APPLiED GEOLOGY

DESK STUDY & PHASE I COAL MINING RISK ASSESSMENT FOR PARKSIDE, HOYLAND

REPORT STATUS SHEET

Client:	Newlands Developments
Report Title:	Desk Study & Phase I Coal Mining Risk Assessment for Parkside, Hoyland
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APPENDICES

1.0 INTRODUCTION

An area of land between Sheffield Road and Stead Lane, to the south of Hoyland Common near Barnsley (the site) is to be developed by Newlands Developments (the Client). The proposals comprise the construction of football pitches and an archery pitch, temporary car parking and a temporary container pod for changing facilities, refreshments etc. There will be some cut and fill to create level platforms for the pitches. The development will be carried out in two phases.

Applied Geology was appointed by Newlands Developments to undertake a Desk Study/Phase 1 Geo-environmental Risk Assessment and a Phase 1 Coal Mining Risk Assessment (CMRA) to:

- Permit formulation of an opinion, as to the potential for hazardous substances or conditions to exist on, at or near the site at levels or in a situation likely to warrant mitigation or consideration appropriate to the intended end use proposed by the Client and as stated above.

- Establish anticipated geological conditions to assist with the design of a geotechnical ground investigation for the Phase 1 works.

- Assess potential coal mining related risks.

- Support a Planning Application.

More specifically, the services provided are summarised below and detailed in the following Sections.

- A site inspection and walkover survey to identify indicators (as defined in later sections) of the existence of hazardous substances or conditions on and in the vicinity of the site.

- A review of the following sources to provide data on likely ground conditions, geohazards and features which may affect development and to obtain information about the potential for hazardous substances to exist at and in the vicinity of the site:
  - Groundsure Report - obtained on the 4th August 2020
  - Barnsley Metropolitan Borough Council - Planning Portal
  - BGS - Published Information & Borehole Database
  - Historical Maps
  - Government Web Site - historic landfill database
  - Coal Authority Web Site and liaison with the Coal Authority
  - Coal Mining Report and Abandonment Plans
  - MAGIC Web Site
  - Archaeological Desk-based Assessment by Oxford Archaeology (ref.2019-20/2051)

- Assessment and reporting of the results of the works.

This report should be read in conjunction with the General Notes at the end of the report text.

2.0 SITE LOCATION AND DESCRIPTION

2.1 General

The site is located between Sheffield Road (A6135) to the southwest and Stead Lane to the northeast. It is adjacent to the southeast of the village of Hoyland Common and approximately 6.5km south of Barnsley town centre in South Yorkshire. The Ordnance Survey grid reference for the centre of the site is 436069, 399771 as shown on the Site Location Plan (AG3080D-20-01) included in Appendix A.

The site is irregular in plan shape, covering an approximate area of 5.5ha. The site has a generally undulating topography, with an overall downhill slope towards the southeast from approximately 137m AOD in the north-western corner of the site to approximately 124m AOD on the south-eastern corner of the site.

2.2 Walkover Survey

A site inspection/walkover was undertaken by Applied Geology on the 6th August 2020. Access to the site was gained via a gate off Stead Lane in the north of the site. At the time of inspection, the site comprised two fields separated by concrete fence posts, with the majority of the former mesh fencing no longer visible. The field in the northwest comprised open pasture land and the field in the southeast comprised agricultural land (cropped) and an electricity pylon. Anecdotal evidence from local residents identified that the northwestern field was formerly used as playing fields, but due to the undulating ground surface, was no longer useable for this purpose. A public footpath ran along the northern site boundary and was signposted from the NE corner of the site.

There was no visual or olfactory evidence of any source of gross contamination.

The site was bound to the northeast by Stead Lane, with residential properties beyond and a stream and fields beyond at its eastern extent, to the southeast by the remainder of the cropped field present on site, to the southwest by Sheffield Road and to the northwest by residential properties off Parkside Road beyond. Trees were spread out along all the site boundaries and along the fence line separating the two fields.

View of field in northwest, looking east

View of cropped field in southeast, looking northeast

It should be noted that Applied Geology Limited does not provide arboricultural surveys or specialist surveys for the detection of invasive plant species (such as Japanese Knotweed) or protected species of wildlife.

2.3 Proposed Development

The proposals comprise the construction of football pitches and an archery pitch, temporary car parking and a temporary container for changing facilities, refreshments etc. There will be up to 2.9m of cut and up to 3.6m of fill required to create the proposed levels for the various pitches. The development will be carried out in two phases (Phase 1 and Phase 2). Details of the proposed layout, the proposed levels and the earthworks required are shown on various drawings included in Appendix A.

3.0 DESK STUDY INFORMATION

3.1 Site History

Historical Ordnance Survey maps were obtained in order to determine any significant past activity or land usage. Copies of these maps are presented in Appendix B of this report and are described below in Table 1.

Table 1: Site History

Map Date	On the Site	In the Vicinity of the Site
1850-1855	The site comprises several fields, with a possible small structure in the corner of one field in the north of the site.	The surrounding area comprises predominantly agricultural land. Stead Lane is adjacent to the northeast, with Stead Wood beyond. A road (currently Sheffield Road) is adjacent to the southwest. There are numerous ironstone pits southwest of the site, part of Swallow Wood Mine, with the closest being approximately 55m from the site.
1893-1894	No significant changes.	A small pond and stream are beyond Stead Lane east of the site. Another stream is 100m southwest of the site. The ironstone pits closest to the site are marked as disused. The village of Hoyland Common is northwest of the site, with residential properties 160m from the site at their closest. Lidgett Colliery is approximately 750m southeast of the site and Skier's Spring Brick Works is approximately 800m southeast.
1901-1906	A pond is just south of centre on site.	Allotment gardens are adjacent to the northwest. A shaft is marked 475m southeast.
1929-1931	No significant changes.	Stead Wood is now a field and the stream formerly marked east of the site is now shown to run parallel to the northeastern site boundary, beyond Stead Lane. The brick works is now Milton Pottery, with Staindrop Pit (coal) adjacent to the west. Skier's Spring coal pit is approximately 750m east of the site.
1938	No significant changes.	No significant changes.
1948	No significant changes.	No significant changes.
1951-1956	Some of the field boundaries are no longer shown and the pond is not marked.	The stream northeast of the site is shown to flow to the southeast. The old ironstone pits are no longer marked. Opencast mining is labelled southeast of the site, but no outline of the opencast pit is shown.
1966	Overhead electricity cables cross the south of the site, orientated	A refuse tip is now marked at the location of Staindrop Pit. Skier's Spring coal pit is no longer

Map Date	On the Site	In the Vicinity of the Site
	east-west, with a pylon in the southeast of the site.	marked.
1967-1978	No significant changes.	Residential development of Hoyland Common has extended up to the northwestern site boundary, including an electricity substation 125m northwest.
1980	No significant changes.	The refuse tip is labelled as no longer in use.
1987-1993	The site comprises the two fields in their present-day configuration, with the northwestern field marked as a recreational ground.	Residential development has extended adjacent to the northeast of the site, halfway along the northeastern site boundary. All coal and air shafts associated with the former Lidgett Colliery and Staindrop pit are marked as disused. The refuse tip extended to the southwest since 1980 but is now labelled as disused.
2001-2003	No significant changes.	Residential development has extended further along the northeastern site boundary.
2010	No significant changes.	No significant changes.
2020	The recreational ground is no longer marked. The OS Map in the Groundsure Report shows a footpath to run along part of the northeastern site boundary.	No significant changes.

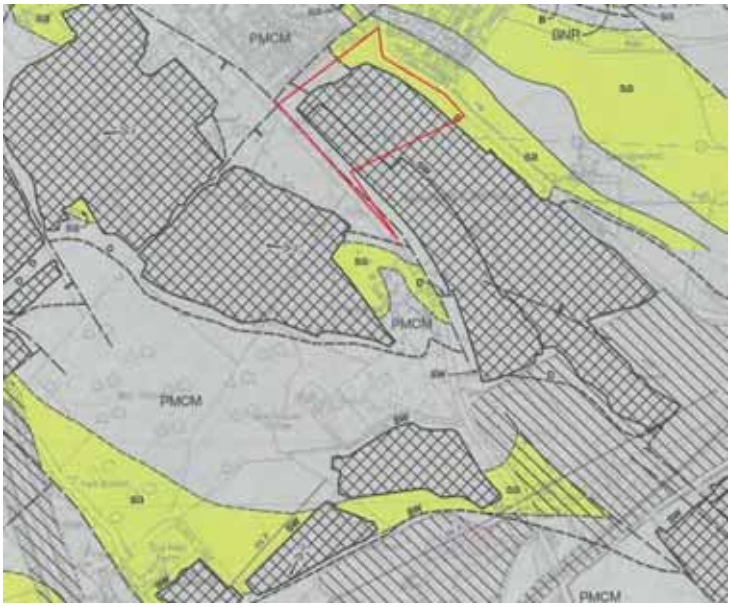
Summary: the historical Ordnance Survey maps show the site to have comprised fields since at least 1850, with opencast mining marked southeast of the site during the mid-20th century. Information in later sections of this report confirm that the opencast mining extended onto site, though this is not apparent from available mapping. The opencast pits have since been backfilled and the land restored back to fields. Further details regarding mining on site are given in Section 7.0 of this report. The surrounding area has remained predominantly agricultural, with numerous former ironstone pits southwest of the site and coal mining and brick works some distance east and southeast of the site. Residential development of Hoyland Common has extended up to the northeastern and northwestern site boundaries.

3.2 Anticipated Geology

Reference to the published 1:50,000 scale British Geological Survey (BGS) map, Sheet 87 (Barnsley) [Bedrock and Superficial Geology] dated 2008 indicates the site to be underlain by Solid Geology of the Pennine Middle Coal Measures Formation of Carboniferous age. A band of sandstone is present along the northeastern site boundary and in the northern corner of the site, with the remainder of the site comprising interbedded mudstone, siltstone and sandstone with numerous workable coal, ironstone and fireclay seams, which have been historically worked in the area. No natural Superficial Deposits are shown to be present on or in the vicinity of the site. A geological fault runs along the southwestern site boundary, downthrown to the southwest.

The Groundsure Report and geological map identify that infilled ground is present across most of the site, excluding strips of land along the northeastern, southwestern and northwestern site boundaries, with infilled ground extending beyond the site to the southeast. This is considered backfill to the former opencast pit, referenced in the Groundsure Report, and labelled southeast of the site on the 1951-1956 OS map.

The 1:10,000 BGS map (extract below) appears to show the Dunsil (also known as Harley) Coal seam to outcrop alongside the sandstone in the north and northeast of the site, with infilled ground across the rest of the site to the south and southwest. It is anticipated that this represents the location of the seam in the opencast highwall at this location and not the pre-opencast outcrop of the seam, which would be further to the southwest. The Dunsil Coal seam is also shown to outcrop to the southwest of the site, and again is likely to represent the location of the seam at the north-eastern extent of that opencast pit. The Swallow Wood Seam is shown running through the site (generally northwest to southeast) within the area of opencast. The seam outcrop is stepped and is believed to relate to the position of the worked seam within the opencast pit. This suggests the Swallow Wood continues beneath the base of the opencast towards the northeast.



The Coal Authority Consultants Coal Mining Report (ref. 51002292341001, dated 04/08/20) states that the Swallow Wood Coal seam, beneath the Dunsil Coal, dips to the east by 2.7 degrees. Seams of coal and ironstone beneath the Swallow Wood Coal dip by around 3 to 4 degrees to the northeast. Copies of the Groundsure Report and the Coal Mining Report are included in Appendix B.

The extraction thickness of the Swallow Wood Coal seam at the site is identified in the Coal Mining Report as being 1.06m thick. The Geological Memoir 'Geology of the Country around Barnsley' dated 1947 states that the Swallow Wood Coal seam is the same as the Netherton Thick Coal seam and the Top Haigh Moor Coal seam encountered elsewhere around Barnsley.

The general sequence of coal seams anticipated on site, based on the BGS 1:10,000 scale map, BGS Memoir, Coal Authority Report, abandonment plans NE419, Sheets 1-5 (discussed in Section 3.3) and previous ground investigation southwest of Sheffield Road by Applied Geology is detailed in Table 2 below. The Coal Authority Report identifies a further six worked coal and ironstone seams beneath the site between 137m and 355m bgl.

Table 2: Summary of Workable Seams up to 100m bgl Beneath Site

Seam	Opencast/ Underground	Colliery	Approx. Depth (m bgl)*1	Date Last Worked	Comments
Unidentified coal	Opencast	Stead Lane	10.9*2	1951	0.29m thick
Dunsil (Harley) Coal	Opencast	Stead Lane	18.9*2	1951	0.71m thick
Thin coal	Opencast	Stead Lane	17.2*2	1951	0.27m thick
Swallow Wood Coal	Opencast in W	Stead Lane	26*2	1951	0.69m thick
	Underground in E	Skiers Spring/Rockingham Colliery	38*3	1956	1.06m thickness extracted
Lidgett Coal	Underground	Lidgett	91*3	1892	0.7m thickness extracted
	Underground	Un-named	94*3	1906	0.75m thickness extracted

Notes: 1. Depths will vary due to site topography and dip of strata
2. Based on abandonment plan NE419, Sheet 1&2, depth to base of excavation on site (maximum depth)
3. Based on Coal Authority Report, depth is to top of coal seam

The BGS online archive was checked for records of any relevant archived boreholes within the vicinity of the site. Several records are shown on the opposite side of Sheffield Road southwest of the site, but are all confidential.

Applied Geology has carried out a ground investigation on the opposite side of Sheffield Road for the proposed Hoyland West development, which included areas both within and outside former opencast areas. The closest exploratory holes were approximately 30m southwest of the site and encountered Topsoil or possible Made Ground to depths of between 0.4m and 0.45m bgl, underlain by weathered Pennine Middle Coal Measures Formation (firm to very stiff silty clay/clay) to depths of between 1.0m and 3.2m bgl. These were located outside the former opencast area to the west of Sheffield Road.

Within the wider Hoyland West area, the Applied Geology ground investigation proved the sequence of Coal Measures strata including various coal seams which match those shown as being extracted from the subject site east of Sheffield Road. The Unidentified Coal, Harley Seam and Swallow Wood seam were all open cast mined to some extent west of Sheffield Road. The 'Thin Seam' opencast mined east of Sheffield Road was generally encountered in the Hoyland West area as a persistent intact seam but, based on the abandonment plans, was not shown to have been extracted.

3.3 Mining History/Geological Cavities

The Groundsure Report identifies historic opencast mining on site and numerous historic underground workings within 1km of the site, predominantly for ironstone and coal. The closest were ironstone pits, reportedly 45m southwest of the site. A Coal Mining Risk Assessment is presented in Section 7.0 of this report, although brief information is presented below.

The site is within a Coal Mining Reporting Area, with much of the site (the area of the former opencast) within a Development High Risk Area.

The Coal Mining Report identifies underground mining of coal seams (Swallow Wood Coal and those below) and the Tankersley Ironstone seam between 1892 and 1956. No shafts are identified on site, with the closest being approximately 70m southwest of the southern extent of the site (ref. 436399-018 & 044).

Abandonment plan ref. NE419, Sheets 1-5, show four opencast pits on site, with an unidentified coal seam initially extracted in the northeast and southeast of the site (maximum pit depth of 10.87m bgl), followed by the Dunsil (Harley) Coal across most of the site (maximum pit depth of 18.95m bgl), followed by a thin coal seam in the west and southwest (maximum pit depth of 17.25m bgl) and the Swallow Wood Coal also in the west and southwest (maximum pit depth of 26m bgl).

The Groundsure Report identifies that the site is not located in an area of recorded natural cavity formation, nor is it within area of known brine or gypsum extraction.

3.4 Natural Ground Stability Hazards

The Groundsure Report has classified the risk of various natural ground stability hazards, depending on the anticipated ground conditions on site. These tend to have a range of risk, given that part of the site is underlain by backfilled opencast pits and some by natural ground.

The risk of ground dissolution of soluble rocks is negligible, of shrink-swell of clays and running sand is negligible to very low, of collapsible deposits and landslides is very low and of compressible deposits is negligible to moderate.

3.5 Radon

The Groundsure Report, which sources information on radon affected areas from the BGS/Public Health England, identifies the western part of the site to be in an area where <1% of properties are above the Action Level and the remainder of the site to be within an area where between 1% and 3% of properties are above the Action Level. Therefore, no precautions against ingress of radon into buildings would be necessary if any new buildings were constructed on site in the future.

3.6 Hydrology

The closest watercourse to the site is a stream, identified on the Groundsure Report approximately 7m northeast, on the opposite side of Stead Lane, and noted during the walkover survey east of the site. The stream flows to the southeast. The Surface Water Flooding map within the Groundsure Report suggests that the stream flows across the northern corner of the site, is culverted along part of Stead Lane and then becomes a surface water course again close to the eastern extremity of the site. The historic maps do not show the stream to formerly or currently cross the site.

There are no surface water abstractions or licensed discharge consents to Controlled Waters within 500m of the site.

The site is not within Fluvial Flood Zones 2 or 3. However, surface water flooding associated with the stream crossing the northern corner of the site has a highest flood risk rating of 1 in 30 years.

The opencast mine abandonment plan shows a deep mine drain at the base of the opencast site which flows to the southeast and discharged into a water course.

This report is not intended to be a full hydrological study and if a flood risk assessment is needed, additional analysis by others is recommended to confirm this aspect of the development.

3.7 Hydrogeology

The Pennine Middle Coal Measures Formation is classified by the Environment Agency as a Secondary A Aquifer.

There are no groundwater abstraction licences within 1km of the site and the site is not located within a groundwater Source Protection Zone.

3.8 Environmental Searches

Information pertaining to environmental issues was obtained from the Groundsure Report. This database contains sets of data corresponding to the databases held by a number of sources including the Environment Agency, British Geological Survey, British Gypsum, The Coal Authority, Public Health England, Johnson Poole & Bloomer and Peter Brett Associates.

The Government website and Groundsure Report indicate that there are no recorded historical landfill or waste sites within 250m of the site, although the Groundsure Report and mine abandonment plans identify former opencast pits on site and geological maps show that most of the site has infilled ground. There are no recorded active landfill sites within 250m of the site.

There is one recorded pollution incident within 250m of the site, which occurred 175m southwest in 2003. This involved unidentified oils, resulting in ‘minor’ impact (Category 3) to land and water.

The Groundsure Report states that there are no current or historic fuel filling stations within 250m of the site.

The Groundsure Report states that neither the site nor any land within 500m is currently designated as Contaminated Land under Part IIA of the Environmental Protection Act.

3.9 Current Industrial Land Uses

There are two relevant current industrial land uses identified by the Groundsure Report within 250m of the site, for electricity substations 75m north and 125m northwest of the site.

3.10 Railways and Tunnels

The Groundsure Report does not have any records of historic or current railways or tunnels within 250m of the site but does identify the High Speed 2 Optimised Route to cross the centre of the site, orientated north-south. However, the current (2020) gov.uk website shows the planned HS2b route several miles to the east of the site.

3.11 Ecology

Information from environmental and ecological datasets was obtained from a review of the MAGIC (Multi-Agency Geographic Information for the Countryside) web site undertaken on the 10th August 2020 and the Groundsure Report.

The site is within a farmland bird breeding area and a priority area for Countryside Stewardship measures addressing lapwing habitat issues. There is a Network Enhancement Zone 1 in the eastern extremity of the site and extending off site to the east and a Network Enhancement Zone 2 approximately 170m southeast of the site. These designations identify land within close proximity to existing habitats, that are more likely to be suitable for habitat recreation (Zone 1) or where other types of habitat may be created or land management enhanced (Zone 2). Adjacent to the south of the site, on the opposite side of Sheffield Road, is the South and West Yorkshire Green Belt.

If a detailed assessment of ecological aspects is required, this should be undertaken by specialist consultants.

3.12 Archaeology

An Archaeological Desk-based Assessment was undertaken for parts of the adjacent Hoyland West proposed development. This identified various structures, features and finds to the west of the site and a late prehistoric/Romano-British enclosure east of the site. As such, it is recommended that an archaeological desk study be carried out for the site prior to any intrusive works, including ground investigation.

3.13 Unexploded Ordnance

The Zetica on-line bomb risk map identifies the site to be within a low risk area of unexploded bombs from WWII.

3.14 Information from the Planning Portal

No pertinent information was available from Barnsley Metropolitan Borough Council's Planning Portal.

