



**PHASE 1 ENVIRONMENTAL ASSESSMENT
AND
DESK BASED COAL MINING RISK
ASSESSMENT
PROPOSED RETAIL DEVELOPMENT
CROSS KEYS LANE, HOYLAND
BARNSELY**

FOR

LIDL GREAT BRITAIN LTD

GDP PROJECT NUMBER 2047



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Issue record: 1 FINAL for approval.

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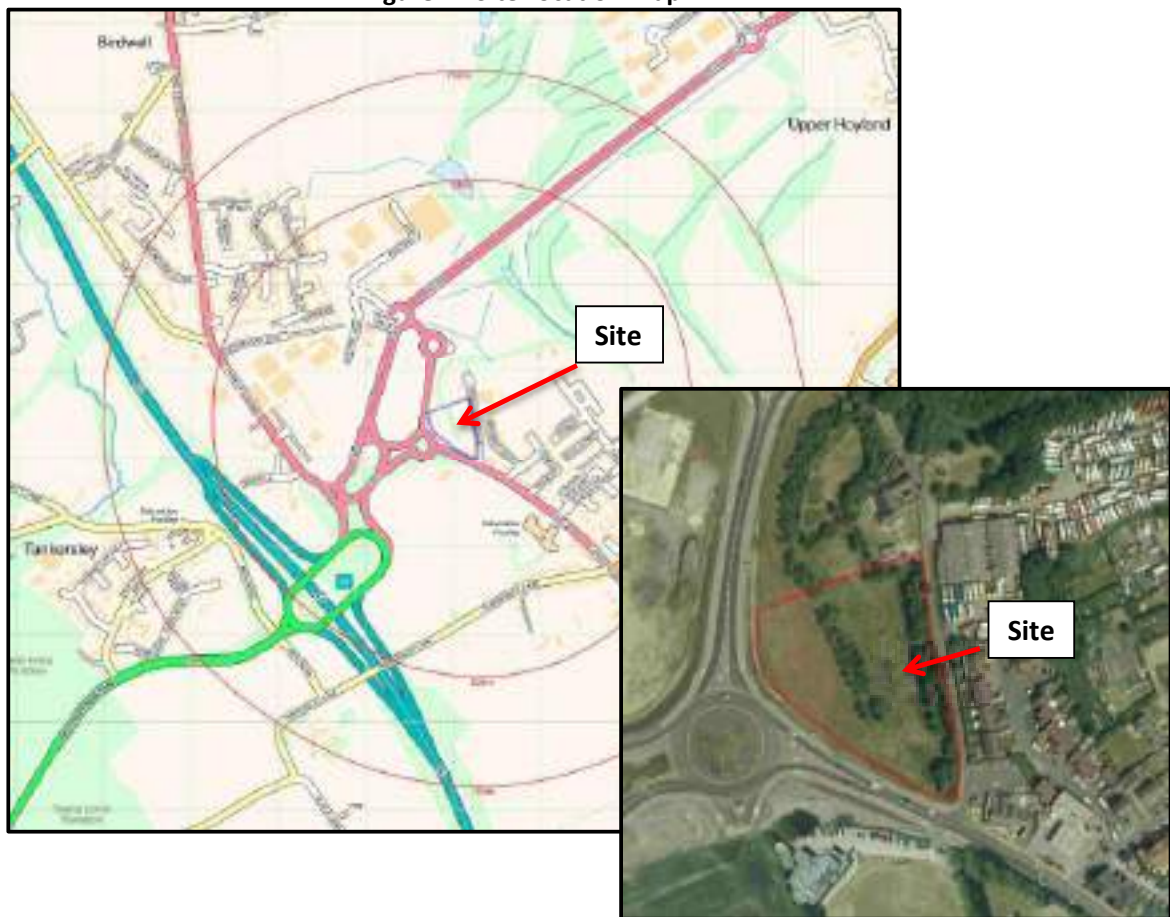
1.0 INTRODUCTION

1.1 Authorisation, Context and Purpose

GD Pickles Ltd (GDP) was instructed by Lidl Great Britain Ltd (the Client) to undertake a Phase 1 Environmental Assessment and Coal Mining Risk Assessment of land at Cross Keys Lane, Hoyland, Barnsley (the 'Site'). The Site is approximately 0.93 hectares in size and is centred on grid reference 435205 400470.

A location map and aerial image of the Site is provided in Figure 1.

Figure 1 - Site Location Map



1.2 Context & Purpose

The objectives of a Phase 1 Environmental Assessment are to assess the potential for ground contamination and its implications in consideration of the Site's use or, when being redeveloped, its proposed use. Specifically the study considers the potential for soil and

groundwater contamination at the Site, from current and historic on and off-site sources in order to assess potential risks to sensitive 'receptors' such as:

- ☼ Human health;
- ☼ 'Controlled waters';
- ☼ Building fabric and underground infrastructure.

This Assessment will adhere to the principal aims of BS10175:2011+A2:2017 '*Investigation of Potentially Contaminated sites – Code of practice*', The British Standards Institution, 2017.

Accordingly, this Assessment will:

- ☼ Assess the likelihood of contamination, its nature and its extent;
- ☼ Evaluate the environmental setting of the Site and identify sensitive receptors;
- ☼ Provide information from which likely contaminant-pathway-receptor relationships can be identified and formulate a Conceptual Site Model (CSM);
- ☼ Evaluate the potential for potential contamination from current and historical use to manifest as statutory or third party liabilities; and
- ☼ Consider the need for a site Investigation or further work to evaluate contamination risk.

It is intended that this Report be submitted to the Local Authority as part of a staged process required to discharge planning conditions pertaining to potential contamination. With respect to contamination this Report is a Phase 1 Preliminary Risk Assessment (PRA) only.

The Site is situated within a Coal Mining referral area and within a Development High Risk Area. The report thus also presents a desk based coal mining risk assessment (CMRA).

This Report will also provide a preliminary assessment of geotechnical, engineering and drainage issues pertinent to this stage of the assessment process.

1.3 Development Proposals

It is intended to develop the Site into a Lidl Store with 115 parking spaces and limited landscaping. The current development plans are presented in **Appendix 1**.

1.4 Limitations

During the preparation of this Report, GDP reviewed and evaluated information provided by a number of other sources including the Client's architects, Groundsure, The British Geological Survey (BGS), The Coal Authority and others. GDP's conclusions, opinions and recommendations are based upon this information. GDP does not warrant the accuracy of the

information provided to it and will not be responsible for any opinions which GDP has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate. The interpretation contained in this Report is only applicable to the development proposals provided to GDP at the time of writing.

2.0 PRELIMINARY RISK ASSESSMENT

2.1 Introduction

2.1.1 Objectives of Preliminary Risk Assessment

The objectives of the Preliminary Risk Assessment (PRA) are to:

- ❖ Establish the geological and hydrogeological conditions for the Site using existing available information;
- ❖ Summarise available information and identify site specific geo-environmental hazards which may place a constraint upon the proposed development;
- ❖ Produce a preliminary Conceptual Site Model (CSM) and preliminary qualitative contamination risk assessment identifying plausible potential linkages between contamination sources, pathways and receptors; and
- ❖ Provide objectives and recommendations with regards to an Intrusive Ground Investigation and other further assessments that may be required.

The assessments in this Report are underpinned by Planning and Regulatory requirements correct at time of writing.

2.1.2 Sources of Information

The following sources of information were consulted during the process of compiling this PRA;

- ❖ The Coal Authority;
- ❖ Groundsure Enviro+Geo Insight Report;
- ❖ Historical Mapping procured specifically for the Site;
- ❖ Zetica UXO website;
- ❖ British Geological Survey (BGS) website.

In addition, previous investigations have been undertaken at the site. The following reports, or parts of, were available for review.

- ❖ Mineral Report for Birdwell Roundabout and Link Road to Rockingham Roundabout (Symas Report Reference PJ/M3687/5, dated 16th August 2013);
- ❖ Desk Study Report for Junction 36 (M1), Birdwell, Barnsley, South Yorkshire (Abbeydale Report Reference 151045DS, dated September 2013);
- ❖ Technical Report on Ground Investigation at A61 Birdwell Junction Improvement, Tankersley, South Yorkshire (Sub Surface North East Limited Report Reference NE3312A, dated October 2014); and
- ❖ Technical Note Land at Rockingham Quarry, WSP Report No. 70019822-001 December 2016.

2.2 Geoenvironmental Baseline Summary

The following provides a summary of the geoenvironmental baseline study that has been undertaken using the information sources listed at Section 2.1.2. The Groundsure report and historical maps reviewed are reproduced in **Appendix 2**.

Historical maps showing the Site and its environs were procured to review the development history of the Site and assess the potential for its history, or that of the immediate surrounding area, to have the potential to have resulted in contamination on the Site.

Salient observations are described in Table 2.2a below.

Table 2.2 a Site History

Date(s)	On-Site	Off-Site
1855 1891-94 1893 1903 1905-06 1929 1931 1938	The Site is undeveloped. Field boundaries are shown running roughly east to west across the centre of the Site until 1929 and north to south in the west of the Site throughout the mapped period.	Cross Keys Inn is shown to the south east and what appears to be a house and farm complex to the north and a railway line circa 250m north all present from the first map edition. Rockingham Colliery is labelled circa 400m north and Rockingham Gas Works circa 400m west from 1891. A reservoir is first shown 1891 approximately 200m north with a Powder Magazine shown 250m north east, not shown by 1903. Filter beds are shown circa 180m north of the Site from 1903 with a structure present 180m north east present at the same time, later labelled sewage tanks by 1929. Several small quarries and ironstone or clay pits are shown over the wider area.
1948 1951-56 1955 1956 1955-56 1965-66 1973-74 1977-80 1986	No changes.	Large linear embankment features and a heap are shown from approximately 400m north east, later shown as spoil or refuse. This extends to within approximately 250m north east of the Site assumed by 1973/74. Slurry ponds are shown from 1973/74 100m north east and a motor body works and tank labelled circa 10m east of the Site which

1987 1987-92 1993		is cited in what appears to be an engineered depression/possibly former quarry. An aerial ropeway is present running north south direction approximately 50m west of the Site on the 1955, 1956 and 1965-66 maps and a crane shown approximately 150m north on the same editions. A garage is shown 80m south of the Site by 1973-1974. The reservoir formerly 200m to the north is labelled as a tip from 1987 along with the wider expanse of spoil which extends to the north and north east.
2001	A vegetated strip is present running north south down the centre of the Site and the former field boundary on the west of the Site is no longer shown.	The expanse formerly shown as 'tip' is no longer labelled as such and various areas of vegetation and a small lake and surface water courses are now shown.

Table 2.2 b Site Setting and Database Records

BASELINE STUDY AND DATABASE RECORDS		
Site Location	The Site is located at National Grid Reference 435205 400470 in the east of Brough, approximately 2km west of Hoyland and 6k south of Barnsley.	
Site Description and Topography	The Site is a broadly triangular shape bound by the recently constructed A6135 to the south west, a roundabout to the west, Sheffield Rd to the north west, vacant land and housing to the north and Cross Keys Land, beyond which are a works and housing to the east. The Site is vacant with bushes and trees around its perimeter and line of semi mature trees running north south with a slight curve through the centre of the Site within a shallow depression. Topographically the Site and surrounding area slope towards the north west. A number of blue borehole covers were noted from previous investigation but do not tally with any records reviewed to date.	
Geological Setting	Artificial Ground	Reference to the Groundsure report indicates that Artificial/Made Ground is not present on Site. However, South Yorkshire Mining Advisory Service plan (provided as part of the mineral report prepared by Symas) indicated that the western part of the site was located within the

boundary of the Rockingham Opencast mine. The edge of the opencast mine is depicted in red on the plan below and approximately coincided with the location of a bank of trees that crosses the site.



The mineral report indicated that the Rockingham opencast site was worked during the 1990s and the opencast voids were subsequently backfilled with overburden/spoil and the land returned to agricultural use/open space. The backfill is indicated to vary in thickness from less than 2m in the west to in excess of 10m in the east. As the site is located on the eastern side of the Rockingham opencast site it is anticipated that approximately 10m of backfill is likely to be present along with the opencast highwall. The report indicated that the Rockingham opencast site was compacted back to provide a developable platform, although it is indicated that creep and/or differential settlement could still occur particularly across the high wall.

According to the BGS Made ground is mapped over a wide area to the north of the site corresponding to the area of the former tip and immediately to the east in the location of the current works. Numerous areas of infilled or worked ground are mapped in proximity to the Site in all directions.

	Superficial Deposits	Superficial deposits are not mapped on the Site or surrounding area.
	Bedrock Geology	Reference to the Groundsure report and the BGS GeoIndex indicate that the Site is underlain by Pennine Middle Coal Measures. The eastern half of the site is directly underlain by a sandstone unit and the western half underlain by the general sequence of mudstone and siltstones. To the west of the site a coal outcrop is indicated orientated approximately north to south which dips below the site. The 1:50,000 scale BGS Map Sheet 87 'Barnsley', dated 2008 indicated that the coal outcrop to the west of the site to be the Swallow Wood Coal which is indicated to be between 0.2 and 3.7m thick. The Swallow Wood Coal is underlain by the Haigh Moor (Kexbrough) Rock, a named sandstone unit between 0.0 and 28m thick. Further coal seams (Top Haigh Moor Coal, Haigh Moor Coal and Low Haigh Moor Coal are indicated to be present within the lower part of the sandstone unit. The sandstone unit indicated to be present beneath the eastern part of the site is stratigraphically above the Swallow Wood Coal. Therefore, the coal seam is likely to extend beneath the site, very likely the seam taken in the Rockingham opencast site up to the mapped high wall and possibly underground from there. Approximately 100m to the southwest of the site a fault line is indicated, orientated northwest to southeast with the downthrown side to the southwest.
	Borehole Records	No publicly available borehole records are available in the vicinity.
Hydrology	The closest surface water feature is a land drain 94m north east located within the area of the former tip.	

Flooding	Reference to the Groundsure Enviro Insight report indicates the Site is not vulnerable to the risk of flooding from rivers and seas. Consideration of the potential risks from flooding fall outside the scope of this assessment.
Hydrogeology	The bedrock geology is classified as a Secondary A Aquifer. There are no licensed groundwater abstractions in the vicinity.
Mining, Ground Workings and Natural Cavities	Reference to the Groundsure report indicates: ✿ 5 BritPit record exists within 500m. These relate to surface and deep coal extraction, being located 253m west, 291m west, 430m north, 464m north and sandstone extraction 497m west. ✿ There are 25 surface ground workings within 250m, including the slurry ponds formerly 117m north east, refuse heap listed from 132m north, disused tip from 178m north, sewage tanks 188m north east and reservoir circa 200m north; ✿ There are 8 underground workings listed within 1km, 6 of which appear to relate to the same colliery feature listed from 268m north; ✿ 4 non-coal mining records for iron ore extraction including for the Site itself, 149m west, 402m south and 473m south west;
Coal Authority Information	According to the Coal Authority website an outcrop of coal is indicated to be present to the west of the site, orientated approximately north to south. Probable coal workings associated with this seam are indicated to be located beneath the entire site and the site is also located within a Development High Risk Area. Underground workings (at depth) are also indicated to be present across the entire area. The Consultants Coal Mining Report obtained from the Coal Authority for the site indicated that seven named coal seams had been worked beneath the property. Details of the upper two coal seams comprise: • Lidgett Coal, located 72m depth with an extracted thickness of 0.66m and dipping at 3.8 degrees to the northeast; • Low Fenton Coal, located 190m depth with an extracted thickness of 1.37m and dipping at 3.4m to the northeast. The Consultants Coal Mining Report also indicates that there are probably unrecorded shallow workings located beneath the site and that the Shallow Wood Coal Seam outcrops approximately 25m to the west of the site. The bearing of the outcrop was 346 degrees.

	The site is also indicated to be located entirely within an opencast mine licence area, with the eastern boundary of the site coinciding with the boundary of the licence area. No further details were provided.
Natural Ground Subsidence	Reference to the Groundsure report indicates: ✿ The Shrink-Swell Clays hazard is very low to negligible; ✿ The Landslides hazard rating is very low; ✿ The Ground Dissolution of Soluble Rocks Hazard is negligible; ✿ The Compressible Deposits hazard is negligible; ✿ The Collapsible Deposits hazard is very low; ✿ The Running Sands hazard is negligible.
Pollution Incidents	Reference to the Groundsure report indicates there are 4 pollution incident records within 500m of the Site. The closest was located 190m south west of the Site resulting in minor impact to land from construction wastes in 2003. The others are all over 400m from the Site also resulting in minor land impact.
Current Industrial Uses	The Groundsure report identifies 11 current Industrial Land uses within 250m of the Site, the closest being various business operations in the works complex east of the Site. These include a vehicle hire and rental, unspecified works or factories and tanks. A Petrol station and vehicle wash is listed 69m east (Jet Garage), electricity substation 139m north west, vehicle cleaning 142m east, substation 173m south east, vehicle repair 212m east and a BP filling station 213m north west among others.
Historical Industrial Sites	The Groundsure report identifies 73 potentially contaminative uses from historical mapping within 500m of the Site. Many are repeat entries for the same feature and include works, slurry ponds, refuse heaps, tip, sewage tanks, colliery, filter beds and railway sidings among others.
Historical Tank Database	The Groundsure report identifies 29 historical tanks from historical mapping within 500m of the Site. Many of these records are repeat entries of the same features, the closest being the AST identified from historical mapping located in the 'works' to the east of the Site.
Historical energy features	The nearest recorded feature is an electricity substation 267m south east.
Historical Petrol & Fuel and Garage & Motor Vehicle Repair Database	There are 10 records listed for historical garages relating to 3 discrete features located 47m south east, 458m south east and 495m west.

Current Petrol & Fuel Sites	The Jet and BP filling stations listed in the current industrial uses above are also listed under this category at 48m south east and 185m north west respectively.
Environmental Permits	- There are 7 Part B permitted installations within 500m of the Site. The closest being 30m east for vehicle respraying and 71m east at the Jet garage for unloading of petrol. - There are 9 discharge consents listed within 500m, these include sewage discharges 32m east and 3 Trade Discharges 85m north east although these licenses have been revoked.
Potentially Infilled Land, Landfills and Waste Management	Reference to the Groundsure Report indicates: - There are no active or recently closed landfills under EA regulation recorded within 500m; - There are no BGS recorded landfills within 500m; - There are no historical landfills identified from local authority records; - There is 1 historic EA landfill recorded 239m north west; - There are 2 historic waste sites derived from LA planning records located 285m north west and 474m north; - There are 4 active or recently closed licensed waste sites within 500m, the closest being 228m south west. It is noted that the made and infilled ground referred to in the geology section are not referenced in the waste and landfill records.
Radon Gas	Reference to the Groundsure report indicates the Site is not in a Radon Affected Area and no protective measures are necessary.
Environmental Designations	No sensitive designations in proximity to the Site. Land 182m south west is classified as greenbelt.
UXO	Reference to the Zetica UXO Unexploded Bomb Risk Map indicates the site lies in a Low Risk Area. Zetica state that <i>"if both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions"</i> . The client should consider whether it requires a detailed UXO risk assessment undertaking by a specialist consultant.

2.3 Additional Information

A previous site investigation report was prepared by Sub Surface NE. The purpose of the investigation was to assess the ground conditions for a new road network that has subsequently been constructed and forms the western boundary of the site. Consequently some of the exploratory holes were located within the site boundary. These include M4, TP8, DP1, DP1A, DP2A, DP3 and DP4.

Borehole M4, located in the northwestern part of the site was only drilled to a depth of 2.05m where the borehole was terminated due to an obstruction within the made ground. The made ground generally comprised clayey silty sandy fine to coarse gravel and cobble sized fragments of mudstone. Trial pit TP8 was located in the southeastern part of the site and encountered natural ground conditions beneath a thin layer of topsoil. Near surface the deposits were described as sandy gravel and cobble sized sandstone lithorelicts. At a depth of 0.7m weak thinly bedded sandstone was encountered which extended to a depth of 1.3m. Very weak mudstone was then encountered to the base of the trial pit at 2.35m. Dynamic probes DP1, DP1A, DP2A, DP3 and DP4 were all located in the southwestern part of the site. Several of the dynamic probes terminated at shallow depths, possibly due to obstructions within the made ground. However, DP2 in particular indicated that there was an increase in blow count at approximately 8.3m. This could potentially coincide with the base of the made ground.



A Technical produced by WSP in 2016 discusses the general area of the site as Plot 3 in accordance with the land designations at the time. There were ground investigations

discussed in the WSP report but GDP did not have access to the factual or interpretative reports that the WSP technical Note refers to.

The WSP report confirms the location of the deep fill and probable high wall location. The report also states that;

‘the site was backfilled and validated in accordance with an engineering specification, the consequence of this is that the ground has been prepared for development and although a degree of ground improvement may be needed it is unlikely that a deep foundation solution (i.e. piles) would be required at the site, subject to building loadings. but points out that any warranty attached has long expired. GDP concur with this statement. The highwall presents a constraint to Plot 3, as the ground conditions either side of the highwall are likely to be variable therefore it is not generally recommended to construct buildings over a highwall as it could result in differential settlement. However, infrastructure such as roads could be constructed over the highwall, but would require upgrading to mitigate against the potential settlement risks. The location of the highwall in Plot 3, along the boundary is unlikely to inhibit development as the strip on land is likely to be required as a development buffer from the adjacent properties. Coal Authority records indicate a shallow coal seam may have been worked located to the east of the highwall in Plot 3, outside the extent of the opencast. Building over abandoned shallow coal working could lead to collapse of the workings resulting in surface instability. Therefore, the area may require drilling and grouting to fill in the void space associated with the workings to facilitate safe development above’.

With regards to contamination and hazardous ground gas WSP state;

‘The backfill material and groundwater across all three plots has been tested for a variety of chemicals and recorded concentrations which are unlikely to pose unacceptable risks to sensitive receptors associated with a future commercial development, or residential development on Plot 3. Ground gas monitoring at the site has recorded elevated ground gas levels which are likely to require ground gas protection measures to be incorporated into new buildings to mitigate the potential gas ingress risks.’

3.0 QUALITATIVE CONTAMINATED LAND ASSESSMENT

3.1 Initial Conceptual Site Model

An initial Conceptual Site Model (CSM) has been developed for the Site adopting the Source-Pathway-Receptor approach. The initial CSM is developed during the preliminary risk assessment stage and is used to design the Phase 2 Intrusive Investigations.

- 🌀 **Sources (S)** are potential or known contaminant sources e.g. soil contamination resulting from a former land use;
- 🌀 **Pathways (P)** are environmental systems thorough which a contaminant could migrate e.g. air, groundwater;
- 🌀 **Receptors (R)** are sensitive environmental receptors that could be adversely affected by a contaminant. e.g. Human End User (longer- term risks) or groundworkers (shorter-term risks), surface or groundwater resources and ecology.

Where a source, relevant pathway and receptor are present, a plausible pollutant linkage is considered to exist whereby environmental harm could occur and a potential environmental liability could be realised.

The site specific potential pollutant linkages have been assessed and used to formulate the initial Conceptual Model for the site presented in Table 3.1.

Table 3.1 Initial Conceptual Model

POTENTIAL SOURCES		
CSM ID	Detailed Description	Summary Description for CSM
S1	Potentially contaminated soils associated with historical use and made ground.	S1: Soil Contamination.
S2	Contaminated groundwater resulting from soil contamination.	S2: Groundwater Contamination.
S3	Potential contamination originating from off-site sources.	S3: Off-site sourced contamination.
S4	Asbestos containing materials in made ground on Site.	S4: ACMs
S5	Potential for ground gases from on and off-Site made ground, infilling, natural geology and mine workings.	S5: Ground gas

POTENTIAL PATHWAYS		
CSM ID	Detailed Description	Summary description for CSM
P1	Human uptake pathways; ☼ Ingestion of excavated or exposed soils; ☼ Ingestion of home grown produce; ☼ Inhalation of soil/dust/volatile compounds or hazardous ground gases via migration through permeable strata/conduits; and ☼ Dermal contact with exposed soils or leachates.	P1: Human uptake
P2	Vertical migration of contaminants through the unsaturated zone	P2: Vertical Migration Unsaturated Zone
P3	Horizontal and vertical migration of contaminants within groundwater	P3: Groundwater Migration
P4	Direct contact of soils with construction materials	P4: Direct Contact Construction Materials
P5	Migration of ground gases and vapours vertically and horizontally through the ground and into buildings.	P5: Ground gas migration
POTENTIAL RECEPTORS		
CSM ID	Detailed Description	Summary description for CSM
R1	Construction/maintenance workers.	R1: Construction workers
R2	Controlled waters within the Secondary Aquifer or nearby surface water.	R2: Controlled waters
R3	End-users.	R3: End-users
R4	Construction Materials - Buried concrete and potable water supply pipes.	R4: Construction Materials
R5	Off-site property and users.	R5: Off-site receptors

3.2 Risk Evaluation

For each potential pollutant linkage identified within the Conceptual Model the potential risk has been evaluated for potential receptors using a Preliminary Qualitative Risk Assessment based on the probability of the pollution event and the severity it poses to Site users and the environment.

The preliminary assessment of risk assumes no specific remediation measures but does take account of obvious pathway disruption due to development such as proposed hardstandings, building footprints or necessary reduced level dig.

The risk evaluation assessment is summarized in Table 3.2 below.

Table 3.2 Preliminary Qualitative Risk Assessment

Potential Source	Potential Pathway	Potential Receptor	Consequence	Probability	Risk	Comments
S1 Soil Contamination	P1: Human Uptake	R1: Construction workers	Mild	Low likelihood	Low	The open cast backfill forming the west half of the site is thought to comprise mainly of colliery spoil but there is very little data so remains a plausible risk. The east of the site is thought to be natural Sandstone/weathered sandstone and is not expected to be significantly contaminated. The WSP Technical Note indicates that contamination levels were low such that the site was suitable for commercial or residential development based on assessment criteria at that time (2016).
		R3: End-users	Minor	Unlikely	Very low	
	P2: Vertical migration unsaturated zone	R3: End-users	Minor	Unlikely	Very low	
	P3: Groundwater migration	R2: Controlled waters	Mild	Low likelihood	Low	Soil contamination with the potential to impact controlled waters is not anticipated. Groundwater is expected to be found in the backfill but is often complex consisting of several perched groundwater bodies.
		R3: End-users	Mild	Unlikely	Very Low	
		R4: Construction materials	Mild	Low likelihood	Low	
	P4: Direct contact construction materials	R3: End-users	Minor	Unlikely	Very Low	Contamination with the potential to impact water pipes is not expected although the colliery spoil may contain contamination. The colliery spoil may also contain pyrite and high sulphides which could lead to aggressive ground conditions for concrete. Any buried concrete in the east of the site is likely to encounter Sandstone and should not be aggressive ground.
		R4: Construction materials	Medium	Likely	Moderate	
	P1: Human Uptake	R1: Construction workers	Mild	Unlikely	Very low	

S2: Groundwater Contamination		R3: End-users	Mild	Unlikely	Very low	Groundwater contamination is not anticipated but high sulphates could be present.
		R4: Construction materials	Mild	Low likelihood	Low	
	P3: Groundwater migration	R2: Controlled waters	Mild	Low likelihood	Low	
		R3: End-users	Mild	Unlikely	Very Low	
	P4: Direct contact construction materials	R4: Construction materials	Mild	Unlikely	Very low	
S3: Off-site sourced contamination	P1: Human Uptake	R1: Construction workers	Mild	Unlikely	Very low	There are no off Site sources of concern other than if the opencast backfill is found to be contaminated during intrusive investigations.
		R3: End-users	Minor	Unlikely	Very low	
	P3: Groundwater migration	R1: Construction workers	Mild	Unlikely	Very low	
		R3: End-users	Mild	Unlikely	Very low	
		R4: Construction materials	Mild	Unlikely	Very low	
		R2: Controlled waters	Mild	Unlikely	Very low	
	P4: Direct contact construction materials	R4: Construction materials	Mild	Unlikely	Very low	
S4: ACMs	P1: Human Uptake	R1: Construction workers	Severe	Unlikely	Moderate/ Low	Asbestos may be present in the open cast backfill but if it was engineered fill would

		R3: End-users	Severe	Unlikely	Moderate/ Low	probably not have come from an industrial source. All brownfield and some greenfield sites may contain asbestos in or on the ground and suitable assessments should be made at ground investigation stage.
S5: Ground Gas	P5: Ground gas migration	R3: End Users	Medium	Likely	Moderate	There is commonly elevated carbon dioxide associated with opencast backfill. This tends to reduce over time as anerobic conditions establish. Boreholes that reintroduce atmospheric air to the fill can sometimes trigger short-term increased generation as organic matter is exposed. The gas risk assessment should be mindful of the characteristics of colliery spoil fill. Other potential sources of ground gas were identified associated with pits etc. and potential underground mine workings.

4.0 COAL MINING RISK ASSESSMENT

Information from the Coal Authority has indicated that seven known coal seams have been worked beneath the site at depths of between 72 and 338m between 1885 and 1951. Given the depth of these worked coal seams it is considered that the risk to the proposed development is considered to be low.

