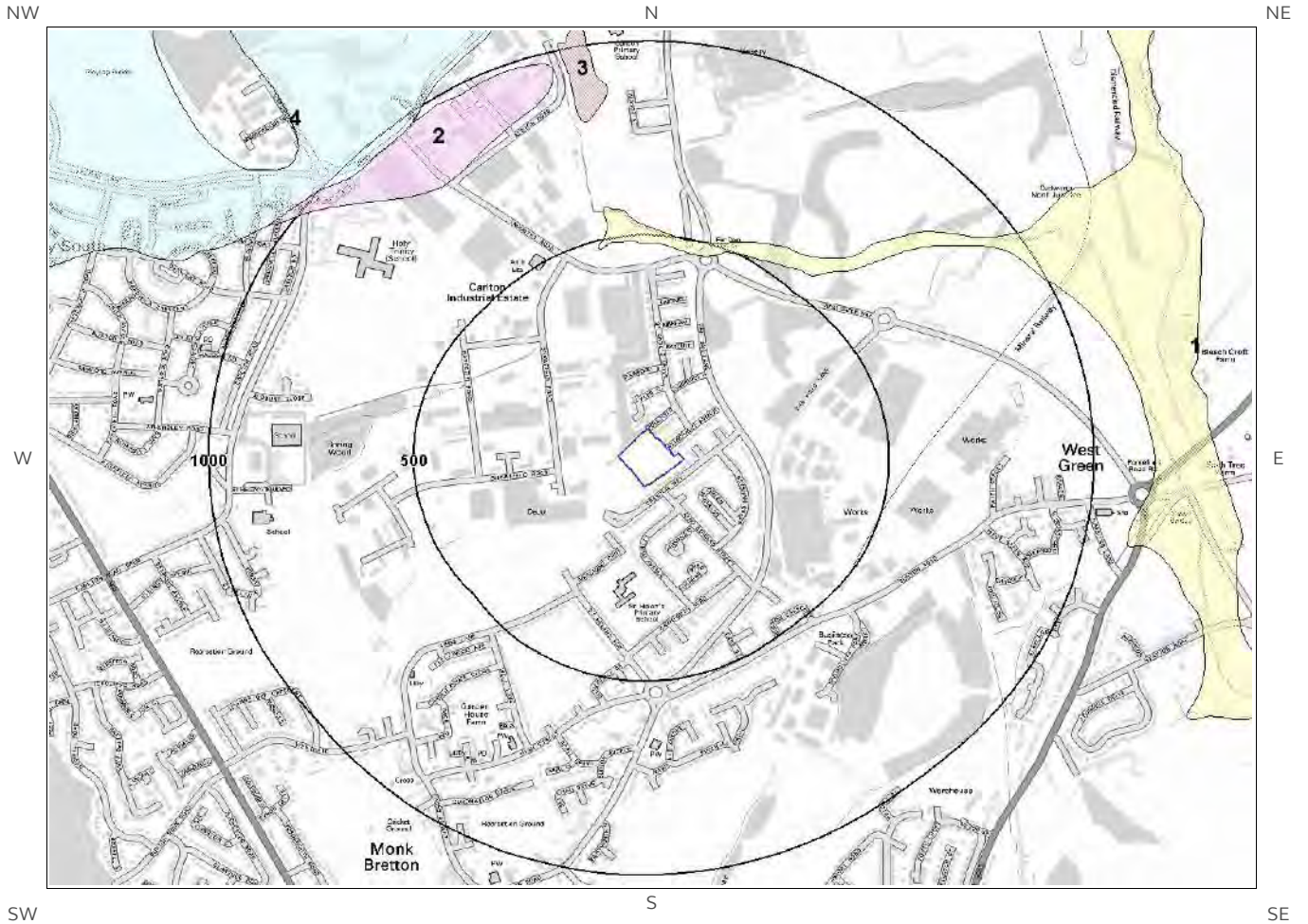
## 1.1 Artificial Ground

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

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

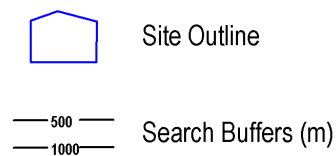
ID	Distance	Direction	LEX Code	Description	Rock Description
1	8.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	139.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	219.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	383.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	480.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	493.0	SE	WGR-VOID	Worked Ground (Undivided)	Void

# 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	462.0	N	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

## 1.2.2 Landslip

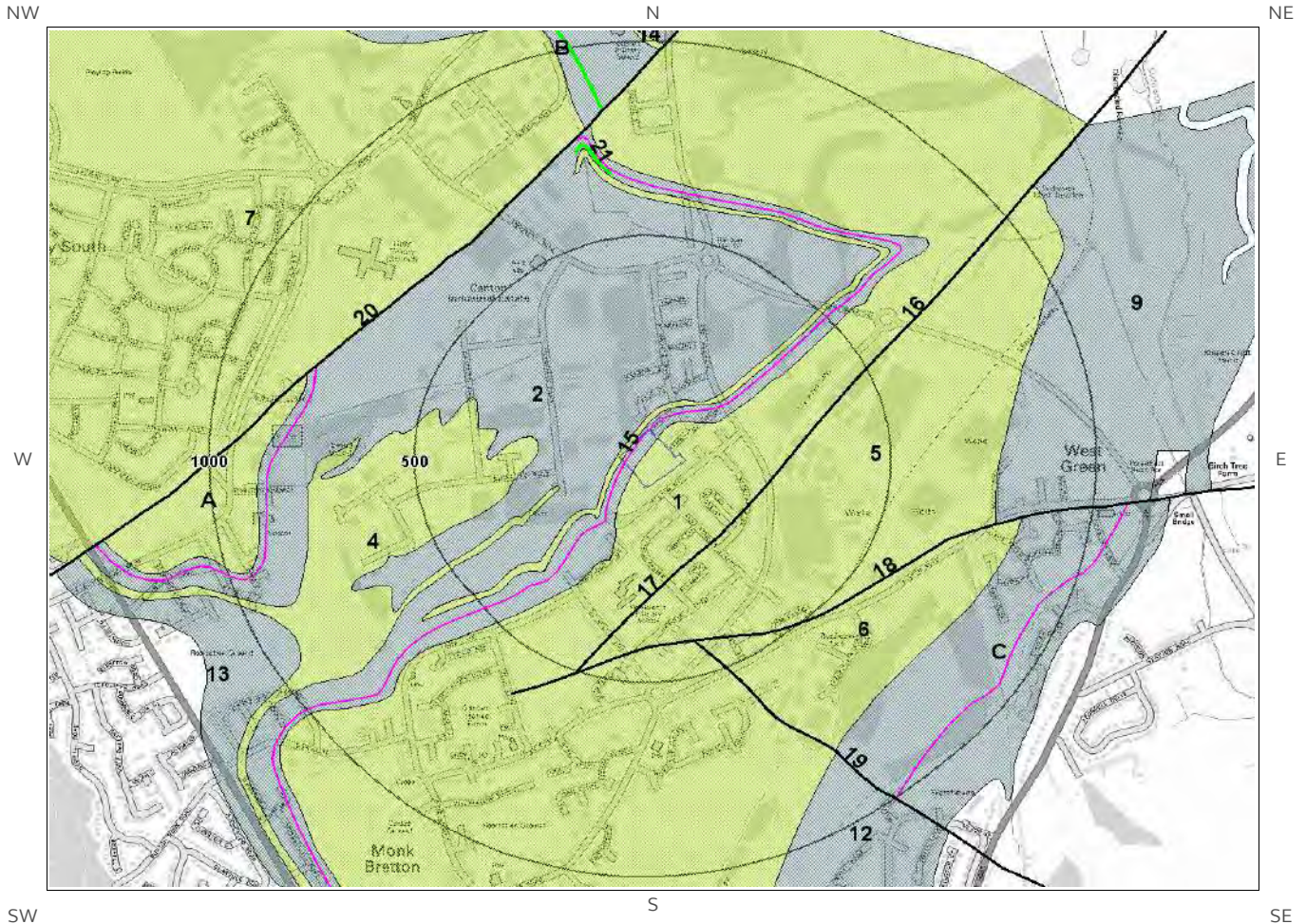
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