4.0 CONCEPTUAL MODEL

In developing a Conceptual Model for the site, pollutant linkages are determined by identifying likely sources of contamination from previous and current site uses, possible targets such as site users, neighbouring site users and Controlled Waters and linkages between them. These are discussed below:

4.1 Summary of Site History

The site comprised fields from at least 1850 until the mid-20th century, when opencast mining occurred across most of the site. The opencast pits appear to have been backfilled in the early to mid-1950s and the land returned to agricultural use. The northwestern field became a recreational ground by the late 1980s/early 1990s, but due to the uneven ground surface, likely due to settlement of the backfill material within the historic opencast pit, is no longer used as such. The surrounding

area has remained predominantly agricultural, with numerous former ironstone pits southwest of the site and former coal mining and brick works some distance east and southeast of the site. Residential development of Hoyland Common has extended up to the northeastern and northwestern site boundaries.

4.2 Summary of Anticipated Geology

The majority of the site is anticipated to be underlain by backfill to the historic opencast pits, up to depths of around 26m bgl and probably comprising overburden (ie. natural deposits), underlain by the Pennine Middle Coal Measures Formation. The opencast pits appear to have extracted four coal seams, with coal and ironstone seams below mined by deep mining.

4.3 Sources

The following specific sources of contamination were identified in the desk study:

- Backfill to the former opencast pits (probably overburden materials) across most of the site and off site to the southeast and colliery spoil, if present, associated with potential unrecorded historic coal/ironstone workings on site;
- Ground gases from backfill material and any spoil on and off site;
- Mine gases on and off site;
- Sulphates in backfill material, any spoil or underlying natural strata on site.

The Applied Geology ground investigation to the west of Sheffield Road did not identify any elevated concentrations of potential contaminants (with respect to human health screening criteria) in the opencast backfill materials tested. There is limited potential for low-mobility PCBs/oils from the electricity substations 75m north and 125m northwest of the site to have impacted the site.

Given the distance and direction from the site and that the pollution incident occurred seventeen years ago, these oils are not considered to represent a plausible source of contamination that could impact the site.

4.4 Receptors

The following receptors have been identified:

- End users;
- Residential neighbours;
- Pennine Middle Coal Measures Formation (Secondary A Aquifer);
- Stream close to northeast/east of site (off site);
- Buried substructure concrete (Building Materials);
- Water supply pipes (Building Materials).

The risk to construction workers is not included here due to the short-term exposure times that they will be subject to and the assumption that good hygiene practices will be adopted on site and the appropriate use of relevant PPE/RPE will be adhered to when exposed to potentially contaminated soils.

4.5 Pathways

Taking into account the proposed end use as sports pitches, car parking and temporary changing rooms, the following pathways are relevant to this development:

- Ingestion of soil;
- Dermal contact with contaminated soil;
- Inhalation of dust, gas and vapour;
- Gas migration to off-site receptors;
- Leaching and/or migration through permeable horizons;
- Direct contact with soil by services, concrete and infrastructure.

4.6 S-P-R Linkages and Assessed Risks

The Conceptual Model described above is summarised below, together with the source-pathway-receptor linkages and qualitatively assessed levels of risk:

Table 3: Initial Conceptual Site Model

Source	Pathway	Receptor	Risk*
Backfill material to historic opencast pits (on and off site) and possible spoil from any historic unrecorded workings (on site)	Ingestion, dermal contact, inhalation of dust	End users	Low
	Leaching/migration	Neighbours	Low
		Stream	Low
		Aquifer	Low
	Direct contact	Water supply pipes	Low
Ground gas from backfill material to historic opencast pits (on and off site) and possible spoil from any historic unrecorded workings (on site)	Migration into temporary changing room, service ducts, etc and inhalation	End users	Low
	Migration into buildings, service ducts, etc and inhalation	Neighbours	Low
Mine gas from the Pennine Middle Coal Measures strata (on and off site)	Migration into temporary changing room, service ducts, etc and inhalation	End users	Low
	Migration into buildings, service ducts, etc and inhalation	Neighbours	Low
Elevated sulphates in backfill material, any spoil and natural soils (on site)	Direct contact	Buried concrete	Medium-High

*** Definition of Risk Categories**

Negligible - Contaminants that might have unacceptable impact on key receptors, are unlikely to be present, or, no pathway is envisaged.

Low Risk: Contaminants may be present but are unlikely to be at levels to have unacceptable impact on key receptors, or pathways are likely to be minimal.

Medium Risk: Contaminants are probably present and might have an unacceptable impact on key receptors. Pathways may also be present therefore remedial measures may be necessary to reduce the risks.

High Risk – Contaminants probably or certainly present and pathways are probably also present. Therefore, contaminants are likely to have an unacceptable impact on key receptors and remedial measures are likely to be necessary to reduce the risks to acceptable levels.

5.0 PRELIMINARY GEOENVIRONMENTAL ASSESSMENT

Based on the available information, there is considered to be an overall low risk with regard to Human Health and Controlled Waters receptors.

Although most of the site is anticipated to comprise opencast backfill, there is no evidence that the backfill comprises contaminated materials. Land to the southwest and west of the site has recently been investigated by Applied Geology, with the backfill material encountered as clay, mudstone, sandstone and shale derived from the overburden stripped off to access the coal seams (and possible shallow ironstone). However, such natural materials (assumed not to have been engineered when placed into the void, given the undulating ground surface) may still give rise to high levels of some (naturally occurring) heavy metals, PAHs, sulphates and ground gas.

Based on the anticipated natural backfill materials/spoil, the likelihood of elevated concentrations of ground gas (methane and carbon dioxide) being present to effect on and off-site receptors is considered to be low.

Mine gas (methane, carbon dioxide, carbon monoxide and hydrogen sulphide) could be present from remnant shallow unworked coal seams and/or deeper workings, which could potentially migrate to the surface laterally along old workings.

Although a Secondary A Aquifer, the Coal Measures strata at the site have been subject to shallow and deeper coal mining and it is not anticipated that this will be viewed as a key receptor. It is understood that the site is to be drained and run-off towards the stream adjacent to the northeast/east of the site is therefore not anticipated.

6.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

Given the historical opencast mining on site, the unknown backfill material up to 26m thick, and the uneven surface settlement of this material evident during the walkover survey, there is the potential for ongoing settlement within the former opencast on site, particularly where site levels are being raised and if building loads are to be transmitted to the backfill materials, though it is anticipated that the majority of self-weight settlement will now have occurred. The deep drain placed at the base of the opencast may have helped keep groundwater levels suppressed, which could increase the risk of inundation settlement.

The opencast highwalls coincide with the footprints of all three football pitches, the car park and the overshoot area of the archery zone. This could create issues with differential settlement, especially where site levels are to be increased, even though there are no or minimal construction loads.

The proposed cut slopes along the northern site boundary are anticipated to lie should be just outside the former opencast, hence cut slopes are expected to be formed in natural coal measures strata. Proposed 1v:3h slopes may well be stable here but a ground investigation is needed to confirm the highwall locations. Similarly, the cut slope in the NE corner of the site is also anticipated to be just outside the opencast highwall and so again would be expected to be suitable at 1v:3h, subject to the investigation confirming highwall location and material properties. The proposed cut slope along the western end of the sports pitches

(assumed to also be 1v:3h) will straddle the highwall and be largely in opencast backfill materials and so may not be stable based on the findings of the ground investigation and slope stability analyses undertake on the adjacent Hoyland west site. Consideration will need to be given to re-engineering the slope materials and a shallow thickness of the underlying founding materials.

The coal content and calorific value of the materials to be re-used as engineered fill will need to be investigated, along with the engineering properties and material classification. Possible unworked coal associated with the Unnamed Seam could be encountered at shallow depth in the cut slopes in the north of the site.

The Coal Measures strata are anticipated to be predominantly cohesive, ie. of low permeability, except in the north and along the northeastern site boundary, where sandstone is expected, which will probably have a higher permeability. Possible soakaway drainage from the sports pitches and the temporary car park will need to take this into account and may not be viable.

Elevated concentrations of sulphates, and potentially low (acidic) pH should be anticipated in the opencast backfill materials, but may also be present in the natural Coal Measures strata. Therefore, sulphate-resisting concrete is envisaged to be required for any buried structures.

7.0 PRELIMINARY COAL MINING RISK ASSESSMENT

The site is located within an area designated by the Coal Authority (CA) as being of Development High Risk as a result of historic coal mining legacy. As a result, a Coal Mining Risk Assessment (CMRA) is required to identify the historic coal (and other mineral) mining risks and any mitigation measures required prior to the proposed development of the site for playing fields.

Assessment has been made using 1:10,000 geological maps, The Geological Memoir ‘Geology of the Country around Barnsley’, the CA Interactive Maps and Consultants Coal Mining Report and CA Abandonment Plans.

7.1 Published Geology

7.1.1 Made Ground and Superficial Strata

Although the site has not been subject to any built development, significant thicknesses of disturbed ground are expected beneath the site, associated with historic opencast coal mining of four separate seams.

For the most part, this Made Ground is expected to comprise reworked natural strata (mainly clays, mudstone, siltstones and sandstone) derived from excavation and replacement of overburden after the removal of coal. While this form of mining and restoration is unlikely to result in the creation of residual voids, it will not have been compacted to an engineering specification.

It is expected that the thickness of the Made Ground will not extend much further beneath the base of the Swallow Wood Seam in the west and the Dunsil (Harley) Seam in the east, as indicated by Abandonment Plan NE419 (5 sheets).

No Superficial Deposits are mapped on or in the vicinity of the site.

7.1.2 Solid Strata

Solid strata of the Pennine Middle Coal Measures Formation of Carboniferous age are present on site. These strata generally comprise cyclical sequences of mudstone, siltstone and sandstones within thin coal and ironstone seams. The strata sequence expected to immediately underlie the proposed site at depths likely to influence the proposed development comprise those just above the Dunsil (Harley) Seam to the Swallow Wood Seam. The Dunsil (Harley) Seam is marked as outcropping at the eastern end of the opencast area (having been present across the majority of the site prior to being opencast mined). The Swallow Wood Seam is shown as sub-cropping within the opencast mine, having been mined to the southwest and dipping at shallow angle below the base of the opencast to the northeast.

According to the CA report, the Swallow Wood seam was underground mined (min. 38m depth) via the Skiers Spring Colliery, however, the abandonment plan for that colliery doesn't show any workings beneath the site. However, Abandonment Plan NE820 for the Rockingham Colliery does show that the Swallow Wood seam was mined below the eastern part of the site and the date last mined (1956) matches that noted in the CA Report.

The Lidgett Colliery Abandonment Plan 5843 shows that the Lidgett Seam was also deep mined below most of the site and is anticipated at 91-94m bgl at its shallowest points (where mined).

Abandonment Plan NE419 5 of 5 indicates the following sequence and typical seam thicknesses:

- Unidentified Seam – 0.29m thick;
- Grey bind (separation) – 5.89m;
- Harley (Dunsil) Seam – 0.71m;
- Stone (separation) – 4.77m;
- Thin Seam – 0.27m;
- Stone & grey bind (separation) – 10.21m;
- Swallow Wood Seam – 0.69m.

Abandonment Plan NE820 for the swallow Wood workings beneath the site and surrounding areas to the northeast, east and southwest, indicate that the Sallow Wood seam comprises 4 leaves with the main leaf being 0.91m thick. The typical section also shows that a 0.96m thick ironstone band also overlies the upper leaf.

A geological fault is located to the west of the site approximately along the alignment of Sheffield Road, down-throwing to the southwest. A smaller fault is shown on the abandonment plans parallel to this fault and which disrupted the coal seam continuity within the opencast mine. Another fault is shown just to the north of the site, running approximately northeast-southwest and down-throwing to southeast.

7.1.3 Coal Authority Interactive Map and Consultants Coal Mining Report

Consultation of the Coal Authority's Mining Searches Directory indicates that the site lies in an area for which a standard mining report is required for a new

development. A copy of the CA Consultants Coal Mining Report is presented in Appendix B.

Reference to the CA Interactive map shows most of the site falls within a Development High Risk Area (DHRA). This means that the Local Authority is required to refer any planning application to the CA, and the CA will require the preparation of this CMRA to assess the risks posed by historical mining legacy.

Extract from Coal Authority Interactive Mapping showing the Development High Risk Areas

Extract from Coal Authority Interactive Mapping showing Unlicensed Opencast Areas

Closer examination of the DHRA shows that its boundaries relate to the area of opencast mining.

Basic information on underground mining is provided by the attached CA Consultants Report. The extent of local coal mining history is demonstrated by the fact that at least ten separate coal and ironstone seams have been mined by at

least five different collieries. A general summary (covering 100m depth) is present in Table 2 of Section 3.2 of this report.

The CA Interactive mapping shows where historic shallow coal mine workings are known or thought to have existed. At this site, the DHRA shown above relates to 'probable shallow coal mine workings', associated with the presence of the Swallow Wood Coal seam present to the southeast and southwest of the site. However, the CA Interactive mapping indicates that underground shallow coal mine workings of the Swallow Wood did not extend onto the site, as shown below.

Extract from Coal Authority Interactive Mapping showing Past Shallow Coal Mine Workings

It is noted, however, that the Coal Authority Consultants Report states that the Swallow Wood Seam was mined from the Skiers Spring Colliery at 38m bgl beneath the site.

The CA Consultants Coal Mining Report identifies the shallowest ironstone seam to be the Tankersley seam at 137m bgl, which is thought have been last mined in 1879 as part of Tankersley Colliery. From the work undertaken for the Hoyland West site, it is known that shallower ironstone workings, possibly bell pits, are recorded nearby, to the southwest on the opposite side of Sheffield Road.

The CA Consultants Report show the positions of recorded mine entries (shafts or adits) within close proximity of the site but none on the site itself. Both shafts are closer to the Hoyland West development and are discussed in the corresponding CMRA and GIR reports for that site. However, a summary of known information is provided below.

Table 4: Mineshafts and adits

CA Reference	Coordinates	General location	Mineral	Treatment/ Comments
436399-018	436037, 399508	To SW of site	Coal	Has been filled and mounded to an unknown specification
436399-044	436012, 399543	To SW of site	Coal	No treatment records.

Other data contained within the CA report can be summarised as follows:

- there are no probable unrecorded shallow workings;
- there are no managed tips within 500m of the enquiry boundary;
- there have been no remediation works recorded within 50m of the enquiry boundary;
- the CA is not aware of any request having been made to carry out preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991;
- there have been no reports of mine gas incidents within 500m of the enquiry boundary;
- there have been no claims regarding coal mining subsidence within 50m of the property boundary;
- there are no mine water treatment schemes in the vicinity of the site;
- there are no licences for current coal mining or future underground coal mining within 200m of the site.

7.1.4 Coal Mine Abandonment Plans

The Coal Authority archives were searched and copies of eight mine abandonment plans were obtained (others were available but were for seams worked at significant depths below the site). A summary of the pertinent information contained on the plans is provided below and copies are included in Appendix B.

Table 5: Abandonment Plans

CA Ref:	Title	Date	Relevant Information
NE419 1 of 5	Stead Lane (Opencast)	1960	Individually shows depth of extraction of four coal seams including Harley (Dunsil) and Swallow Wood
NE419 2 of 5	Stead Lane (Opencast)	1960	Composite drawing of above four worked seams including dates of workings and restoration and typical vertical section
NE419 3 of 5	Stead Lane (Opencast)		Detailed plan of Unidentified Seam and Thin Seam workings including typical sections
NE419 4 of 5	Stead Lane (Opencast)		Detailed plan of Harley (Dunsil) Seam workings including typical section
NE419 5 of 5	Stead Lane (Opencast)		Detailed plan of Swallow Wood Seam workings including typical section
M796	Skiers Spring		Swallow Wood but doesn't cover the site area
NE820	Rockingham Colliery		Swallow Wood seam underground workings below eastern part of site (also shows Stead Lane opencast extent in the same seam)
5843 Part A*	Lidgett, Plan of Abandonment	Not shown	Lidgett Coal seam worked beneath the majority of the site but not toward Sheffield Road

7.2 Summary of Coal Mining Issues

Based on available data, the table below summarises the potential risks associated with the mining legacy for the proposed development site.

Table 6: Coal Mining Issues Summary

Coal Mining Issue	Yes/No	Risk Assessment
Recorded underground shallow mine workings	Yes	Low risk – mined at 38m or greater depths in 1955/56. Movements should by now have ceased.

Coal Mining Issue	Yes/No	Risk Assessment
Unrecorded underground shallow mine workings	Yes	Low risk: workable shallow seams all recorded as mined but adjacent unrecorded workings could exist
Recorded Mine entries (shafts and adits)	No	Negligible
Unrecorded Mine entries (shafts and adits)	Yes	Very low risk – potentially present just outside opencast area where seams shallowest.
Mining geology (faults and fissures)	Yes	Very low risk – faulting recorded on abandonment plan within opencast mine now backfilled
Record of past mine gas emissions	No	Negligible
Recorded mining surface hazard	No	Negligible
Surface mining (opencast workings)	Yes	Low Risk: Uncontrolled backfill

7.2.1 Recorded Underground Shallow Mine Workings

Shallow underground mine workings of the Swallow Wood Coal seam are recorded on mine abandonment plan NE820 which shows underground workings from 1955 and 1956 below the eastern part of the site. The CA Report states the shallowest depth of workings being 38m bgl. There is estimated to be between 15 and 20m of solid strata between the underground workings of the Swallow Wood seam and base of opencast mine above. Given this and the nature of the proposed development, these underground workings are unlikely to affect the construction.

Underground mine workings of the Lidgett Coal seam are shown on mine abandonment plan 5843 Part A beneath most parts of the site. However, the depth of working is thought to be more than 90m beneath the site. It is considered that there is sufficient thickness of solid strata between the workings and the ground surface to mitigate against the risk of void migration and any general aerial settlement as a result of former workings should now be complete. No further mitigation is required. Recorded workings in coal and ironstone seams below the Lidgett are therefore also considered to present a negligible risk to surface instability.

7.2.2 Unrecorded Underground Shallow Mine Workings

Given the date, depth and extent of the opencast mine in this area, there are not anticipated to be any unrecorded underground shallow coal mine working present at the site. However, the Dunsil (Harley) Seam is shown to outcrop in the north-western corner of the site just outside the opencast boundary and therefore potential old shallow workings (probably via bell pits) could theoretically exist here. A few trial pits could be undertaken in this area as part of the ground investigation works, followed by watching brief during the earthworks exercise during site preparation works.

7.2.3 Unrecorded Mine Entries

The proposed development site's coal mining context is such that there will always be a low risk of unrecorded mine entries being present. The same comments and recommendations made in section 7.2.2 above also relate to the risk of unrecorded mine entries. Any anomalous features that may indicate historic mine entries should be investigated and recorded by a competent person.

7.2.4 Mining Geology (faults & fissures)

Minor faulting was noted in the opencast mine (also shown on the underground mine plan) and another fault is mapped immediately west of the site, however, these are not considered likely to affect the proposed development.

7.2.5 Surface Mining (Opencast Workings)

The proposed development area has been subject to historic opencast mining to various depths across the majority of the site. Variations in backfilling compaction can result in variable and unpredictable settlement when new loads are applied and also as a result of self-weight settlement and changes in groundwater levels. This is particularly the case at highwalls, where sudden variations in thickness of Made Ground can occur. Even so, the plans for this site are not particularly sensitive to differential settlements and so the risk is deemed to be low. Highwall locations should be investigated where they coincide with the proposed development, especially in areas of fill which will add loads to the ground and induce settlement in the loosely compacted opencast backfill material.

7.3 Conclusions

This CMRA has revealed significant mining heritage at the proposed development site, which has included opencast mining of four coal seams and underground mining of coal and ironstone. However, given the low sensitivity of the proposed development (football pitches and archery zone) the risks of mining issues affecting the development are considered to be low to very low.

8.0 RECOMMENDATIONS

A ground investigation is recommended to confirm the anticipated ground conditions, validate the conceptual site model, locate the highwalls associated with the former opencast pits on site, check the Coal Measures strata outside the opencast boundary and assess the suitability of materials for re-use in the proposed earthworks. Note that this investigation will only address the requirements of Phase 1 of the proposed development, however, geotechnical information useful to the design of the Phase 2 works (by others) will be obtained.