However, the Coal Authority has also indicated that there are probable unrecorded shallow workings located beneath the site and as such the site falls within a Development High Risk Area (DHRA). In addition, a coal seam is indicated to outcrop approximately 25m to the west of the site. The coal seams beneath the property are indicated to dip at between 2.3 and 3.8 degrees to the east/northeast. Therefore, the coal seam is likely to be present at a depth of between 1 to 2m beneath the western boundary of the site. The width of the site is approximately 75m (west to east). Therefore, the coal seam is predicted to be at a depth of approximately 5 to 7m begl. It should be noted that the site elevation falls from southeast to northwest and therefore the depth to the coal seam is likely to be shallowest in the northwest and deepest in the southeast.

According to the BGS the coal seam is the Swallow Wood Coal which had an extractable thickness of between 0.2 and 3.7m. According to the mineral report the western part of the site was located within the boundary of an opencast site, presumably to extract the Swallow Wood Coal. The plan provided with the mineral report indicated that the eastern extent of the mine coincided with the outcrop of the sandstone unit. In addition, a bank of trees is indicated to cross the site, in the same shape as the opencast site. This does not coincide with earlier field boundaries or trees and it is possible that the trees were planted as a screen to the opencast mine. The historical site investigation undertaken at the site also confirms that the western part of the site was within the opencast site and was backfilled with what appeared to be colliery spoil (Mudstones). However, a trial pit located in the southeastern part of the site indicates that this part of the site had not been excavated as natural in situ Pennine Middle Coal Measures was reportedly encountered from surface. Information from the dynamic probes suggest that the opencast site could have been in the order of 8m deep.

The mineral report suggests that the opencast site was backfilled with compacted materials to provide a developable platform, although it was indicated that creep and/or differential settlement could still occur across the high wall. There are no records indicating any specification or verification of the fill.

The proposed development has the store located in the eastern part of the site, predominantly outside of the opencast area. However, the southwestern corner of the store may encroach onto the opencast area and therefore is likely to be located over the buried quarry (open cast) highwall.

While the coal is likely to have been completely extracted from the opencast area there is still the potential for the Swallow Wood Coal to have been extracted (by underground techniques)

from beneath the eastern part of the site. It is therefore recommended that a site investigation is undertaken at the site in order to determine the following:

- Depth and quality (geochemical and geotechnical) of backfilled materials within the opencast area;
- Accurate location of the buried highwall (and highwall zone) and in particular if this is located beneath or close to the proposed store footprint; and
- Whether the Swallow Wood Coal seam has been mined beneath the eastern part of the site.

The ground investigation should be designed to investigate mining legacy, address Phase 2 contamination requirements and obtain geotechnical information to inform the engineering design. Further details of the recommended scope of investigations is included in Section 5.0.

An enquiry to the Coal Authority for any further information relating to the opencast, particularly any mining surveyor records, should also be made.

5.0 CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The Site straddles the highwall of the former Rockingham opencast mine. The mine was active in the 1990's and was reportedly backfilled to form a developable platform although no records of the specification or verification of the infilling are available. The west of the site lies over the backfill whilst the east of the site is thought to be underlain at shallow depth by Sandstone.

The quarry high wall runs roughly north to south with a curving shape but moves sharply westwards in the very south. A line of trees of an age that suggests they were planted at around the time of the quarrying activity currently marks the approximate line of the top of the highwall. The width of the Highwall Zone will be determined by the angle of the quarry face and the depth to the bottom of the quarry.

A coal seam is mapped to outcrop close to the western boundary of the site and was presumably removed in the opencast. However, this seam may dip below the east of the site at shallow depth and thus may have been mined in the past or even during the opencast operations when often seams were chased underground by pillar and stall methods. Coal Authority records indicate that the site lies within a Development High Risk Area and is in an area highlighted for unrecorded shallow mine workings. Underground mining at depth has occurred but is unlikely to affect the stability of the site.

Based on comments by previous investigators significant or widespread contamination is not anticipated on the Site provided the colliery spoil in the open cast backfill is predominantly re-worked natural materials which is normally the case when it was placed under controls on quality for a development platform.

ACMs may be present in the colliery spoil if this is not wholly re-worked natural soils. Made Ground should be checked for the presence of asbestos as a default.

5.2 Recommendations

Soil, Groundwater and Ground Gas

Geochemical (contamination) testing should be undertaken across the site as part of a combined environmental, geotechnical and coal mining legacy intrusive investigation. Suites of testing should include for standard metals, inorganics and organics and should include speciated PAH. Where hydrocarbons and or volatile contaminants are suspected during the investigation then speciated TPH and VOCs should also be scheduled.

Monitoring wells should be installed in boreholes to facilitate a period of ground gas monitoring to confirm the absence of problematic permanent ground gases associated with the deep colliery spoil and potential other coal mining sources. Previous investigations have indicated elevated levels of ground gasses but no records are available.

Preliminary Engineering Observations

Stabilisation of unstable ground to the east of the high wall may be required dependant on the findings of the rotary drilling and updated coal mining risk assessment.

It is normally not advised, but is possible, to build across a buried quarry highwall. On this site foundations , floor slabs and drainage would span from deep Made Ground to shallow rock.

At this site the store could be built running east to west but it is very likely that the west section spanning the high wall and across the deep fill would need to be piled or significant ground improvement undertaken to prove that differential settlement would not occur. Piling would ensure that total and differential settlement of foundations was tolerable. Piling through the fill could be difficult and a rock socket would need to be formed in the base of the quarry. If the structure was to be entirely on the fill and not across the high wall zone it may be feasible, following further investigation and almost certainly ground improvement of upper layers, to support the structure on a shallow foundation solution. If records of the filling were available then this would be extremely beneficial in assessing the potential for future settlement of the infill. It is difficult to provide confidence on the settlement potential of the deeper layers. Due to the shape of the site and access and planning constraints it is not feasible to construct the store wholly in the backfill area.

The store can be positioned orientated north to south in the east of the site so that it is mostly on shallow Sandstone. Planning requirements require that it cannot be placed close to the east boundary with Cross Keys Lane which would place the whole building footprint outside of the recorded opencast.

The existing information indicates that traditional shallow foundations should be viable except potentially for the extreme southwest corner of the building where it may overhang the suspected highwall zone. The store shape can be amended to limit (or remove) any foundations that could sit over

No significant retaining structures are envisaged based on current site drawings.

External areas to the east and north of the store will be underlain by Sandstone or engineered site build up. To the west of the store the family parking and access road may overlie the highwall zone and the remainder of the west of the site will over the opencast backfill. In the south of the site the highwall shape is complicated. Special measures may be required to

control differential settlement across the high wall zone. Some ground improvement of the upper layers of the backfill across the site may be required and would be assessed during ground investigation.

No infiltration SuDS is recommended into the or close to the opencast backfill. It is plausible that soakaways may be effective in the Sandstone in the east of the site. However, infiltrating water could flow to the open cast and cause wash out and collapse settlement along the highwall zone.

Services that cross the high wall zone will need to be designed to tolerate some differential movements as will any services passing across the backfill areas.

Asbestos

Made Ground Soils sampled at the Site should be tested for asbestos presence and asbestos quantified where found to be present.

Waste and Materials Management

Cut and fill levels are currently unknown. Some topsoil is likely to require removal from Site to facilitate development and should be sent to a recycling facility if suitable. Any waste must be disposed of by appropriately licensed contractors in accordance with current waste management legislation and Duty of Care regulations. Waste arisings should not be assumed to be inert. WAC testing of materials destined for off-Site disposal to landfill may also be required.

6.0 LIMITATIONS TO ENVIRONMENTAL ASSESSMENTS

This Report has been produced on behalf of The Client, as detailed in Section 1.0 of this Report, and no responsibility is accepted to any Third Party for all or any part.

GDP accepts no responsibility or liability for:

- a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and
- b) the consequences of this document being used by any third party with whom an agreement has not been executed.

The Client should be aware that property development carries risk and that unidentified development abnormalities should be anticipated particularly on brownfield sites with regard to in-ground risks such as contamination, asbestos, waste and underground obstructions/made ground. This Report provides an assessment of the potential and actual ground conditions found based upon the available information and in the context of the scope of works performed. It does not provide a flood, drainage, asbestos, ecological, archaeological or legal assessments or provide advice on other technical matters which may be appropriate when considering site ownership and development. The Client should satisfy itself that it has adequate information on which to make its own decision with regards the commercial and legal merit of acquiring and developing the site. All development risk rests with the developer and owner. GDP will employ all reasonable endeavours to assist the Client manage and mitigate those risks, however, no liability is accepted by GDP for any loss, damages, or consequential or third party losses which may be suffered by the Client from the inappropriate use or misinterpretation of the content of this report.

Phase I Desk Studies and Preliminary Risk Assessments

The work undertaken in producing this report comprised a study of available in-house and third party documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The assessments and opinions given in this report rely on such information and activities and are only relevant to the purpose for which the report was commissioned. Any information reviewed should not be considered exhaustive and has been accepted and used in good faith as providing accurate and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, GDP reserves the right to review and if necessary modify the opinions accordingly. It should be noted that any risks identified in a Phase 1 report are perceived risks based on the information reviewed; actual risks can usually only be quantified following a physical investigation of the site.

Phase II Intrusive Combined Geotechnical and Geoenvironmental Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and significance of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of the environment risks together with engineering and development implications. If costs have been included in relation to site development professional cost advice should be sought.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site for each of the exploratory holes. There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report. Whilst exploratory testing is intended to gain an accurate representation of the site, the very nature of sampling and testing is such that it cannot ensure that all localised conditions are detected.

The comments made on groundwater conditions are based on observations made at the time the site work was conducted. It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects. The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

The risk assessment and opinions provided take in to consideration, inter alia, currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Any other issues not listed in the scope of works, but subsequently identified during the completion of the Site investigation and reported herein (such as the potential presence of Schedule 2 Invasive Weeds, flood assessment studies or ecological surveys) are provided for information only and fall outside the scope of this Assessment. The Report does not constitute an archaeological, geotechnical or ecological assessment, nor does it constitute an 'asbestos inspection' or flood assessment.

Appendix 1

Development Plan

PLANT ROOM LOCATION TBC BY CLIENT. DETAILED DESIGN BY M&E ENGINEERS

PROPOSED SERVICE AREA SUBJECT TO TRACKING BY HIGHWAYS ENGINEERS. DETAILED DESIGN OF SERVICE RAMP BY STRUCTURAL ENGINEERS

EXISTING FRENCH DRAIN

ASSUMED SITE BOUNDARY

PROPOSED LAYOUT SUBJECT FINAL LEVEL STRATEGY

PROPOSED PEDESTRIAN ACCESS/FOOT BRIDGE. SUBJECT TO FINAL LEVEL STRATEGY, RETAINING WALL MAY BE REQUIRED TO EITHER SIDE. DETAILED DESIGN BY OTHERS

PROPOSED PARKING AND TURNING ZONES SUBJECT TO TRACKING BY HIGHWAYS ENGINEERS

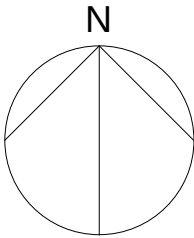
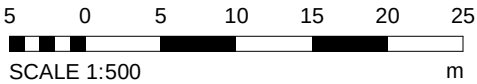
EXISTING TREES/VEGETATION WITHIN SITE TO BE REMOVED WHERE REQUIRED SUBJECT TO ARBORICULTURAL ADVICE AND LPA APPROVAL

PROPOSED PEDESTRIAN ACCESS SUBJECT TO FINAL LEVEL STRATEGY. RETAINING WALL MAY BE REQUIRED TO EITHER SIDE. DETAILED DESIGN BY OTHERS

PROPOSED HGV TRACKING BY HIGHWAY ENGINEERS

EXISTING JUNCTION RETAINED SUBJECT TO FURTHER REVIEW BY HIGHWAYS ENGINEERS AND LPA APPROVAL (INDICATIVE ONLY). IMPROVEMENT WORKS & DETAILED DESIGN BY HIGHWAY ENGINEERS/OTHERS

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SITE AREAS			
		ACRES	HECTARES
	SITE BOUNDARY	2.30	0.93

PARKING SCHEDULE OPT2	
LIDL DISABLED SPACES	6
LIDL PARENT&TODDLER SPACES	9
LIDL STANDARD SPACES	100
GRAND TOTAL	115

GROSS INTERNAL AREAS - OPTION 1		
LIDL BBS 18.3 ECO		
	m²	ft²
LIDL SALES	1,256	13,519
LIDL WAREHOUSE	435	4,682
LIDL ANCILLARY (incl. int. walls)	209	2,250
TOTAL	1,900	20,451

PROXIMITY OF REAR PROPERTY

PROPOSED LANDSCAPE BUFFER ZONE SUBJECT TO ARBORICULTURAL REVIEW

EXISTING PERIMETER TREES/VEGETATION TO BE REMOVED WHERE REQUIRED SUBJECT TO ARBORICULTURAL ADVICE AND LPA APPROVAL

PROPOSED ACCESS JUNCTION AT 4% GRADIENT SUBJECT TO FURTHER REVIEW BY HIGHWAYS ENGINEERS AND LPA APPROVAL

INDICATIVE 2.4x120m VISIBILITY SPLAY TO HIGHWAY ENGINEERS INPUT

Do not scale this drawing.
Architects are to be notified of any discrepancies.
Contractors must check all dimensions on site.
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For other information refer to the latest revision of any cross referenced drawings.
To be read in conjunction with relevant design standards/protocols

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FEASIBILITY CHECKLIST

☒	Initial Client Brief
☒	Ordinance Survey Map
☐	Legal Input to include Title Information
☒	Topographical Information Incorporation
☐	Client Review
☐	Highways Input / Review
☐	Structural Input / Review
☐	Landscape Design Input / Review
☐	Existing Statutory Services / Utilities Review
☐	Planning Consultant Guidance / Input
☐	Cost Management Advice - Budget Determined

P5	Visibility splays amended, tracking added	20.07.20	DM	JM
P4	Visibility Splay Overlay (EJS) added	16.06.20	DM	MS
P3	Revision requested 10.06.20	12.06.20	DM	JM
P2	Provisional Level strategy indicated	29.05.20	DM	MS
P1	First Issue	09.03.20	DM	CG
Rev	Description	Date	Dm	Ckd

Status

CONCEPT DESIGN

SMR

SMALLEY MARSEY RISPIN

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Project

HOYLAND, CROSS KEYS LANE

Client



Drawing Title

PROPOSED SITE PLAN - OPTION 2

Proj Ref	Origin	Zone	Level	Type	Role	Num	Status	Rev
---	7200	- SMR	- 30	- XX	- DR	- A	- 8003	- S4 - P5
SMR Job Ref		Sheet	Scale	Drawn				
7200-30-8003		A2	As indicated	DM				

Appendix 2

Groundsure Report and Historical Maps

Hoyland, S74 0QA

Order Details

Date: 14/12/2020
Your ref: 33420
Our Ref: CMAPS-GDP-925464-33420-141220EDRGEO
Client: CENTREMAPS

Site Details

Location: 435205 400470
Area: 0.93 ha
Authority: [Barnsley Metropolitan Borough Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.13

groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	0	1	23	49	-
17	1.2	Historical tanks	0	3	3	23	-
19	1.3	Historical energy features	0	0	0	8	-
19	1.4	Historical petrol stations	0	0	0	0	-
20	1.5	Historical garages	0	3	0	7	-
20	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
21	2.1	Historical industrial land uses	0	2	31	65	-
25	2.2	Historical tanks	0	3	4	36	-
27	2.3	Historical energy features	0	0	0	17	-
28	2.4	Historical petrol stations	0	0	0	0	-
28	2.5	Historical garages	0	3	0	10	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
30	3.1	Active or recent landfill	0	0	0	0	-
30	3.2	Historical landfill (BGS records)	0	0	0	0	-
31	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
31	3.4	Historical landfill (EA/NRW records)	0	0	1	0	-
31	3.5	Historical waste sites	0	0	0	2	-
32	3.6	Licensed waste sites	0	0	2	2	-
33	3.7	Waste exemptions	0	0	0	5	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
35	4.1	Recent industrial land uses	0	2	9	-	-
36	4.2	Current or recent petrol stations	0	1	1	0	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
37	4.5	Sites determined as Contaminated Land	0	0	0	0	-



37	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
37	4.7	Regulated explosive sites	0	0	0	0	-
38	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
38	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
38	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	1	3	3	-
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39	4.13	<u>Licensed Discharges to controlled waters</u>	0	1	4	4	-
41	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
41	4.15	Pollutant release to public sewer	0	0	0	0	-
42	4.16	List 1 Dangerous Substances	0	0	0	0	-
42	4.17	List 2 Dangerous Substances	0	0	0	0	-
42	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	1	3	-
43	4.19	Pollution inventory substances	0	0	0	0	-
43	4.20	Pollution inventory waste transfers	0	0	0	0	-
43	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
44	5.1	Superficial aquifer	None (within 500m)				
45	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
47	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
48	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
48	5.5	Groundwater vulnerability- local information	None (within 0m)				
49	5.6	<u>Groundwater abstractions</u>	0	0	0	0	4
51	5.7	Surface water abstractions	0	0	0	0	0
51	5.8	Potable abstractions	0	0	0	0	0
51	5.9	Source Protection Zones	0	0	0	0	-
51	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
52	6.1	<u>Water Network (OS MasterMap)</u>	0	0	3	-	-



53	6.2	<u>Surface water features</u>	0	0	3	-	-
53	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
54	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
54	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
55	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
55	7.2	Historical Flood Events	0	0	0	-	-
55	7.3	Flood Defences	0	0	0	-	-
55	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
56	7.5	Flood Storage Areas	0	0	0	-	-
57	7.6	Flood Zone 2	None (within 50m)				
57	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
58	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
59	9.1	<u>Groundwater flooding</u>	Negligible (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
60	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
61	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
61	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
61	10.4	Special Protection Areas (SPA)	0	0	0	0	0
61	10.5	National Nature Reserves (NNR)	0	0	0	0	0
62	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	1
62	10.7	<u>Designated Ancient Woodland</u>	0	0	0	0	12
63	10.8	Biosphere Reserves	0	0	0	0	0
63	10.9	Forest Parks	0	0	0	0	0
63	10.10	Marine Conservation Zones	0	0	0	0	0
63	10.11	<u>Green Belt</u>	0	0	1	0	6
64	10.12	Proposed Ramsar sites	0	0	0	0	0



64	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
64	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
64	10.15	Nitrate Sensitive Areas	0	0	0	0	0
65	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	3
66	10.17	SSSI Impact Risk Zones	0	-	-	-	-
66	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
67	11.1	World Heritage Sites	0	0	0	-	-
67	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
67	11.3	National Parks	0	0	0	-	-
67	11.4	Listed Buildings	0	0	0	-	-
68	11.5	Conservation Areas	0	0	0	-	-
68	11.6	Scheduled Ancient Monuments	0	0	0	-	-
68	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
69	12.1	<u>Agricultural Land Classification</u>	Grade 3b (within 250m)				
70	12.2	Open Access Land	0	0	0	-	-
70	12.3	Tree Felling Licences	0	0	0	-	-
70	12.4	Environmental Stewardship Schemes	0	0	0	-	-
71	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
72	13.1	Priority Habitat Inventory	0	0	0	-	-
72	13.2	Habitat Networks	0	0	0	-	-
72	13.3	Open Mosaic Habitat	0	0	0	-	-
72	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
73	14.1	<u>10k Availability</u>	Identified (within 500m)				
75	14.2	<u>Artificial and made ground (10k)</u>	0	1	2	14	-
77	14.3	Superficial geology (10k)	0	0	0	0	-



77	14.4	Landslip (10k)	0	0	0	0	-
78	14.5	<u>Bedrock geology (10k)</u>	3	1	7	7	-
80	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	1	6	17	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
82	15.1	<u>50k Availability</u>	Identified (within 500m)				
83	15.2	<u>Artificial and made ground (50k)</u>	0	1	1	4	-
84	15.3	<u>Artificial ground permeability (50k)</u>	0	1	-	-	-
85	15.4	Superficial geology (50k)	0	0	0	0	-
85	15.5	Superficial permeability (50k)	None (within 50m)				
85	15.6	Landslip (50k)	0	0	0	0	-
85	15.7	Landslip permeability (50k)	None (within 50m)				
86	15.8	<u>Bedrock geology (50k)</u>	3	1	4	2	-
87	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
88	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	2	2	10	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
89	16.1	<u>BGS Boreholes</u>	0	0	18	-	-
Page	Section	Natural ground subsidence					
91	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
93	17.2	<u>Running sands</u>	Very low (within 50m)				
95	17.3	<u>Compressible deposits</u>	Very low (within 50m)				
97	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
98	17.5	<u>Landslides</u>	Very low (within 50m)				
99	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
100	18.1	Natural cavities	0	0	0	0	-
101	18.2	<u>BritPits</u>	0	0	0	5	-
102	18.3	<u>Surface ground workings</u>	0	0	25	-	-
103	18.4	<u>Underground workings</u>	0	0	0	6	2
104	18.5	Historical Mineral Planning Areas	0	0	0	0	-



104	18.6	<u>Non-coal mining</u>	1	0	1	2	0
105	18.7	Mining cavities	0	0	0	0	0
105	18.8	JPB mining areas	None (within 0m)				
105	18.9	<u>Coal mining</u>	Identified (within 0m)				
105	18.10	Brine areas	None (within 0m)				
106	18.11	Gypsum areas	None (within 0m)				
106	18.12	Tin mining	None (within 0m)				
106	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
107	19.1	<u>Radon</u>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
108	20.1	<u>BGS Estimated Background Soil Chemistry</u>	3	3	-	-	-
108	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
109	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
110	21.1	Underground railways (London)	0	0	0	-	-
110	21.2	Underground railways (Non-London)	0	0	0	-	-
111	21.3	Railway tunnels	0	0	0	-	-
111	21.4	<u>Historical railway and tunnel features</u>	0	0	18	-	-
112	21.5	Royal Mail tunnels	0	0	0	-	-
112	21.6	Historical railways	0	0	0	-	-
112	21.7	Railways	0	0	0	-	-
112	21.8	Crossrail 1	0	0	0	0	-
113	21.9	Crossrail 2	0	0	0	0	-
113	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 30/06/2018

Site Area: 0.93ha



Recent site history - 2013 aerial photograph



Capture Date: 07/06/2013

Site Area: 0.93ha



Recent site history - 2012 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2020. All Rights Reserved.

Capture Date: 28/05/2012

Site Area: 0.93ha



Recent site history - 2009 aerial photograph



Capture Date: 11/09/2009

Site Area: 0.93ha



Recent site history - 1999 aerial photograph



Capture Date: 17/11/1999

Site Area: 0.93ha



OS MasterMap site plan



Site Area: 0.93ha



Contact us with any questions at:

info@groundsure.com

08444 159 000

Date: 14 December 2020

1 Past land use



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- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

73

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	11m E	Unspecified Works	1977 - 1987	1555328



ID	Location	Land use	Dates present	Group ID
C	117m NE	Slurry Ponds	1977	1419603
1	132m N	Refuse Heap	1977	1438030
2	178m N	Unspecified Disused Tip	1987	1420291
C	188m NE	Sewage Tanks	1938	1505157
C	194m NE	Sewage Tanks	1951	1546128
C	195m NE	Sewage Tanks	1948	1516482
3	202m N	Colliery	1948	1549514
D	216m N	Filter Beds	1903	1483019
D	216m N	Filter Beds	1938	1537984
D	218m N	Filter Beds	1948 - 1951	1478526
E	226m NW	Railway Sidings	1977	1543881
F	229m NE	Refuse Heap	1977	1483645
G	231m NW	Railway Sidings	1951	1534998
H	232m NW	Unspecified Workshops	1977	1550810
G	233m NW	Railway Sidings	1938 - 1948	1539968
E	235m NW	Cuttings	1938	1512099
G	235m NW	Railway Sidings	1961 - 1966	1520404
H	235m NW	Unspecified Workshops	1965	1472389
E	235m NW	Refuse Heap	1987	1438031
4	240m W	Unspecified Depot	1977	1428494
I	240m NW	Railway Sidings	1903	1528376
E	242m NW	Cuttings	1951	1463476
5	245m NE	Powder Magazine	1891	1426533
H	256m NW	Unspecified Commercial/Industrial	1938 - 1948	1487540
I	268m N	Colliery	1903	1469243
I	268m N	Colliery	1938	1520095
F	272m NE	Unspecified Disused Tip	1987	1420289
I	273m N	Colliery	1977	1466323



ID	Location	Land use	Dates present	Group ID
H	276m NW	Unspecified Tanks	1951	1426422
I	277m N	Disused Workings	1987	1426487
I	277m N	Colliery	1951 - 1966	1522155
I	287m N	Colliery	1891	1509677
I	287m N	Railway Sidings	1891	1513213
K	309m NE	Refuse Heap	1951 - 1966	1535292
6	316m NW	Railway Building	1948	1430533
H	317m W	Gas Works	1891 - 1903	1550834
L	321m W	Police Station	1948 - 1951	1467048
7	328m SE	Nursery	1977 - 1987	2366457
L	330m W	Police Station	1965 - 1977	1466263
L	335m W	Police Station	1938	1508700
L	335m W	Police Station	1903	1545653
M	358m N	Unspecified Tank	1966 - 1977	1487225
N	364m W	Cuttings	1891 - 1903	1462866
K	367m N	Unspecified Ground Workings	1948	1545808
H	371m W	Unspecified Tanks	1938 - 1948	1516200
8	382m E	Pump House	1987	1457535
H	383m W	Unspecified Tank	1938 - 1948	1463207
H	385m W	Gasometer	1891 - 1903	1532091
N	394m W	Cuttings	1951	1538003
N	401m W	Cuttings	1948	1516880
N	402m W	Cuttings	1938	1522588
I	403m N	Unspecified Tank	1938	1493931
N	403m W	Cuttings	1977	1489285
I	405m N	Unspecified Tank	1948	1505897
9	411m E	Fire Engine Station	1938 - 1948	1547225
10	413m NE	Refuse Heap	1903	1484158



ID	Location	Land use	Dates present	Group ID
I	413m N	Unspecified Tank	1951	1554093
11	420m SW	Cuttings	1977	1410376
12	436m NE	Disused Workings	1987	1426488
13	441m W	Cuttings	1977	1479685
O	445m W	Unspecified Quarry	1951	1487319
O	450m W	Unspecified Quarry	1938	1481089
O	450m W	Unspecified Quarry	1891 - 1903	1532329
O	451m W	Unspecified Quarry	1948	1525208
P	459m SE	Unspecified Depot	1977 - 1987	1504602
Q	473m NW	Cuttings	1948	1510974
R	474m NW	Cuttings	1938	1476711
14	477m E	Opencast Mining	1951	1418486
R	477m NW	Railway Sidings	1965	1466204
Q	479m NW	Cuttings	1951	1482551
O	480m W	Unspecified Disused Quarry	1977	1449505
Q	493m NW	Cuttings	1903	1486160

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

29

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	7m E	Unspecified Tank	1986	234016
A	8m E	Unspecified Tank	1999	239295



ID	Location	Land use	Dates present	Group ID
A	9m E	Unspecified Tank	1974	238896
A	53m E	Unspecified Tank	1986 - 1999	237812
A	55m E	Unspecified Tank	1974	240131
C	192m NE	Urban District Council Sewage Tanks	1931	230120
D	253m N	Tanks	1974	232765
H	319m W	Gas Works	1893 - 1905	242757
H	354m W	Unspecified Tank	1931	229022
M	359m N	Unspecified Tank	1955 - 1974	239000
H	359m NW	Tanks	1931	232766
H	370m W	Tanks	1931	232767
I	380m N	Tanks	1931	241823
H	383m W	Tanks	1931	232770
I	383m N	Tanks	1955 - 1974	248501
H	384m W	Unspecified Tank	1931	229021
I	388m N	Unspecified Tank	1974	229016
H	389m W	Unspecified Tank	1931	229026
H	389m W	Gasometer	1893 - 1905	238791
H	401m W	Tanks	1893 - 1905	241897
I	403m N	Unspecified Tank	1931	237927
I	410m N	Unspecified Tank	1955	235441
H	415m W	Tanks	1893 - 1905	239734
H	422m W	Unspecified Tank	1893 - 1905	236040
H	424m W	Tanks	1931	232769
H	426m W	Unspecified Tank	1893 - 1905	243403
H	428m W	Tanks	1931	232768
H	432m W	Tanks	1893 - 1905	242474
I	453m N	Unspecified Tank	1955	241859

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

8

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
J	267m SE	Electricity Substation	1973 - 1993	138910
J	268m SE	Electricity Substation	1955	140543
J	274m SE	Electricity Substation	1955	132279
H	282m NW	Electricity Substation	1993 - 1999	141048
H	299m NW	Electricity Substation	1973	131142
H	319m W	Gas Works	1893 - 1905	134573
H	389m W	Gasometer	1893 - 1905	145909
H	401m W	Electricity Substation	1973 - 1999	138714