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

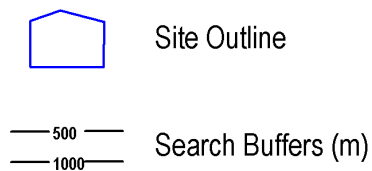
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

# 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	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age
2	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
3	0.0	On Site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4	166.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	193.0	SE	OR-SDST	Oaks Rock - Sandstone	Duckmantian Sub-age
6	410.0	S	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

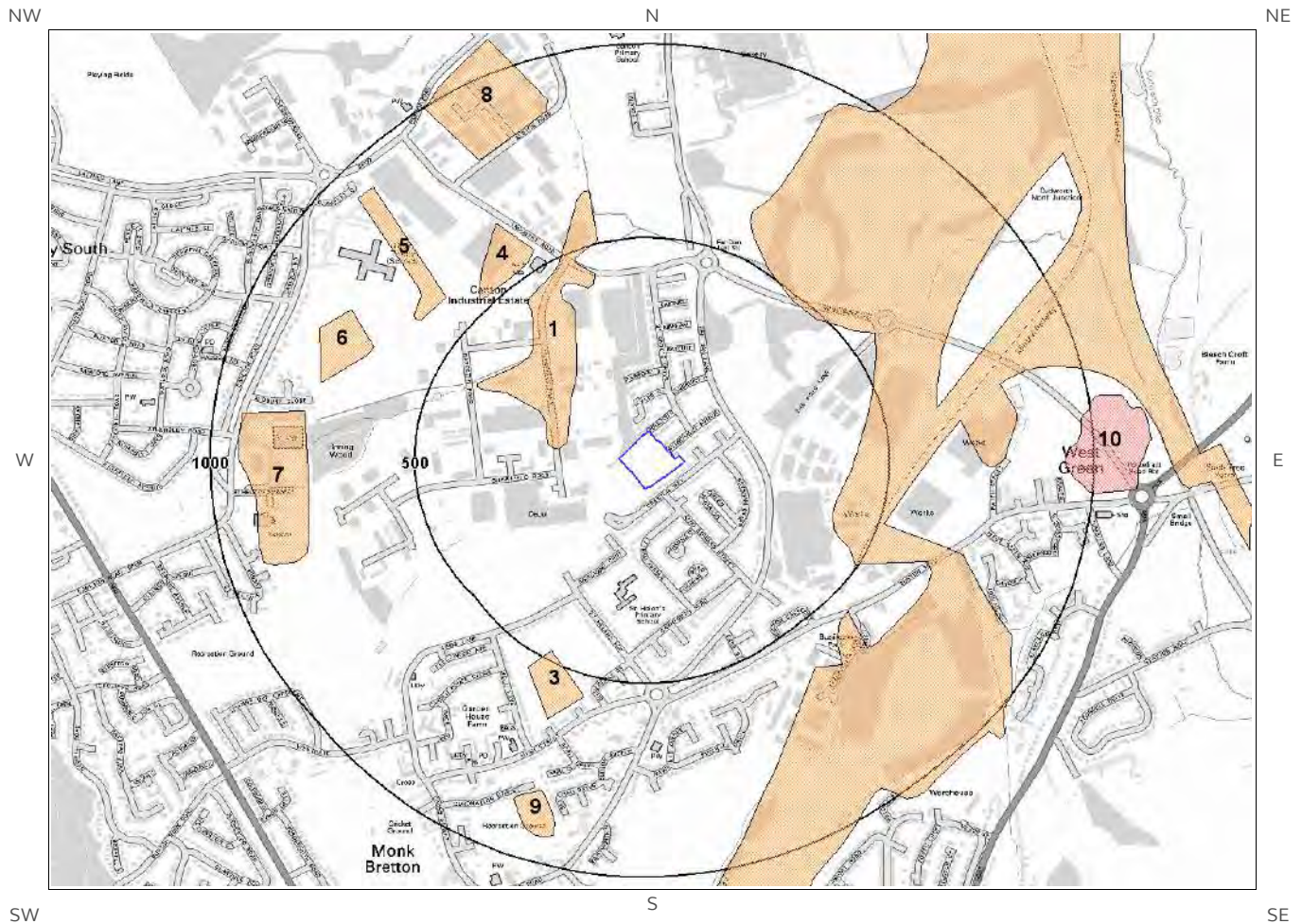
ID	Distance (m)	Direction	Category Description	Feature Description
15	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band
16	193.0	SE	FAULT	Normal fault, inferred
17	203.0	SE	FAULT	Normal fault, inferred
18	406.0	S	FAULT	Normal fault, inferred
19	410.0	S	FAULT	Normal fault, inferred

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

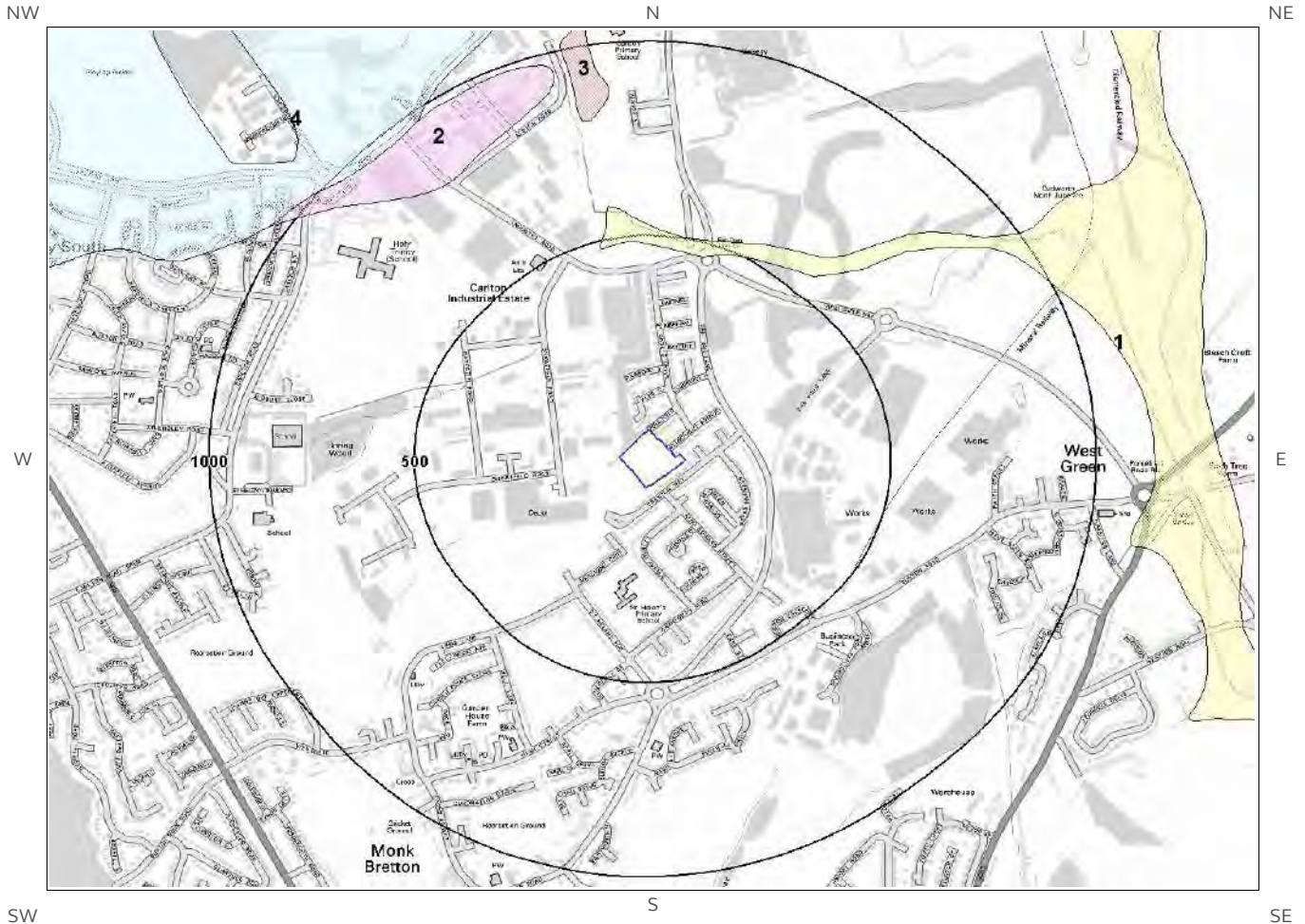
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	136.0	W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	383.0	E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	474.0	SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

#### 2.1.2 Permeability of Artificial Ground

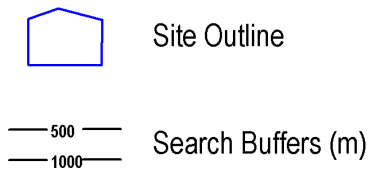
Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

# 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	463.0	N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

## 2.2.2 Permeability of Superficial Ground

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

Database searched and no data found.