A series of trial pits are envisaged to investigate the nature and lateral extent of the opencast backfill materials and obtain representative samples for earthworks classification testing and chemical testing. Some trial pits may be extended as trenches to identify the highwalls across the site and some pits will be positioned to check for shallow coal seams just outside the opencast boundary in the northwest of the site. Some shallow driven continuous sample boreholes are also recommended to obtain some in situ (SPT) test results and to allow the installations of standpipes to check for any shallow groundwater. A series of Cone Penetration Tests (CPT) are also recommended to get further in situ parameters for the opencast backfill materials and to check for possible deeper groundwater. However, the CPTs are not intended to prove the base of the opencast backfill materials.

If, as expected, the backfill materials comprise inert natural materials derived from the overburden, large numbers of chemical tests are not considered necessary. However, as there could be elevated concentrations of naturally occurring sulphates and possibly arsenic in the opencast backfill and in-situ Coal Measures strata,

sufficient testing should be undertaken to appropriately classify the materials. Testing should comprise a general suite of contaminants and a few selected samples from the southern part of the site should be tested for pesticides.

Geotechnical laboratory testing is envisaged to comprise soil and rock classification testing, earthworks suitability testing, remoulded shear strength testing and BRE SD1 sulphate testing.

Groundwater monitoring should be undertaken to help establish groundwater levels. If appropriate, groundwater samples could be obtained and tested for sulphate levels and a range of commonly occurring contaminants.

This desk study/Phase I Geo-environmental Risk Assessment and Phase I Coal Mining Risk Assessment Coal should be submitted with the Planning Application to demonstrate that the site has been adequately investigated at the pre-planning stage and that sufficient information has been obtained to design an appropriate Phase II intrusive investigation. On completion of the intrusive investigation, a Ground Investigation Report (GIR) should be produced.

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Tel: 02476 511822

GENERAL NOTES

A) The assessment made in this report is based on the site terrain and ground conditions revealed by the various field investigations undertaken and also any other relevant data for the site including previous site investigation reports (if available) and desk study data. There may be special conditions appertaining to the site, however, which have not been revealed by the investigation and which have not, therefore, been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available. It must be recognised that many of the Environmental Searches obtained during the course of the desk study are often lengthy. Applied Geology have, where appropriate and in the interests of simplicity, only reproduced the summary of the searches within the report. A full copy of all the search data is held at the Applied Geology office and is available for inspection if required.

B) Where any data supplied by the Client or other external source, including that from previous site investigations, has been used it has been assumed that the information is correct. No responsibility can be accepted by Applied Geology for inaccuracies within this data.

C) Whilst the report may express an opinion on possible configurations of strata between or beyond the exploratory locations, or on the possible presence of features based on either visual, verbal or published evidence this is for guidance only and no liability can be accepted for the accuracy.

D) Comments on groundwater (and landfill gas) conditions are based on observations made during the course of the present and past investigations or with reference to published data unless otherwise stated. It should be noted, however, that groundwater (and landfill gas) levels vary due to seasonal (or atmospheric conditions) or other effects.

E) The copyright of this report and other plans and documents prepared by Applied Geology is owned by Applied Geology and no such report, plan or document may be reproduced, published or adapted without the written consent of Applied Geology. Complete copies of the report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its submission.

F) This report is prepared and written in the context of the proposals stated in the introduction to the report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Applied Geology for re-assessment and if necessary, re-appraisal.

G) The survey was conducted and this report was prepared for the sole internal use and reliance of the Client. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Applied Geology. If an unauthorised third party comes into possession of this report they rely on it at their peril and Applied Geology owes them no duty of care and skill.

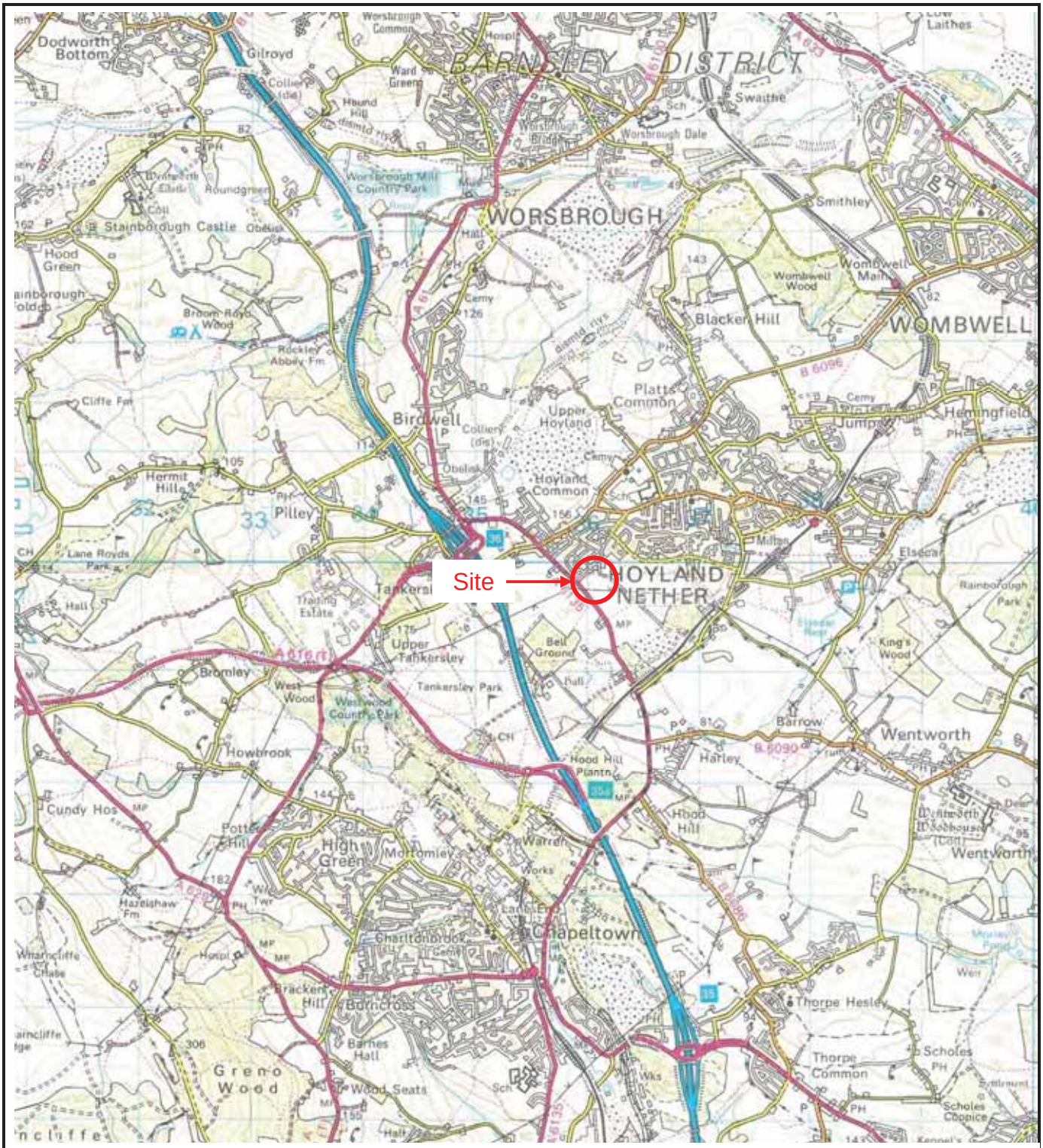
H) Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of this data by the supervising geotechnical or geo-environmental engineers.

I) Unless specifically stated, the investigation has not taken into account the possible effects of mineral extraction.

J) The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, depends on very many factors in addition to geotechnical considerations and hence its evaluation is outside the scope of this report.

K) Applied Geology operates as a Consultancy and does not operate it's own laboratory for soil testing, this work being sub contracted to known and respected, generally UKAS accredited, laboratories. Applied Geology can therefore not be held responsible for the testing carried out.

APPENDIX A



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Tel: 02476 511822
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Client: newlands developments

Project: PARKSIDE, HOYLAND

Drawn By:	Checked By:	Paper Size:
FD	SD	A4

Scale:	Date:	NGR:
NTS	10.08.2020	436069 99771

Title: SITE LOCATION PLAN

Drawing No:	Revision:
AG3080D-20-01	0

2.4m high Paladin (weldmesh) Fencing
Dark Green RAL.6005, to boundary

Notes;

To enable the archery club to have a continuous use it is proposed to undertake the works as indicated in two phases.

Phase 1 will comprise;

- Undertake site clearance to form new entrance off Sheffield Road;
- Provide a temporary surfaced access way and car park area;
- Undertake earthworks and re-modelling to create plateaus for new archery zone area and sports pitches.
- Subject to the timing of the land exchange the archery area is proposed to be part turfed (to the archery runs) and part grass seeded to the remainder.
- The provision of new archery zone will be located on the lower plateau.
- Provide container storage.

Phase 2 will comprise;

- Finalise clearance and earthworks re-modelling to create required level plateau for sports pitches
- playing areas to be left with a topsoil surface ready to receive seeding/turf as part of BMBC phase of works;
- Form new permanent entrance off Sheffield Road together with underground electricity and surface and foul water supplies to serve the future community building;

existing public right of way maintained

Phase 2.
finalise levels and topsoil surface pitches

Phase 1.
earthworks plateauing

Phase 2.
form permanent access, electricity, foul and surface drainage supplies, capped off as necessary for future connection

Phase 1.
existing drains to remain

Plot redline area 4.38ha

Phase 1.
temporary surfaced access and parking area

Phase 1.
perimeter fencing

Phase 1.
provide container storage and temporary portakabin type changing/toilets

Phase 1.
turf/seeding of archery zone
(pink dotted line area 0.988ha)

indicative overhead electricity cable zone

A6195 - Sheffield Road

Revision:

P1	first issue	12aug2020 PL
P2	boundary fence type noted	18aug2020 PL
P3	updated as required	19aug2020 PL

N

SCALE 1:1000

Hoyland Common
Barnsley M1, J36

newlands developments

pHp Architects
www.peter-haddon.com

Land for Sports Facilities
Proposed Phase 1 and Phase 2 works

Drawing Status:	Preliminary
CAD Reference:	4400-001
Drawn:	PL
Date:	feb2020
Scale @A1:	1/1000

Project No:	Drawing No:	Rev:
4400	SP002	P3

Notes

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2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing should be read in conjunction with all other relevant drawings and specifications.

Key:

+ 130.500 : Proposed Level
1:6 : Proposed Gradient
: Major Contour 0.5m Intervals
: Minor Contour 0.1m Intervals

N

Rev	Description	By	Ckd	Date
P01	First Issue	ST	AE	20.08.20

MAKING COMPLEX EASY

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Client: newlands developments

Project: Hoyland

Title: Sports Facility
Proposed Levels

RPS Project Number	Scale @ A1	Date Created
NK020040	1:500	20.08.2020

Task Team Manager	Information Author	Task Information Manager
SG	ST	AE

Status: S2 (Suitable for Information)

Document Number: HOYLA-RPS-SI-XX-DR-C-1651
Revision: P01
Project Code - Originator - Zone - Level - Type - Role - Drawing Number

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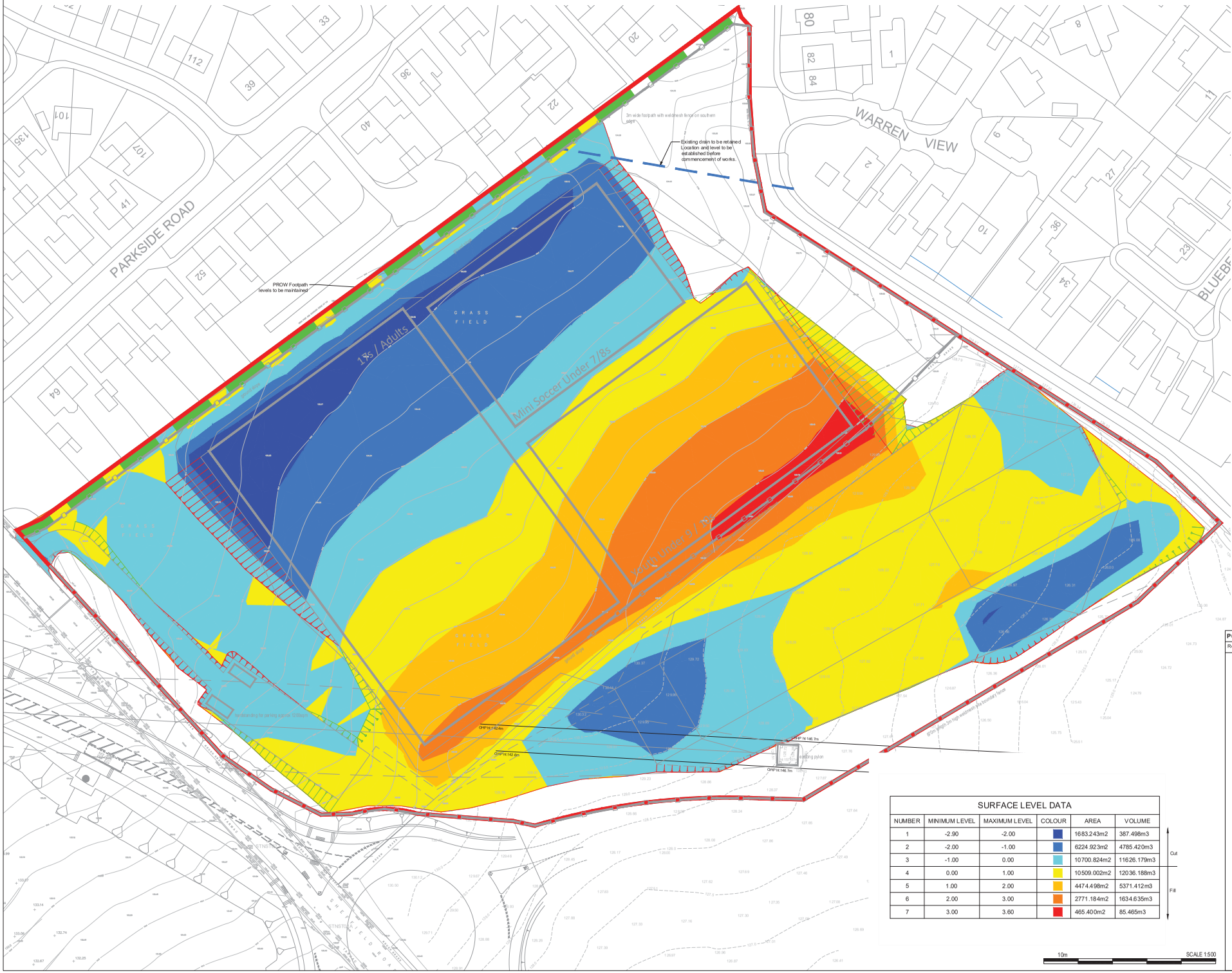

Notes

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Design Assumptions

1. This drawing is based on Greenhatch Survey Z001_30326_T_REV0 Topo
2. The Cut and Fill analysis on this drawing is based on the Proposed Finished Floor Levels indicated on RPS drawing HOYLA-RPS-SI-XX-DR-C-1651.
3. The Cut and Fill analysis is based on a general construction depth of 450mm for car park and access road.
4. No allowance has been made for a site strip.
5. No bulking factors have been applied to the figures below.
6. No allowance has been made for drainage or foundation arisings
7. Cut & Fill volumes:

Total cut	**= 16,799m³**
Total Fill	**= 19,128m³**
Net (Defecit)	**= 2,329m³**

N

SURFACE LEVEL DATA

NUMBER	MINIMUM LEVEL	MAXIMUM LEVEL	COLOUR	AREA	VOLUME	
1	-2.90	-2.00		1683.243m2	387.498m3	Cut
2	-2.00	-1.00		6224.923m2	4785.420m3	Cut
3	-1.00	0.00		10700.824m2	11626.179m3	Cut
4	0.00	1.00		10509.002m2	12036.188m3	Fill
5	1.00	2.00		4474.498m2	5371.412m3	Fill
6	2.00	3.00		2771.184m2	1634.635m3	Fill
7	3.00	3.60		465.400m2	85.465m3	Fill

Rev	Description	By	Ckd	Date
P01	First Issue	ST	AE	20.08.20

RPS MAKING COMPLEX EASY
Sherwood House, Sherwood Avenue,
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T: 01636 605 700 E: rpsnewark@rpsgroup.com

Client: newlands developments

Project: Hoyland

Title: Sports Facility
Earthwork Volumes

RPS Project Number	Scale @ A1	Date Created
NK020040	1:500	20.08.2020
Task Team Manager	**Information Author**	**Task Information Manager**
SG	ST	AE

Status: S2 (Suitable for Information)

Document Number: HOYLA-RPS-SI-XX-DR-C-1650 Revision: P01

Project Code - Originator - Zone - Level - Type - Role - Drawing Number

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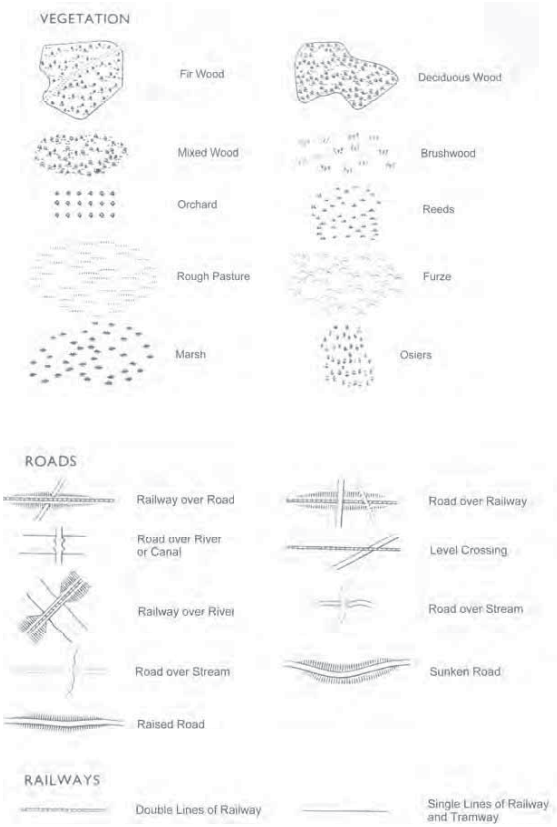
APPENDIX B

County Series 1:10,560 scale



National Grid 1:10,000 scale

GroundSure

Historical Map Pack Legend

County Series & National Grid

1:10,560 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

If you have a query regarding any of the maps provided please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

Technical Helpline

Tel 08444159000

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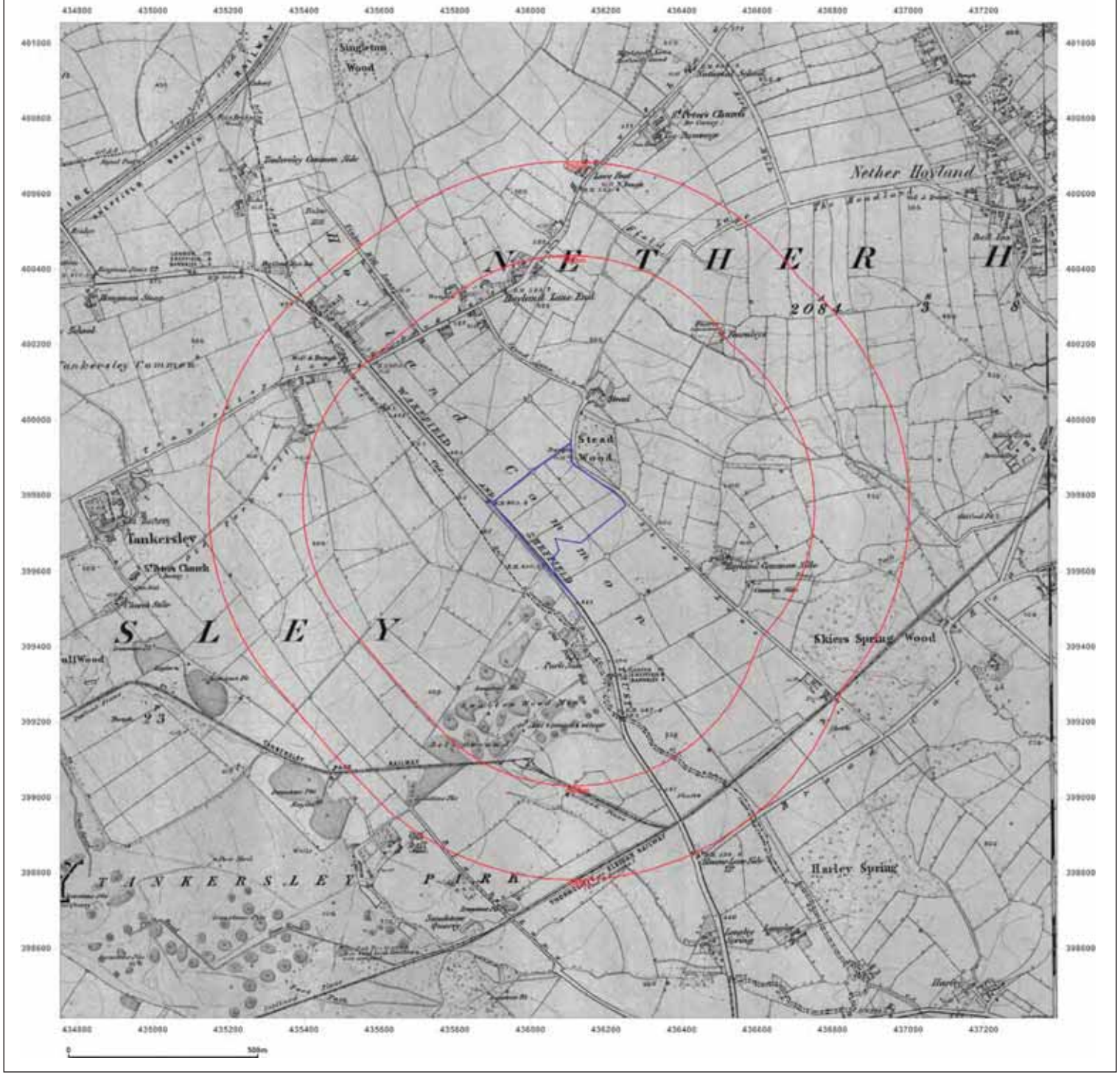