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

10

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
B	47m SE	Garage	1973	44019
B	47m SE	Garage	1981	41681
B	47m SE	Garage	1993	42623
P	458m SE	Garage	1955	43739
P	459m SE	Garage	1976 - 1993	46234
P	459m SE	Garage	1986	43257
P	459m SE	Garage	1972	42575
P	459m SE	Garage	1955	42740
O	495m W	Garage	1973	42828
O	495m W	Garage	1993 - 1999	46645

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

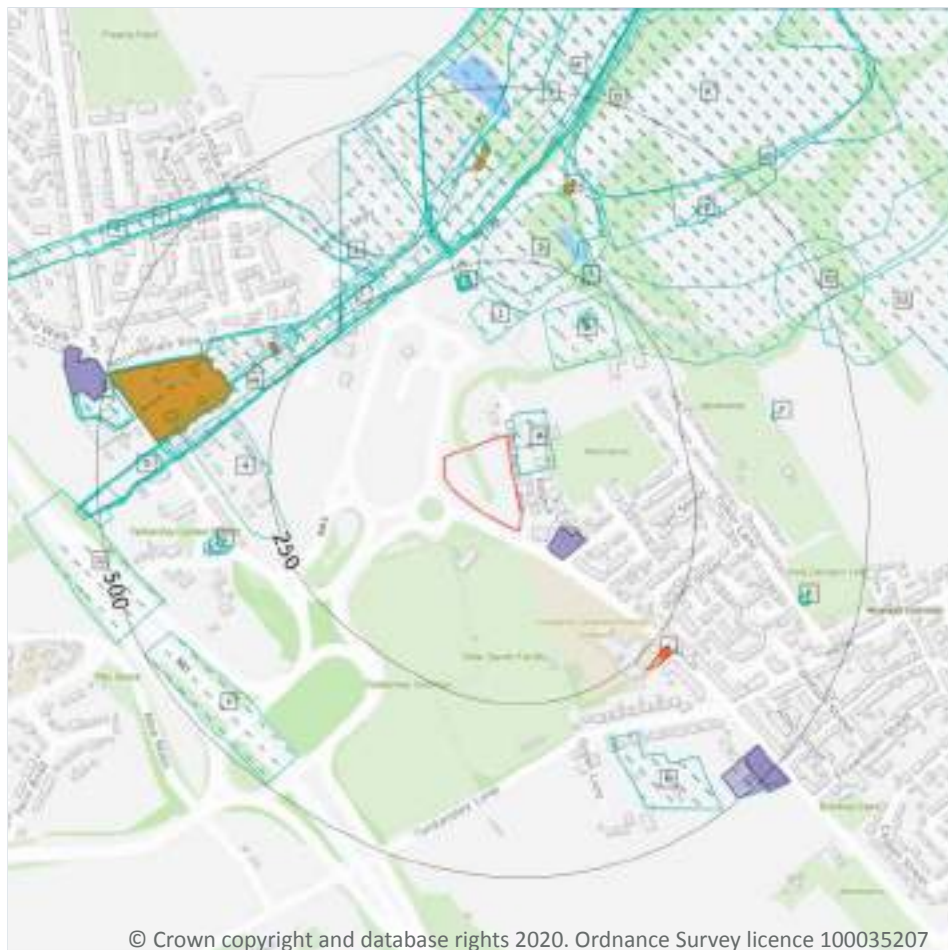
0

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

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



2 Past land use - un-grouped



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- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

98

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
A	11m E	Unspecified Works	1977	1555328
A	11m E	Unspecified Works	1987	1555328
C	117m NE	Slurry Ponds	1977	1419603

ID	Location	Land Use	Date	Group ID
1	132m N	Refuse Heap	1977	1438030
2	178m N	Unspecified Disused Tip	1987	1420291
C	188m NE	Sewage Tanks	1938	1505157
C	194m NE	Sewage Tanks	1951	1546128
C	195m NE	Sewage Tanks	1948	1516482
C	195m NE	Sewage Tanks	1948	1516482
D	202m N	Colliery	1948	1549514
D	202m N	Colliery	1948	1549514
E	216m N	Filter Beds	1903	1483019
E	216m N	Filter Beds	1938	1537984
E	218m N	Filter Beds	1948	1478526
E	218m N	Filter Beds	1948	1478526
E	223m N	Filter Beds	1951	1478526
F	226m NW	Railway Sidings	1977	1543881
G	229m NE	Refuse Heap	1977	1483645
H	231m NW	Railway Sidings	1951	1534998
H	232m NW	Unspecified Workshops	1977	1550810
H	232m NW	Railway Sidings	1977	1543881
3	233m NW	Railway Sidings	1948	1539968
I	235m NW	Cuttings	1938	1512099
H	235m NW	Unspecified Workshops	1965	1472389
H	235m NW	Railway Sidings	1965	1520404
F	235m NW	Railway Sidings	1966	1520404
F	235m NW	Railway Sidings	1951	1534998
I	235m NW	Refuse Heap	1987	1438031
4	240m W	Unspecified Depot	1977	1428494
F	240m NW	Railway Sidings	1938	1539968
F	240m NW	Railway Sidings	1903	1528376



ID	Location	Land Use	Date	Group ID
I	242m NW	Cuttings	1951	1463476
5	245m NE	Powder Magazine	1891	1426533
H	256m NW	Unspecified Commercial/Industrial	1938	1487540
F	268m N	Colliery	1938	1520095
F	268m N	Colliery	1903	1469243
G	272m NE	Unspecified Disused Tip	1987	1420289
F	273m N	Colliery	1977	1466323
H	276m NW	Unspecified Tanks	1951	1426422
H	277m NW	Unspecified Commercial/Industrial	1948	1487540
F	277m N	Colliery	1966	1522155
F	277m N	Disused Workings	1987	1426487
F	277m N	Colliery	1951	1522155
F	287m N	Railway Sidings	1891	1513213
F	287m N	Colliery	1891	1509677
K	309m NE	Refuse Heap	1966	1535292
6	316m NW	Railway Building	1948	1430533
H	317m W	Gas Works	1903	1550834
H	317m W	Gas Works	1891	1550834
L	321m W	Police Station	1951	1467048
M	328m SE	Nursery	1977	2366457
M	328m SE	Nursery	1987	2366457
L	330m W	Police Station	1977	1466263
L	330m W	Police Station	1965	1466263
L	330m W	Police Station	1948	1467048
L	335m W	Police Station	1938	1508700
L	335m W	Police Station	1903	1545653
N	358m N	Unspecified Tank	1966	1487225
N	358m N	Unspecified Tank	1977	1487225

ID	Location	Land Use	Date	Group ID
O	364m W	Cuttings	1903	1462866
O	365m W	Cuttings	1891	1462866
K	367m N	Unspecified Ground Workings	1948	1545808
K	367m N	Unspecified Ground Workings	1948	1545808
H	371m W	Unspecified Tanks	1938	1516200
H	374m W	Unspecified Tanks	1948	1516200
K	374m N	Refuse Heap	1951	1535292
7	382m E	Pump House	1987	1457535
H	383m W	Unspecified Tank	1938	1463207
H	385m W	Gasometer	1903	1532091
H	385m W	Gasometer	1891	1532091
H	387m W	Unspecified Tank	1948	1463207
O	394m W	Cuttings	1951	1538003
O	401m W	Cuttings	1948	1516880
O	402m W	Cuttings	1938	1522588
F	403m N	Unspecified Tank	1938	1493931
O	403m W	Cuttings	1977	1489285
F	405m N	Unspecified Tank	1948	1505897
P	411m E	Fire Engine Station	1948	1547225
P	412m E	Fire Engine Station	1938	1547225
8	413m NE	Refuse Heap	1903	1484158
F	413m N	Unspecified Tank	1951	1554093
9	420m SW	Cuttings	1977	1410376
10	436m NE	Disused Workings	1987	1426488
11	441m W	Cuttings	1977	1479685
Q	445m W	Unspecified Quarry	1951	1487319
Q	450m W	Unspecified Quarry	1938	1481089
Q	450m W	Unspecified Quarry	1903	1532329

ID	Location	Land Use	Date	Group ID
Q	450m W	Unspecified Quarry	1891	1532329
Q	451m W	Unspecified Quarry	1948	1525208
R	459m SE	Unspecified Depot	1977	1504602
R	459m SE	Unspecified Depot	1987	1504602
S	473m NW	Cuttings	1948	1510974
T	474m NW	Cuttings	1938	1476711
12	477m E	Opencast Mining	1951	1418486
T	477m NW	Railway Sidings	1965	1466204
S	479m NW	Cuttings	1951	1482551
Q	480m W	Unspecified Disused Quarry	1977	1449505
S	493m NW	Cuttings	1903	1486160

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

43

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

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
A	7m E	Unspecified Tank	1986	234016
A	8m E	Unspecified Tank	1999	239295
A	9m E	Unspecified Tank	1974	238896
A	53m E	Unspecified Tank	1986	237812
A	54m E	Unspecified Tank	1999	237812
A	55m E	Unspecified Tank	1974	240131
C	192m NE	Urban District Council Sewage Tanks	1931	230120
E	253m N	Tanks	1974	232765
H	319m W	Gas Works	1893	242757



ID	Location	Land Use	Date	Group ID
H	319m W	Gas Works	1905	242757
H	354m W	Unspecified Tank	1931	229022
N	359m N	Unspecified Tank	1955	239000
H	359m NW	Tanks	1931	232766
N	359m N	Unspecified Tank	1955	239000
N	359m N	Unspecified Tank	1974	239000
H	370m W	Tanks	1931	232767
F	380m N	Tanks	1931	241823
H	383m W	Tanks	1931	232770
F	383m N	Tanks	1955	248501
F	383m N	Tanks	1974	248501
F	383m N	Tanks	1955	248501
H	384m W	Unspecified Tank	1931	229021
F	388m N	Unspecified Tank	1974	229016
H	389m W	Gasometer	1893	238791
H	389m W	Gasometer	1905	238791
H	389m W	Unspecified Tank	1931	229026
H	401m W	Tanks	1905	241897
H	401m W	Tanks	1893	241897
F	403m N	Unspecified Tank	1931	237927
F	410m N	Unspecified Tank	1955	235441
F	410m N	Unspecified Tank	1955	235441
H	415m W	Tanks	1893	239734
H	415m W	Tanks	1905	239734
H	422m W	Unspecified Tank	1905	236040
H	422m W	Unspecified Tank	1893	236040
H	424m W	Tanks	1931	232769
H	426m W	Unspecified Tank	1893	243403



ID	Location	Land Use	Date	Group ID
H	426m W	Unspecified Tank	1905	243403
H	428m W	Tanks	1931	232768
H	432m W	Tanks	1893	242474
H	432m W	Tanks	1905	242474
F	453m N	Unspecified Tank	1955	241859
F	454m N	Unspecified Tank	1955	241859

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

17

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

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
J	267m SE	Electricity Substation	1973	138910
J	268m SE	Electricity Substation	1981	138910
J	268m SE	Electricity Substation	1993	138910
J	268m SE	Electricity Substation	1955	140543
J	274m SE	Electricity Substation	1955	132279
H	282m NW	Electricity Substation	1993	141048
H	282m NW	Electricity Substation	1999	141048
H	282m NW	Electricity Substation	1998	141048
H	299m NW	Electricity Substation	1973	131142
H	319m W	Gas Works	1893	134573
H	319m W	Gas Works	1905	134573
H	389m W	Gasometer	1893	145909
H	389m W	Gasometer	1905	145909
H	401m W	Electricity Substation	1973	138714



ID	Location	Land Use	Date	Group ID
H	402m W	Electricity Substation	1993	138714
H	402m W	Electricity Substation	1999	138714
H	402m W	Electricity Substation	1998	138714

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

13

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

Features are displayed on the Past land use - un-grouped map on **page 21**

ID	Location	Land Use	Date	Group ID
B	47m SE	Garage	1973	44019
B	47m SE	Garage	1981	41681
B	47m SE	Garage	1993	42623
R	458m SE	Garage	1955	43739
R	459m SE	Garage	1976	46234
R	459m SE	Garage	1993	46234
R	459m SE	Garage	1986	43257
R	459m SE	Garage	1972	42575
R	459m SE	Garage	1955	42740
Q	495m W	Garage	1973	42828



ID	Location	Land Use	Date	Group ID
Q	495m W	Garage	1999	46645
Q	495m W	Garage	1998	46645
Q	495m W	Garage	1993	46645

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical waste sites
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on **page 30**

ID	Location	Details		
1	239m NW	Site Address: British Rail Railway Cutting, Adjoining premises of Hartwood Exports (Machinery) Limited, Sheffield Road, Birdwell, Barnsley Licence Holder Address: -	Waste Licence: Yes Site Reference: WD20 B378, 4400/B378, 20B378(53), (36)B, 4400/(36), 4400/0439 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 10/05/1983 Licence Surrender: 21/01/1992	Operator: Hartwood Exports Machinery Limited Licence Holder: Hartwood Exports First Recorded 31/05/1983 Last Recorded: 31/12/1989

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

3.5 Historical waste sites

Records within 500m

2

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 30**

ID	Location	Address	Further Details	Date
2	285m NW	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1955



ID	Location	Address	Further Details	Date
3	474m N	Site Address: N/A	Type of Site: Ground Workings and Refuse Heap Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1960

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

3.6 Licensed waste sites

Records within 500m	4
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Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 30**

ID	Location	Details		
A	228m SW	Site Name: Lidget Garage Site Address: Lidget Garage, Sheffield Road, Hoyland Common, Barnsley, S74 0EB Correspondence Address: Lidget Garage, Sheffield Road, Hoyland Common, Barnsley, S74 0EB	Type of Site: - Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000077 EPR reference: - Operator: Richard Adrian Goodwin Waste Management licence No: 65291 Annual Tonnage: 0	Issue Date: 05/04/2006 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
A	228m SW	Site Name: Lidget Garage Site Address: Lidget Garage, Sheffield Road, Hoyland Common, Barnsley, South Yorkshire, S74 0EB Correspondence Address: -	Type of Site: Physico-Chemical Treatment Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 000077 EPR reference: EA/EPR/GP3892ZW/A001 Operator: Richard Adrian Goodwin Waste Management licence No: 65291 Annual Tonnage: 50000	Issue Date: 05/04/2006 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired

ID	Location	Details		
C	435m W	Site Name: Hartwood Exports Site Address: Hangmanstone Depot, Sheffield Road, Birdwell, Barnsley, S Yorks, S70 5TR Correspondence Address: Hangmanstone Depot, Sheffield Road, Birdwell, Barnsley, S Yorks, S70 5TR	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAR002 EPR reference: - Operator: Hartwood Exports Machinery Ltd Waste Management licence No: 60553 Annual Tonnage: 0	Issue Date: 22/11/1996 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
C	435m W	Site Name: Hartwood Exports Site Address: Hangmanstone Depot, Sheffield Road, Birdwell, Barnsley, South Yorkshire, S70 5TR Correspondence Address: -	Type of Site: Metal Recycling Site (Vehicle Dismantler) Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAR120 EPR reference: EA/EPR/CP3695LB/S003 Operator: Hartwood Estates Ltd Waste Management licence No: 60553 Annual Tonnage: 0	Issue Date: 22/11/1996 Effective Date: 30/01/2008 Modified:: - Surrendered Date: Feb 16 2009 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered

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

3.7 Waste exemptions

Records within 500m	5
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Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 30**

ID	Location	Site	Reference	Category	Sub-Category	Description
B	282m W	BIRDWELL MOTORWAY COMPOUND, WOOD VIEW, BIRDWELL, BARNSELY, S70 5TT	WEX228895	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	282m W	BIRDWELL MOTORWAY COMPOUND, WOOD VIEW, BIRDWELL, BARNSELY, S70 5TT	WEX228895	Storing waste exemption	Not on a farm	Storage of waste in a secure place

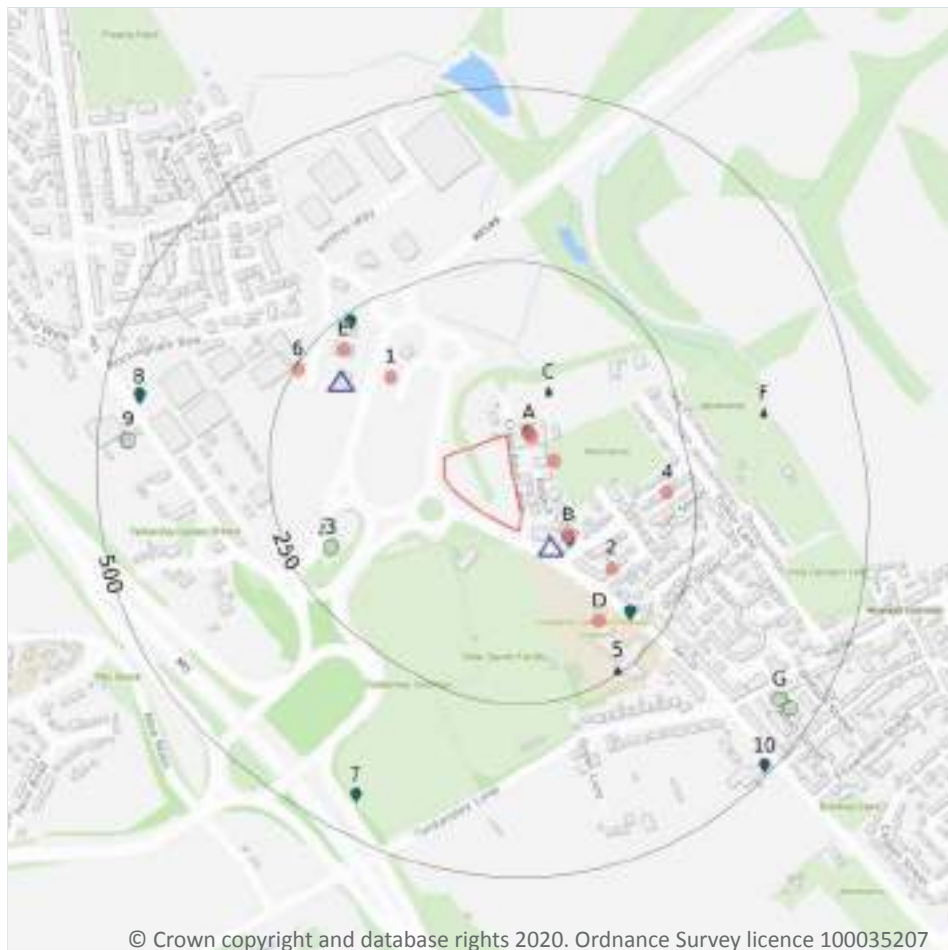


ID	Location	Site	Reference	Category	Sub-Category	Description
B	282m W	BIRDWELL MOTORWAY COMPOUND, WOOD VIEW, BIRDWELL, BARNSLEY, S70 5TT	WEX081808	Storing waste exemption	Not on a farm	Storage of waste in secure containers
B	282m W	BIRDWELL MOTORWAY COMPOUND, WOOD VIEW, BIRDWELL, BARNSLEY, S70 5TT	WEX081808	Storing waste exemption	Not on a farm	Storage of waste in a secure place
C	442m W	Hangmanstone Depot Sheffield Road BARNSLEY South Yorkshire S70 5TR	EPR/TF0002M W/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

11

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 35**

ID	Location	Company	Address	Activity	Category
A	32m E	Riverside Truck Rental	Cross Keys Works, Cross Keys Lane, Hoyland, Barnsley, South Yorkshire, S74 0QA	Vehicle Hire and Rental	Hire Services
A	35m E	Works	South Yorkshire, S74	Unspecified Works Or Factories	Industrial Features
A	64m E	Tank	South Yorkshire, S74	Tanks (Generic)	Industrial Features



ID	Location	Company	Address	Activity	Category
B	69m E	Cross Keys Garage	Sheffield Road, Hoyland, Barnsley, South Yorkshire, S74 0PY	Vehicle Cleaning Services	Personal, Consumer and Other Services
B	69m E	Jet Cross Keys	Sheffield Road, Hoyland, Barnsley, South Yorkshire, S74 0PY	Petrol and Fuel Stations	Road and Rail
1	139m NW	Electricity Sub Station	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities
2	142m E	L S Valeting	6, Regent Street, Hoyland, Barnsley, South Yorkshire, S74 0PU	Vehicle Cleaning Services	Personal, Consumer and Other Services
D	173m SE	Electricity Sub Station	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities
4	212m E	Puncturesafe	12, Steele Street, Hoyland, Barnsley, South Yorkshire, S74 0PS	Vehicle Repair, Testing and Servicing	Repair and Servicing
E	213m NW	BP Service Station	Rockingham Service Station Unit 1e, Kestrel Way, Barnsley, South Yorkshire, S70 5SZ	Petrol and Fuel Stations	Road and Rail
6	246m NW	Pumping Station	South Yorkshire, S70	Water Pumping Stations	Industrial Features

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	2
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Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 35**

ID	Location	Company	Address	LPG	Status
B	48m SE	JET	Sheffield Road, Regent Street, Hoyland, Barnsley, South Yorkshire, S74 0PY	No	Open
E	185m NW	BP	Dearne Valley Parkway, Birdwell, Barnsley, South Yorkshire, S70 5TW	No	Open

This data is sourced from Experian.



4.3 Electricity cables

Records within 500m**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.



4.8 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

7

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

Features are displayed on the Current industrial land use map on **page 35**

ID	Location	Address	Details	
A	30m E	G B Trucks Ltd, Cross Keys Lane, Hoyland, Barnsley, S74 0QA	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
B	71m E	Cross Keys Garage (Barnsley) Ltd, Sheffield Road, Hoyland Common, Barnsley, S74 0PY	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified



ID	Location	Address	Details	
D	196m SE	British Coal Corporation, Sheffield Road, Hoyland, Barnsley, S74 1DQ	Process: Coal & Coke Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
E	236m NW	The Kay Group Ltd - Rockingham Service Station, Unit 1e, Kestrel Way, Birdwell, Barnsley, S70 5SZ	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
7	444m SW	Save Serv Station, Sheffield Rd, Hoyland Common, Barnsley, S74 0DP	Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
8	447m W	Hartwood Exports (Machinery) Ltd, Hangmanstone Depot, Sheffield Rd, Birdwell, S70 5TR	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	488m SE	Mr A Mitha Hoyland Common SS, Sheffield Road, Hoyland Common, Barnsley, S74 0DP	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

9

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

Features are displayed on the Current industrial land use map on **page 35**



ID	Location	Address	Details	
A	32m E	G.B. TRUCKS SERVICES LTD, CROSS KEYS WORKS, CROSS KEYS LANE, HOYLAND LAND, BARNSELY, S74 0QA	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: S/P/1181 Permit Version: 1 Receiving Water: SHORT WOOD DIKE	Status: UNDETERMINED 1961 APPLICATION Issue date: 19/05/1963 Effective Date: 19/05/1963 Revocation Date: -
C	85m NE	CROSS KEY LANE WORKS, HOYLAND COMMON, BARNSELY	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: C5082 Permit Version: 1 Receiving Water: TRIB OF SHORTBRIDGE DYKE	Status: TRANSFERRED FROM COPA 1974 Issue date: 13/05/1988 Effective Date: 13/05/1988 Revocation Date: 20/06/1994
C	85m NE	CROSS KEY LANE WORKS, HOYLAND COMMON, BARNSELY	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: C5082 Permit Version: 2 Receiving Water: TRIB OF SHORTBRIDGE DYKE	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 21/06/1994 Effective Date: 21/06/1994 Revocation Date: 01/10/1996
C	85m NE	CROSS KEY LANE WORKS, HOYLAND COMMON, BARNSELY	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: WRA7281 Permit Version: 1 Receiving Water: SHORT WOOD DYKE	Status: REVOKED - UNSPECIFIED Issue date: 28/01/1997 Effective Date: 28/01/1997 Revocation Date: 28/10/2015
5	245m SE	VALLEY FARM, HUTTON BONVILLE, NORTHALLERTON	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: WA 5000 Permit Version: 1 Receiving Water: RIVER WISKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 09/08/1996 Effective Date: 09/08/1996 Revocation Date: -
F	371m E	TINKER LANE SEWAGE PUMPING STN, TINKER LANE, WOMBWELL, BARNSELY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WRA7784 Permit Version: 1 Receiving Water: SHORT WOOD DIKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 26/02/2002 Effective Date: 26/02/2002 Revocation Date: 17/03/2003

ID	Location	Address	Details	
F	371m E	TINKER LANE SEWAGE PUMPING STN, TINKER LANE, WOMBWELL, BARNSELY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WRA7784 Permit Version: 1 Receiving Water: SHORT WOOD DIKE	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 26/02/2002 Effective Date: 26/02/2002 Revocation Date: 17/03/2003
F	371m E	TINKER LANE SEWAGE PUMPING STN, TINKER LANE, WOMBWELL, BARNSELY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: WRA7784 Permit Version: 2 Receiving Water: SHORT WOOD DIKE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 18/03/2003 Effective Date: 18/03/2003 Revocation Date: -
F	371m E	TINKER LANE SEWAGE PUMPING STN, TINKER LANE, WOMBWELL, BARNSELY, SOUTH YORKSHIRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: WRA7784 Permit Version: 2 Receiving Water: SHORT WOOD DIKE	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 18/03/2003 Effective Date: 18/03/2003 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0
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Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m	0
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Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

4

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

Features are displayed on the Current industrial land use map on **page 35**

ID	Location	Details	
3	190m SW	Incident Date: 22/03/2003 Incident Identification: 145104 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
G	445m SE	Incident Date: 09/09/2003 Incident Identification: 188758 Pollutant: Specific Waste Materials Pollutant Description: Asbestos	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
9	455m W	Incident Date: 08/02/2002 Incident Identification: 57238 Pollutant: Specific Waste Materials Pollutant Description: Other Specific Waste Material	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
G	463m SE	Incident Date: 20/01/2003 Incident Identification: 132102 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m**0**

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

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

4.20 Pollution inventory waste transfers

Records within 500m**0**

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

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

4.21 Pollution inventory radioactive waste

Records within 500m**0**

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

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

5 Hydrogeology - Superficial aquifer

5.1 Superficial aquifer

Records within 500m

0

Aquifer status of groundwater held within superficial geology.