## 2.2.3 Landslip

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

Database searched and no data found.

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

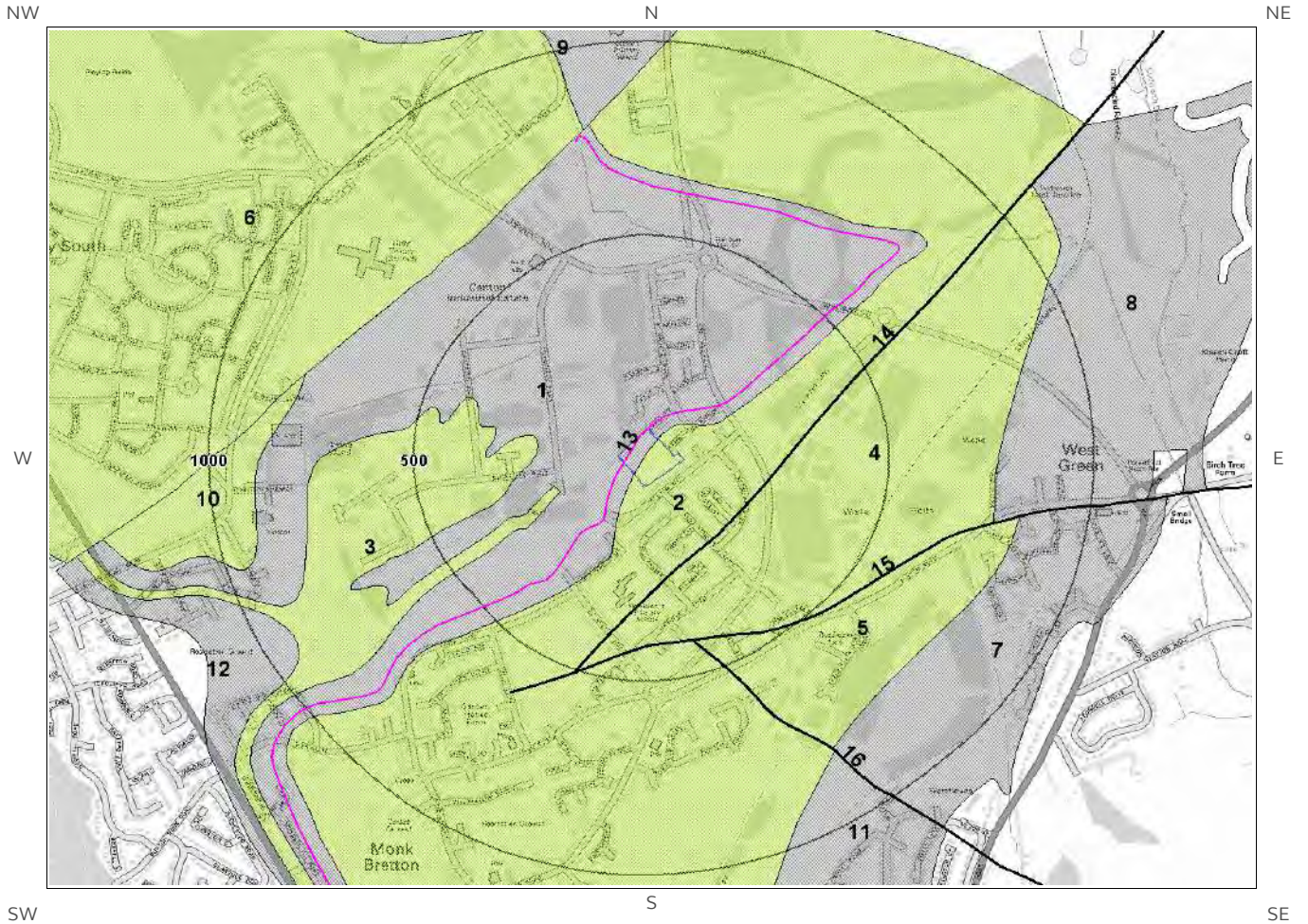
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

## 2.2.4 Landslip Permeability

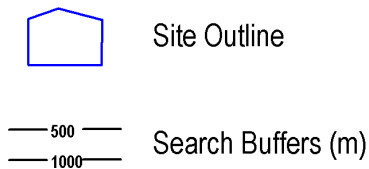
Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

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



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## 2.3 Bedrock, Solid Geology & linear features

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

### 2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	0.0	On Site	OR-SDST	OAKS ROCK - SANDSTONE	WESTPHALIAN
3	167.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
4	193.0	SE	OR-SDST	OAKS ROCK - SANDSTONE	WESTPHALIAN
5	410.0	S	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
0.0	On Site	Fracture	High	Moderate

### 2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
13	0.0	On Site	FOSSIL_HORIZON	Marine band
14	193.0	SE	FAULT	Fault, inferred
15	406.0	S	FAULT	Fault, inferred
16	410.0	S	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.

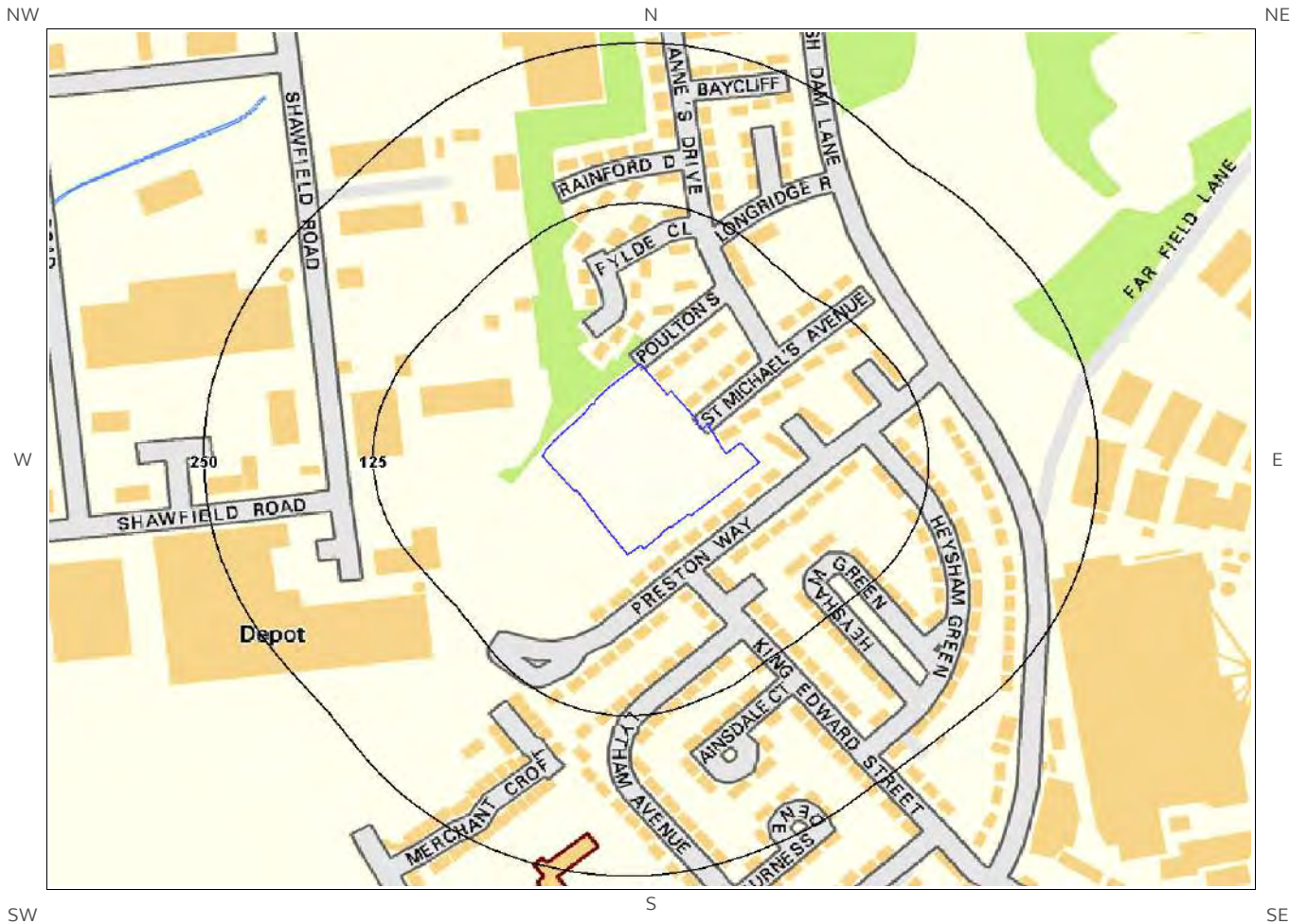
---

## 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.


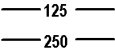



---

# 4 Ground Workings map



Ground Workings Legend

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-  Site Outline
-  Search Buffers (m)
-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings

# 4 Ground Workings

## 4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? No

Database searched and no data found.