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Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

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Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

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Printed at: 1:10,560

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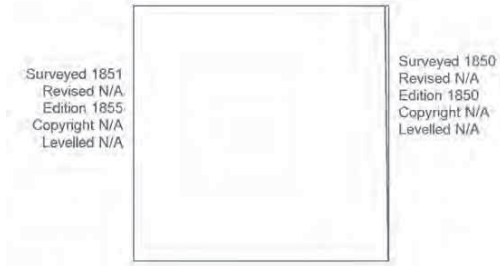

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Production date: 04 August 2020

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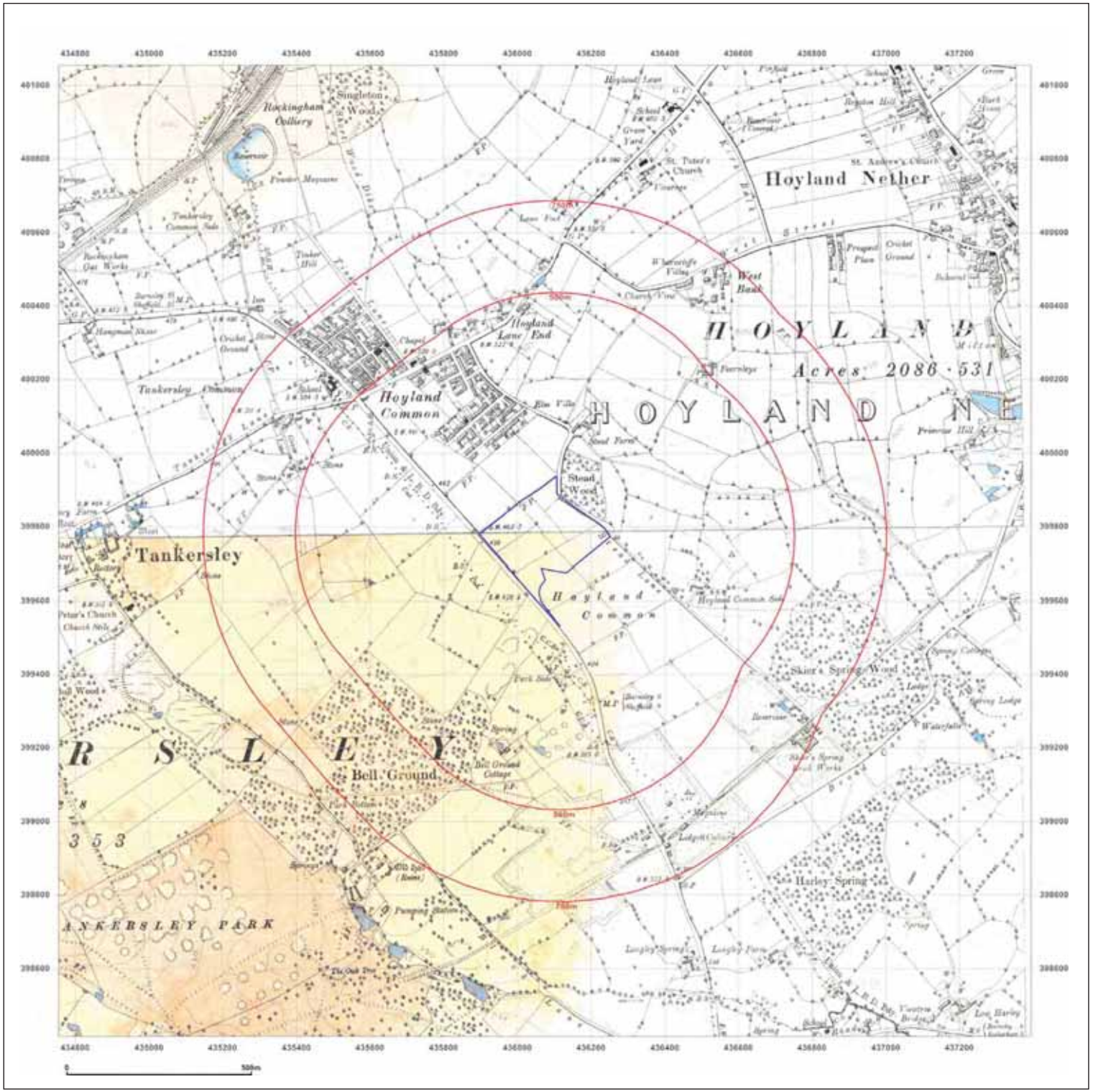

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Site Details:

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Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

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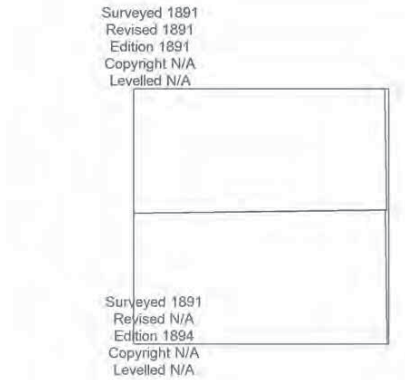

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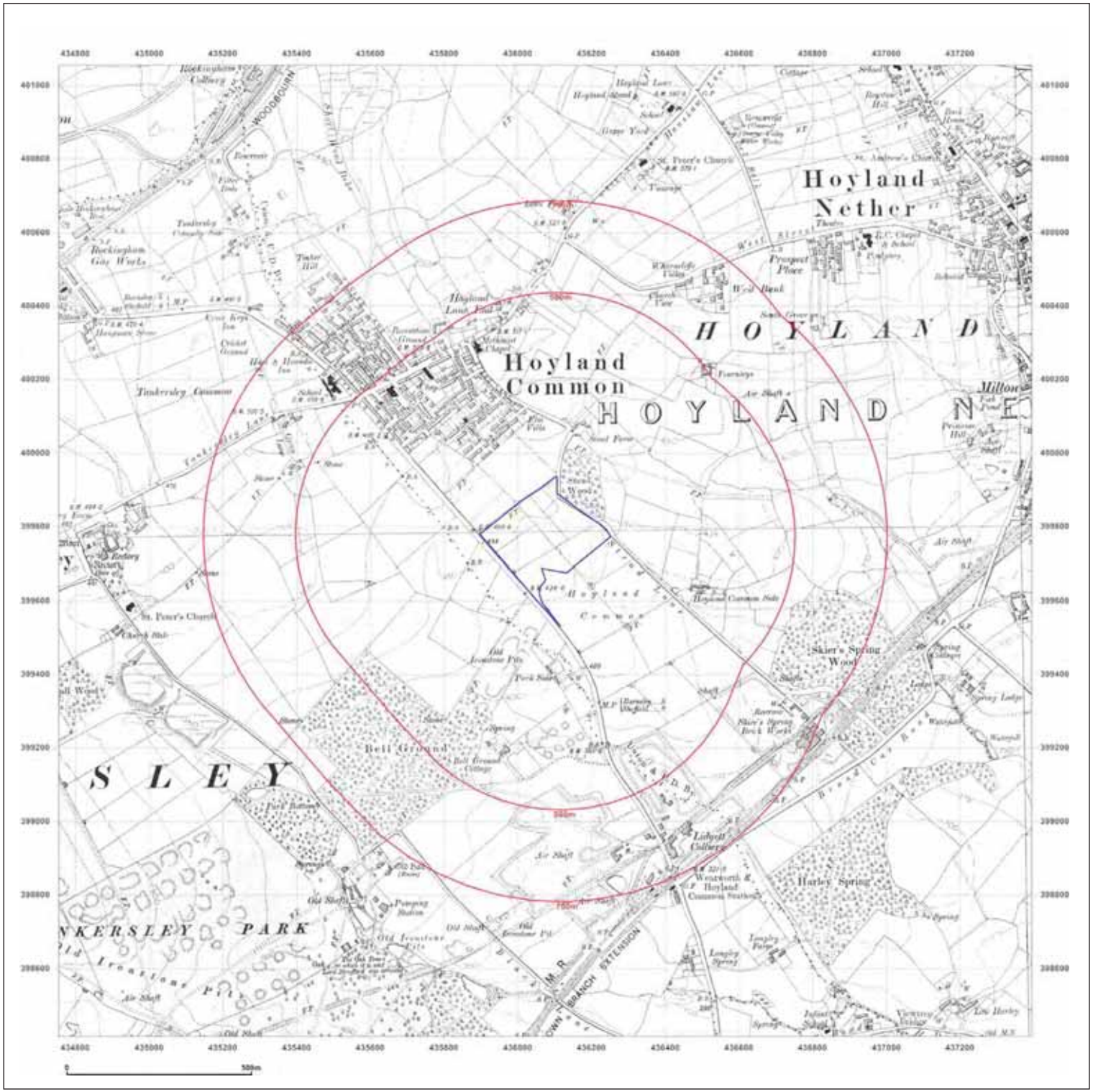

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

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Report Ref: EMS-625397_832707
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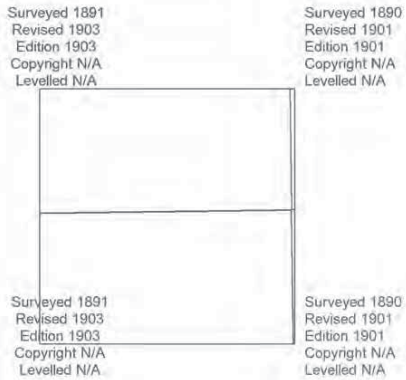

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Map legend available at:
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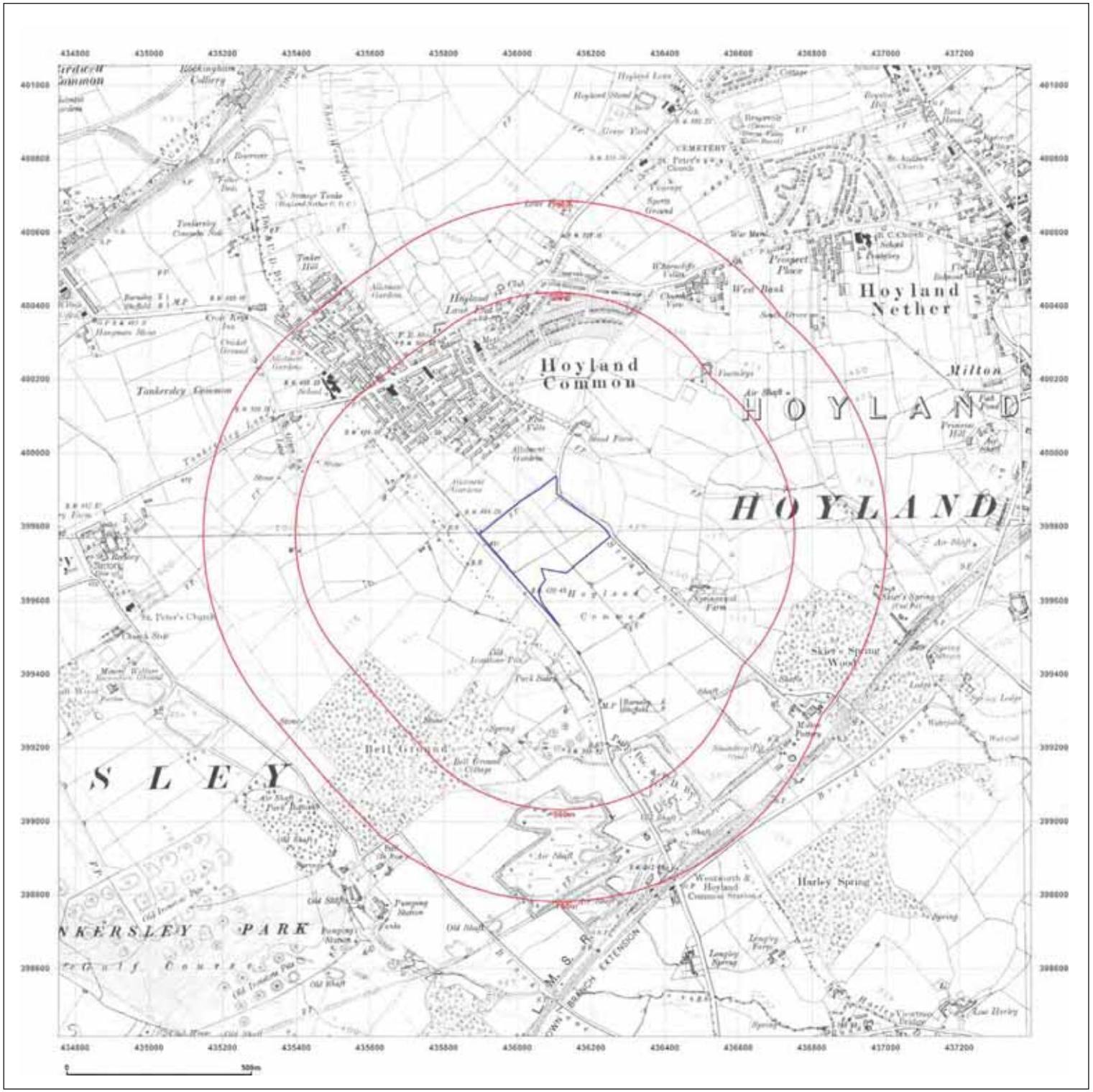

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series
Map date: **1929-1931**
Scale: 1:10,560
Printed at: 1:10,560

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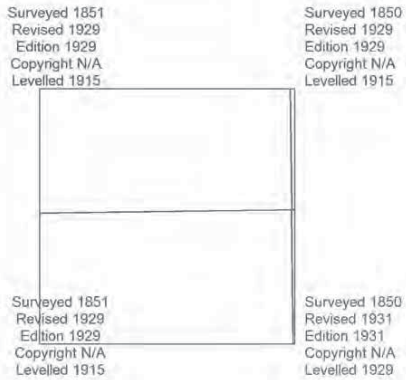

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Production date: 04 August 2020

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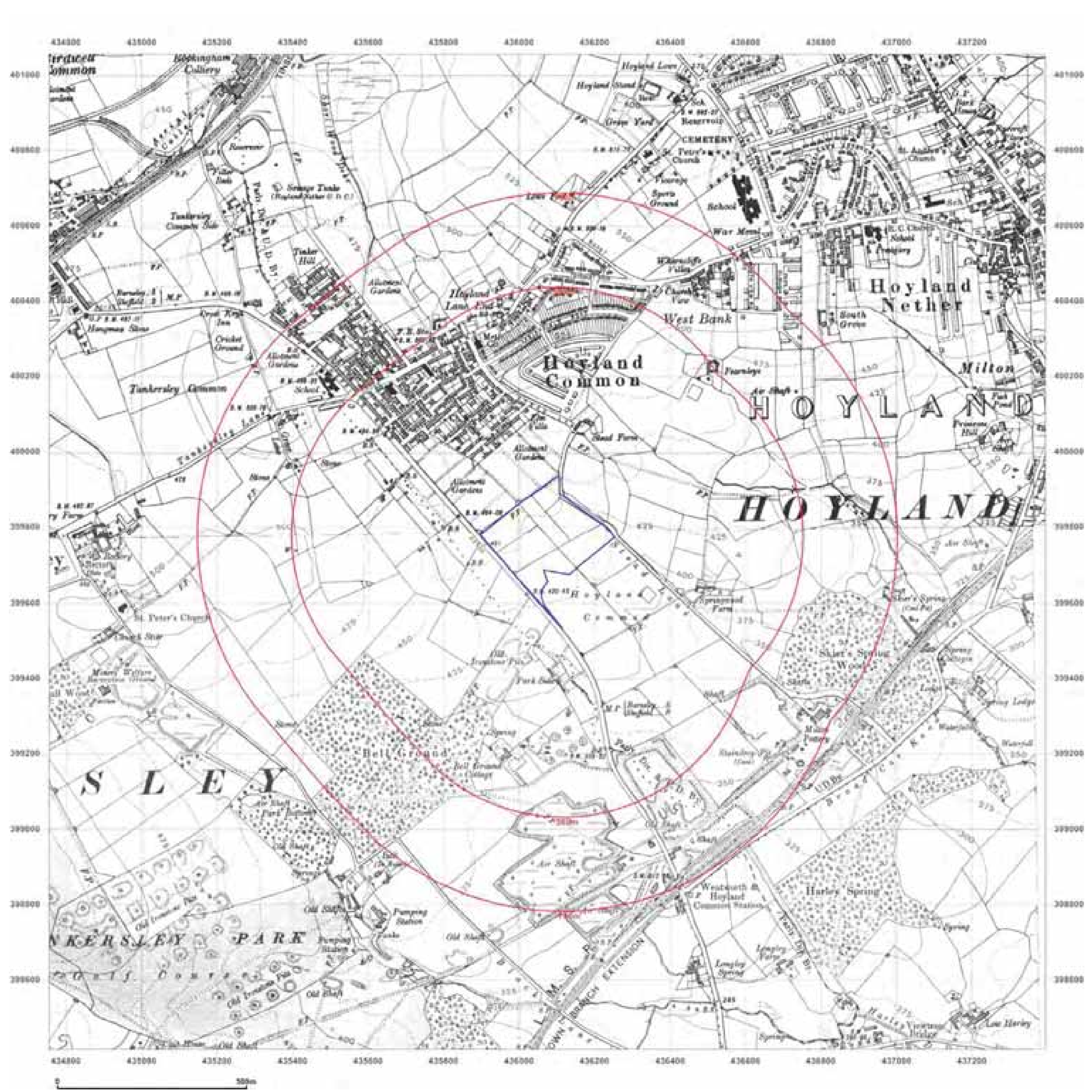