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



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

4

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 45**

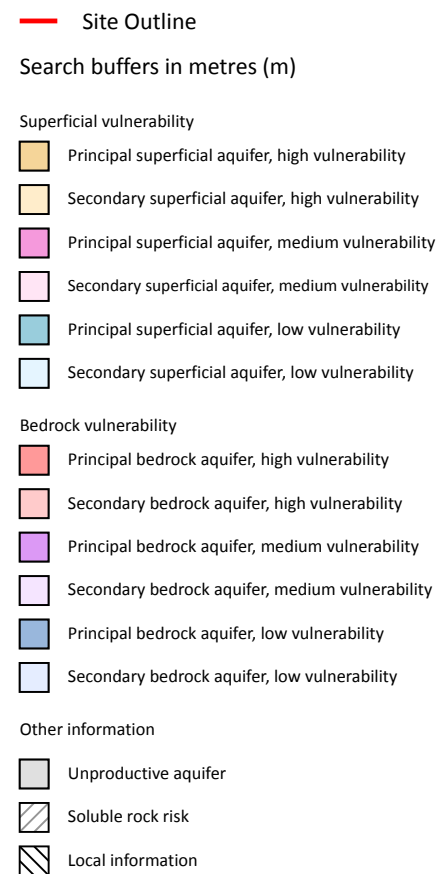
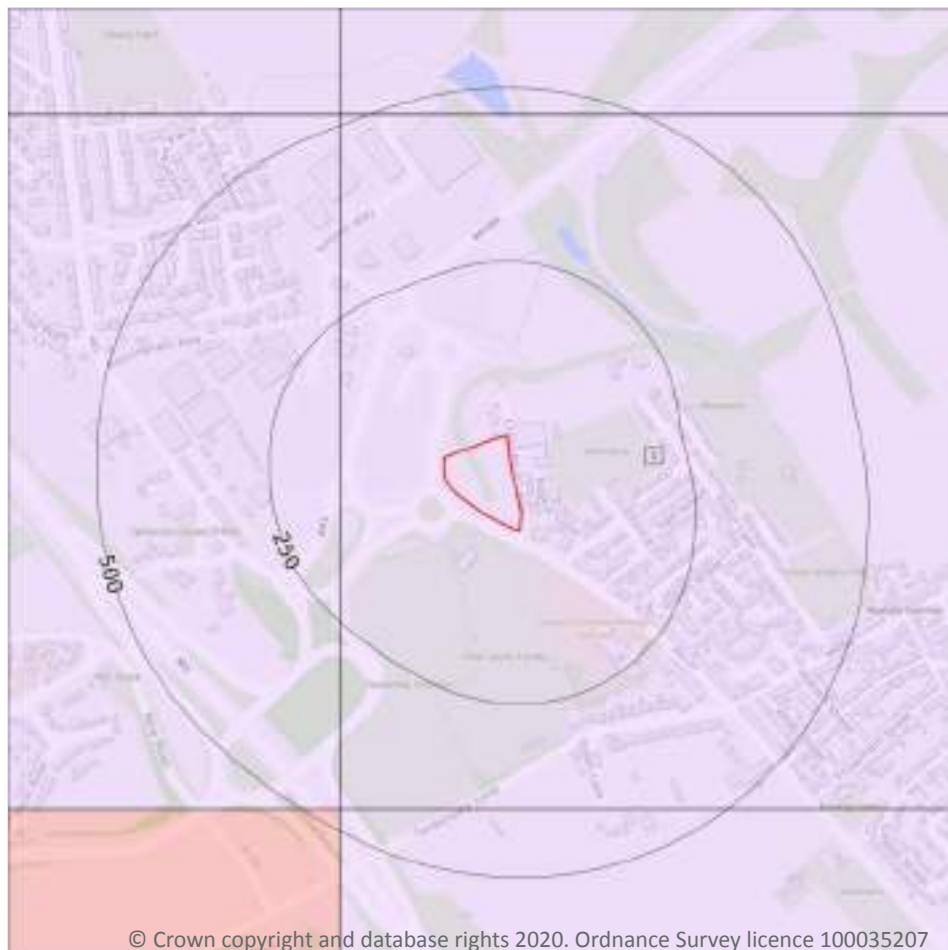
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	149m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	402m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	473m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 47**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300-550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0
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This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

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

5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

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

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Point features
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

4

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 49**

ID	Location	Details	
-	1749m S	Status: Historical Licence No: 2/27/06/043 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE-SHAFT COAL MEASURES-HIGH GREEN Data Type: Point Name: TANKERSLEY PARK GOLF CLUB Easting: 435570 Northing: 398680	Annual Volume (m ³): 8200 Max Daily Volume (m ³): 226 Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/02/2004 Version End Date: -
-	1749m S	Status: Active Licence No: 2/27/06/043 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE-SHAFT COAL MEASURES-HIGH GREEN Data Type: Point Name: TANKERSLEY PARK GOLF CLUB Easting: 435576 Northing: 398681	Annual Volume (m ³): 8,200 Max Daily Volume (m ³): 216.91 Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 103 Version Start Date: 01/04/2017 Version End Date: -
-	1757m S	Status: Historical Licence No: 2/27/06/043 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - SHAFT - COAL MEASURES - HIGH GREEN SHEFFIELD Data Type: Point Name: TANKERSLEY PARK GOLF CLUB Easting: 435700 Northing: 398700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 24/10/2000 Version End Date: -
-	1757m S	Status: Historical Licence No: 2/27/06/043 Details: Spray Irrigation - Direct Direct Source: GROUNDWATERS Point: BOREHOLE-SHAFT-COAL MEASURES-HIGH GREEN-SHEFFIELD Data Type: Point Name: TANKERSLEY PARK GOLF CLUB Easting: 435700 Northing: 398700	Annual Volume (m ³): 8200 Max Daily Volume (m ³): 226 Original Application No: - Original Start Date: 17/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/02/2004 Version End Date: -

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



5.7 Surface water abstractions

Records within 2000m**0**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.8 Potable abstractions

Records within 2000m**0**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

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

5.9 Source Protection Zones

Records within 500m**0**

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m**0**

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

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

6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

3

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 52**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	94m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
A	133m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	237m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	3
----------------------------	----------

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 52**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1
------------------------	----------

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 52**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Dove from Source to River Dearne	GB104027057510	Dearne	Don and Rother

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

6.4 WFD Surface water bodies

Records identified	1
---------------------------	----------

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

Features are displayed on the Hydrology map on **page 52**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	879m N	River	Dove from Source to River Dearne	GB104027057510	Moderate	Good	Moderate	2016

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

6.5 WFD Groundwater bodies

Records on site	1
------------------------	----------

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 52**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Don & Rother Millstone grit & Coal Measures	GB40402G992300	Poor	Poor	Good	2015

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

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

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

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

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

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

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

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

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

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0
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Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

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

7.7 Flood Zone 3

Records within 50m	0
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Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

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



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

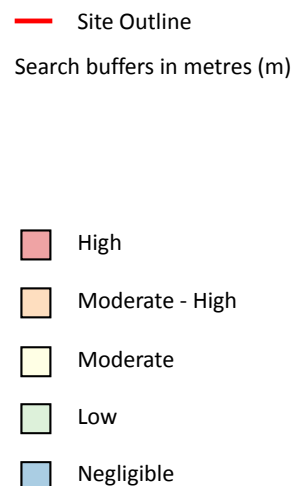
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 59**

This data is sourced from Ambient Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- / Designated Ancient Woodland
- / Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m**0**

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m**0**

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m**0**

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m**0**

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Data source
3	922m SW	Potter Holes Plantation	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

12

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Woodland Type
2	852m N	Short Wood	Ancient & Semi-Natural Woodland
4	1062m SW	Bull Wood	Ancient & Semi-Natural Woodland
5	1122m NW	The Old Park	Ancient Replanted Woodland
6	1244m NW	The Old Park	Ancient & Semi-Natural Woodland
-	1657m NW	Unknown	Ancient Replanted Woodland
-	1658m NW	The Old Park	Ancient & Semi-Natural Woodland
-	1701m SE	Skiers Spring Wood	Ancient & Semi-Natural Woodland
-	1704m NW	The Old Park	Ancient Replanted Woodland
-	1793m NW	The Old Park	Ancient & Semi-Natural Woodland
-	1944m NW	Unknown	Ancient & Semi-Natural Woodland
-	1977m NW	Wigfield Wood	Ancient & Semi-Natural Woodland
-	1982m N	Unknown	Ancient & Semi-Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

7

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

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Local Authority name
1	182m SW	South and West Yorkshire	Barnsley
A	999m W	South and West Yorkshire	Barnsley
A	1000m W	South and West Yorkshire	Barnsley
A	1000m W	South and West Yorkshire	Barnsley
A	1000m W	South and West Yorkshire	Barnsley



ID	Location	Name	Local Authority name
-	1851m SW	South and West Yorkshire	Sheffield
-	1972m SE	South and West Yorkshire	Rotherham

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was



closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

4

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

Location	Name	Type	NVZ ID	Status
On site	River Dearne NVZ	Surface Water	S278	Existing
1057m NW	River Dearne NVZ	Surface Water	S278	Existing
1605m SW	Blackburn Brook from Source to River Don NVZ	Surface Water	S261	Existing
1638m S	Blackburn Brook from Source to River Don NVZ	Surface Water	S261	Existing

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



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site

0

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

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

11.7 Registered Parks and Gardens

Records within 250m

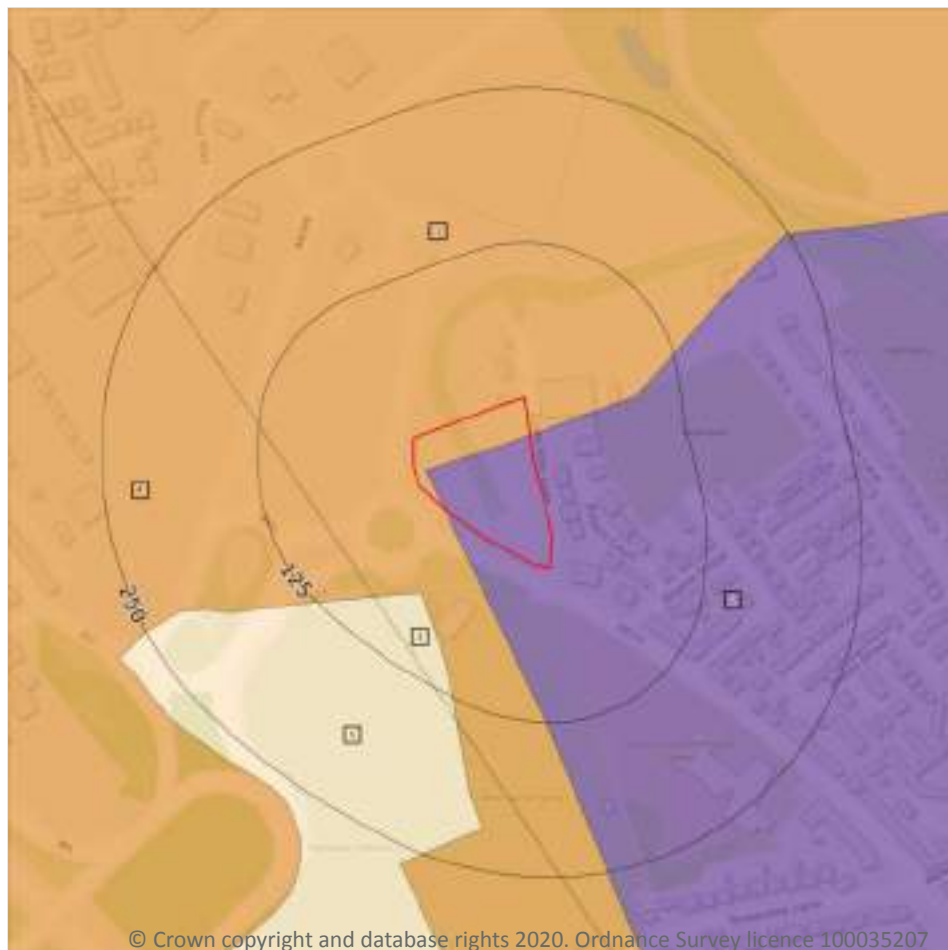
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

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



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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12.1 Agricultural Land Classification

Records within 250m

5

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 69**

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
2	On site	Urban	-



ID	Location	Classification	Description
3	65m SW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
4	80m SW	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
5	91m SW	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

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

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.



12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

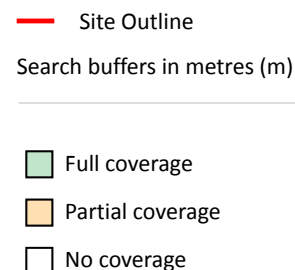
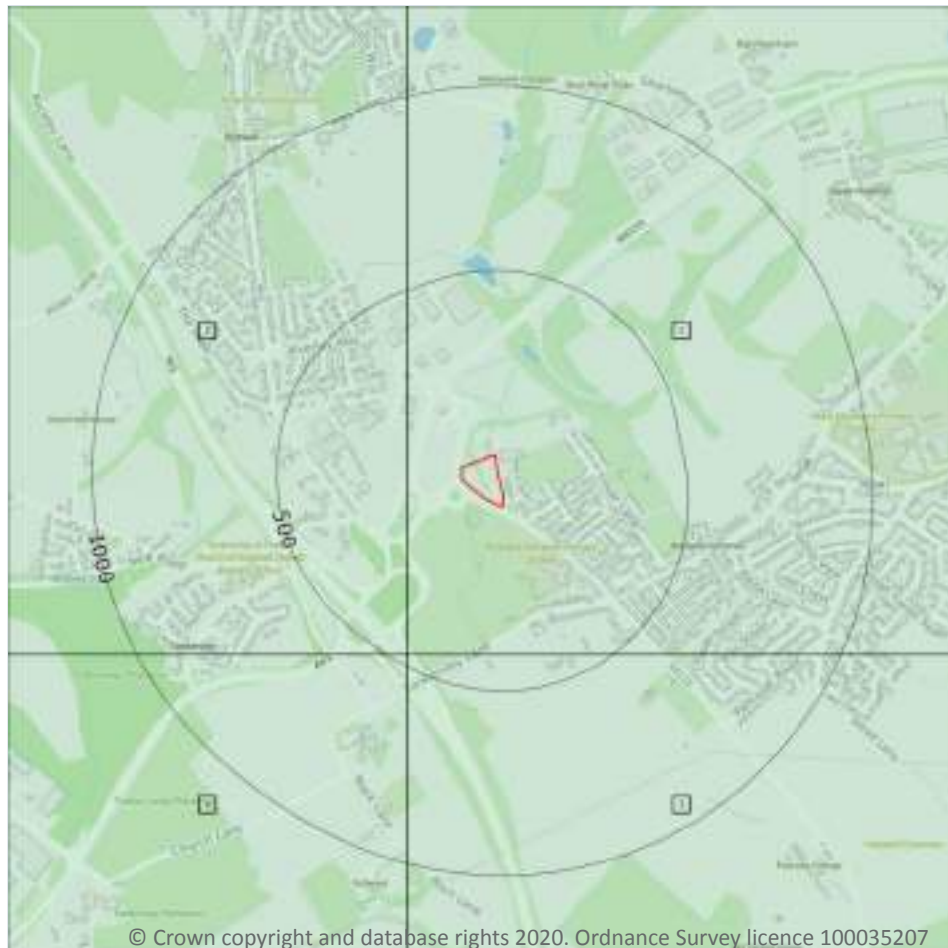
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m

4

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 73**

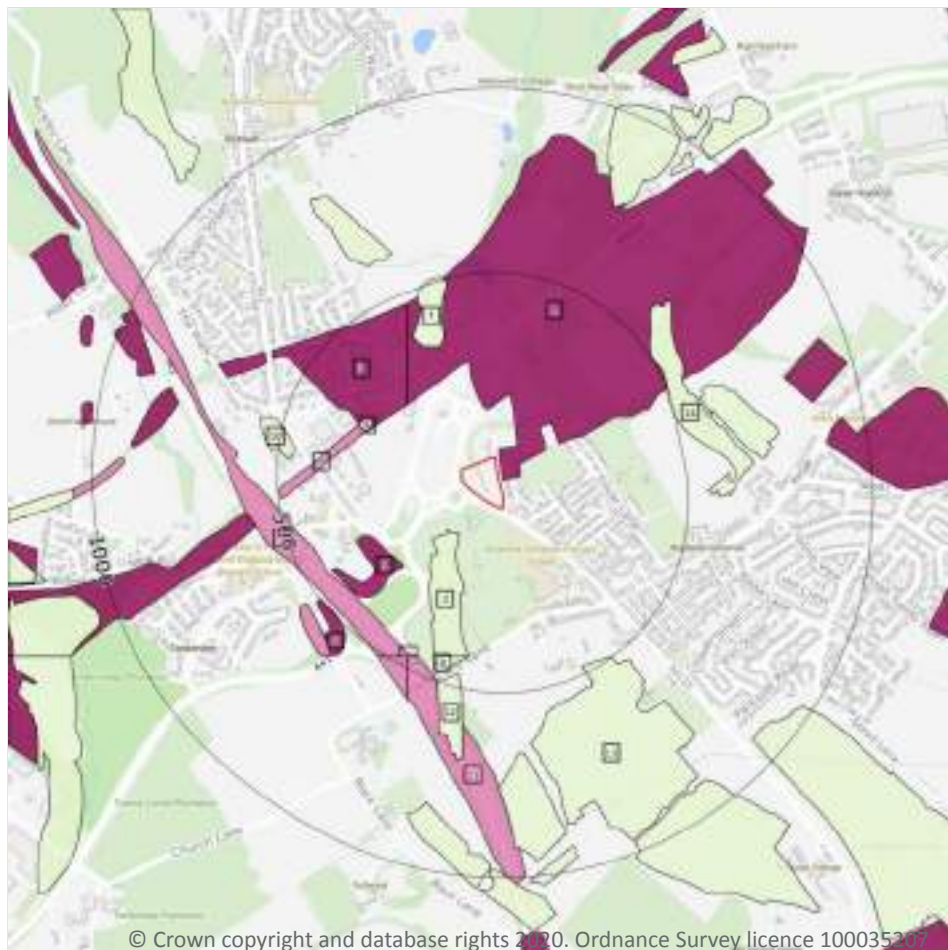
ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SE30SE
2	149m W	Full	Full	Full	Full	SE30SW
3	402m S	Full	Full	Full	Full	SK39NE
4	473m SW	Full	Full	Full	No coverage	SK39NW



This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

17

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 75**

ID	Location	LEX Code	Description	Rock description
1	9m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	112m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	230m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	270m NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit



ID	Location	LEX Code	Description	Rock description
5	273m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	278m W	WGR-VOID	Worked Ground (Undivided)	Void
7	333m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
8	411m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
9	422m SW	WGR-VOID	Worked Ground (Undivided)	Void
10	454m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
11	459m SW	WGR-VOID	Worked Ground (Undivided)	Void
A	459m SW	WGR-VOID	Worked Ground (Undivided)	Void
12	465m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	473m SW	WGR-VOID	Worked Ground (Undivided)	Void
13	478m SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
14	493m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
B	494m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

18

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 78**

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
2	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
3	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
5	39m W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
7	108m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
8	108m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
12	126m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
13	149m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
14	153m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
16	171m W	HMR-SDST	Haigh Moor Rock - Sandstone	Duckmantian Sub-age
17	182m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
20	323m E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
23	338m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
27	393m E	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
28	402m S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
29	409m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
33	416m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
37	473m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

24

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 78**

ID	Location	Category	Description
4	21m W	ROCK	Coal seam, inferred
6	108m SW	FAULT	Normal fault, inferred
9	109m SW	ROCK	Coal seam, inferred
10	112m SW	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
11	123m SW	ROCK	Coal seam, observed
15	153m W	FAULT	Normal fault, inferred
18	191m SW	ROCK	Coal seam, observed
19	298m N	ROCK	Coal seam, observed
21	333m N	ROCK	Coal seam, observed
22	338m S	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
24	347m N	ROCK	Coal seam, observed
25	377m N	ROCK	Coal seam, inferred coincident with both bedrock geology boundary and Artificial geology boundary
26	379m N	ROCK	Coal seam, inferred
30	411m S	ROCK	Coal seam, observed
31	416m SW	ROCK	Coal seam, inferred
32	416m SW	ROCK	Coal seam, observed
34	426m S	ROCK	Coal seam, inferred
35	441m SW	ROCK	Coal seam, inferred
36	465m S	ROCK	Coal seam, observed
38	478m SE	ROCK	Coal seam, observed



ID	Location	Category	Description
39	480m E	ROCK	Coal seam, inferred
40	493m E	ROCK	Coal seam, observed
41	496m SE	ROCK	Coal seam, observed
42	500m N	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline

Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

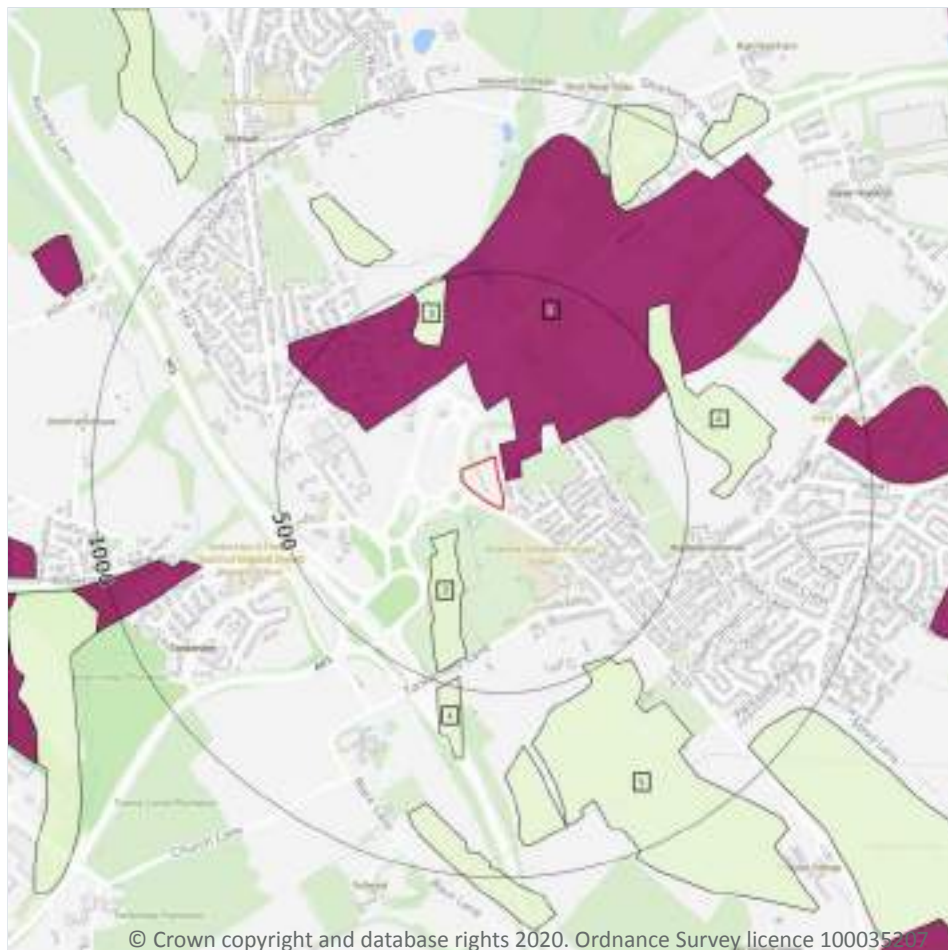
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 82**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW087_barnsley_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



- Site Outline
- Search buffers in metres (m)
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

6

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 83**

ID	Location	LEX Code	Description	Rock description
1	17m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	108m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	333m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	472m S	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT



ID	Location	LEX Code	Description	Rock description
5	478m SE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
6	496m E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

1

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

Location	Flow type	Maximum permeability	Minimum permeability
17m NE	Mixed	Very High	Low

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial

15.4 Superficial geology (50k)

Records within 500m

0

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m

10

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 86**

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
2	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
3	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	25m W	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
8	107m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	125m E	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
11	166m W	HMR-SDST	HAIGH MOOR ROCK - SANDSTONE	WESTPHALIAN
12	178m S	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
15	327m E	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	388m E	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	4
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
On site	Fracture	Moderate	Low
On site	Fracture	High	Moderate
25m NW	Fracture	High	Moderate

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

14

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 86**

ID	Location	Category	Description
4	25m W	ROCK	Coal seam, inferred
6	25m W	ROCK	Coal seam, inferred
7	107m SW	FAULT	Fault, inferred
9	108m SW	ROCK	Coal seam, inferred
13	261m N	ROCK	Coal seam, inferred
14	272m N	ROCK	Coal seam, inferred
16	333m N	ROCK	Coal seam, inferred
17	375m N	ROCK	Coal seam, inferred
19	430m S	ROCK	Coal seam, inferred
20	472m S	ROCK	Coal seam, inferred
21	477m S	ROCK	Coal seam, inferred
22	478m SE	ROCK	Coal seam, inferred
23	489m N	ROCK	Coal seam, inferred
24	489m N	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

18

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 89**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	117m SW	435142 400329	HOYLAND COMMON 0.50	-	Y	N/A
2	154m SW	435131 400292	HOYLAND COMMON 0.49	-	Y	N/A

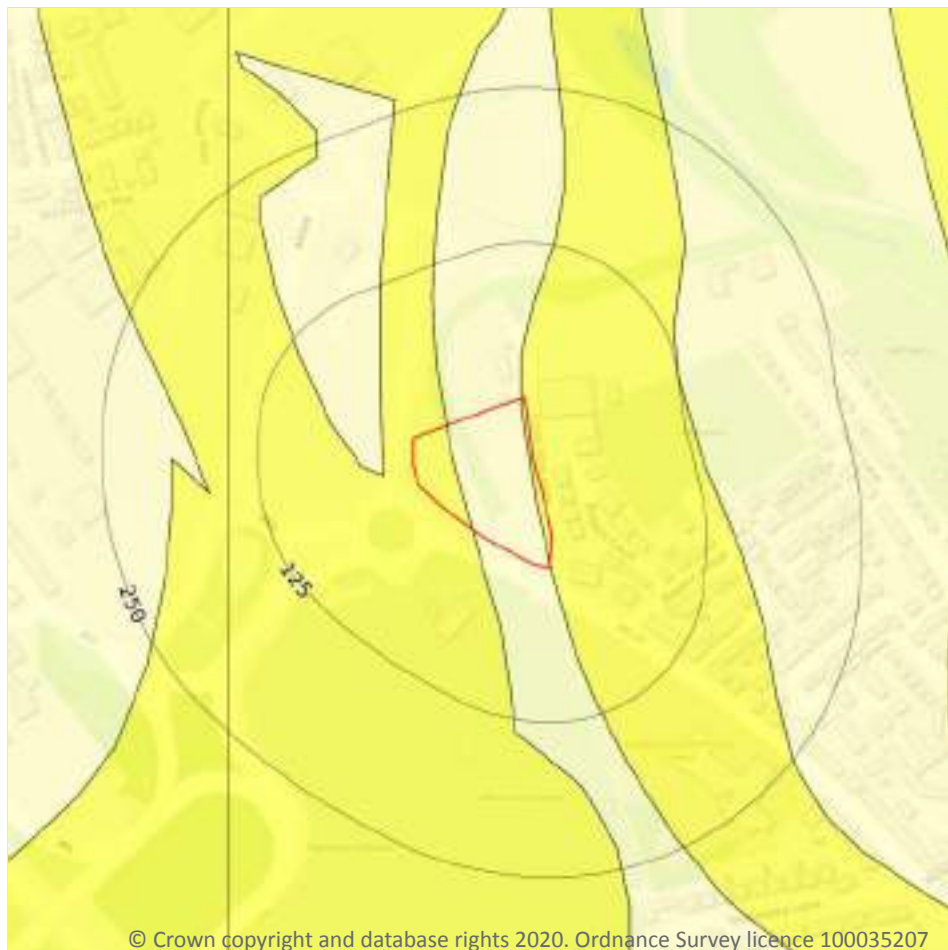


ID	Location	Grid reference	Name	Length	Confidential	Web link
A	160m SE	435358 400275	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC06	-	Y	N/A
A	179m SE	435375 400264	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC08	-	Y	N/A
B	181m SE	435350 400245	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC05	-	Y	N/A
3	183m SW	435144 400251	HOYLAND COMMON 0.48	-	Y	N/A
B	193m SE	435360 400237	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC04	-	Y	N/A
A	193m SE	435384 400254	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC05	-	Y	N/A
A	202m SE	435410 400267	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC02	-	Y	N/A
A	205m SE	435394 400247	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC07	-	Y	N/A
A	208m SE	435389 400238	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC03	-	Y	N/A
A	216m SE	435415 400252	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC02	-	Y	N/A
A	216m SE	435393 400232	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC04	-	Y	N/A
4	218m SW	435152 400208	HOYLAND COMMON 0.47	-	Y	N/A
A	221m SE	435427 400257	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC01	-	Y	N/A
A	223m SE	435411 400238	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC06	-	Y	N/A
A	226m SE	435388 400216	BARNSELY SCHOOLS PFI, HOYLAND COMMON BHROHC03	-	Y	N/A
A	237m SE	435411 400219	BARNSELY SCHOOLS PFI, HOYLAND COMMON TPHC01	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

3

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

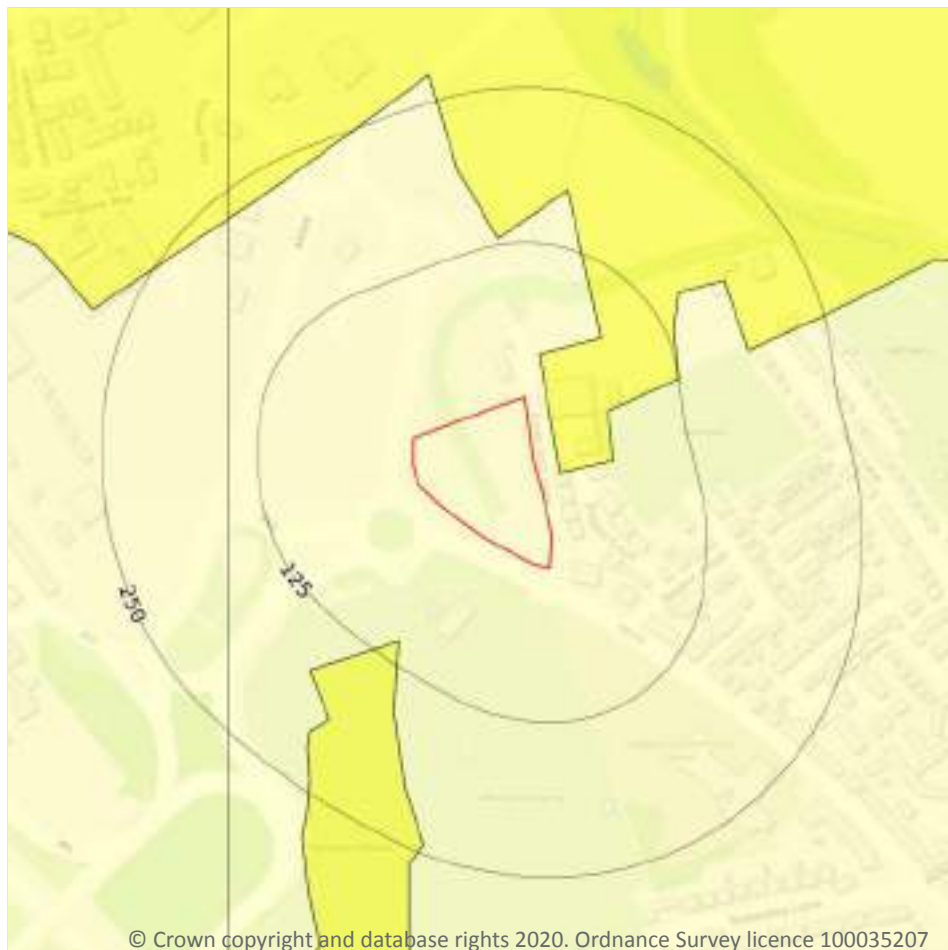
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 91**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
25m W	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 93**