## 4.2 Historical Underground Working Features derived from Historical Mapping

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

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

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	530.0	SE	437056 407804	Colliery	1951
Not shown	530.0	SE	437046 407820	Unspecified Mine	1966
Not shown	533.0	SE	437058 407927	Colliery	1904
Not shown	533.0	SE	437059 407862	Colliery	1948
Not shown	540.0	SE	437101 408010	Colliery	1890
Not shown	684.0	NE	437455 409550	Colliery	1951
Not shown	983.0	NW	436018 409716	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:

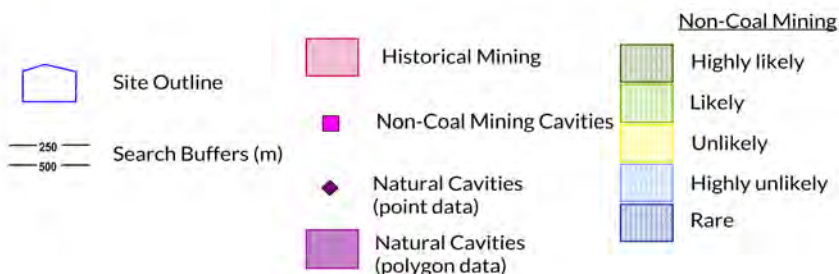
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	672.0	N	436903 409435	Sandstone	Carlton Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	677.0	SE	437200 408130	Coal, Deep	Monk Bretton Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	829.0	SE	437240 407970	Abandoned Mine Methane	Barnsley Colliery Methane	Wellsite, or other surface plant, extracting liquid or gas. Working may be for brine, oil or natural gas	Inactive
Not shown	954.0	NW	436081 409469	Sand & Gravel	Carlton	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
7A	530.0	SE	437056 407804	Colliery	1951
8	530.0	SE	437046 407820	Unspecified Mine	1966
9	533.0	SE	437058 407927	Colliery	1904
10A	533.0	SE	437059 407862	Colliery	1948
11	540.0	SE	437101 408010	Colliery	1890
12	684.0	NE	437455 409550	Colliery	1951
Not shown	983.0	NW	436018 409716	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	0.0	On Site	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
3	437.0	S	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
4	559.0	N	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	648.0	NW	Sheffield Area	Vein Mineral/Iron ore	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
Not shown	800.0	N	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

### 5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

## 5.6 Natural Cavities

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

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

Database searched and no data found.

---

## 5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

---

## 5.8 Gypsum Extraction

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

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

Database searched and no data found.

---

## 5.9 Tin Mining

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

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

Database searched and no data found.

---

## 5.10 Clay Mining

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

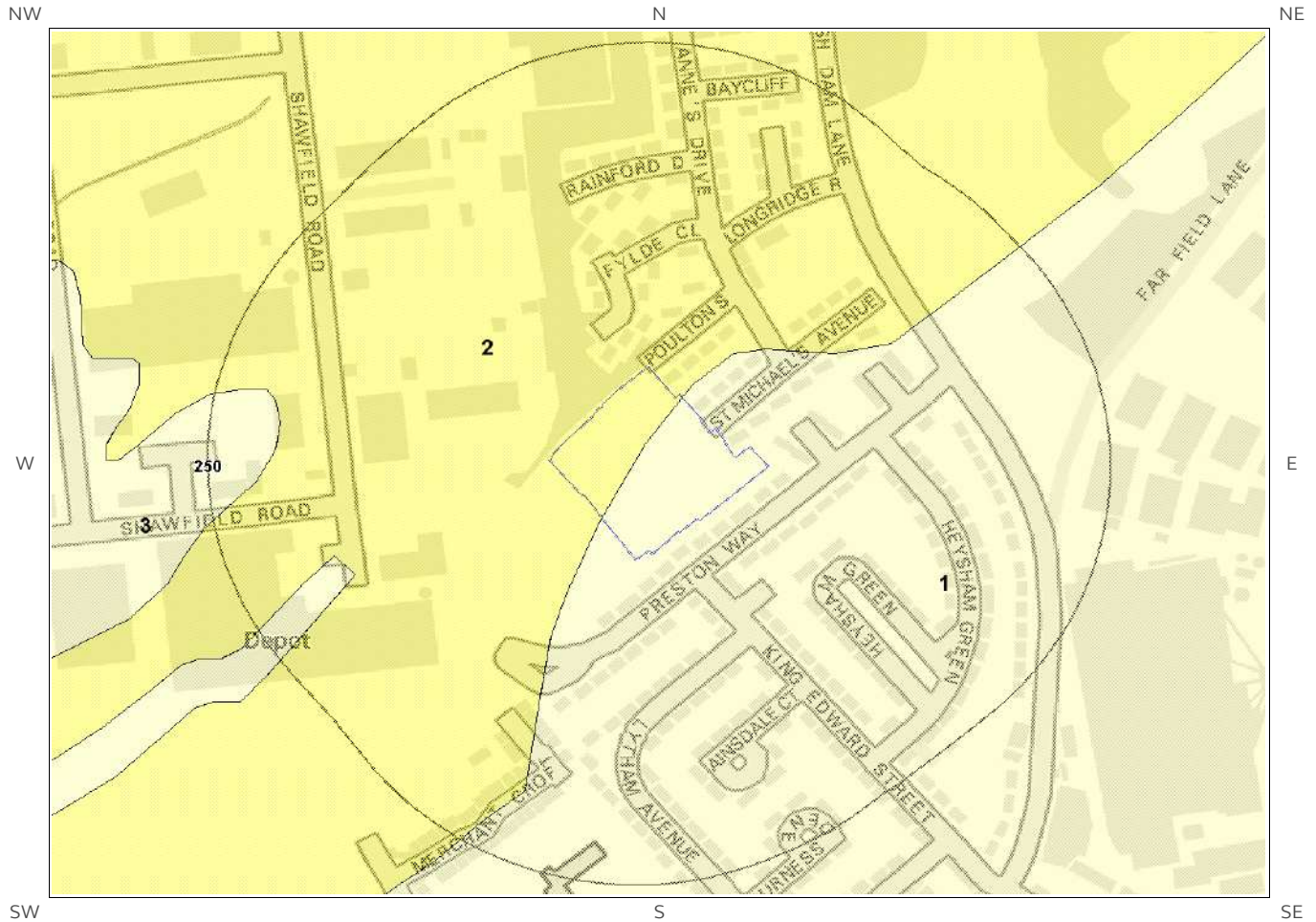
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