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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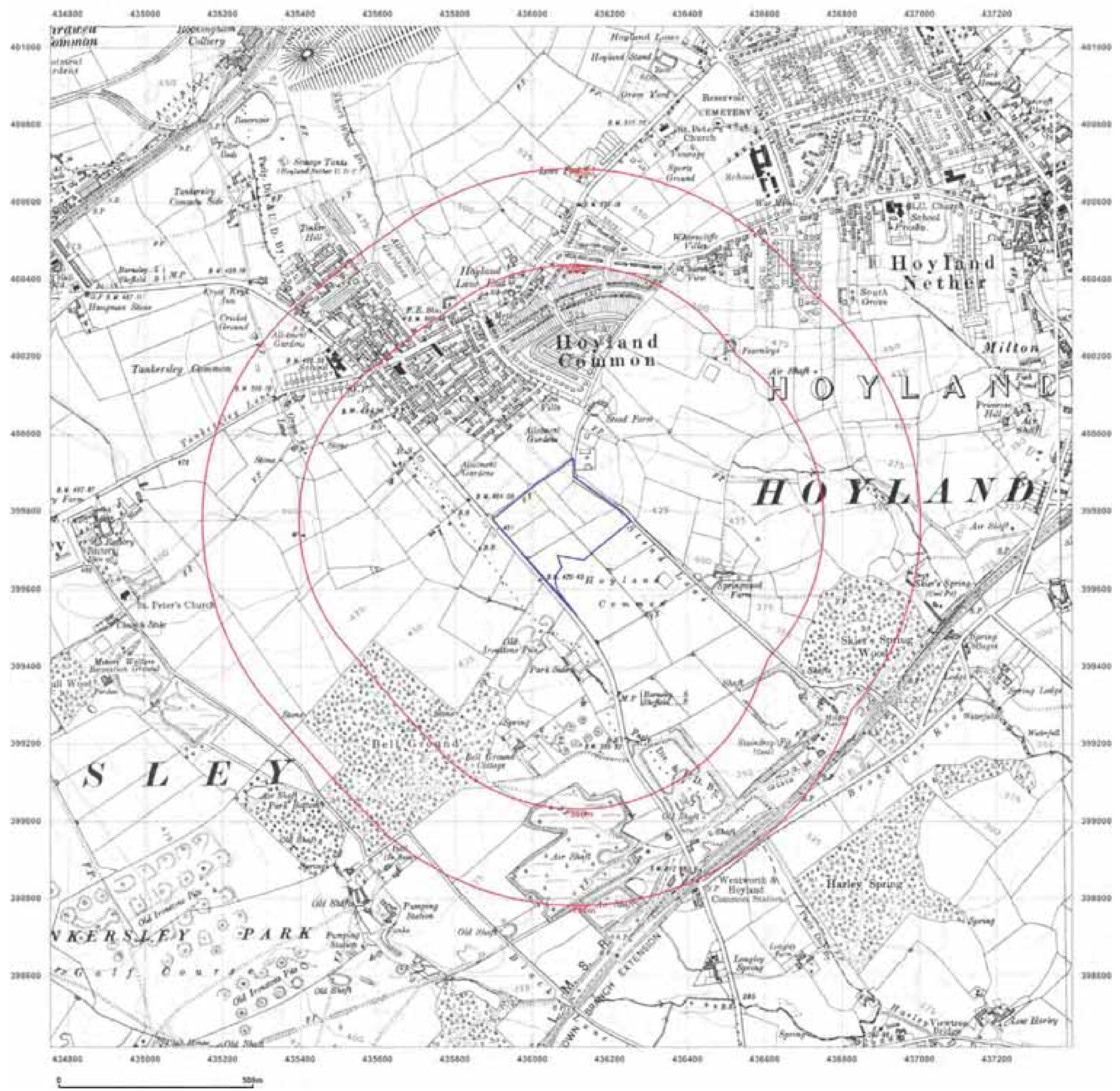

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

Surveyed 1851 Revised 1948 Edition 1948 Copyright N/A Levelled 1929	Surveyed 1850 Revised 1948 Edition 1948 Copyright N/A Levelled 1929
Surveyed 1851 Revised 1948 Edition 1948 Copyright N/A Levelled 1929	Surveyed 1850 Revised 1948 Edition 1948 Copyright N/A Levelled 1929

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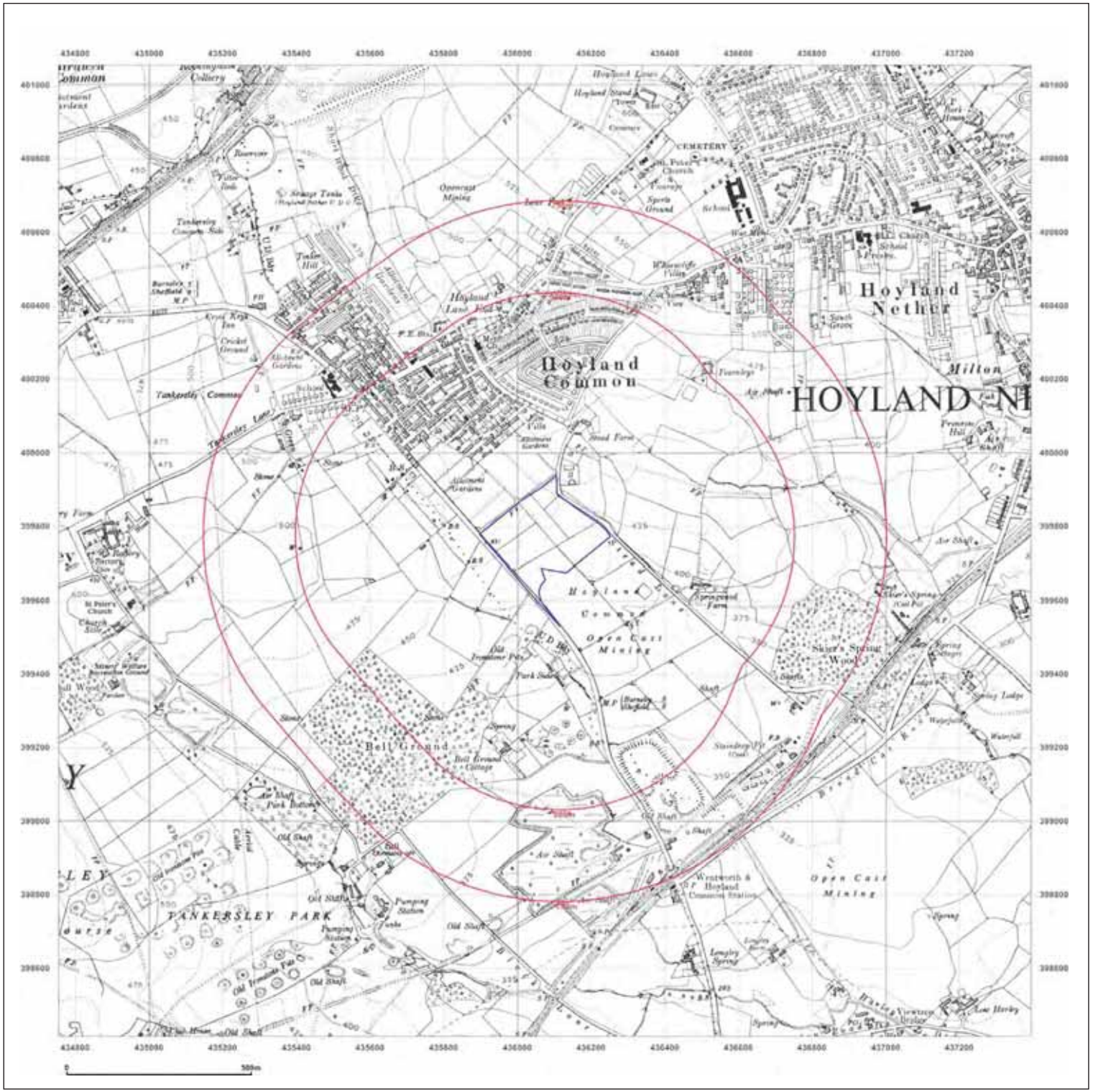

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: Provisional
Map date: 1951-1956
Scale: 1:10,560
Printed at: 1:10,560

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

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

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

Surveyed 1951
Revised 1951
Edition N/A
Copyright 1951
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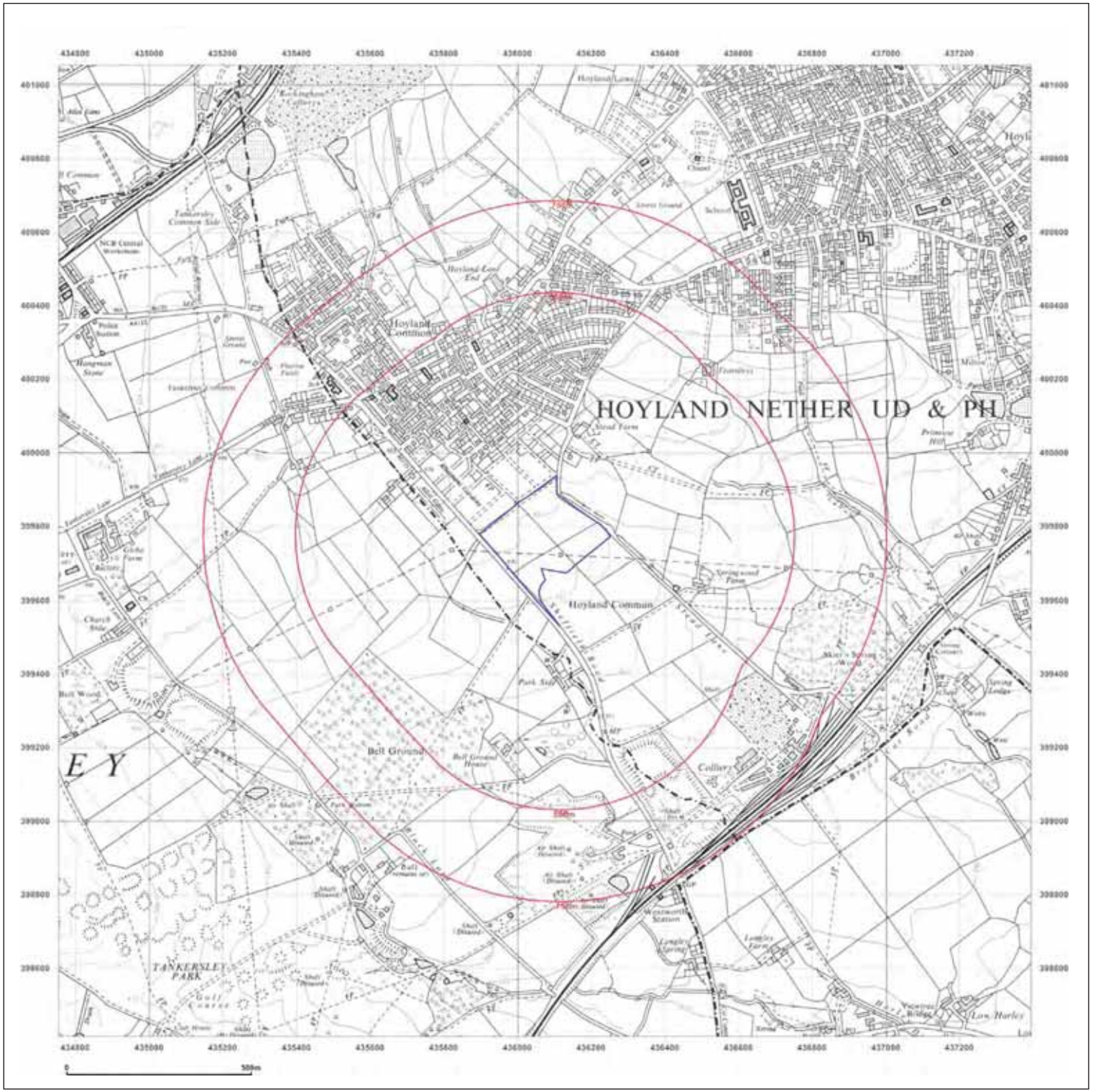

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: Provisional
Map date: **1965-1966**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1966
Revised 1966
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Copyright N/A
Levelled N/A

Surveyed 1965
Revised 1965
Edition N/A
Copyright 1965
Levelled N/A

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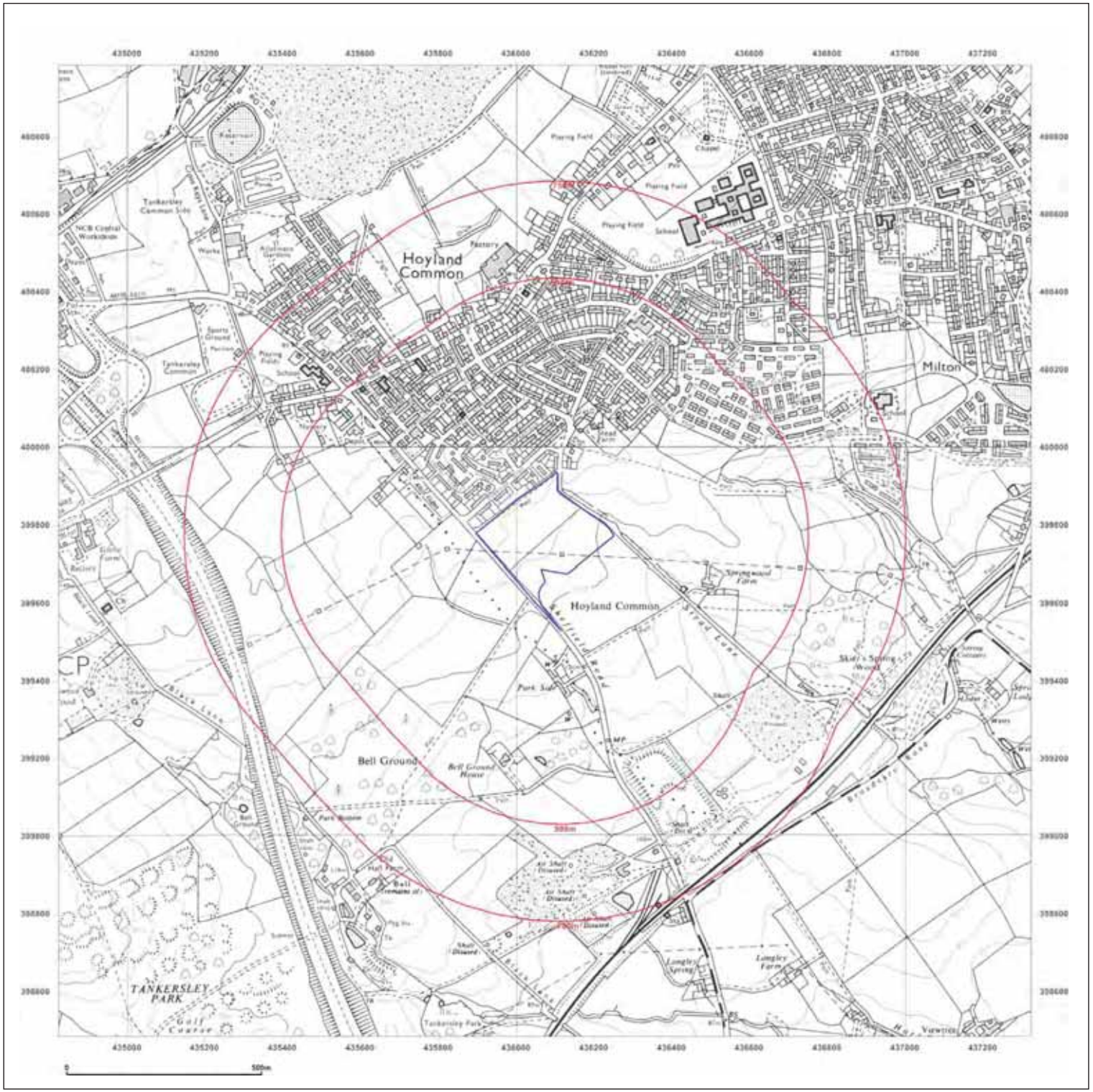

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: **1977-1980**
Scale: 1:10,000
Printed at: 1:10,000

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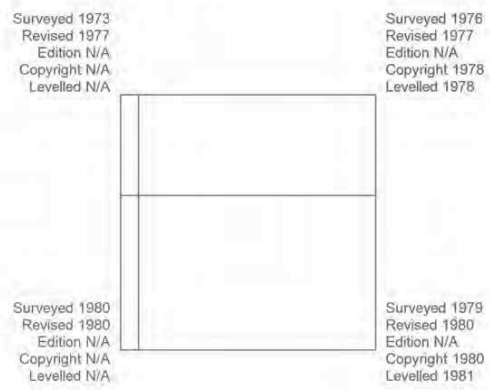

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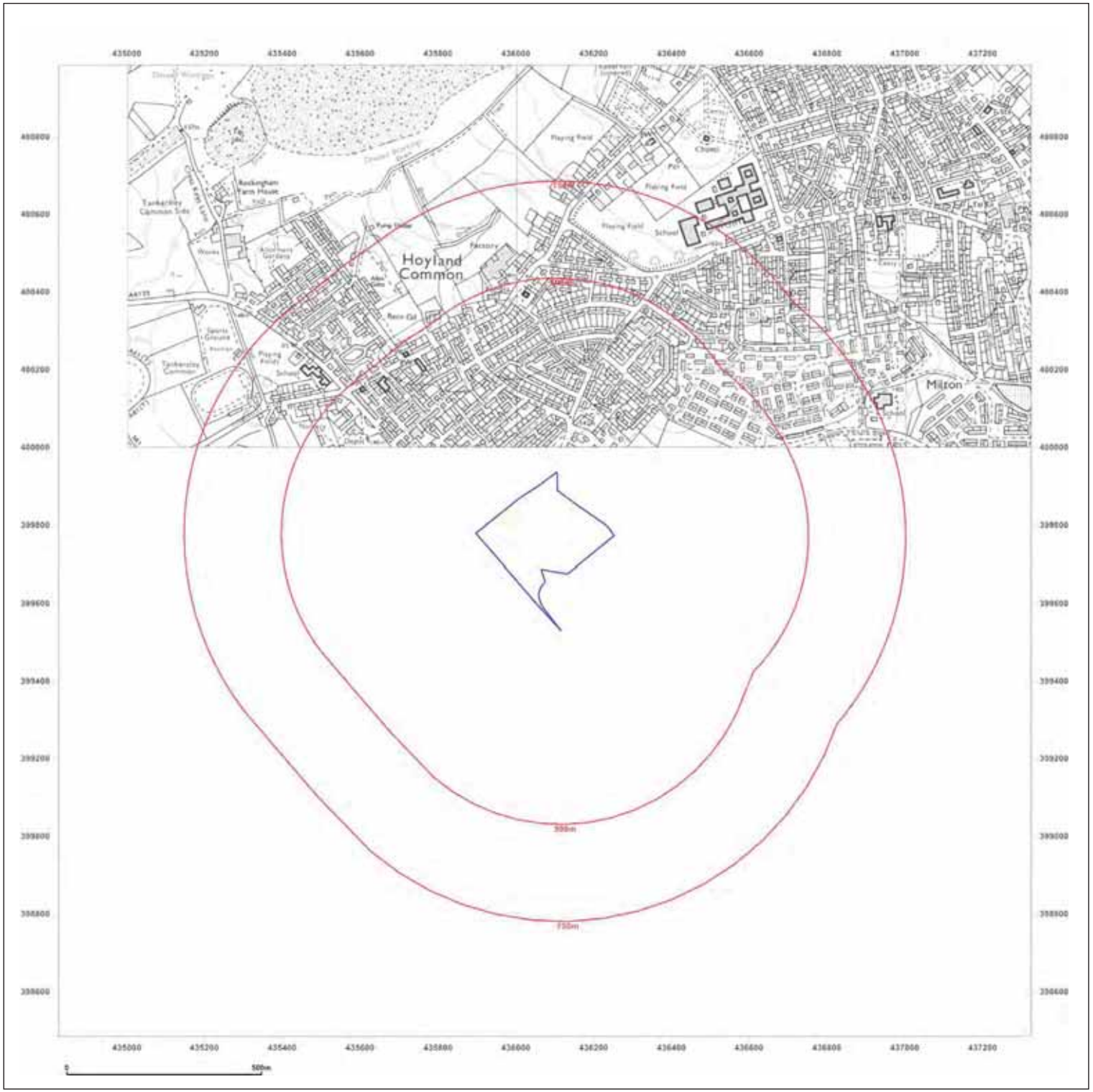

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

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

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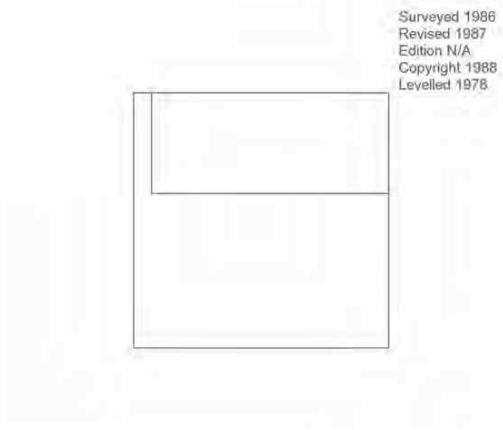