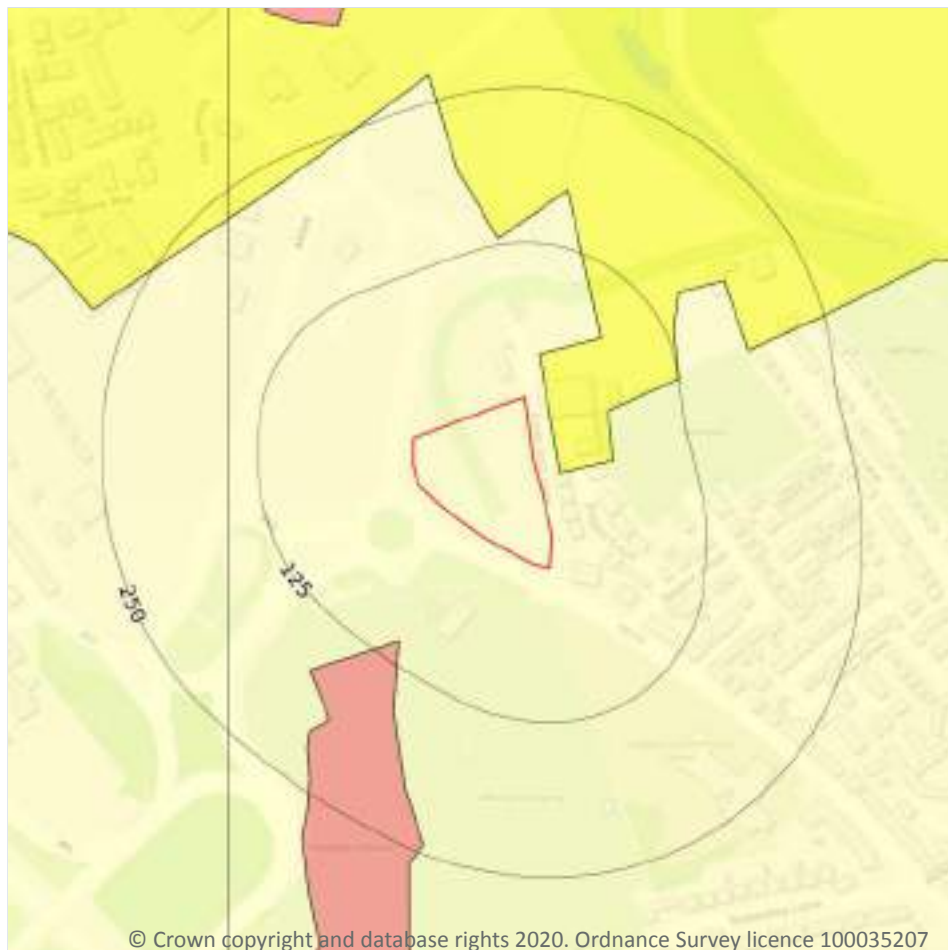
Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

Location	Hazard rating	Details
17m E	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

2

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

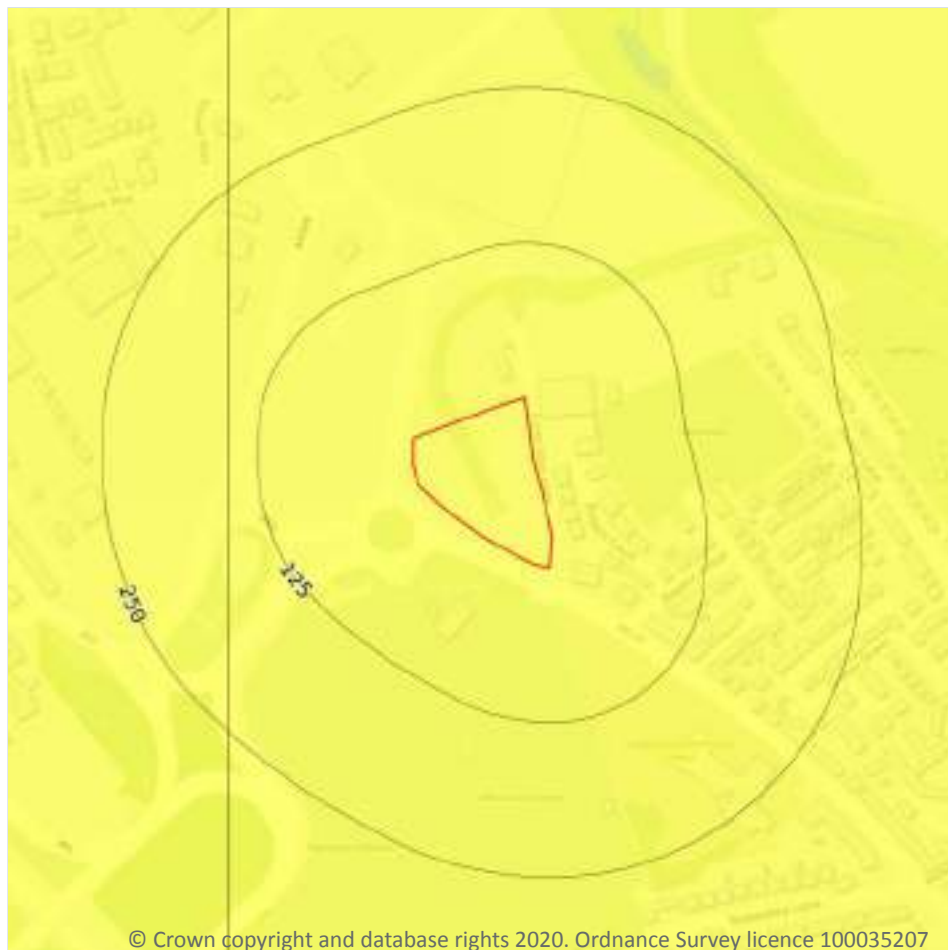
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 95**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
17m E	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

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

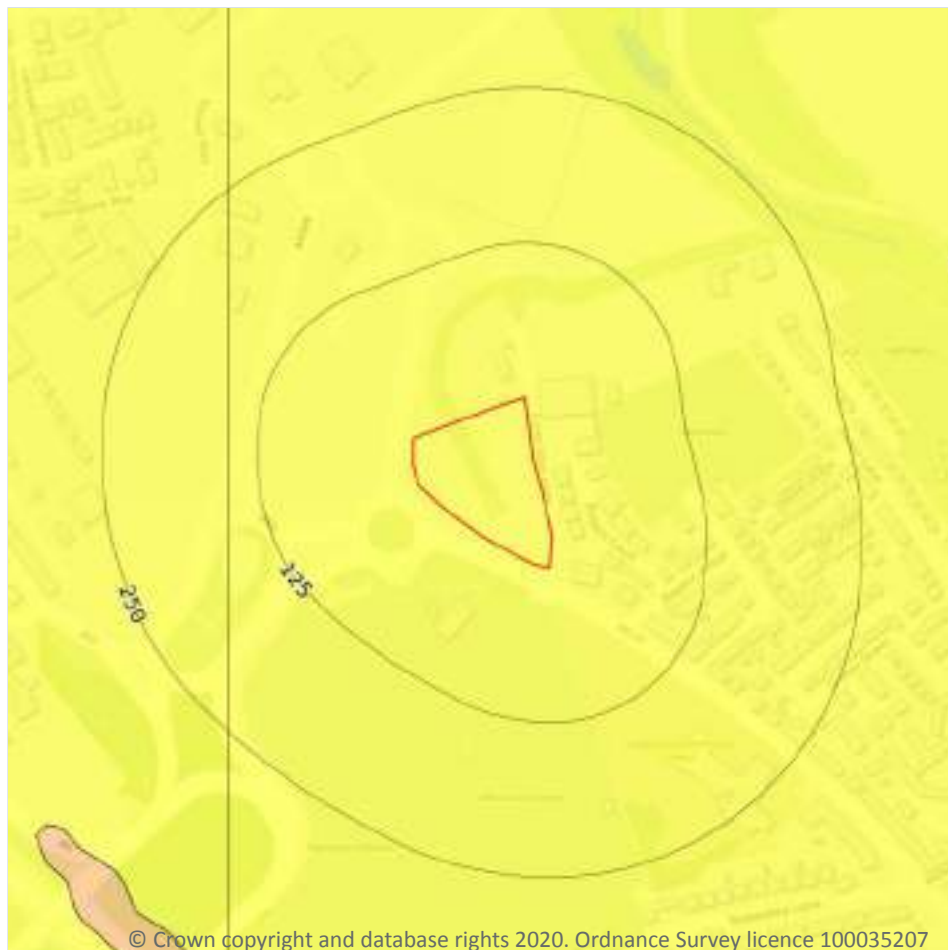
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 97**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 98**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

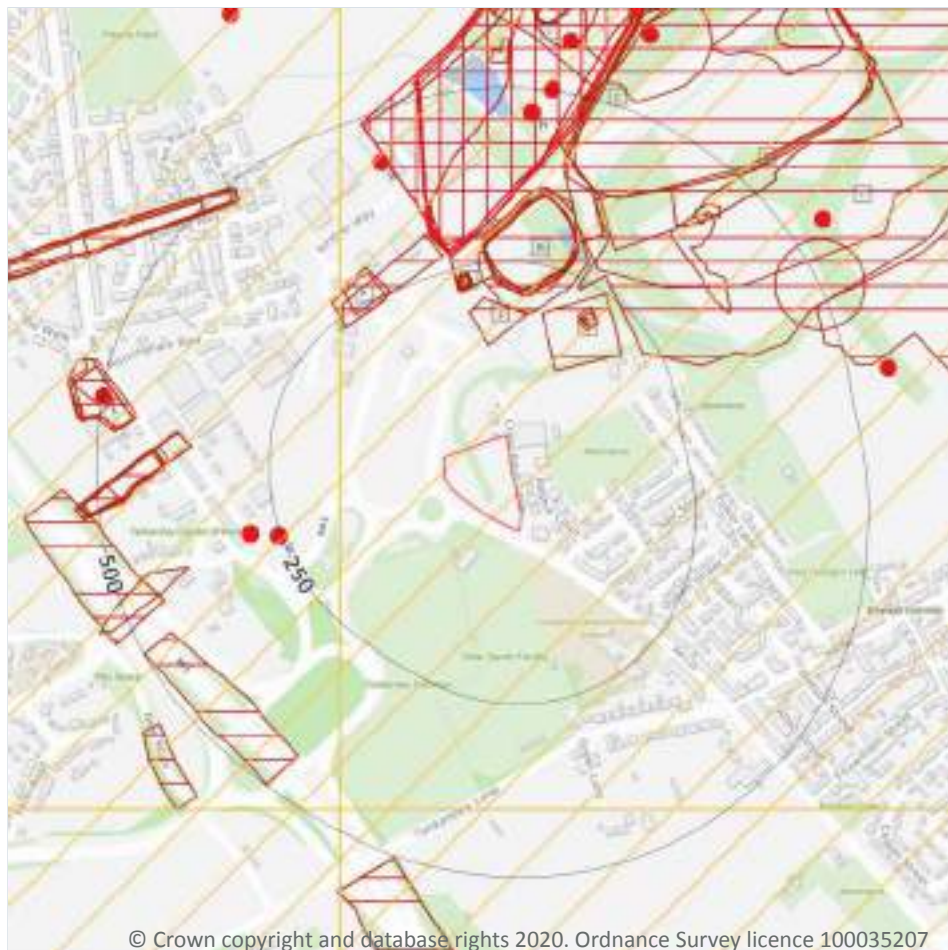
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 99**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

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

This data is sourced from Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m

5

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 100**

ID	Location	Details	Description
G	253m W	Name: Knoll Drift Mine Address: Tankersley Common, HOYLAND, South Yorkshire Commodity: Coal, Deep Status: Ceased	Type: 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) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
G	291m W	Name: Knoll Drift Mine Address: Tankersley Common, HOYLAND, South Yorkshire Commodity: Coal, Deep Status: Ceased	Type: 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) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
9	430m N	Name: Rockingham OCCS Address: Hoyland, BARNSLEY, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	464m N	Name: Rockingham Colliery, No. 1 Shaft Address: Hoyland, BARNSLEY, South Yorkshire Commodity: Coal, Deep Status: Ceased	Type: 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) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
L	497m W	Name: Birdwell Address: Hoyland, BARNSELEY, South Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	25
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 100**

ID	Location	Land Use	Year of mapping	Mapping scale
A	117m NE	Slurry Ponds	1977	1:10000
2	132m N	Refuse Heap	1977	1:10000
B	178m N	Unspecified Disused Tip	1987	1:10000
A	188m NE	Sewage Tanks	1938	1:10560
A	194m NE	Sewage Tanks	1951	1:10560
A	195m NE	Sewage Tanks	1948	1:10560
A	195m NE	Sewage Tanks	1948	1:10560
B	201m N	Reservoir	1977	1:10000
C	202m N	Colliery	1948	1:10560
C	202m N	Colliery	1948	1:10560
B	204m N	Reservoir	1938	1:10560
B	204m N	Reservoir	1903	1:10560
B	204m N	Reservoir	1891	1:10560
B	207m N	Reservoir	1948	1:10560
B	211m N	Water Body	1966	1:10560
B	211m N	Reservoir	1951	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	216m N	Filter Beds	1903	1:10560
D	216m N	Filter Beds	1938	1:10560
D	218m N	Filter Beds	1948	1:10560
D	218m N	Filter Beds	1948	1:10560
D	223m N	Filter Beds	1951	1:10560
E	229m NE	Refuse Heap	1977	1:10000
F	235m NW	Cuttings	1938	1:10560
F	235m NW	Refuse Heap	1987	1:10000
F	242m NW	Cuttings	1951	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

8

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 100**

ID	Location	Land Use	Year of mapping	Mapping scale
I	268m N	Colliery	1938	1:10560
I	268m N	Colliery	1903	1:10560
I	273m N	Colliery	1977	1:10000
I	277m N	Colliery	1966	1:10560
I	277m N	Colliery	1951	1:10560
I	287m N	Colliery	1891	1:10560
-	842m W	Colliery	1951	1:10560
-	918m N	Unspecified Workings	1987	1:10000

This data is sourced from Ordnance Survey/Groundsure.



18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

4

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 100**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Iron Ore (Bedded)	B	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	149m W	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
6	402m S	Not available	Iron Ore (Bedded)	B	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
12	473m SW	Not available	Iron Ore (Bedded)	B	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

This data is sourced from the British Geological Survey.



18.7 Mining cavities

Records within 1000m**0**

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

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site**0**

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

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site**1**

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site**0**

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

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



18.11 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

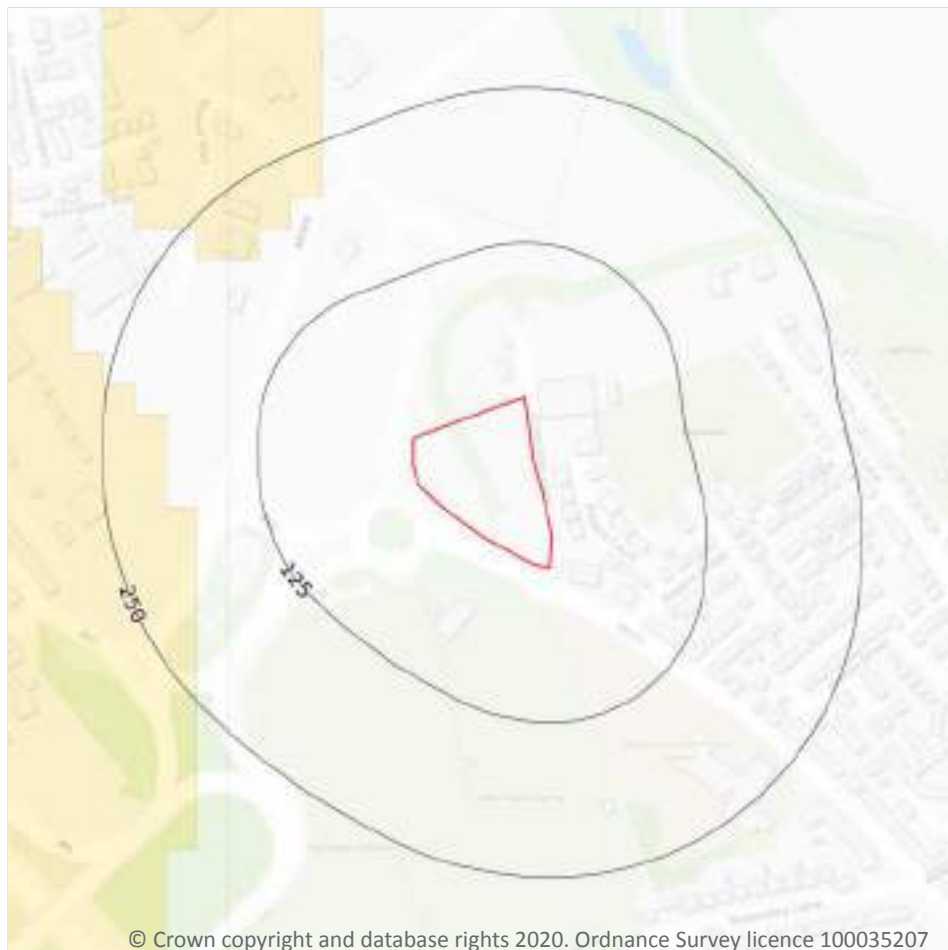
18.13 Clay mining

Records on site	0
-----------------	---

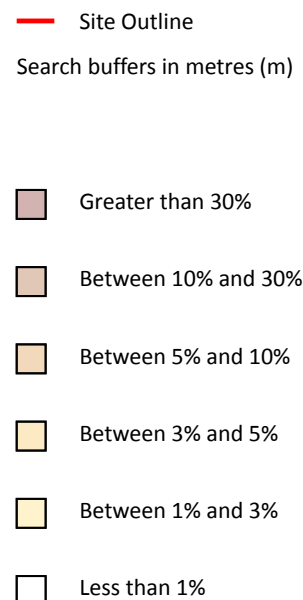
Generalised areas that may be affected by kaolin and ball clay extraction.

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

19 Radon



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19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 107**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None**

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

6

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
4m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
45m SE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
47m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

18

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

Features are displayed on the Railway infrastructure and projects map on **page 110**

Location	Land Use	Year of mapping	Mapping scale
167m N	Railway Sidings	1955	1250
226m NW	Railway Sidings	1977	10000
231m NW	Railway Sidings	1951	10560
232m NW	Railway Sidings	1977	10000
233m NW	Railway Sidings	1948	10560
235m NW	Railway Sidings	1965	10560
235m NW	Railway Sidings	1966	10560
235m NW	Railway Sidings	1951	10560
238m NW	Railway Sidings	1931	2500
239m NW	Railway Sidings	1906	2500
239m NW	Railway Sidings	1893	2500
240m NW	Railway Sidings	1938	10560
240m NW	Railway Sidings	1903	10560
243m NW	Railway Sidings	1973	2500
246m NW	Railway Sidings	1974	1250
249m NW	Railway Sidings	1955	2500
250m NW	Railway Sidings	1955	1250



Location	Land Use	Year of mapping	Mapping scale
250m NW	Railway Sidings	1956	2500

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0
----------------------------	----------

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0
----------------------------	----------

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

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0
----------------------------	----------

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0
----------------------------	----------

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m**0**

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m**0**

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

This data is sourced from HS2 Ltd.



Data providers

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

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Site Details:

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Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Surveyed 1893
Revised N/A
Edition 1893
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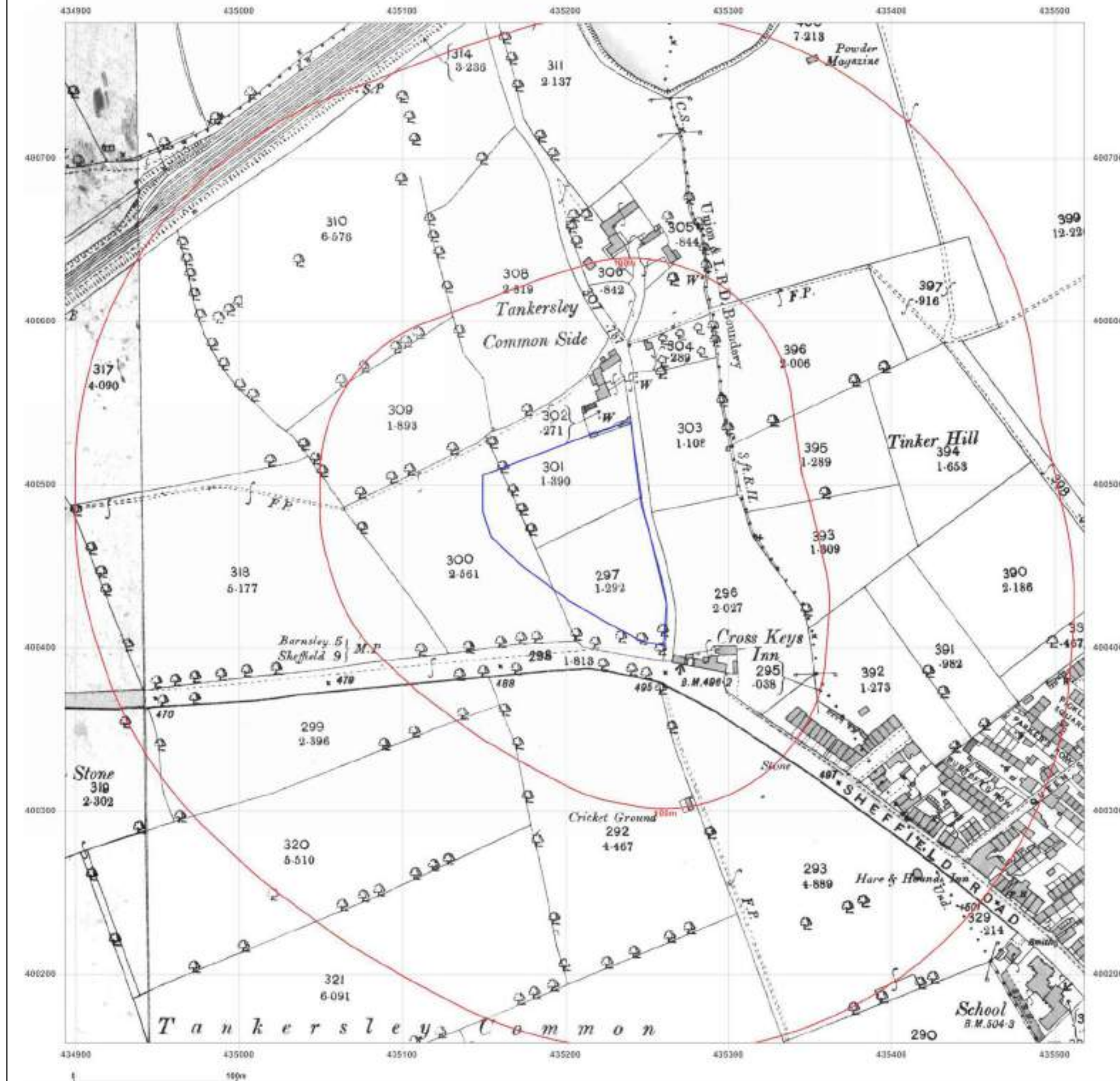


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Map Name: County Series

Map date: 1905-1906

Scale: 1:2,500

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Edition N/A
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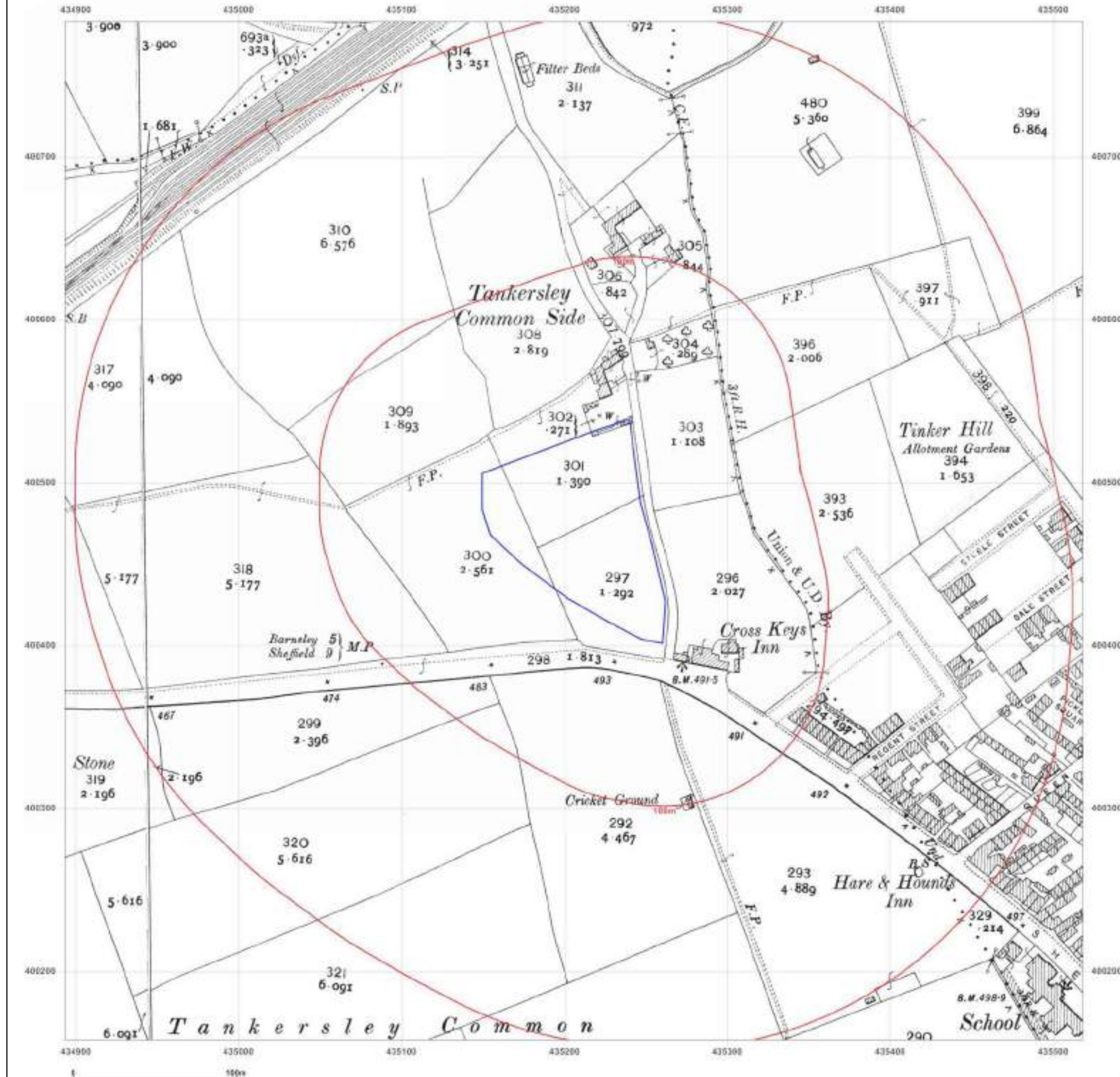
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Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1931