# 6 Natural Ground Subsidence

## 6.1 Shrink-Swell Clay map

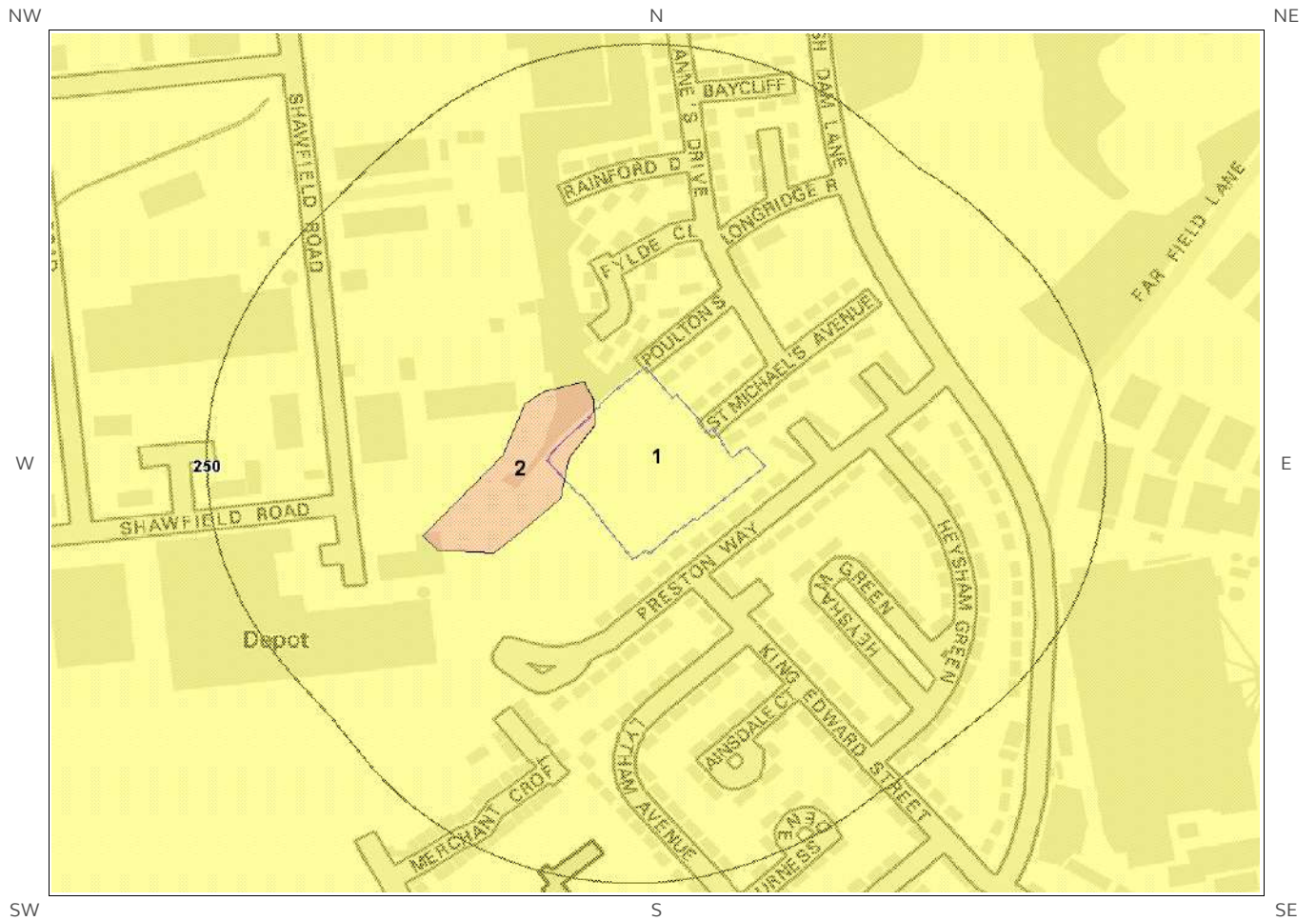


Shrink Swell Clay Legend

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# 6.2 Landslides map



Landslides Legend

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# 6.3 Ground Dissolution of Soluble Rocks map

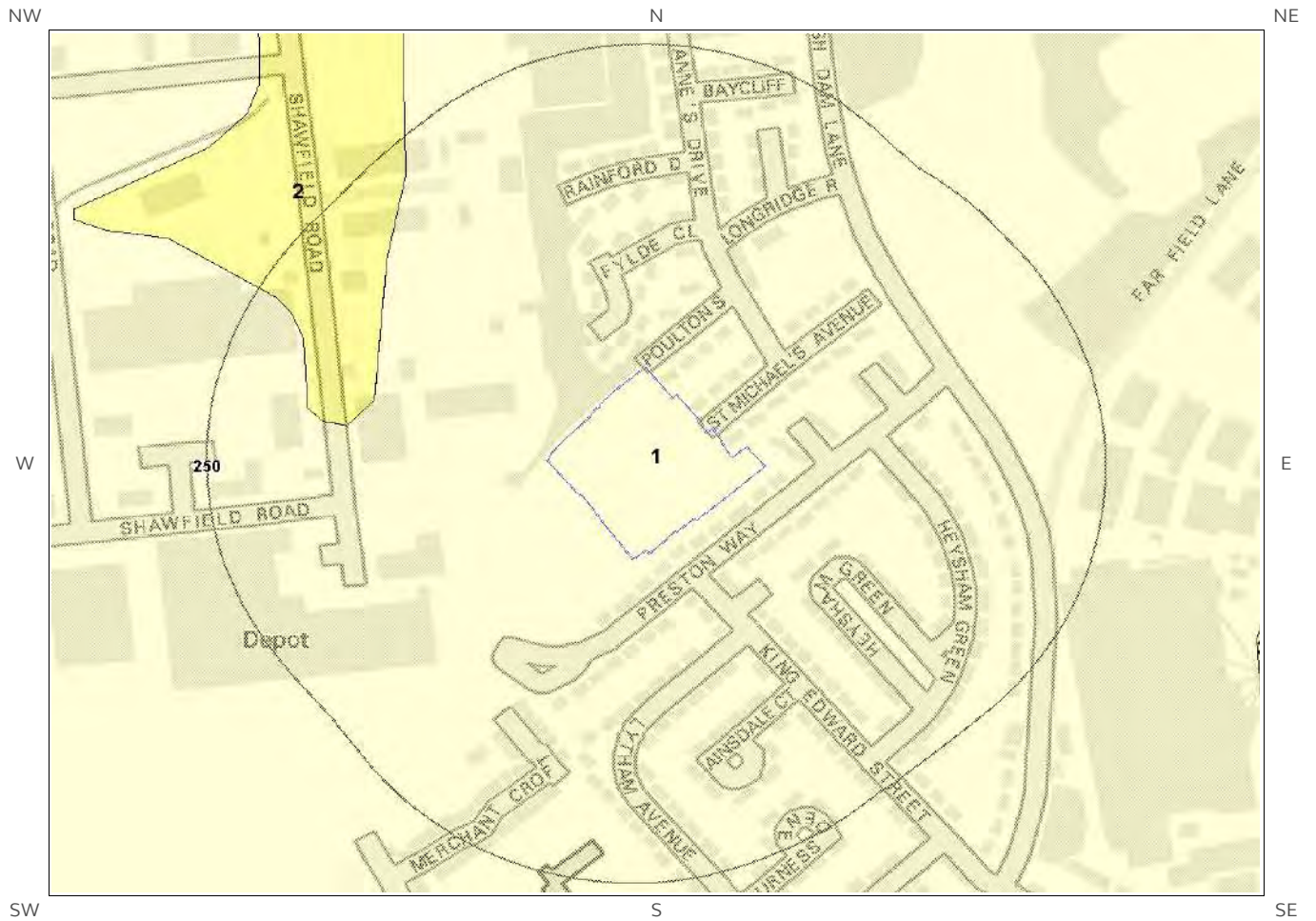


**Ground Dissolution Soluble Rocks Legend**

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# 6.4 Compressible Deposits map