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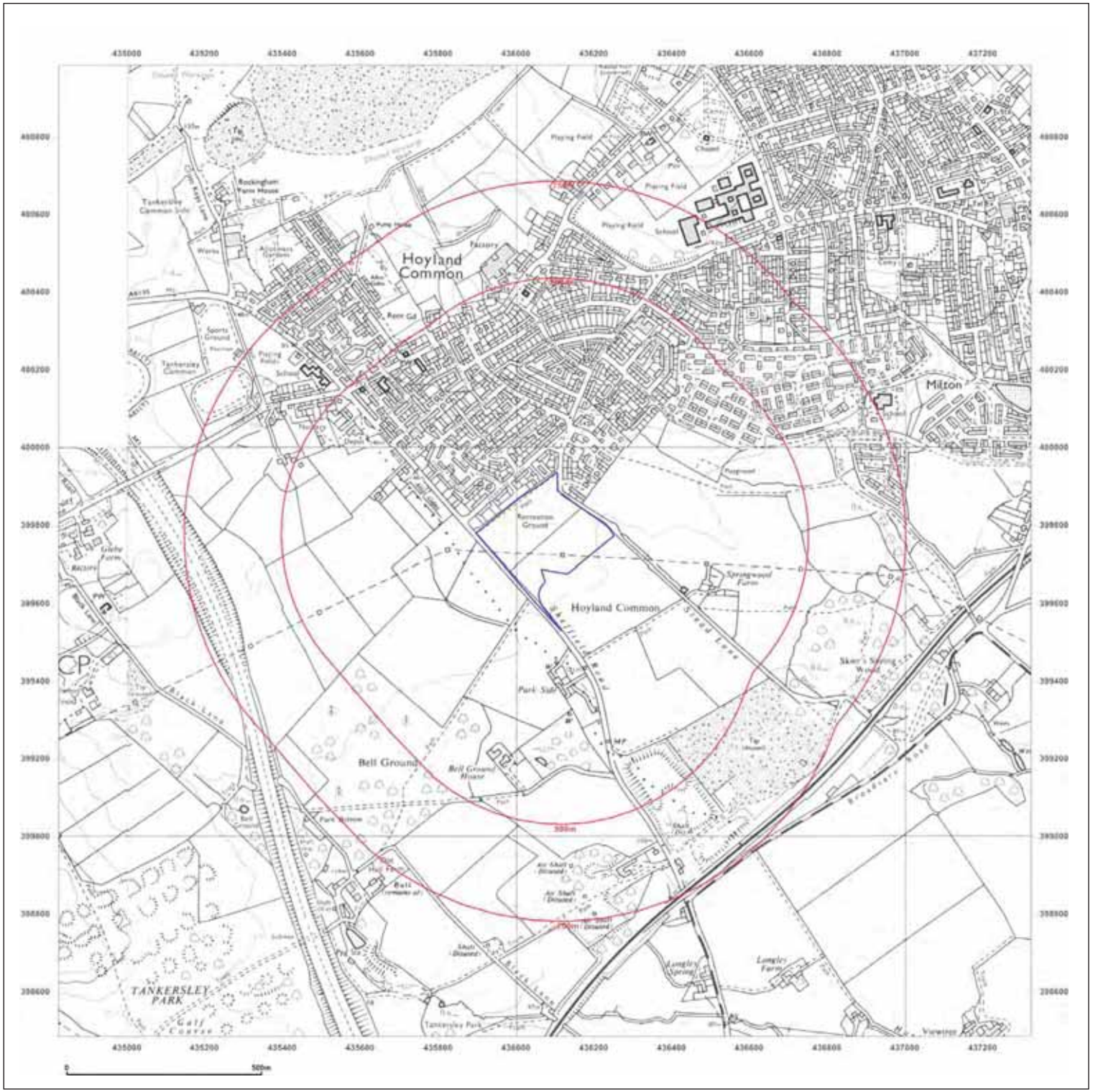

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: **1987-1992**
Scale: 1:10,000
Printed at: 1:10,000

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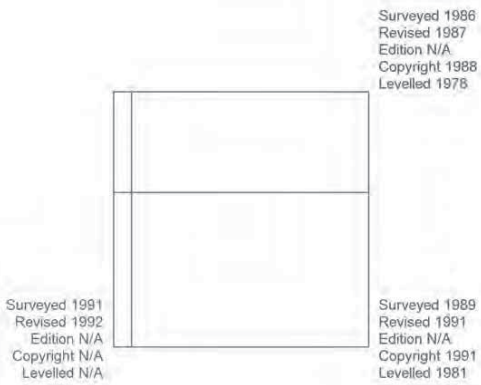

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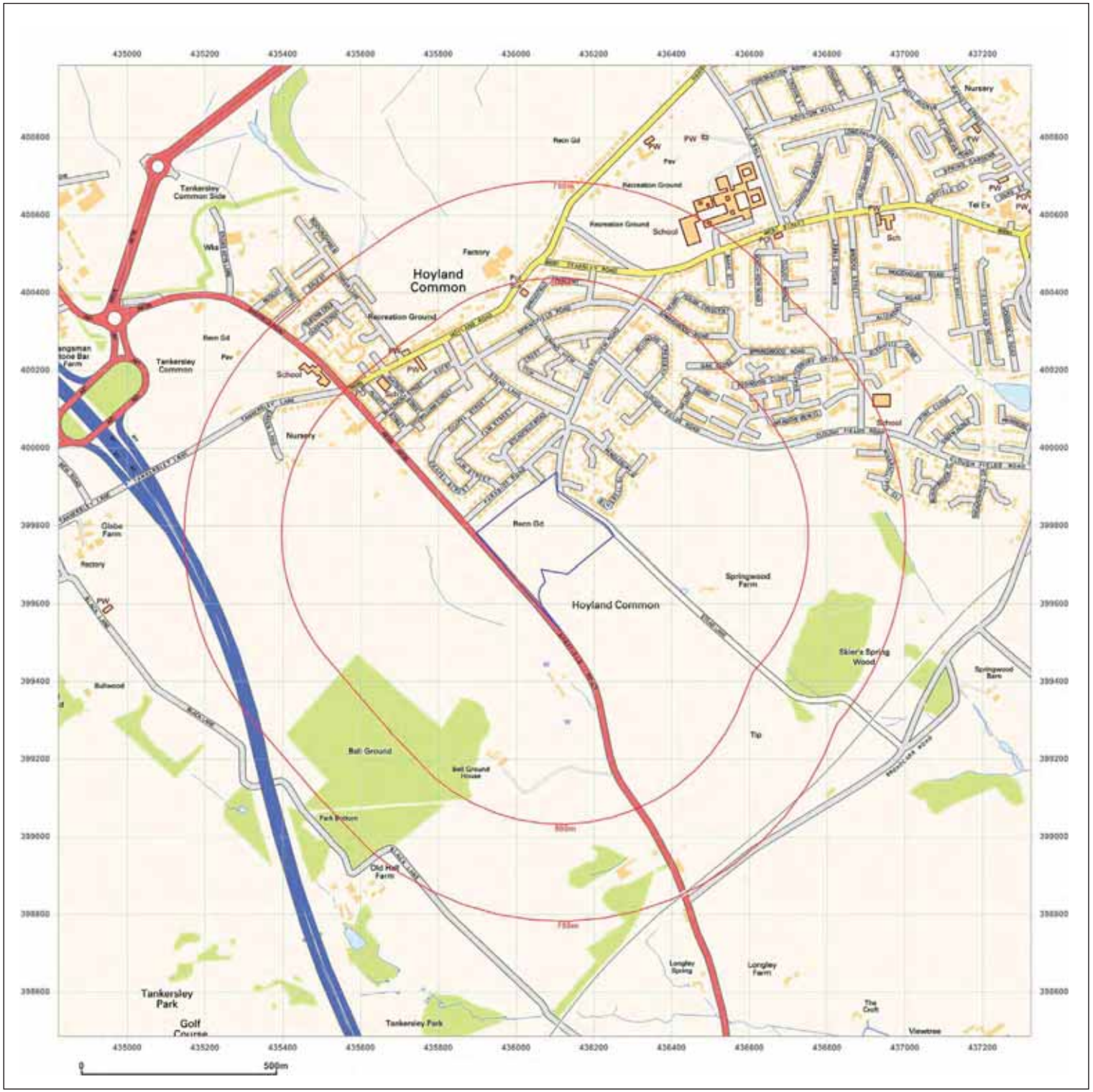

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 2001
Scale: 1:10,000
Printed at: 1:10,000

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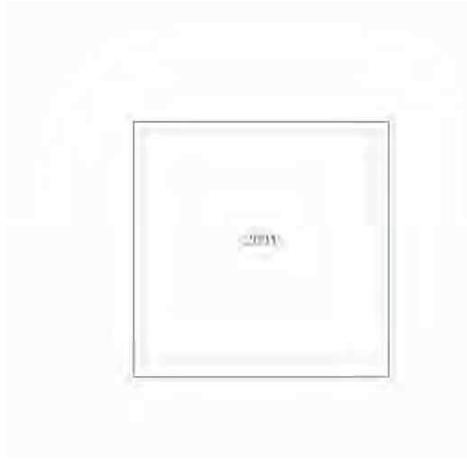

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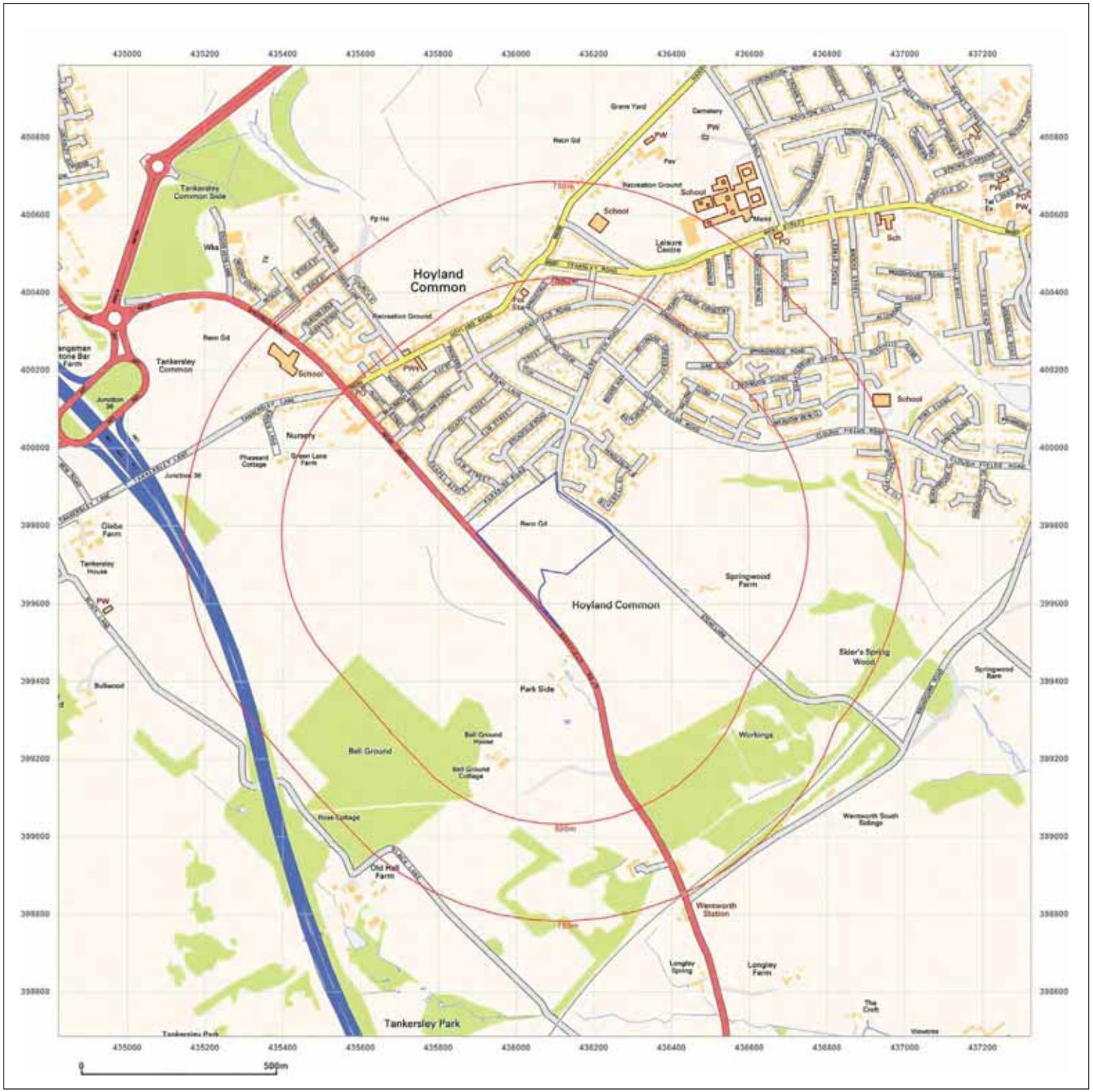

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

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

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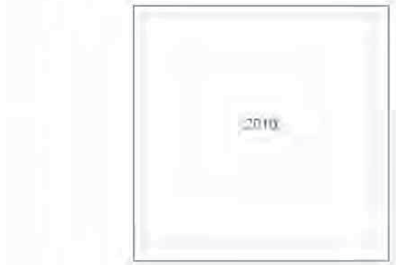

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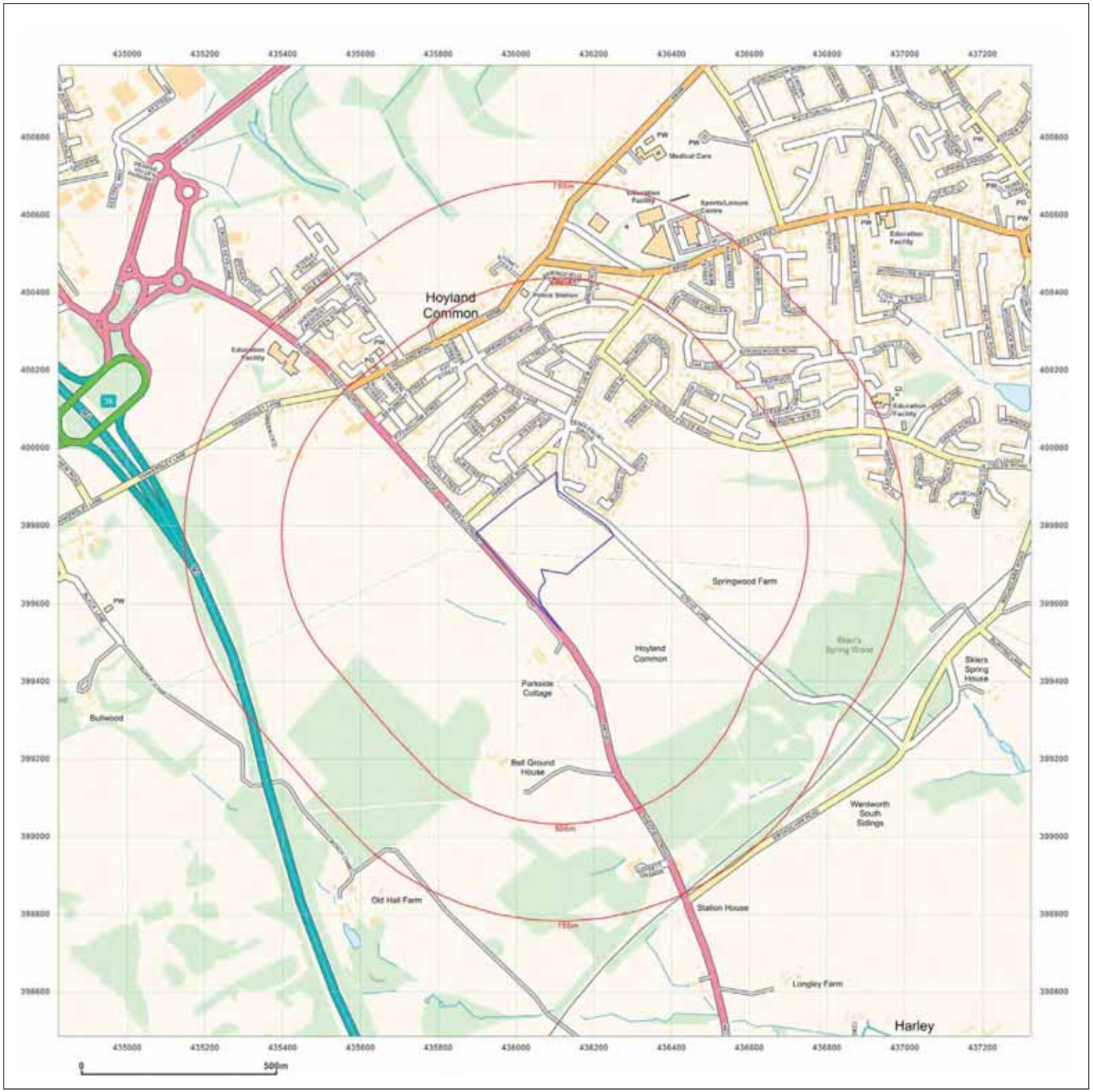

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 2020
Scale: 1:10,000
Printed at: 1:10,000

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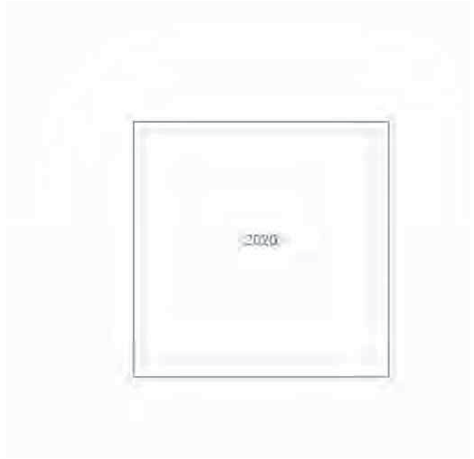

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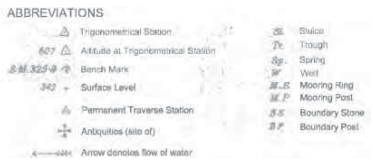
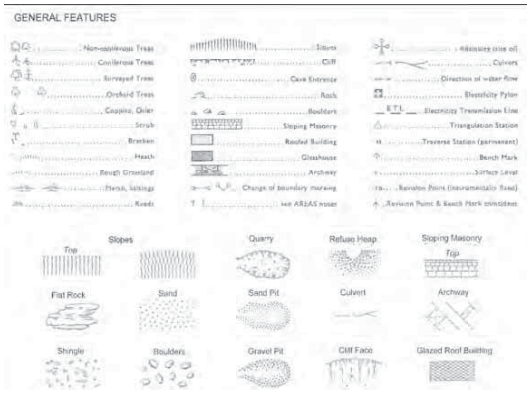
County Series 1:2,500 scale



National Grid 1:2,500 / 1:1,250 scale



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Historical Map Pack Legend

County Series

1:1,250 scale

~

County Series & National Grid

1:2,500 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

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Technical Helpline:

Tel 08444159000

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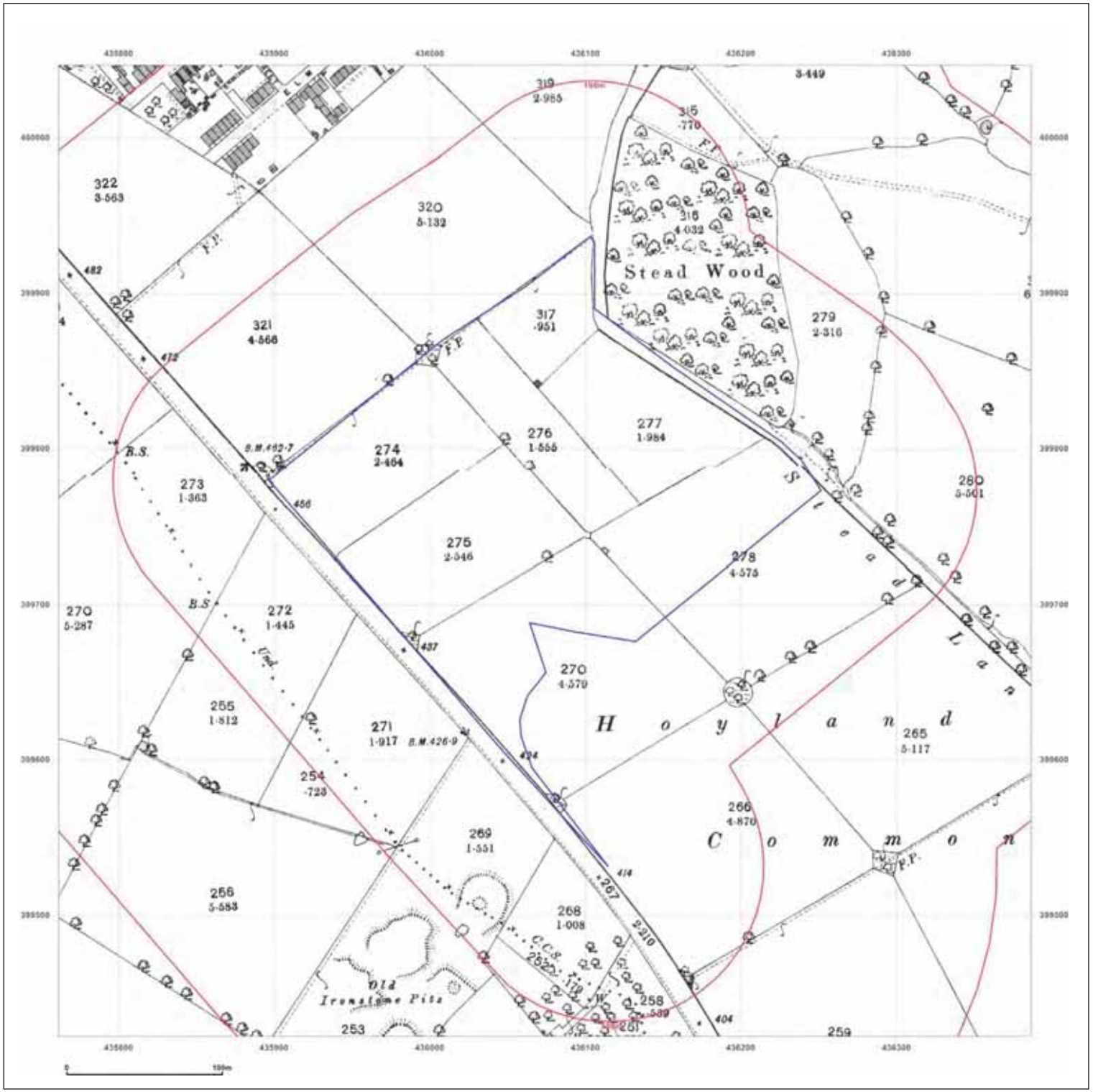

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series
Map date: 1893
Scale: 1:2,500
Printed at: 1:2,500

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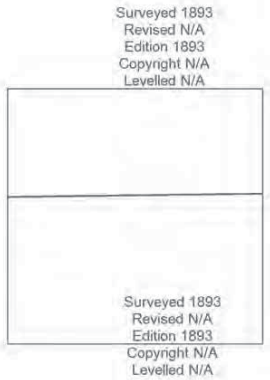

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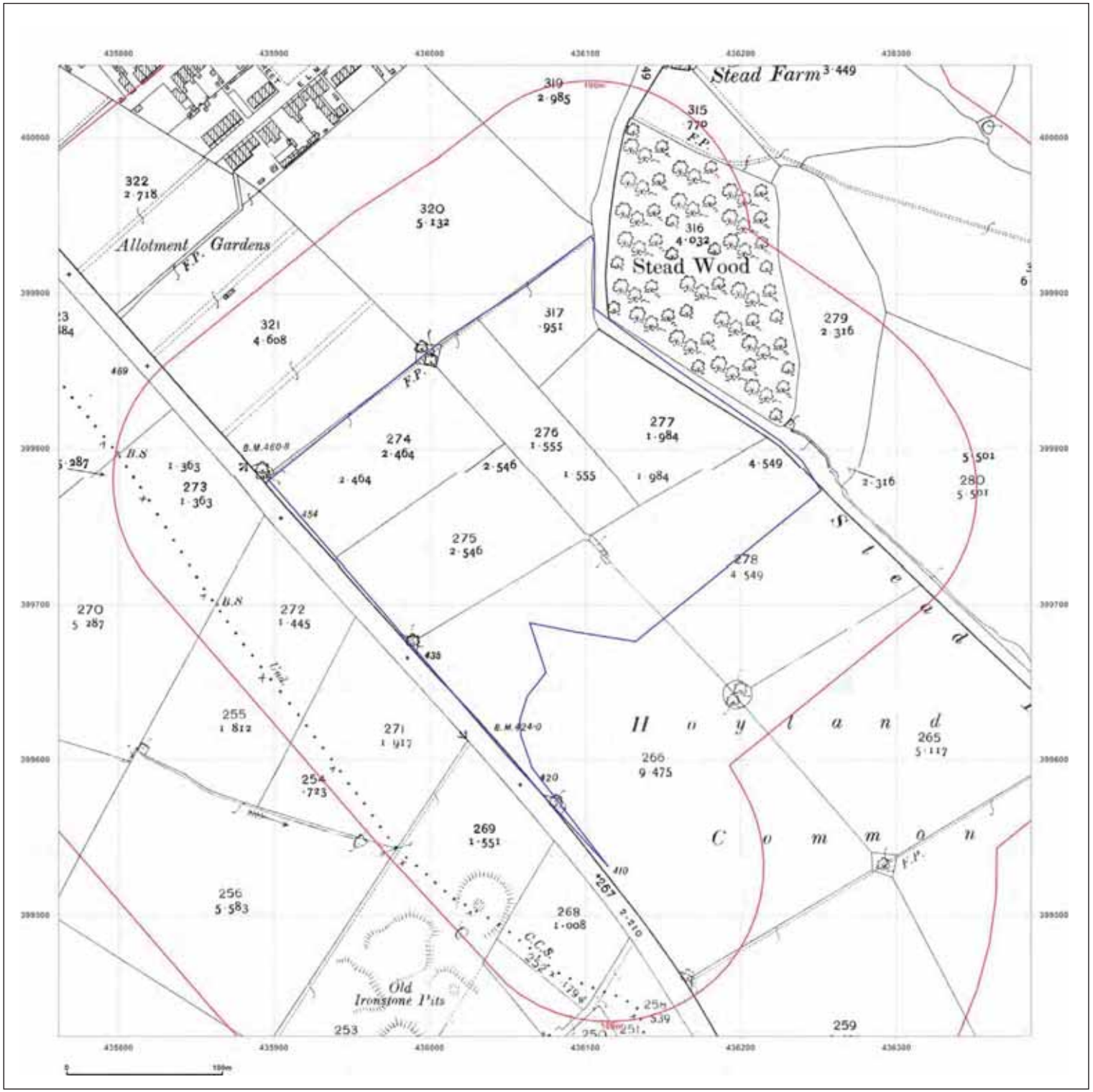

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series
Map date: 1905-1906
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1890
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1901
Edition 1905
Copyright N/A
Levelled N/A

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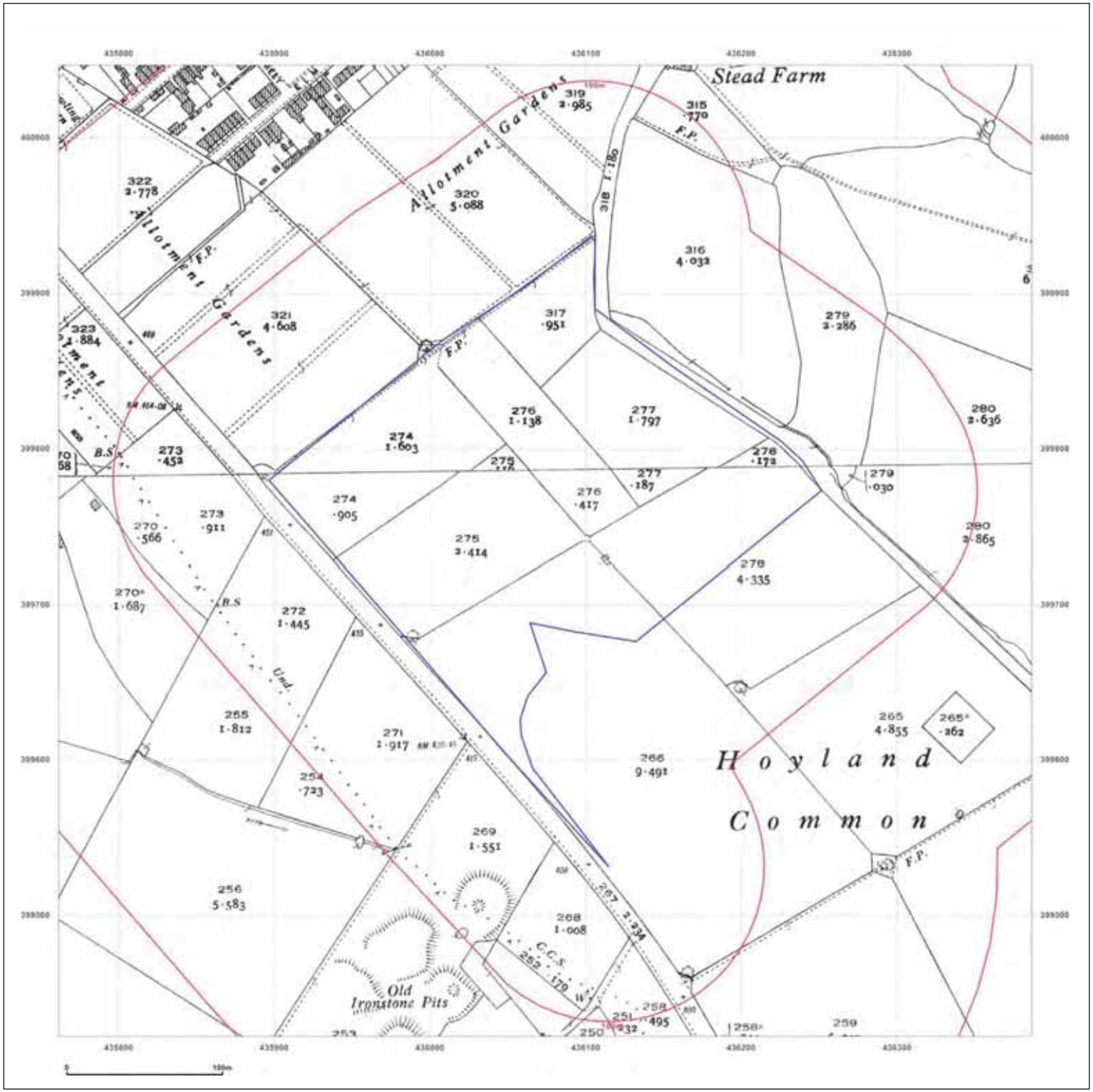

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: County Series
Map date: 1931
Scale: 1:2,500
Printed at: 1:2,500

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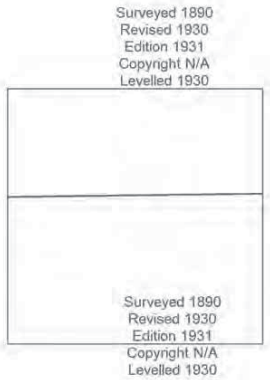

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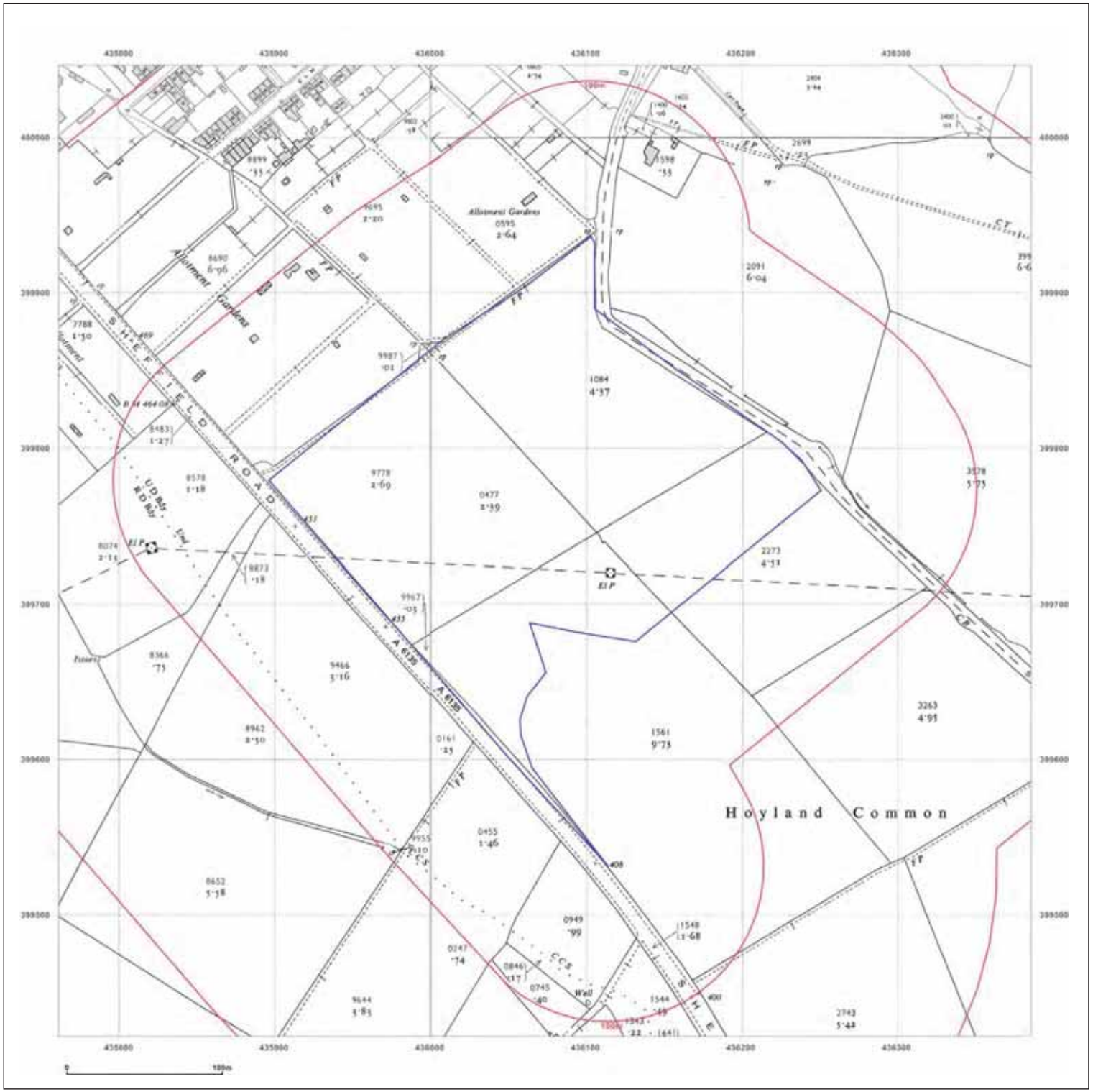

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 1955-1956
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1955
Revised 1955
Edition N/A
Copyright 1956
Levelled 1953

Surveyed 1955
Revised 1955
Edition N/A
Copyright 1956
Levelled 1930

Surveyed 1956
Revised 1956
Edition N/A
Copyright 1957
Levelled 1930

Surveyed 1956
Revised 1956
Edition N/A
Copyright 1957
Levelled 1930

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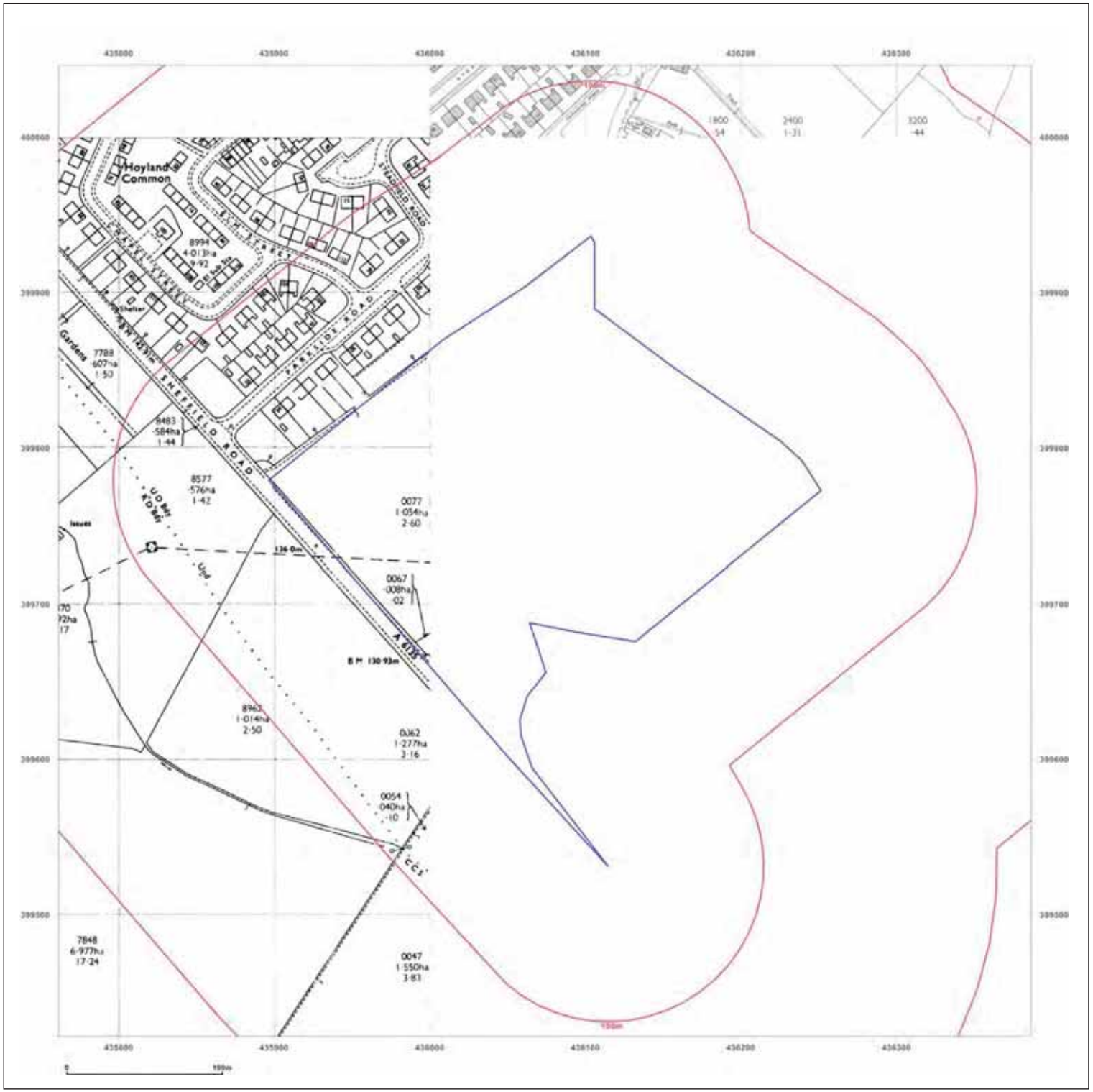

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: **1967-1970**
Scale: 1:2,500
Printed at: 1:2,500

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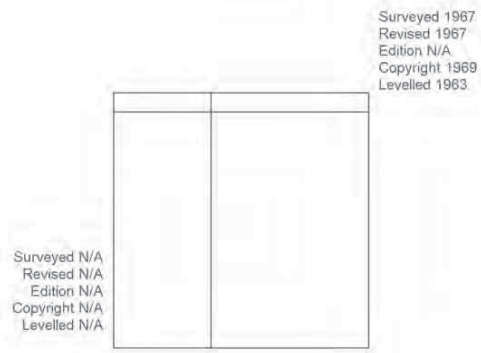