Scale: 1:2,500

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Surveyed 1890
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Edition 1931
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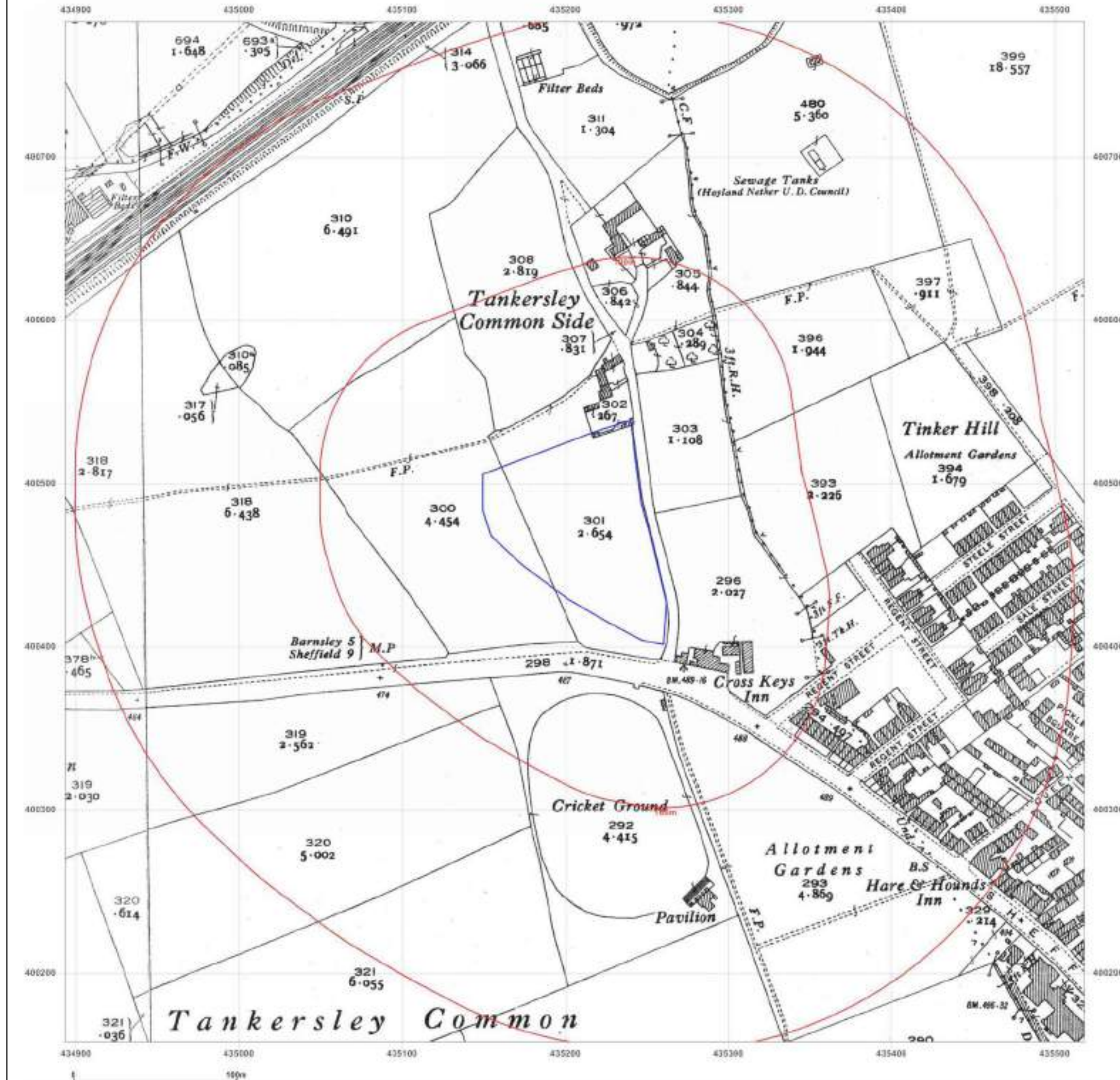
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Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 1955

Scale: 1:1,250

Printed at: 1:2,000



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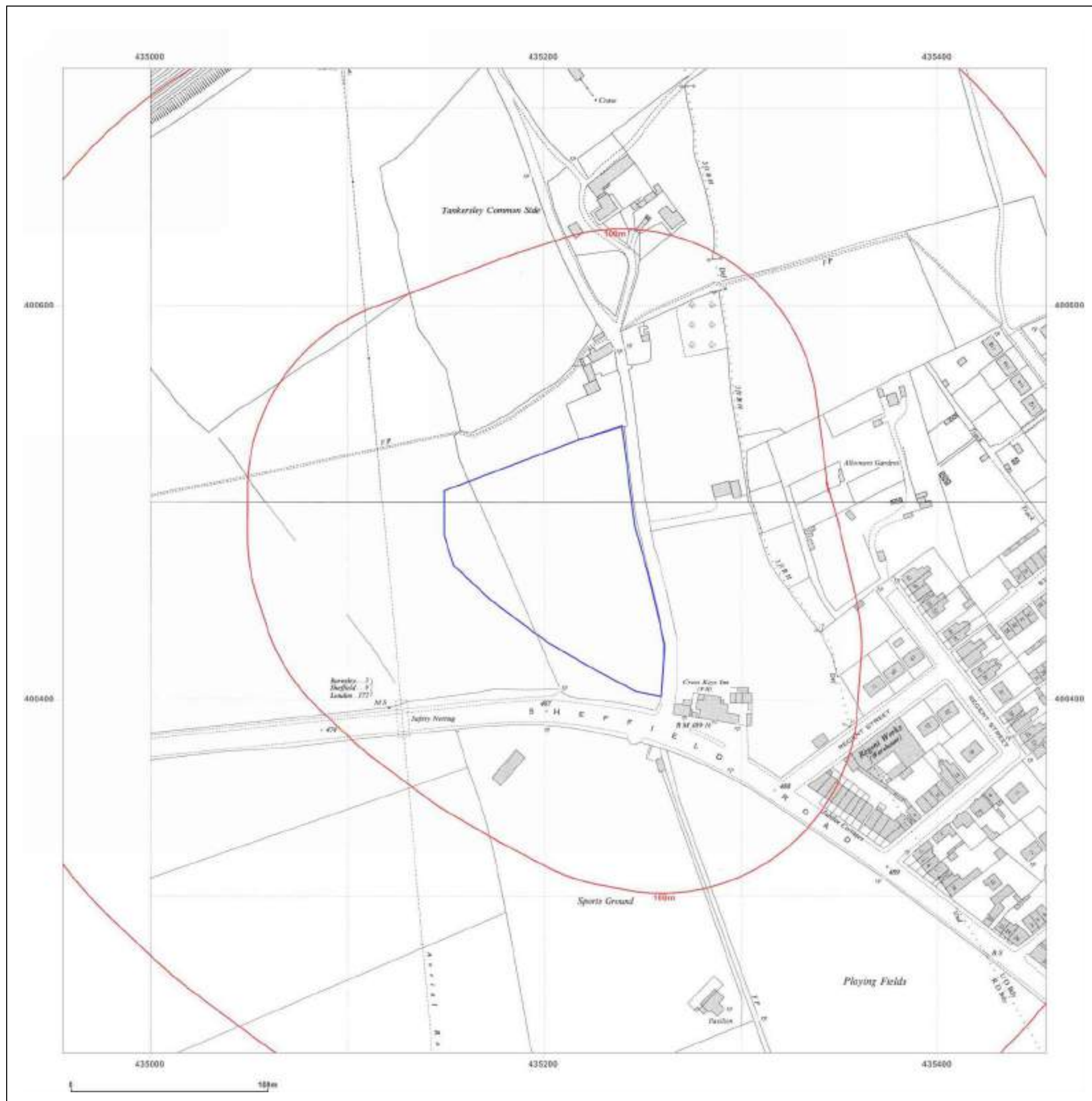


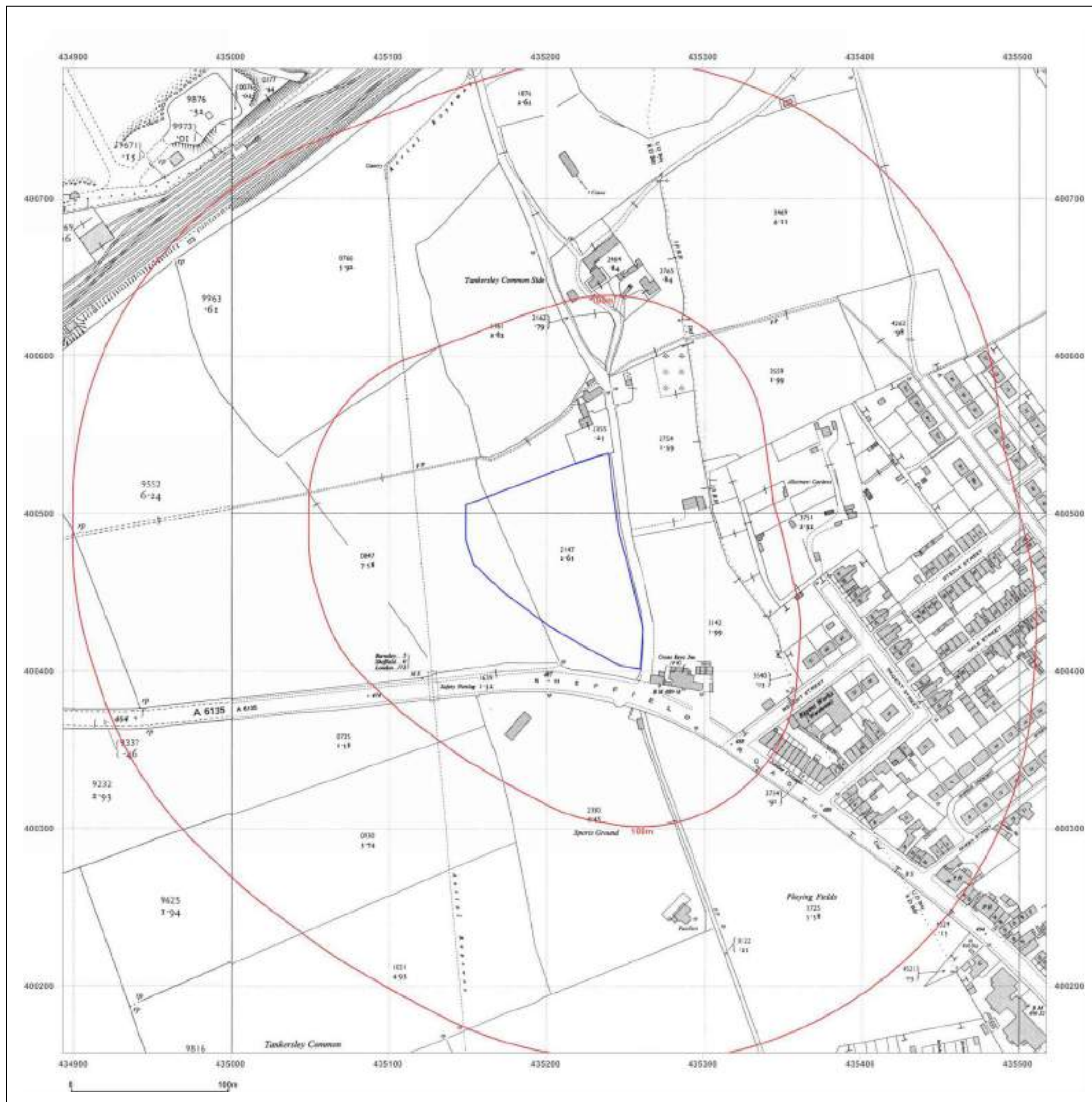
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Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 1955-1956

Scale: 1:2,500

Printed at: 1:2,500



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Surveyed 1955
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Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 1973-1974

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1955
 Revised 1973
 Edition N/A
 Copyright 1974
 Levelled 1963



Surveyed 1955
 Revised 1972
 Edition N/A
 Copyright 1973
 Levelled 1963



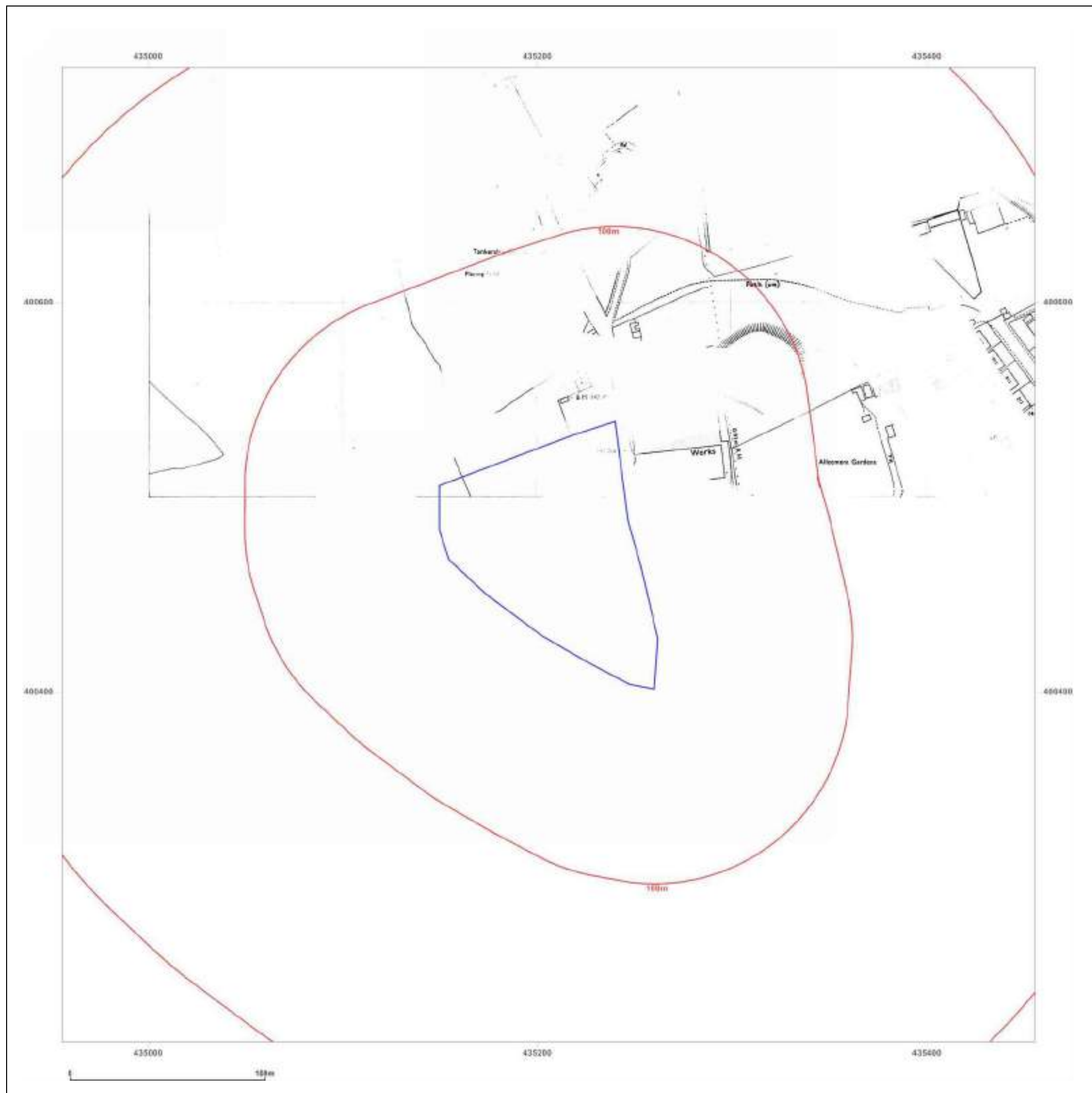
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Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 1986

Scale: 1:1,250

Printed at: 1:2,000



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Map Name: National Grid

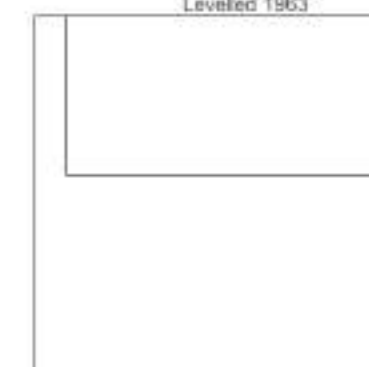
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Scale: 1:1,250

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Surveyed 1963
Revised 1966
Edition N/A
Copyright 1986
Levelled 1963

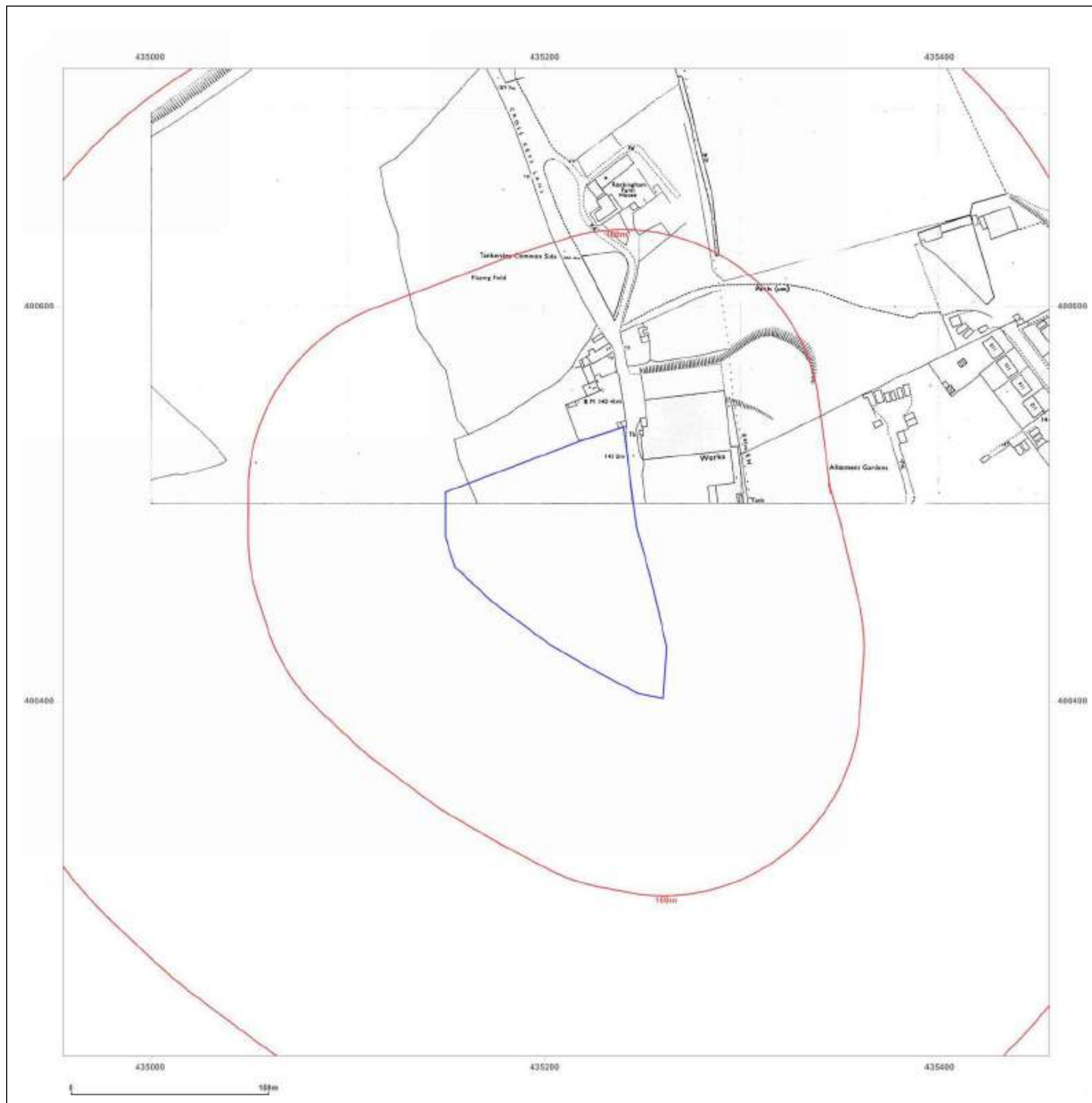


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Map Name: National Grid

Map date: 1993

Scale: 1:1,250

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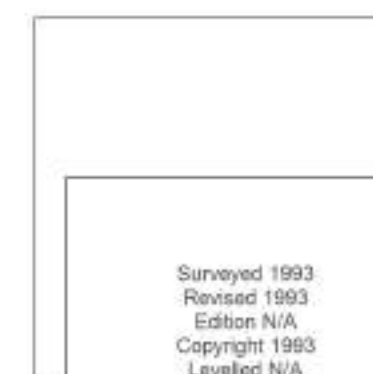
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Map Name: National Grid

Map date: 1993

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Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1855

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1851
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Edition 1855
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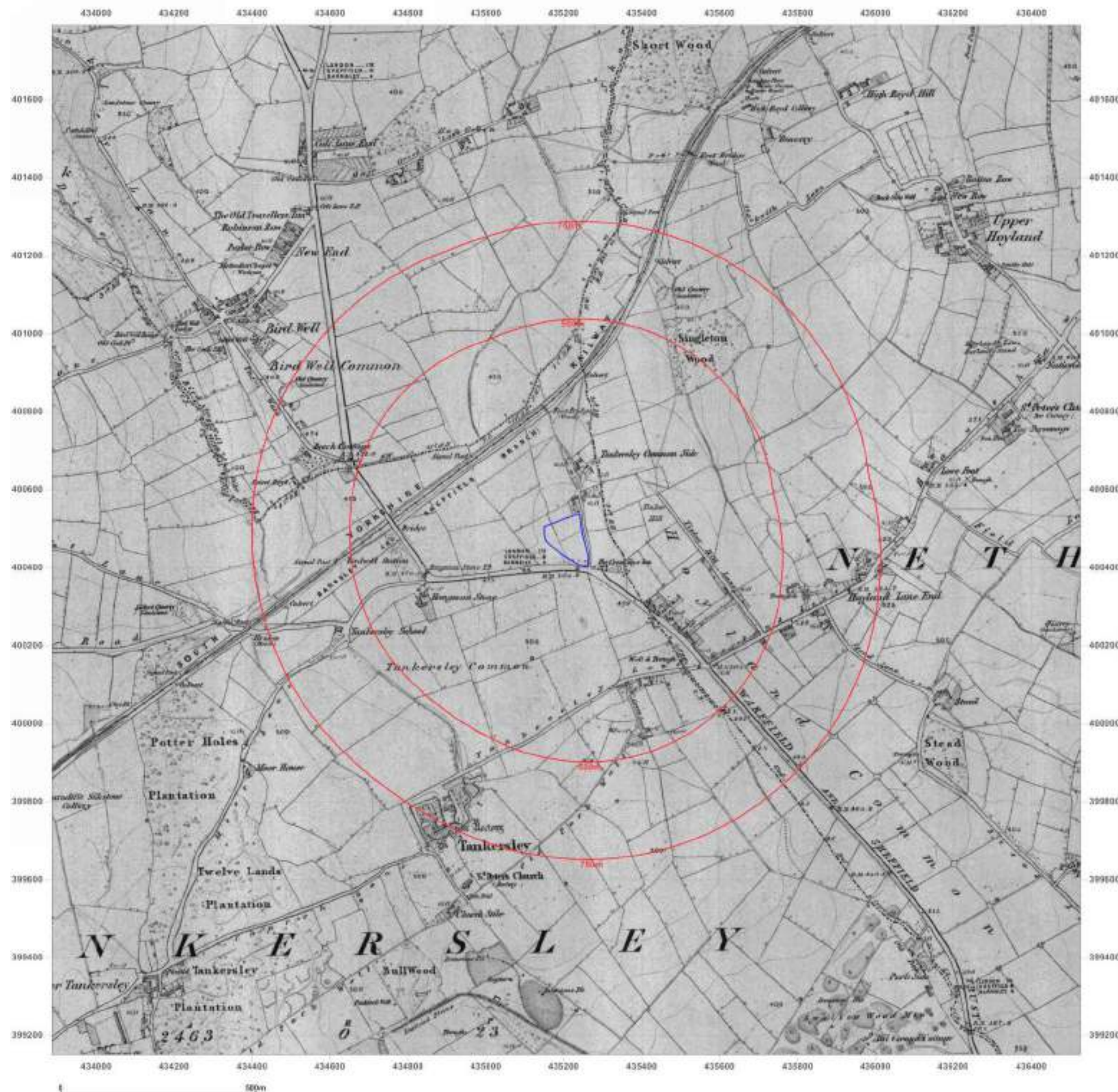
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Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1891-1894

Scale: 1:10,560

Printed at: 1:10,560



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 Edition 1891
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Surveyed 1891
 Revised N/A
 Edition 1894
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 Levelled N/A



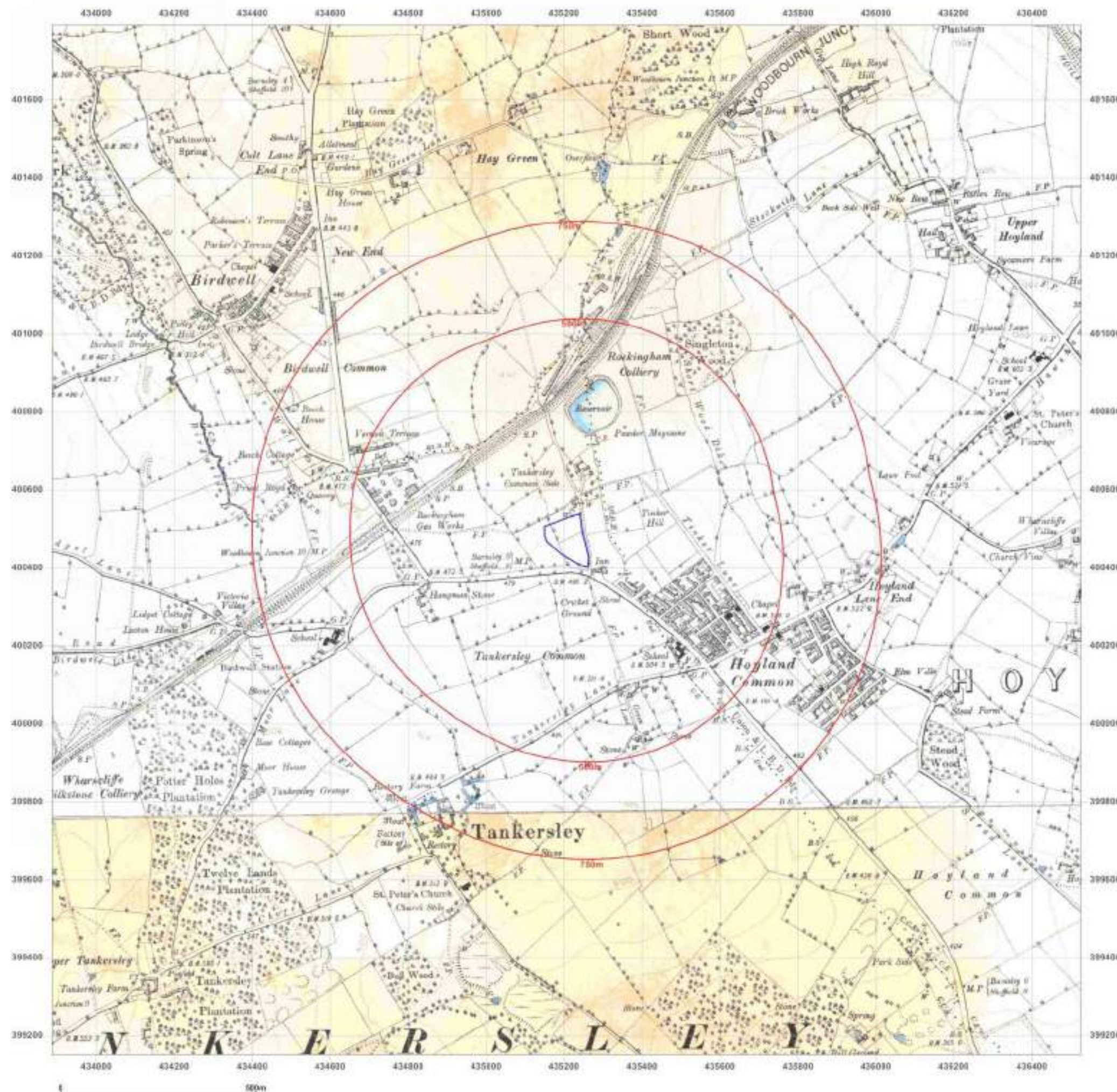
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Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1903

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
 Revised 1903
 Edition 1903
 Copyright N/A
 Levelled N/A

Surveyed 1891
 Revised 1903
 Edition 1903
 Copyright N/A
 Levelled N/A



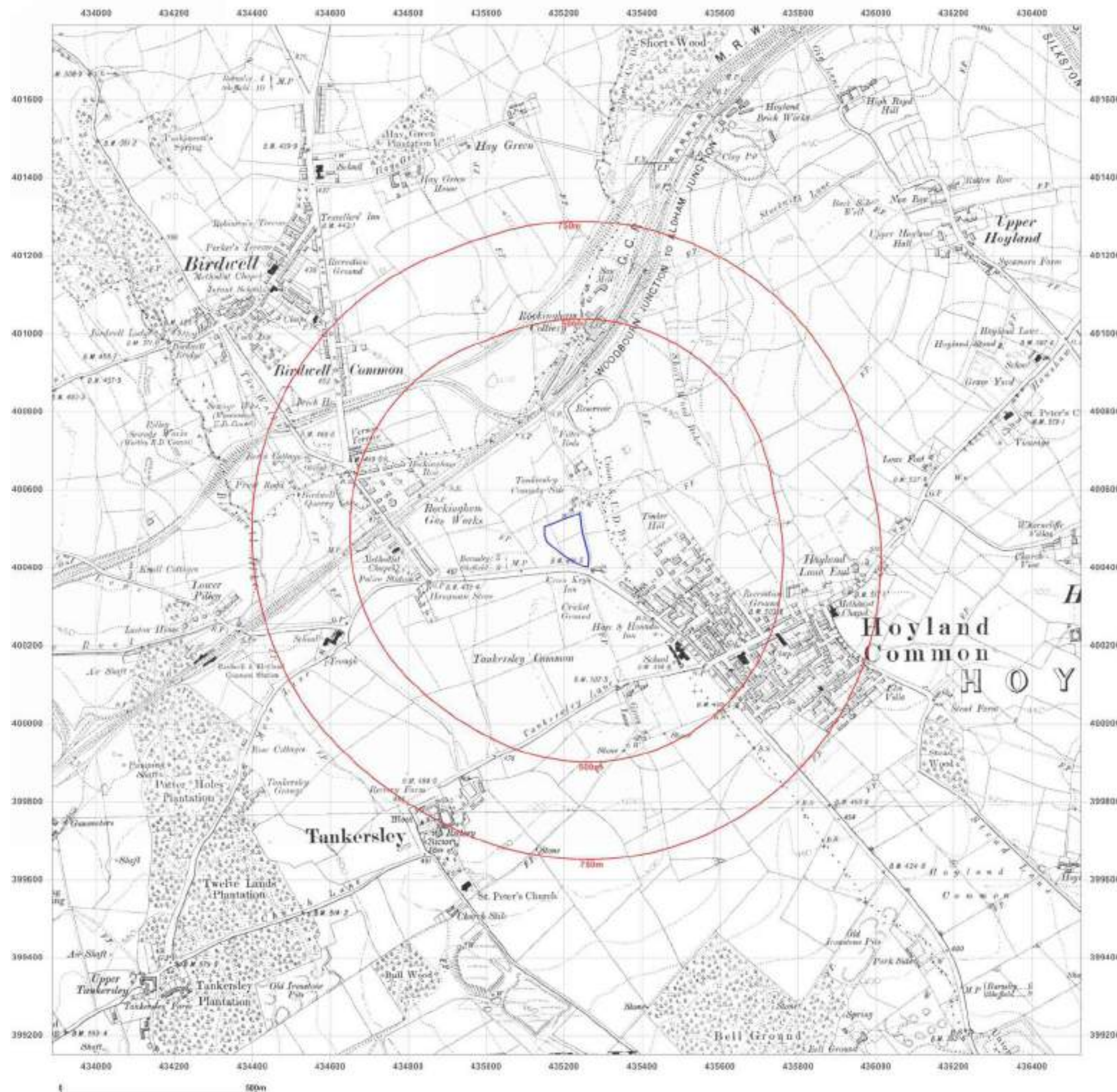
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Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1929