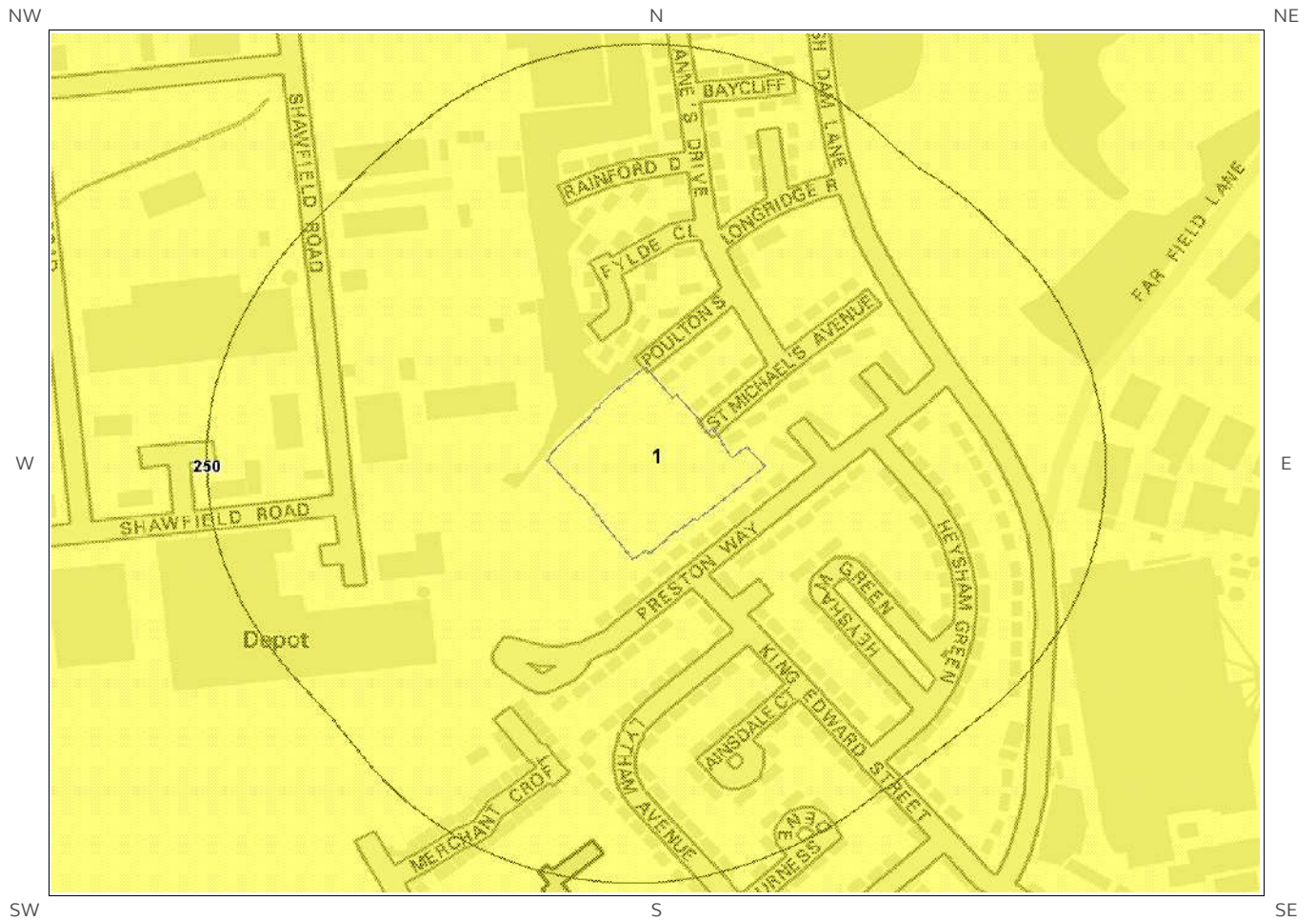


Compressible Deposits Legend

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# 6.5 Collapsible Deposits map

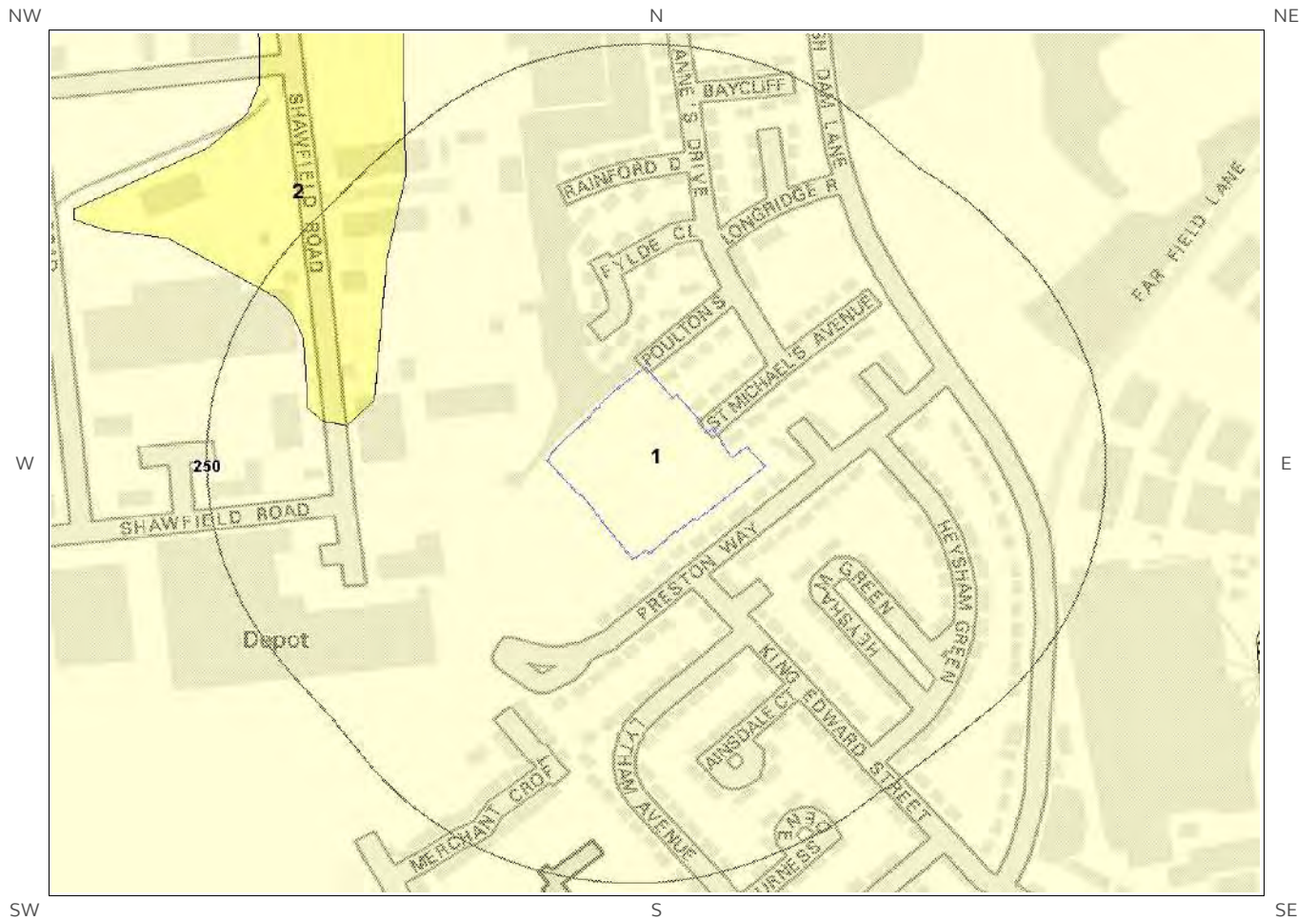


**Collapsible Deposits Legend**

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# 6.6 Running Sand map



Running Sand Legend

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# 6 Natural Ground Subsidence

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

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

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

## 6.1 Shrink-Swell Clays

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

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

## 6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

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

### 6.3 Ground Dissolution of Soluble Rocks

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

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

### 6.4 Compressible Deposits

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

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

### 6.5 Collapsible Deposits

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

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

### 6.6 Running Sands

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

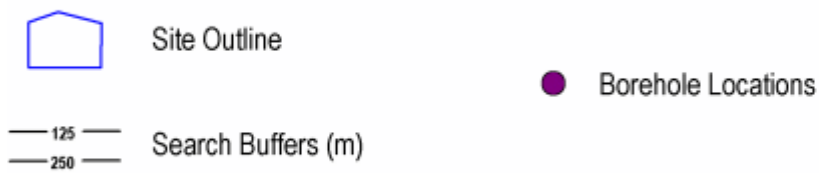
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

# 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:

5

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	102.0	SW	436590 408650	SE30NE333	2.8	SHAWFIELD ROAD BARNESLEY 4
2	111.0	W	436570 408670	SE30NE331	5.6	SHAWFIELD ROAD BARNESLEY 2
3	125.0	W	436550 408690	SE30NE334	3.0	SHAWFIELD ROAD BARNESLEY 5
4	137.0	SW	436550 408650	SE30NE332	3.0	SHAWFIELD ROAD BARNESLEY 3
5	139.0	W	436540 408670	SE30NE330	5.5	SHAWFIELD ROAD BARNESLEY 1

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

- #1: [scans.bgs.ac.uk/sobi\\_scans/boreholes/83849](https://scans.bgs.ac.uk/sobi_scans/boreholes/83849)
- #2: [scans.bgs.ac.uk/sobi\\_scans/boreholes/83847](https://scans.bgs.ac.uk/sobi_scans/boreholes/83847)
- #3: [scans.bgs.ac.uk/sobi\\_scans/boreholes/83850](https://scans.bgs.ac.uk/sobi_scans/boreholes/83850)
- #4: [scans.bgs.ac.uk/sobi\\_scans/boreholes/83848](https://scans.bgs.ac.uk/sobi_scans/boreholes/83848)
- #5: [scans.bgs.ac.uk/sobi\\_scans/boreholes/83846](https://scans.bgs.ac.uk/sobi_scans/boreholes/83846)

# 8 Estimated Background Soil Chemistry

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

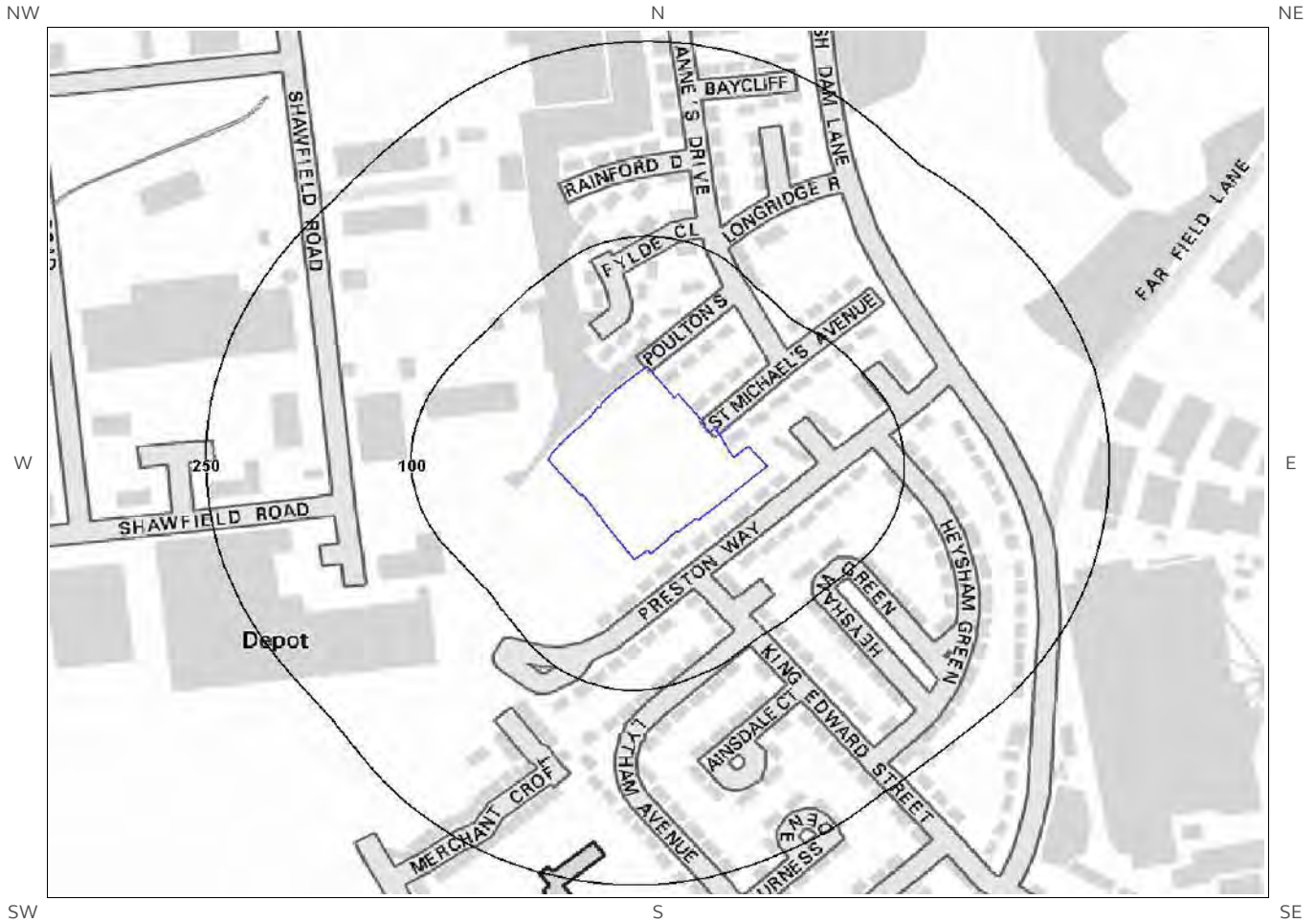
2

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

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













\*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? No

Database searched and no data found.

*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.

# Contact Details

Groundsure Helpline  
Telephone: 08444 159 000  
info@groundsure.com



## British Geological Survey Enquiries

Kingsley Dunham Centre  
Keyworth, Nottingham NG12 5GG  
Tel: 0115 936 3143.  
Fax: 0115 936 3276.  
Email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)  
Web: [www.bgs.ac.uk](http://www.bgs.ac.uk)

BGS Geological Hazards Reports and general geological enquiries



## British Gypsum

British Gypsum Ltd  
East Leake  
Loughborough  
Leicestershire  
LE12 6HX



## 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)



## Public Health England

Public information access office  
Public Health England, Wellington House  
133-155 Waterloo Road, London, SE1 8UG  
<https://www.gov.uk/government/organisations/public-health-england>  
Email: [enquiries@phe.gov.uk](mailto:enquiries@phe.gov.uk)  
Main switchboard: 020 7654 8000



## Johnson Poole & Bloomer Limited

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DY5 3LH  
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Website: [www.jpb.co.uk](http://www.jpb.co.uk)



## Ordnance Survey

Adanac Drive, Southampton  
SO16 0AS  
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Website: <http://www.ordnancesurvey.co.uk/>



## Getmapping PLC

Virginia Villas, High Street, Hartley Witney,  
Hampshire RG27 8NW  
Tel: 01252 845444  
Website: <http://www.1.getmapping.com/>



---

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Website: <http://www.peterbrett.com/home>



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# Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:  
<https://www.groundsure.com/terms-and-conditions-sept-2016/>



## Appendix D

# Coal Authority and SYMAS Reports



The Coal  
Authority

Resolving the **impacts** of mining

# CON29M Non-Residential Mining Report

ST MICHAELS AVENUE, MONK BRETTON,  
BARNESLEY  
SOUTH YORKSHIRE  
S71 2SD

Date of enquiry: 21 December 2017  
Date enquiry received: 21 December 2017  
Issue date: 21 December 2017

Our reference: 51001717812001  
Your reference: GS-4615477



# CON29M Non-Residential Mining Report

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

## Client name

GROUNDSURE LIMITED

## Enquiry address

ST MICHAELS AVENUE, MONK BRETTON,  
BARNSELY, SOUTH YORKSHIRE, S71 2SD


## How to contact us


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

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

[www.groundstability.com](http://www.groundstability.com)

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



Approximate position of property



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# Summary

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

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

# Detailed findings

## 1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 6 seams of coal at 100m to 330m depth, and last worked in 1958.

Any movement in the ground due to coal mining activity should have stopped.

## 2. Present underground coal mining

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

## 3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

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

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

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

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

## 4. Mine entries

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

## 5. Coal mining geology

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

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

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

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

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

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

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

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

## **9. Coal mining subsidence**

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

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

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

## **10. Mine gas**

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

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

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

## **12. Withdrawal of support**

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

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

## **13. Working facilities order**

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

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

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

#### **15. Information from the Cheshire Brine Subsidence Compensation Board**

The property lies outside the Cheshire Brine Compensation District.

## Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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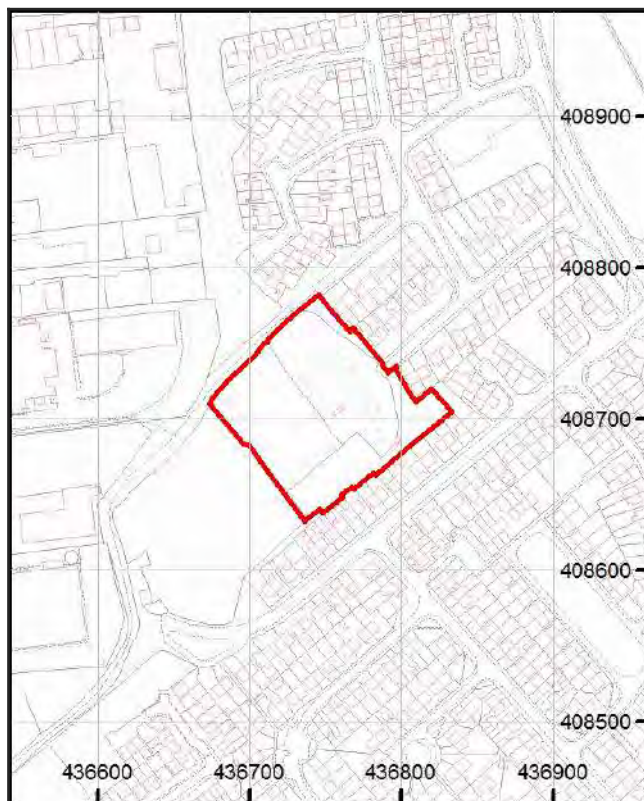
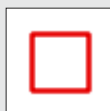
## Alternative formats

If you would like this report in an alternative format, please contact our communications team.

# Enquiry boundary

## Key

Approximate position of enquiry boundary shown




## How to contact us

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 /coalauthority



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PLACE DIRECTORATE  
South Yorkshire Mining Advisory Service



To: NPS

FAO: Gemma Hinchcliffe

My Ref: M4150/4

Your Ref: Allocation H59

Date: 5<sup>th</sup> December 2017

Enquiries to: Mr. M. Lyons

Ext: 2690

Subject: LAND OFF ST. MICHAELS AVENUE, MONK BRETTON, BARNSELEY.

Further to your consultation request of the 23<sup>rd</sup> November 2017, I can confirm the following.

SITUATION

A mining report has been requested for the above named site, as shown edged orange on the attached plan no. M4150/4A. This report provides a review of the geological and mining history of the site and an assessment for the potential for mining legacy risks. The report makes recommendations regarding the need for any investigative and/or remediation requirements.

GEOLOGICAL  
INFORMATION

Geological records indicate that the land is underlain by shales, mudstones and the Oaks Rock Sandstone of the Middle Coal Measures. No geological faults are shown within 50m of the site, however fissures may be present in sandstone bedrock that may have been opened out by the past deep mining activities as detailed below.

No workable coal seams are expected to lie at shallow depths in this vicinity.

An area of made ground is recorded just to the north of the site as indicated. Also, given the visual appearance of the site it is likely that some sort of past ground works have taken place on the land by way of the 'mounds' which are present.

MINING

Opencast/Quarries

None known in the vicinity.

Shallow Mining

No shallow coal workings are known in this vicinity and considering the available information, the risk of any unchartered shallow workings is considered as **LOW** in this instance.

Deep Mining

Deep mining operations have taken place beneath this area in various coal seams, the latest being in the Winter Coal Seam at around 100m deep in the late 1950's. All subsidence movement from these workings will be long complete, and as no deep coalfields now remain it should not be affected for the foreseeable future.

**FORMER  
LAND USES**

According to historical records the site appears free from any past industrial land uses.

**LANDFILL**

According to the Borough Landfill Register the site does not lie within 250m of any past landfill operation.

**CONCLUSIONS**

1. The site will be stable from the deep coal mining aspect for the foreseeable future.
2. Shallow coal mining risks are considered as LOW for this site, therefore no associated investigation work for any proposed development would be deemed necessary.
3. A slight risk will be present for fissures being encountered in sandstone bedrock. Future development may require suitably strengthened foundations where any weak ground conditions are encountered, and prior treatment works to stabilise the features may also be required.
4. The site itself appears free from any past industrial land uses, however the nature of the surface soils including any made ground or bunds from former ground works will require some investigation depending on proposed uses.

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Report prepared by M. Lyons 5<sup>th</sup> December, 2017.



Principal Mining Engineer.

DRAWING TITLE

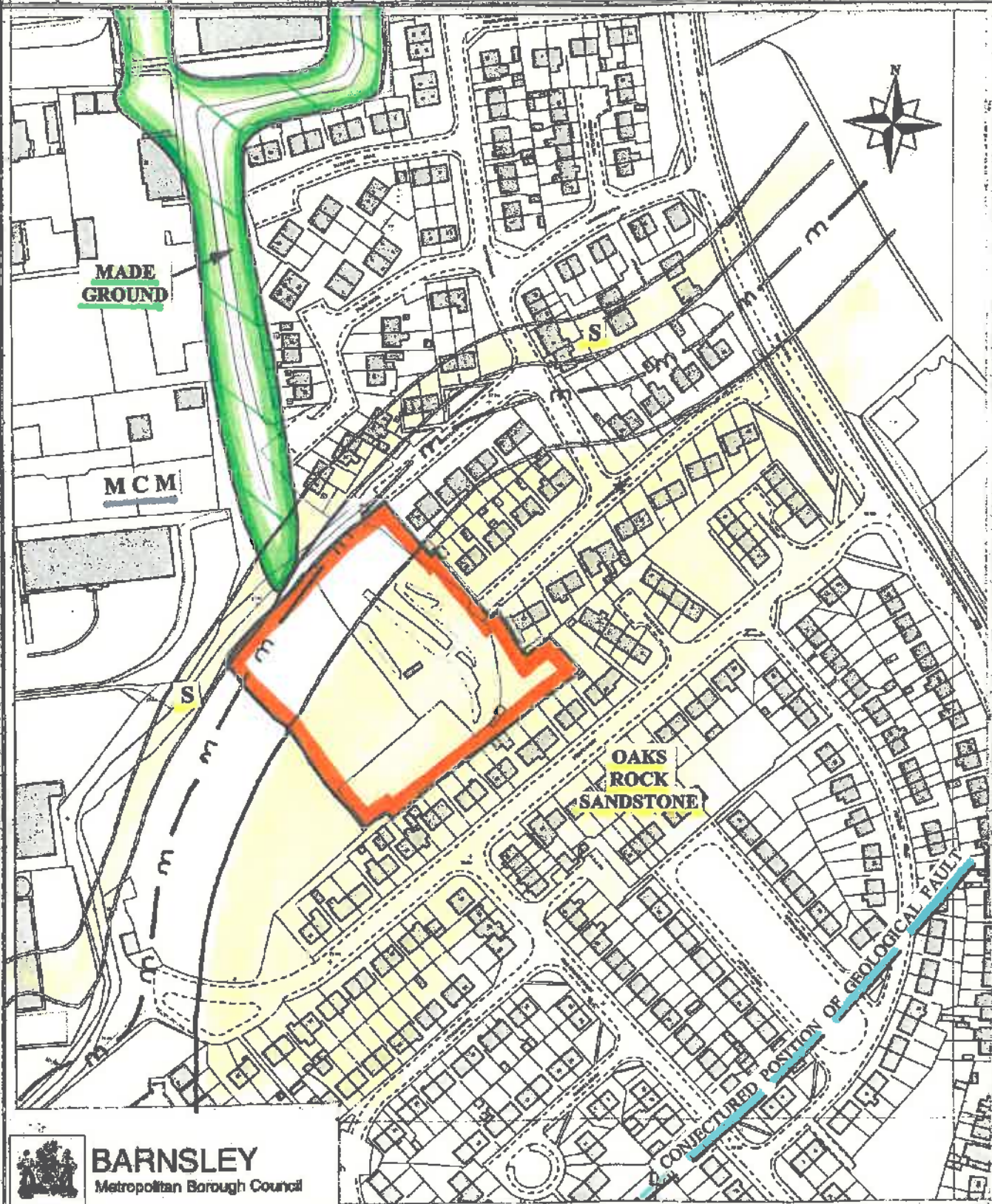
DRAWING NO.

**LAND OFF ST. MICHAELS AVENUE  
MONK BRETTON, BARNSELY  
GEOLOGICAL INFORMATION**

M4150/4A

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**BARNSELY**  
Metropolitan Borough Council

SCALE

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DATE

4.12.17

**SOUTH YORKSHIRE MINING  
ADVISORY SERVICE**

O.S REFERENCE

SE 3608

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