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1929
Edition 1929
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Levelled 1915

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



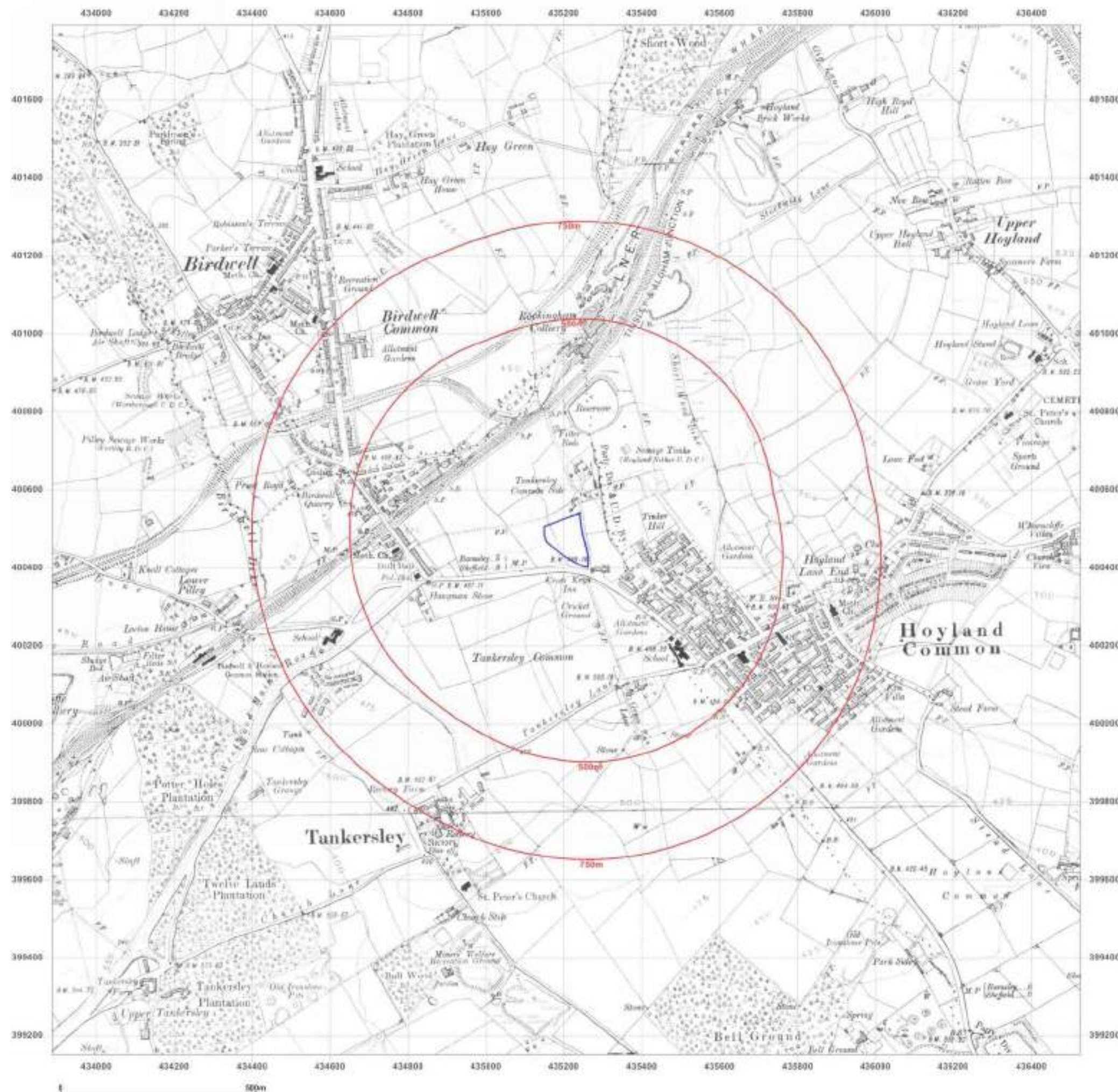
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Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1938
Edition 1938
Copyright N/A
Levelled 1929

Surveyed 1851
Revised 1938
Edition 1938
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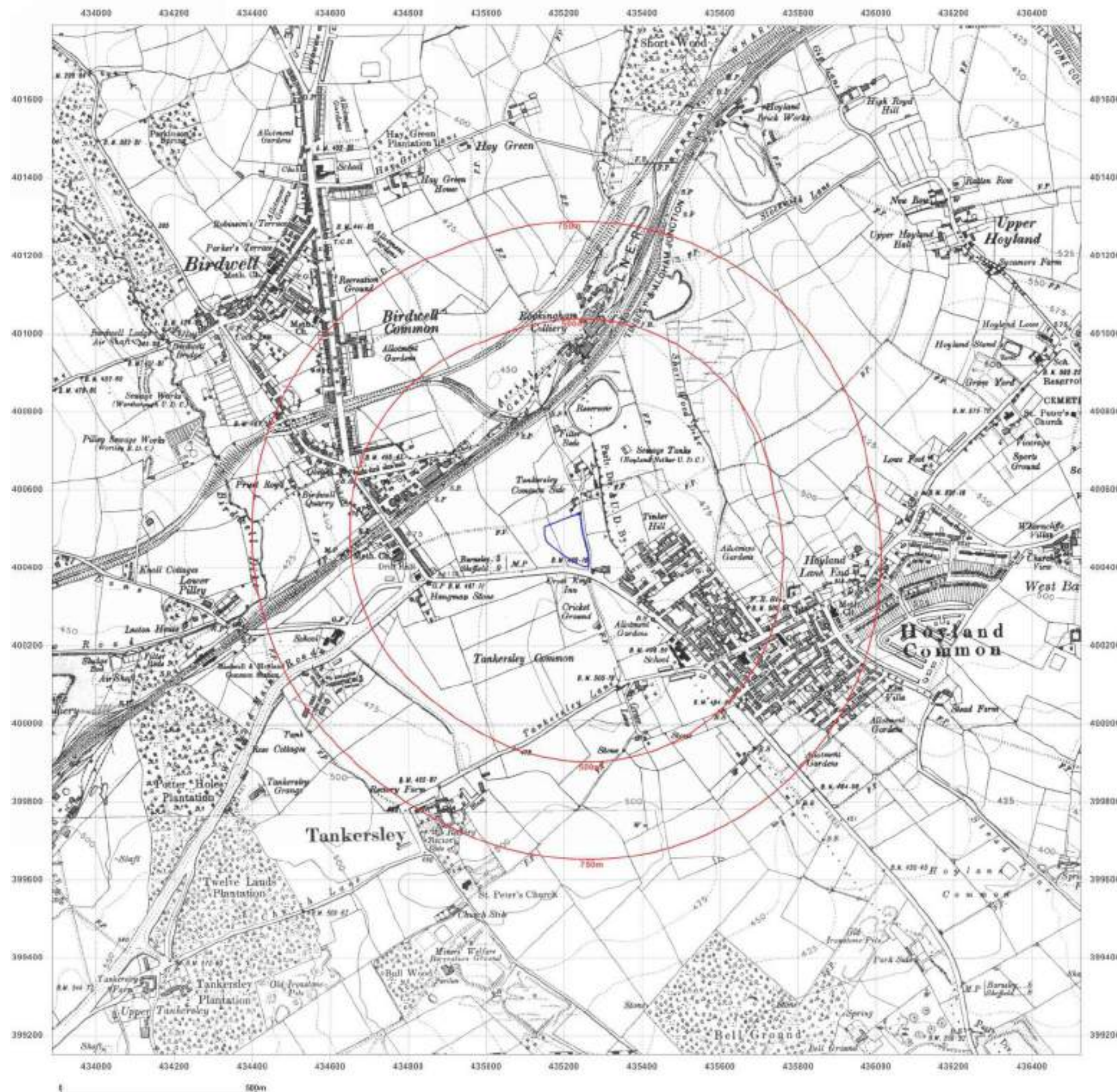
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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1948
Edition 1948
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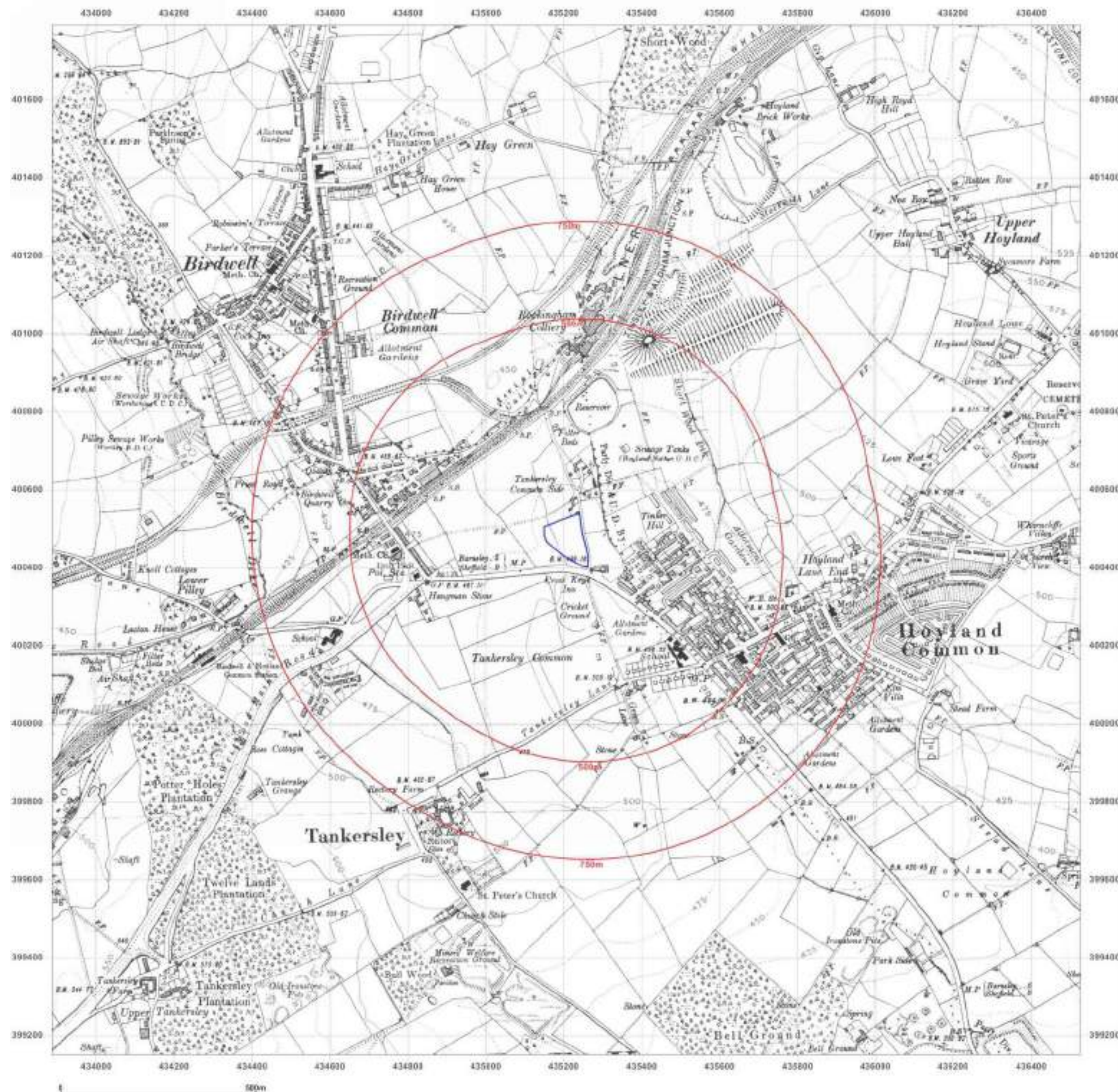
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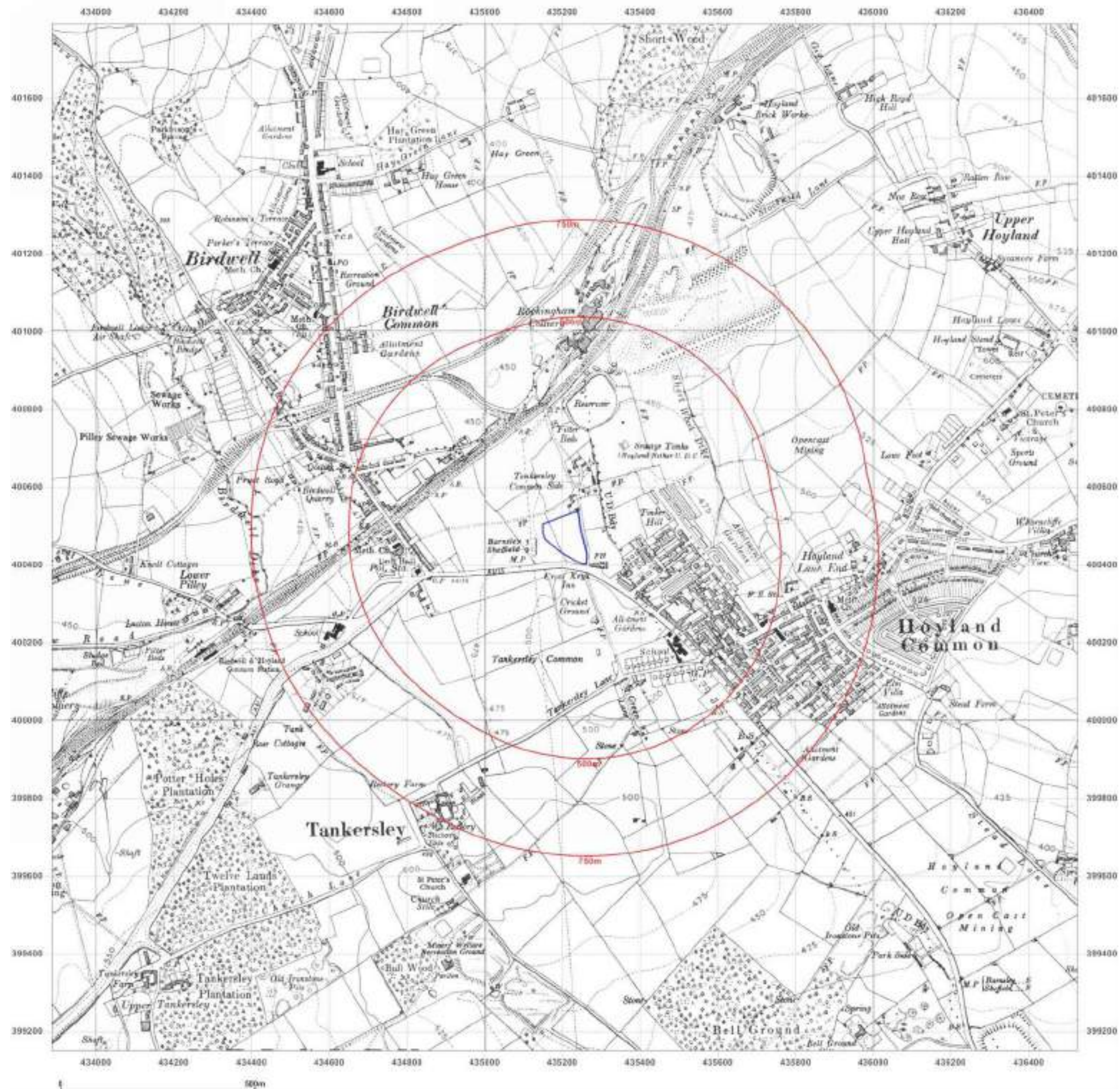


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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: Provisional

Map date: 1951-1956

Scale: 1:10,560

Printed at: 1:10.560



Surveyed N/A
Revised 1955
Edition N/A
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Surveyed 1951
Revised 1951
Edition N/A
Copyright 1951
Levelled N/A

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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: Provisional

Map date: 1965-1966

Scale: 1:10,560

Printed at: 1:10,560



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 Edition N/A
 Copyright 1965
 Levelled N/A



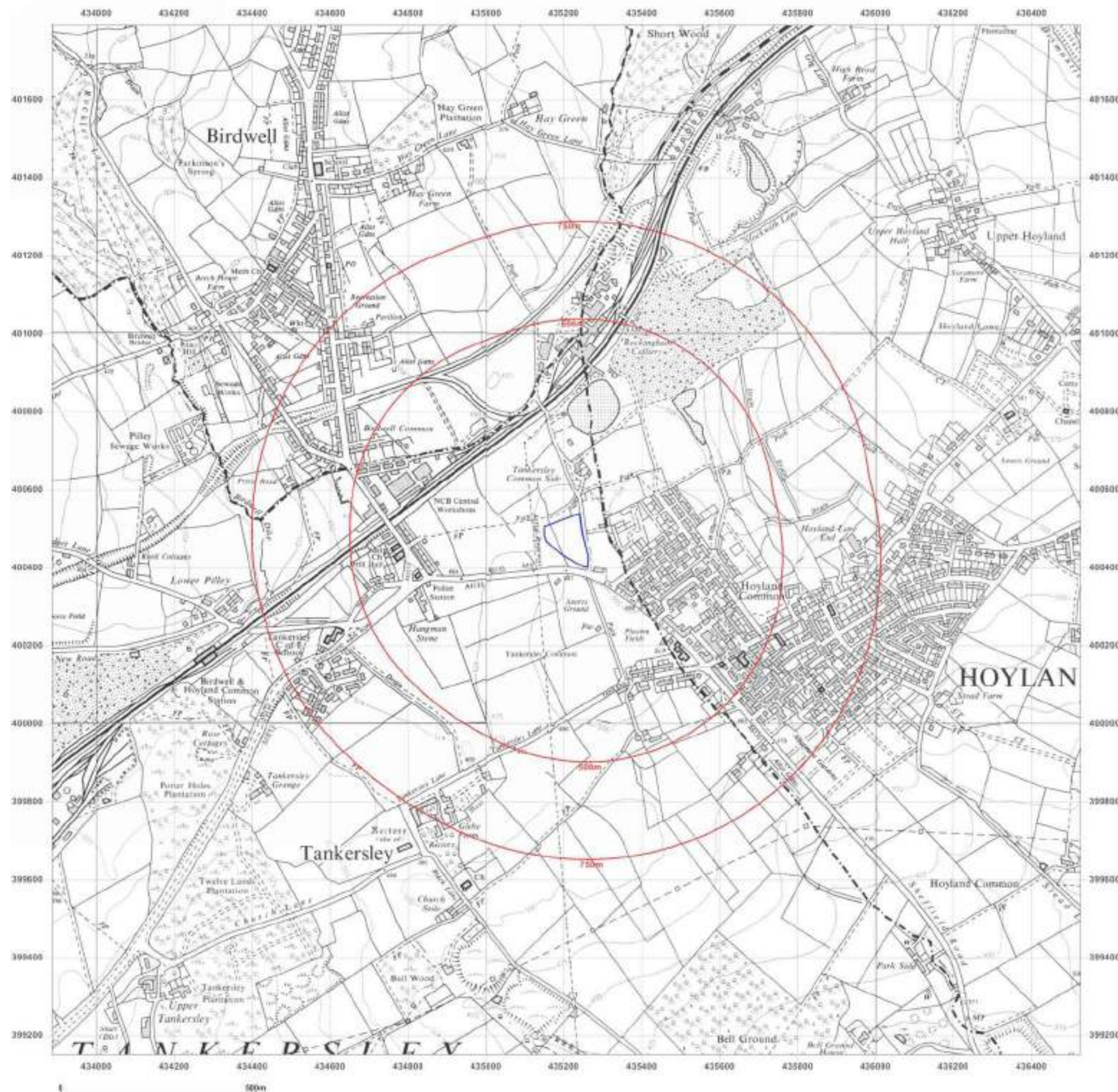
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Production date: 14 December 2020

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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 1977-1980

Scale: 1:10,000

Printed at: 1:10,000



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 Edition N/A
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Surveyed 1978
 Revised 1977
 Edition N/A
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 Levelled 1978

Surveyed 1980
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 Edition N/A
 Copyright N/A
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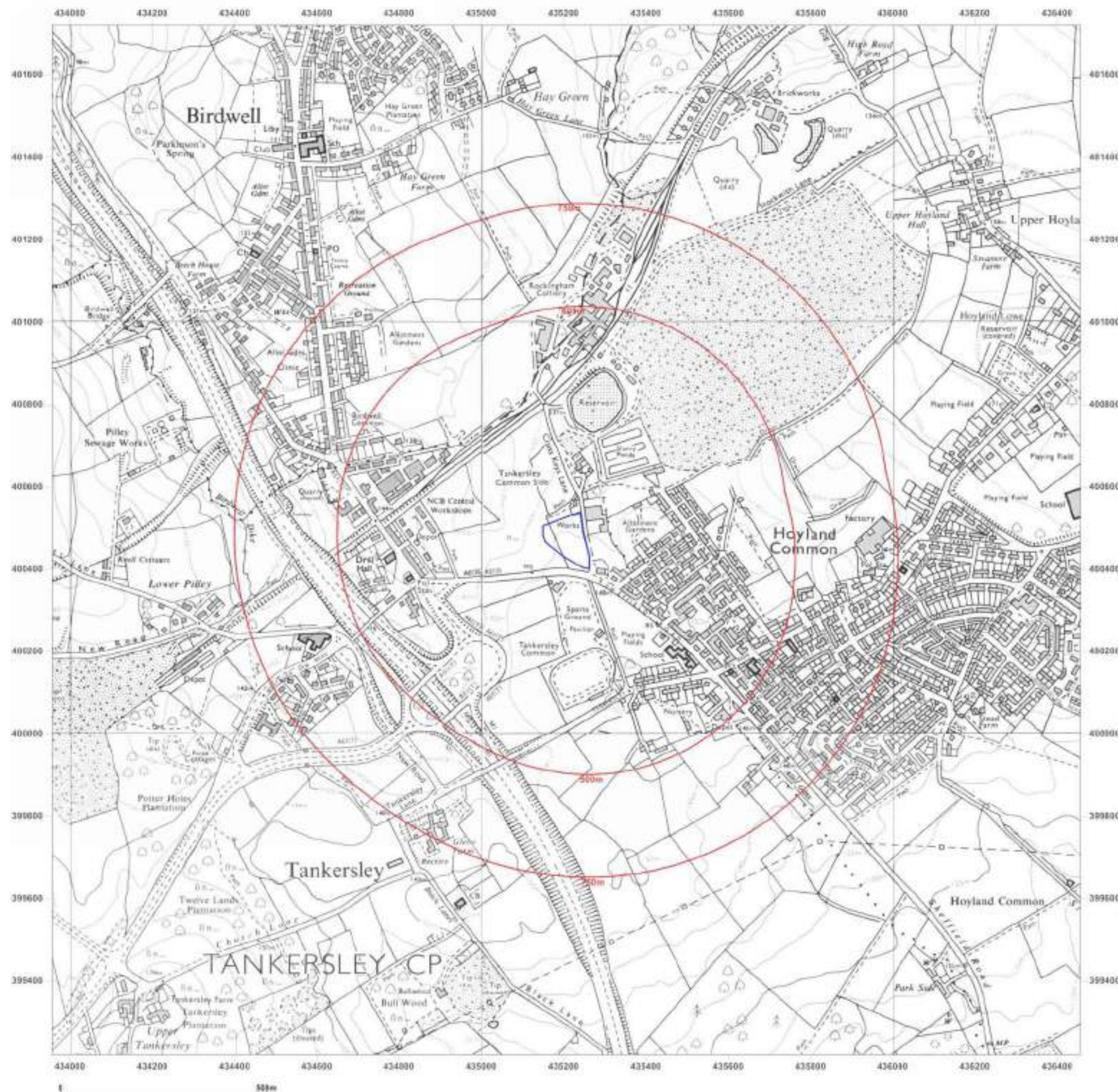


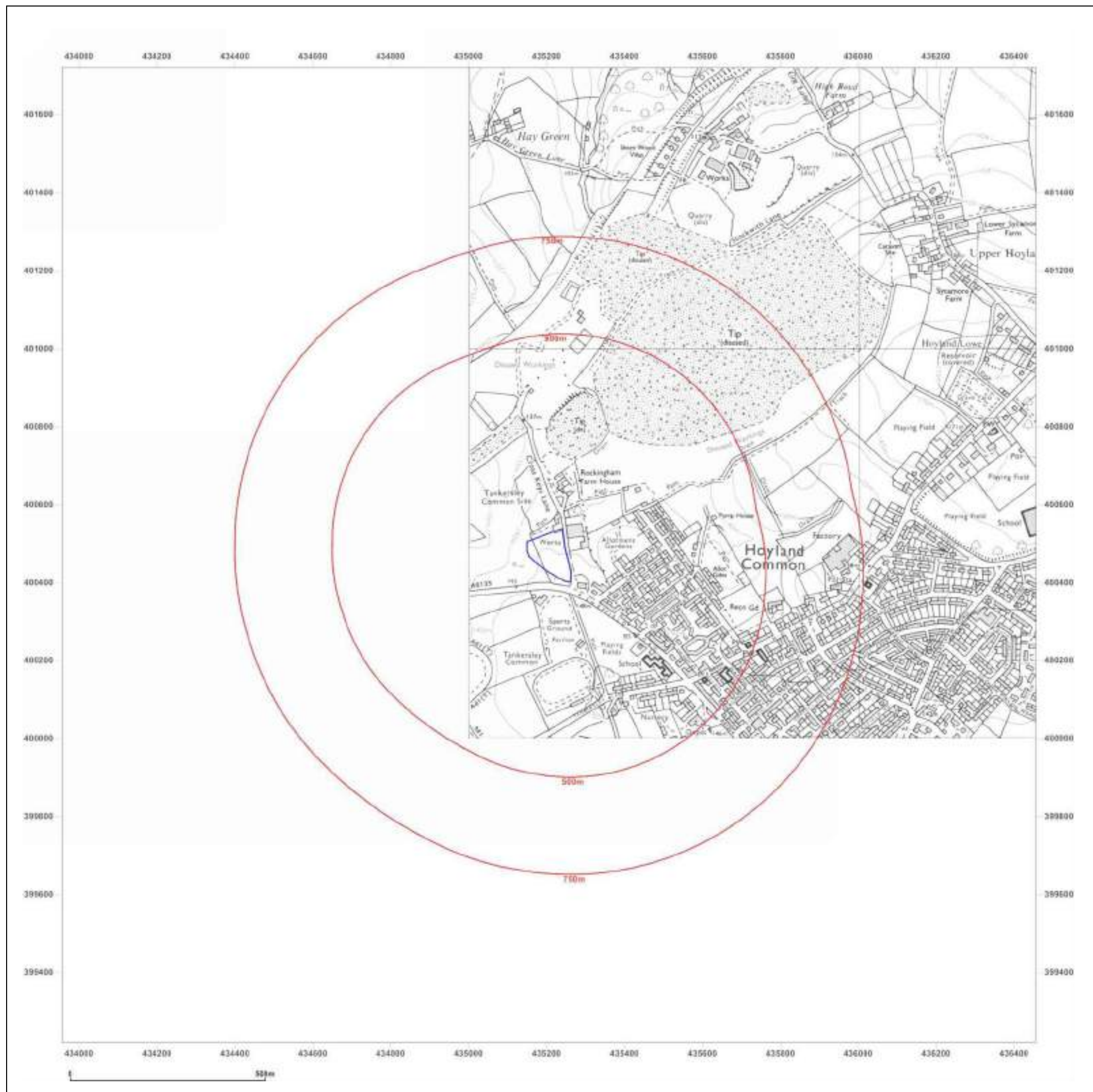
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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: National Grid

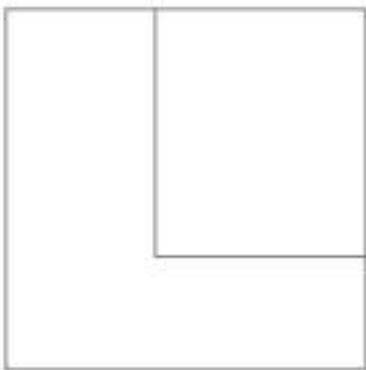
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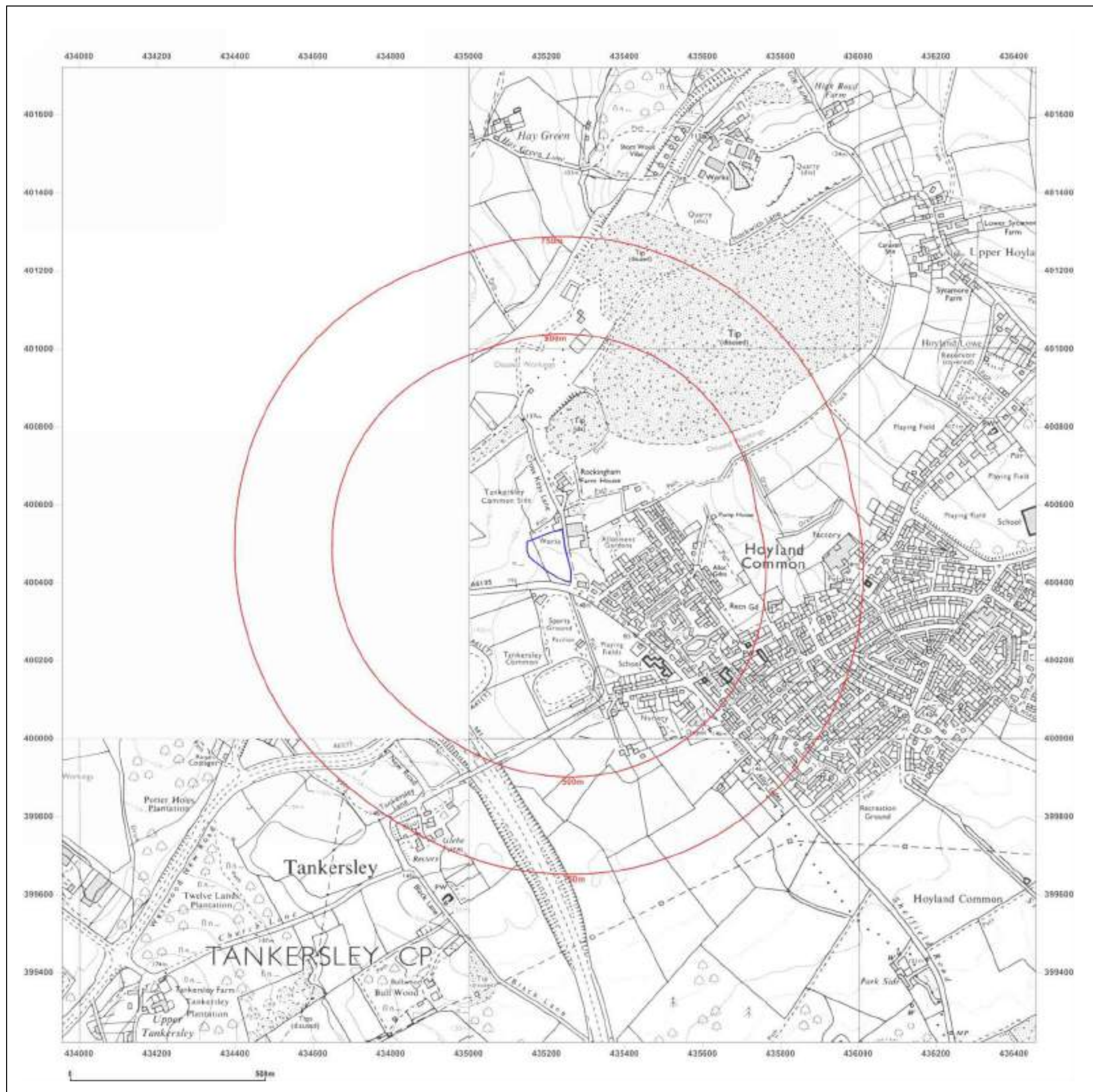
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Revised 1987
Edition N/A
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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: National Grid

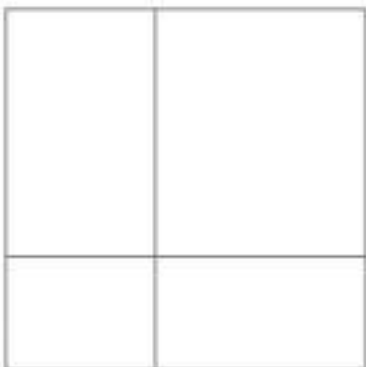
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Printed at: 1:10,000



Surveyed 1986
Revised 1987
Edition N/A
Copyright 1988
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Surveyed 1991
Revised 1992
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Site Details:

Hoyland, S74 0QA

Client Ref: 33420
Report Ref: CMAPS-GDP-925464-33420-141220HIS
Grid Ref: 435206, 400470

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



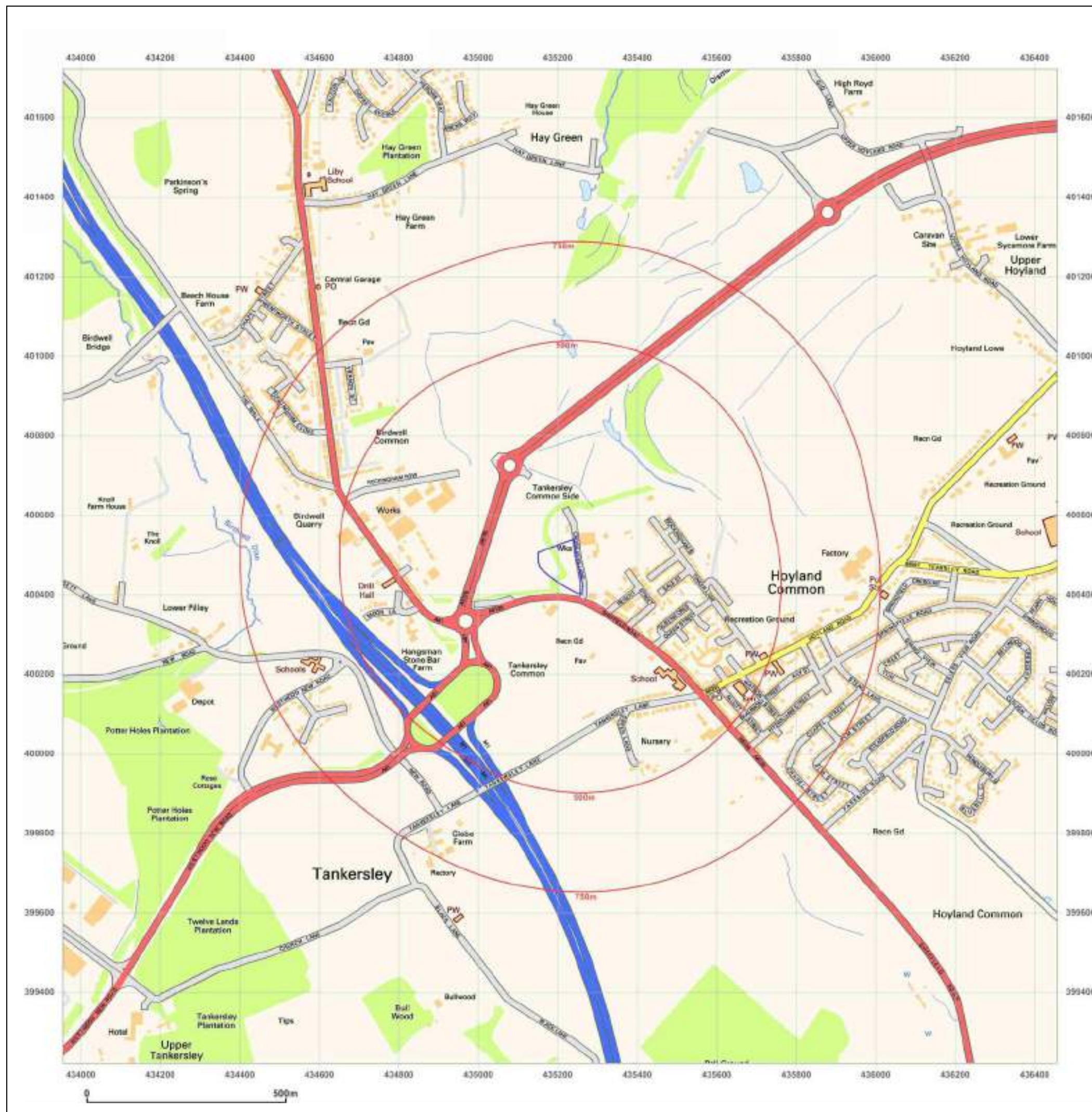
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Production date: 14 December 2020

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Site Details:

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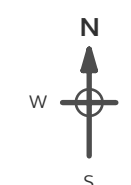
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Map Name: National Grid

Map date: 2010

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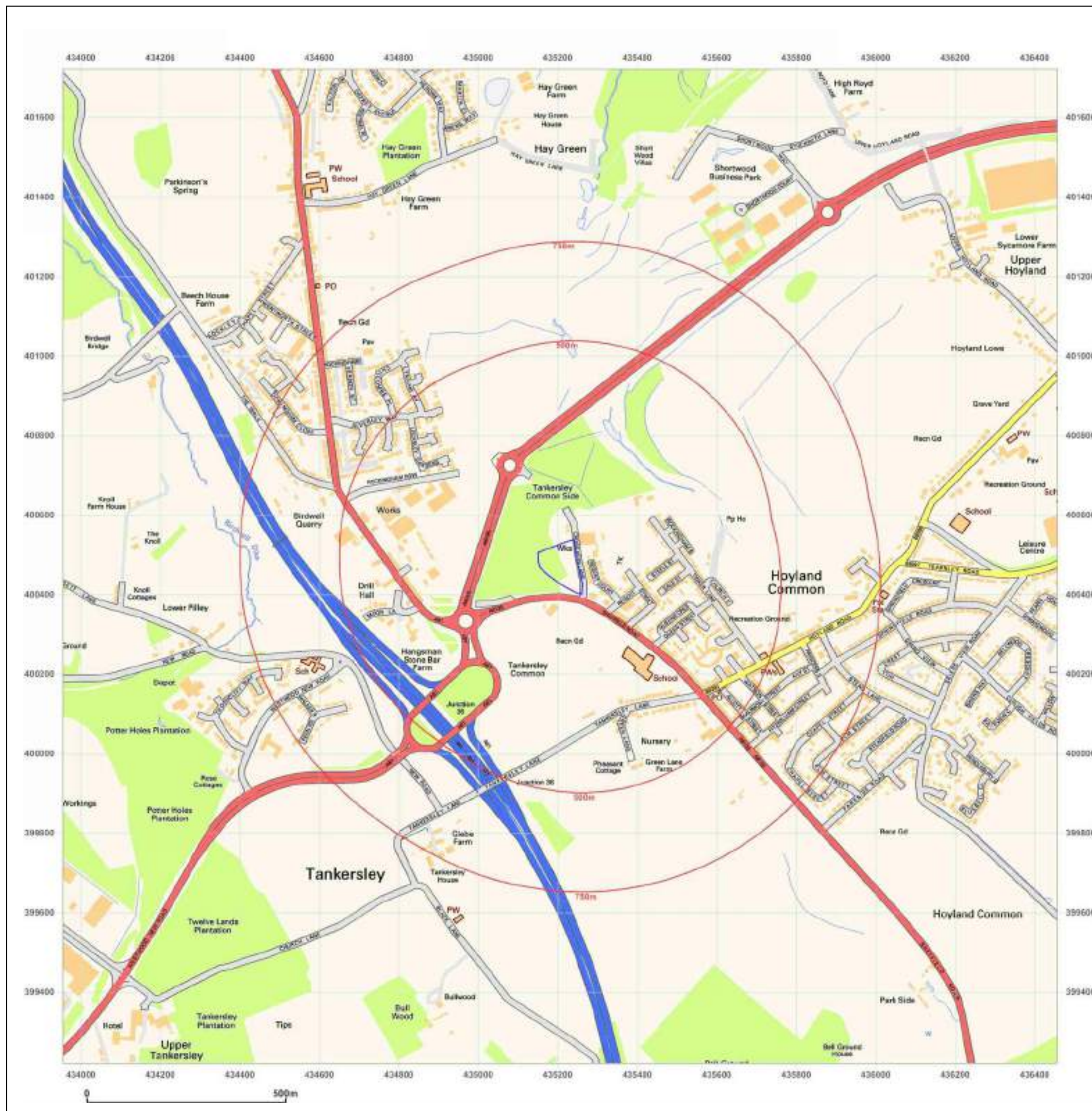


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Brownfield Consulting & Development

Site Details:

Hoyland, S74 0QA

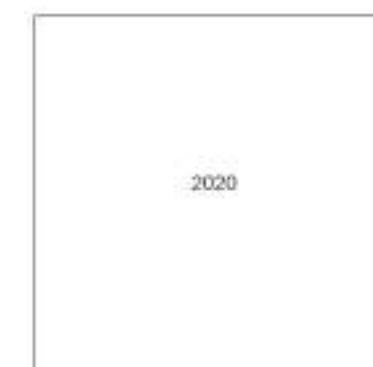
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Map Name: National Grid

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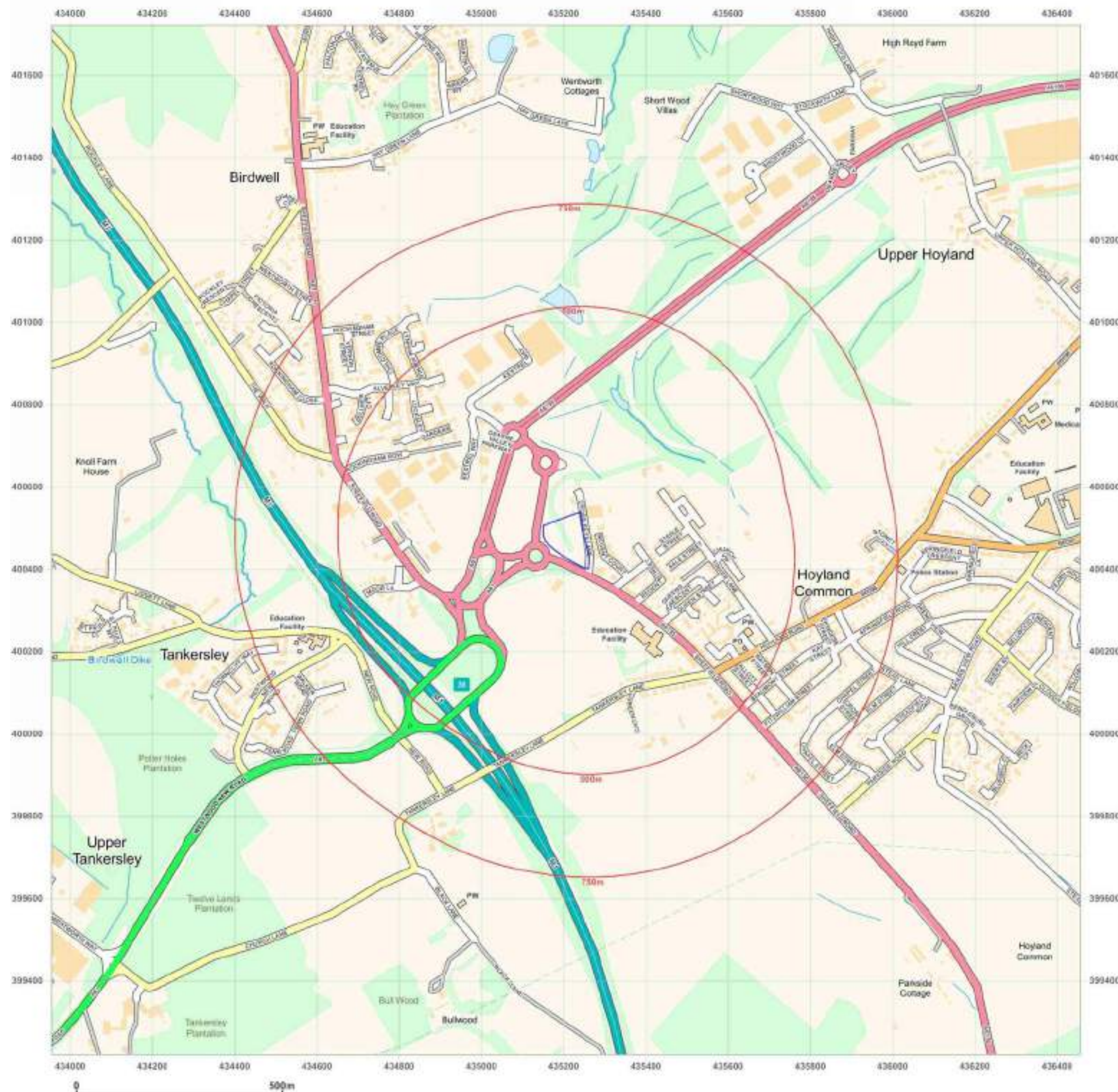


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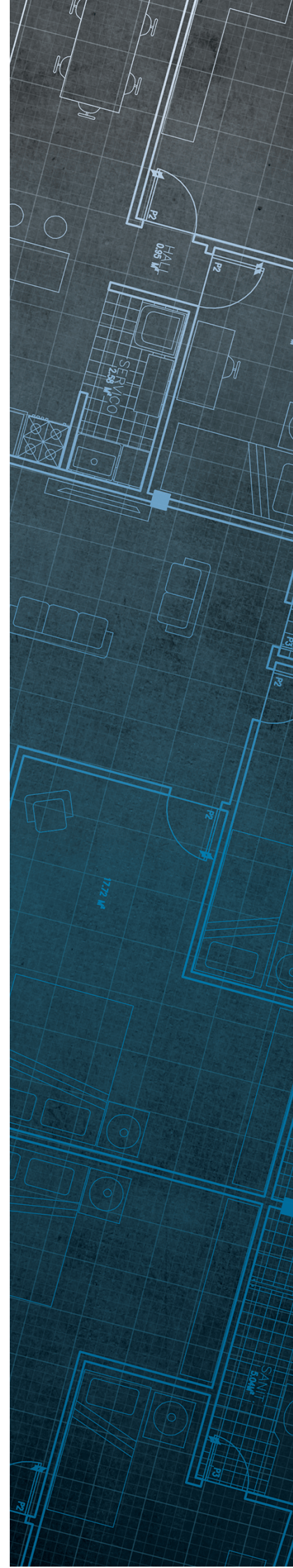
The Coal
Authority

Consultants Coal Mining Report

Land Adjacent To Cross Keys Lane
Hoyland
Cross Keys Lane
Hoyland
Barnsley
South Yorkshire
S74 0PY

Date of enquiry: 4 January 2021
Date enquiry received: 4 January 2021
Issue date: 4 January 2021

Our reference: 51002345159001
Your reference: 2074



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

Jay Fox

Enquiry address

Land Adjacent To Cross Keys Lane Hoyland
Cross Keys Lane
Hoyland
Barnsley
South Yorkshire
S74 0PY

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

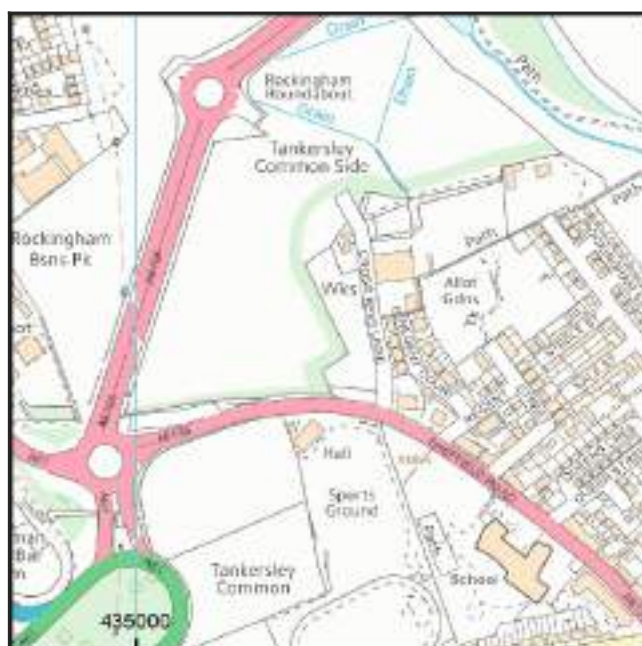
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
ROCKINGHAM	LIDGETT	Coal	64RA	72	Beneath Property	3.8	North-East	66	1942
ROCKINGHAM	FLOCKTON THICK	Coal	64RD	140	North-West	2.9	North-East	104	1951
ROCKINGHAM	LOW FENTON	Coal	64RK	190	Beneath Property	3.4	North-East	137	1948
unnamed	TOP FENTON	Coal	64RH	191	Beneath Property	3.5	North-East	109	1920
unnamed	PARKGATE	Coal	64PM	210	Beneath Property	2.3	East	152	1885
unnamed	MIDDLETON MAIN	Coal	64RT	239	Beneath Property	3.7	North-East	102	1904
UNAMED	SILKSTONE	Coal	64SB	290	Beneath Property	3.5	North-East	180	1918
unnamed	WHINMOOR	Coal	64RY	338	Beneath Property	3.8	East	91	1948

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

17828	NE855	NE853
OC142	12953	NE856
NE851	NE612	NE573

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
SWALLOW WOOD	Coal	Yes	25.0	West	346

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the "Summary of findings" map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

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

Withdrawal of support notices

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.

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.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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VAT receipt

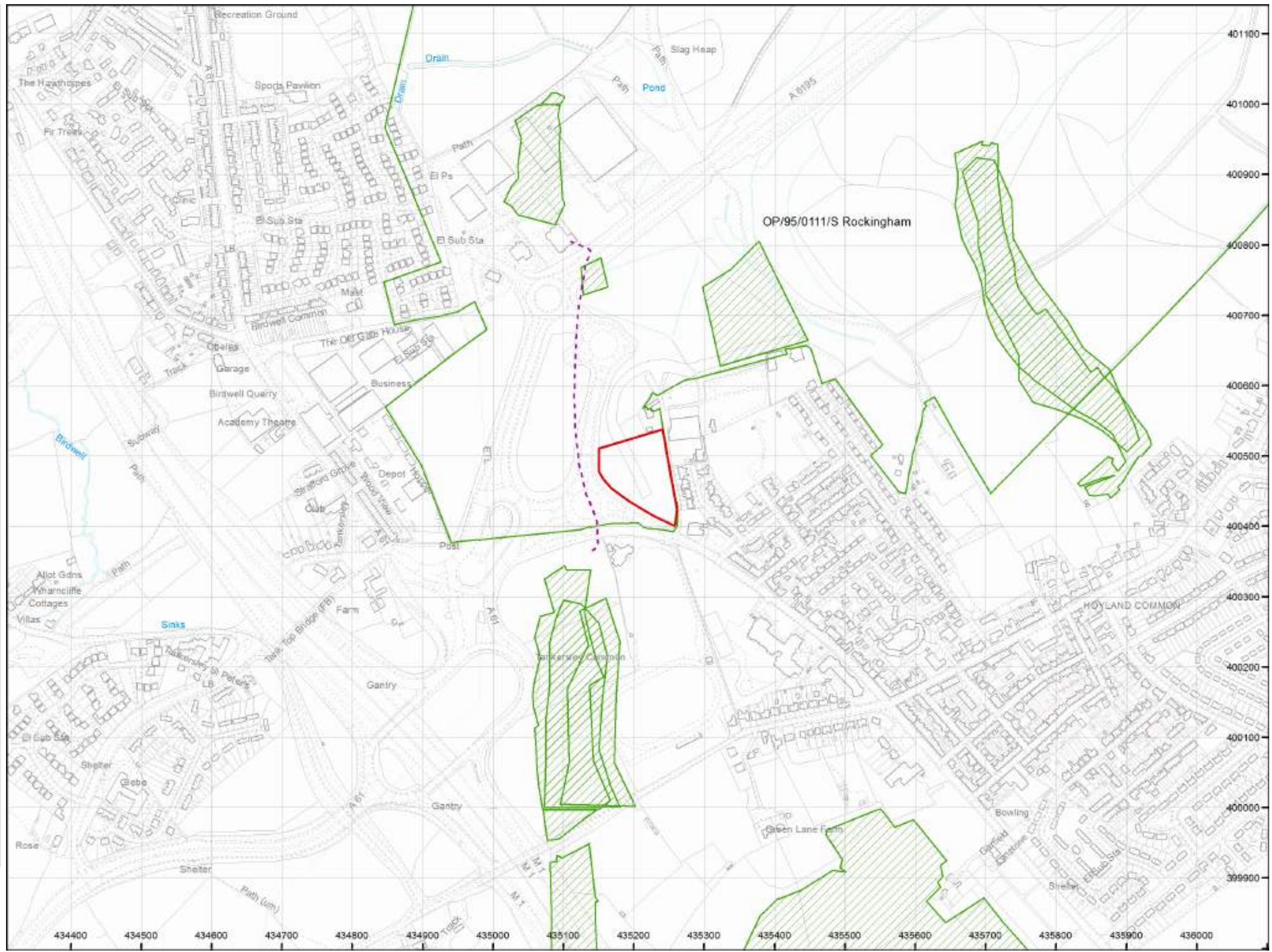
Issued by	The Coal Authority 200 Lichfield Lane Mansfield Nottinghamshire NG18 4RG
Tax point date	04 January 2021
Issued to	JAY FOX BILTONS FARM SOUTH SCARLE LANE SWINDERBY LINCOLN LINCOLNSHIRE LN6 9JA
Property search for	LAND ADJACENT TO CROSS KEYS LANE HOYLAND CROSS KEYS LANE HOYLAND BARNSELEY SOUTH YORKSHIRE S74 0PY
Reference number	51002345159001
Date of issue	04 January 2021
Cost	£112.13
VAT @ 20%	£22.43
Total received	£134.56
VAT registration	598 5850 68

The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Outcrop (Conjectured) 
- Opencast mine licence area 
- Unlicensed opencast site 

How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com



Appendix 3

Risk Assessment Methodology

Contaminated Land Risk Assessment Methodology

The following classification was published by the NHBC, EA, and CIEH (2008). This was developed from *DOE Guide to Risk Assessment and Risk Management for Environmental Protection and the Statutory Guidance on Contaminated Land* (Defra September 2006).

The methodology differs from that presented in *Contaminated Land Risk Assessment, A Guide to Good Practice* (CIRIA C552, 2001), particularly in terms of the definitions of classification of consequence, which includes consideration of immediacy of hazards. The risk assessment methodology is now better aligned with health and safety and geotechnical risk assessment processes.

The designation of risk is based upon the consideration of both:

- **the magnitude of the potential consequence (i.e. severity).**
[takes into account both the potential severity of the hazard and the sensitivity of the receptor]
- **the magnitude of probability (i.e. likelihood).**
[takes into account both the presence of the hazard and receptor and the integrity of the pathway]

The potential consequences of contamination risks occurring at this Site are classified in accordance with Table 1 below:

Table 1: Classification of Consequence (Source: R&D 66:2008)

Classification	Definition of Consequence
Severe	Highly elevated concentrations likely to result in “significant harm” to human health as defined by the EPA 1990, Part 2A, if exposure occurs. Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce. Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population. Catastrophic damage to crops, buildings or property.
Medium	Elevated concentrations which could result in “significant harm” to human health as defined by the EPA 1990, Part 2A if exposure occurs. Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce. Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. Significant damage to crops, buildings or property.
Mild	Exposure to human health unlikely to lead to “significant harm”. Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce. Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population. Minor damage to crops, buildings or property.
Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects of damage to buildings, structures and services.

The probability of contamination risks occurring at this Site is classified in accordance with Table 2 below.
 Note: A pollution linkage must first be established before probability is classified. If there is no pollution linkage then there is no potential risk. If there is no pollution linkage then it follows that there is no need to apply tests for probability and consequence.

Table 2: Classification of Probability

Classification	Definition of Probability
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.
Unlikely	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

For each possible pollutant linkage (source-pathway-receptor) identified, the potential risk can be evaluated based upon the following probability x consequence matrix shown in Table 3 below.

Table 3: Overall Contamination Risk Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate / Low risk	Low risk
	Low likelihood	Moderate risk	Moderate / Low risk	Low risk	Very low risk
	Unlikely	Moderate / Low risk	Low risk	Very low risk	Very low risk

R&D 66:2008 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary for each outcome. These definitions are reproduced in Table 4. These risk categories apply to each pollutant linkage, i.e. not only to each hazard or receptor.

Table 4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required
Very high	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the Site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be Site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the Site without remediation action. Realisation of the risk is likely to present a substantial liability to the Site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to Site owner/occupier. Some remediation works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the Site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
Very low	It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.
No potential risk	There is no potential risk if no pollution linkage has been established.