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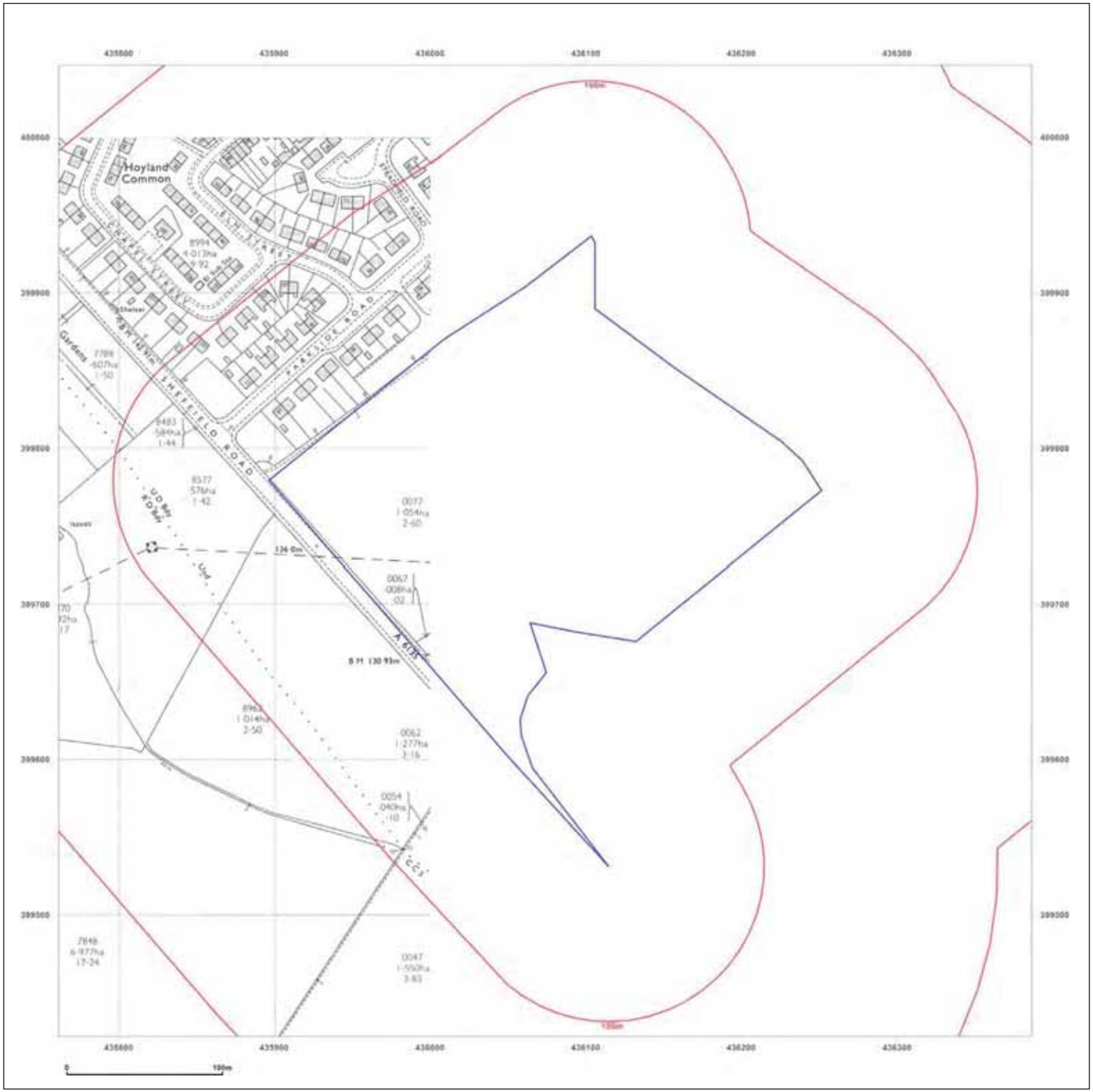

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Site Details:

Parkside, Hoyland,Sheffield Road, Hoyland,S74 0AH

Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 1970
Scale: 1:2,500
Printed at: 1:2,500

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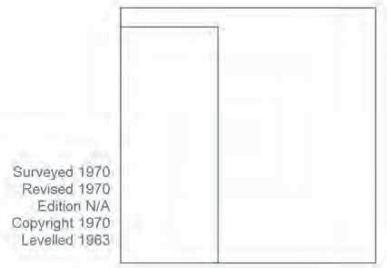

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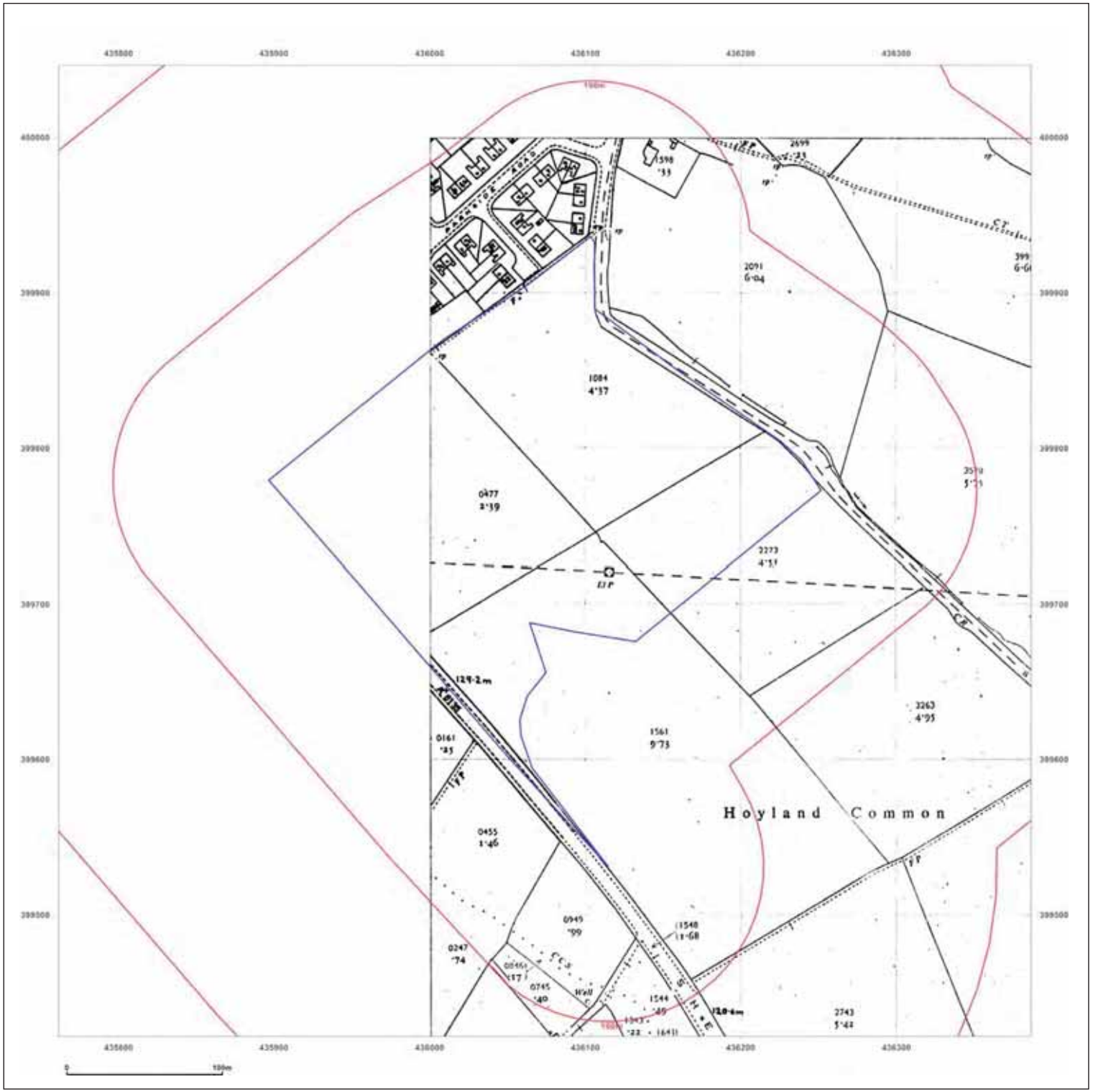

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 1978
Scale: 1:2,500
Printed at: 1:2,500

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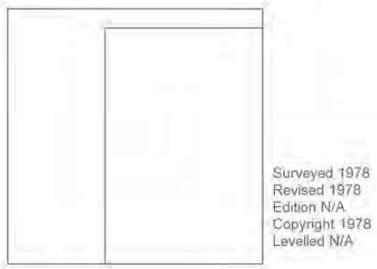

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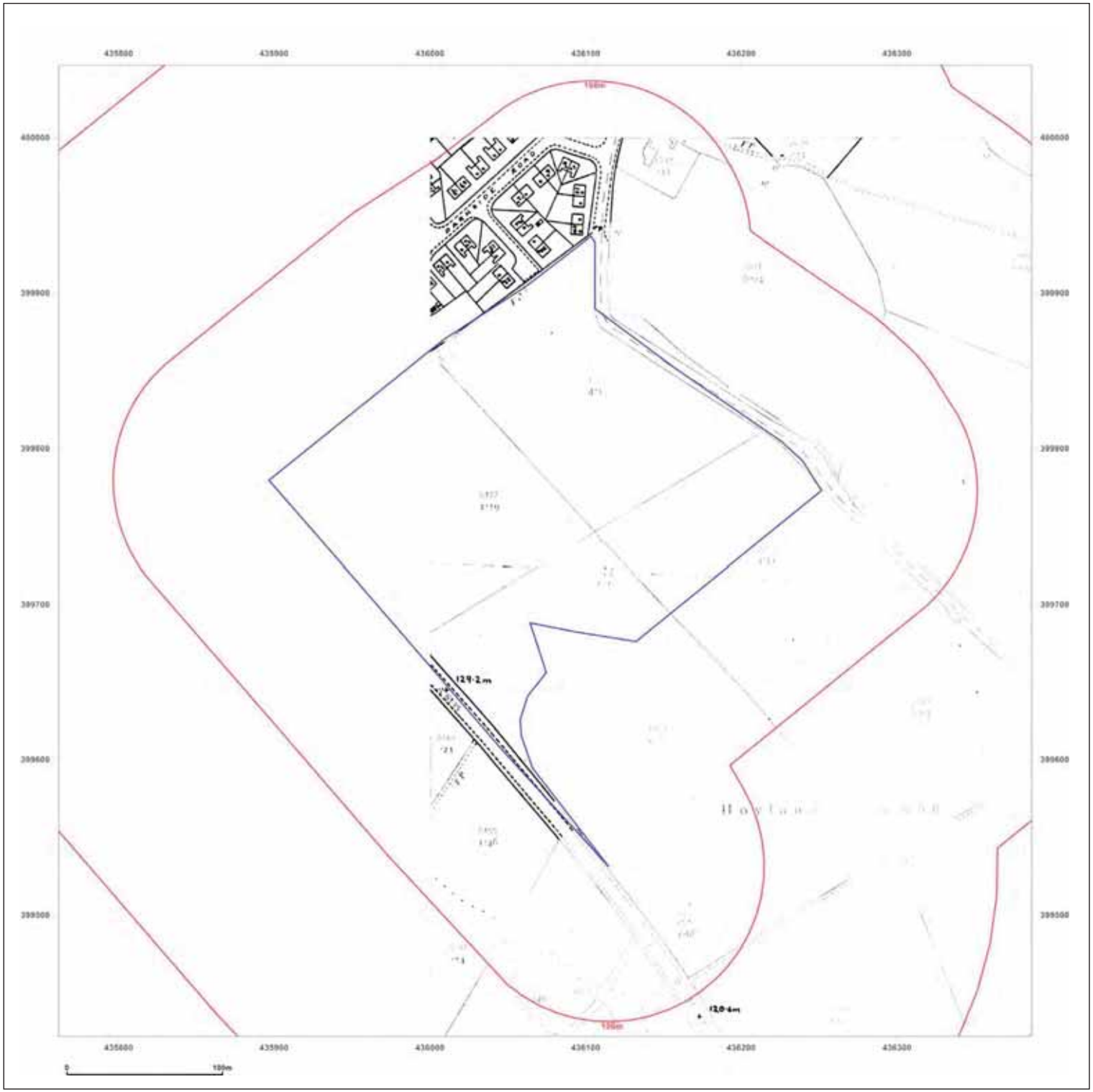

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
Map date: 1978
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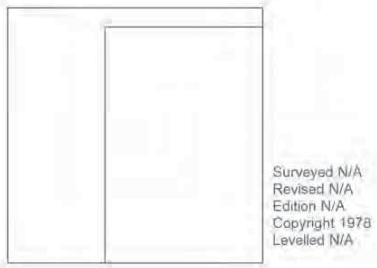

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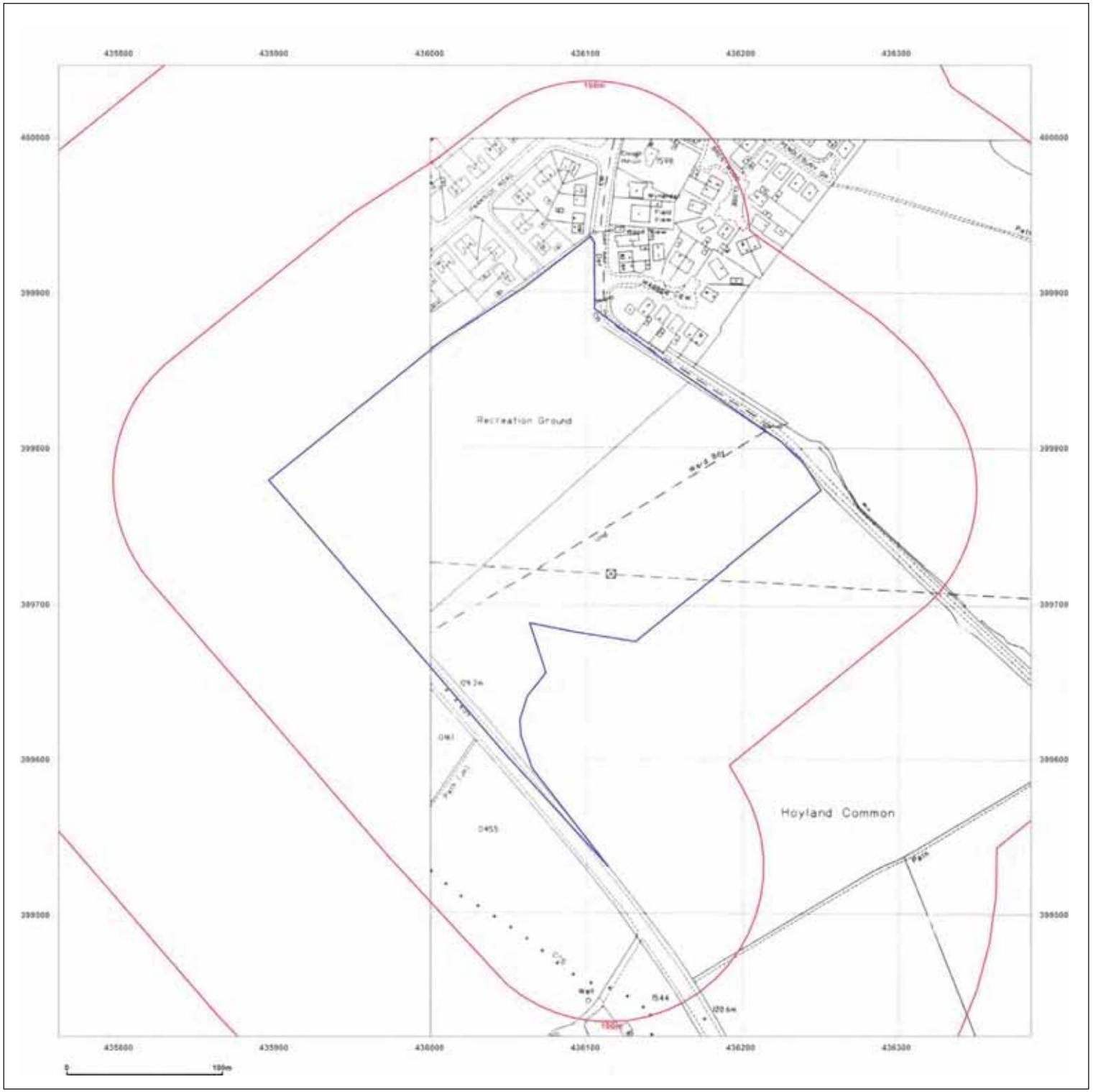

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: National Grid
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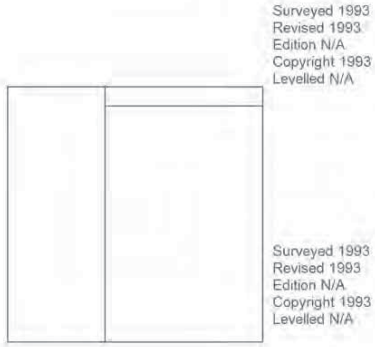

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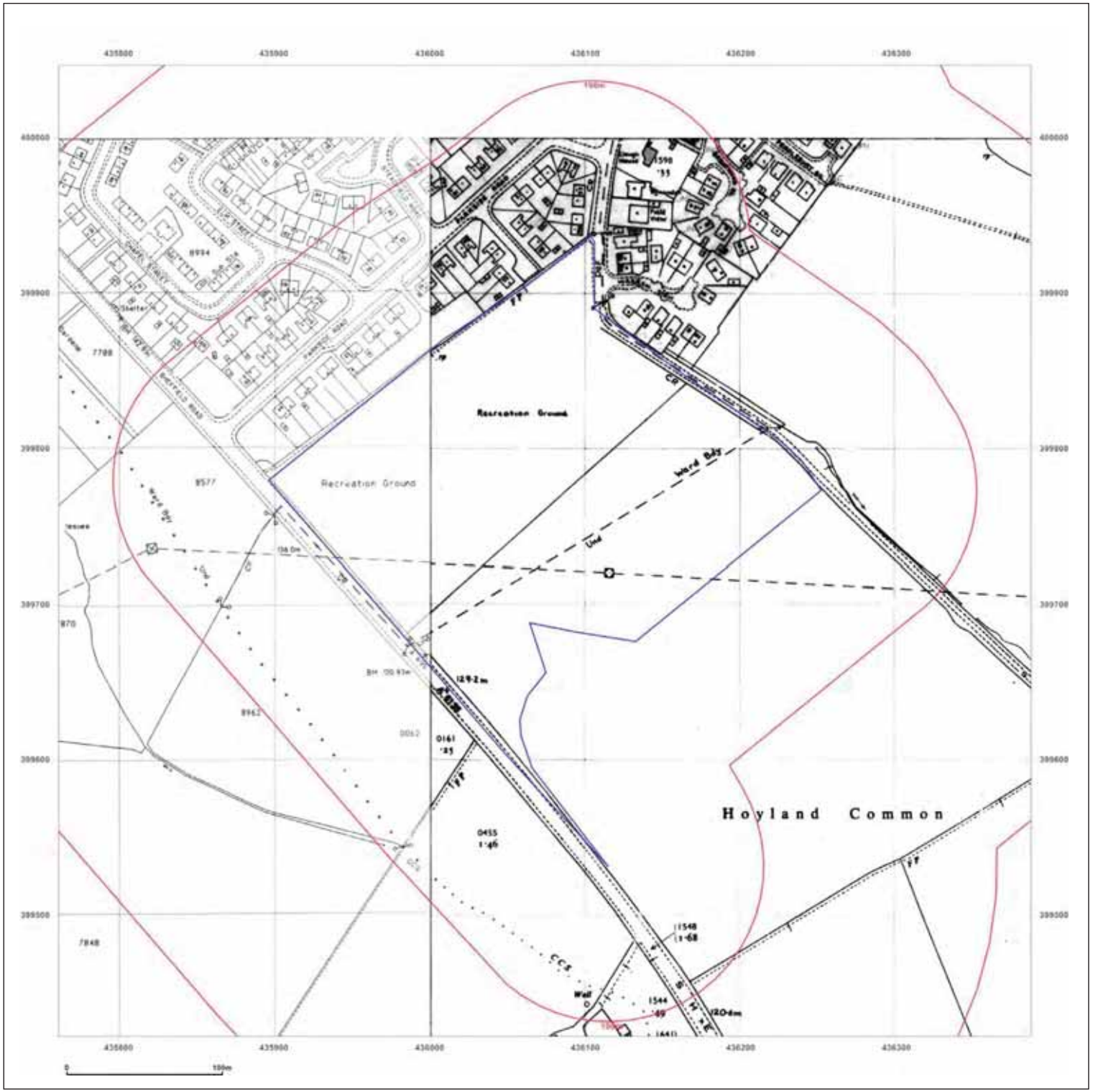

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

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Map date: 1990-1993
Scale: 1:2,500
Printed at: 1:2,500

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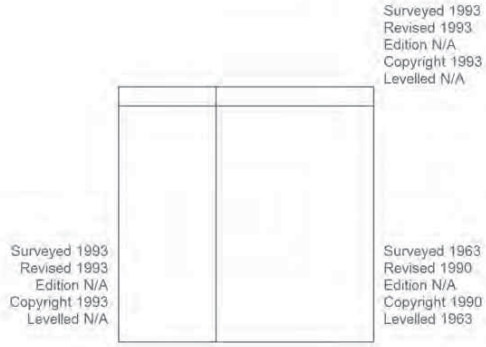

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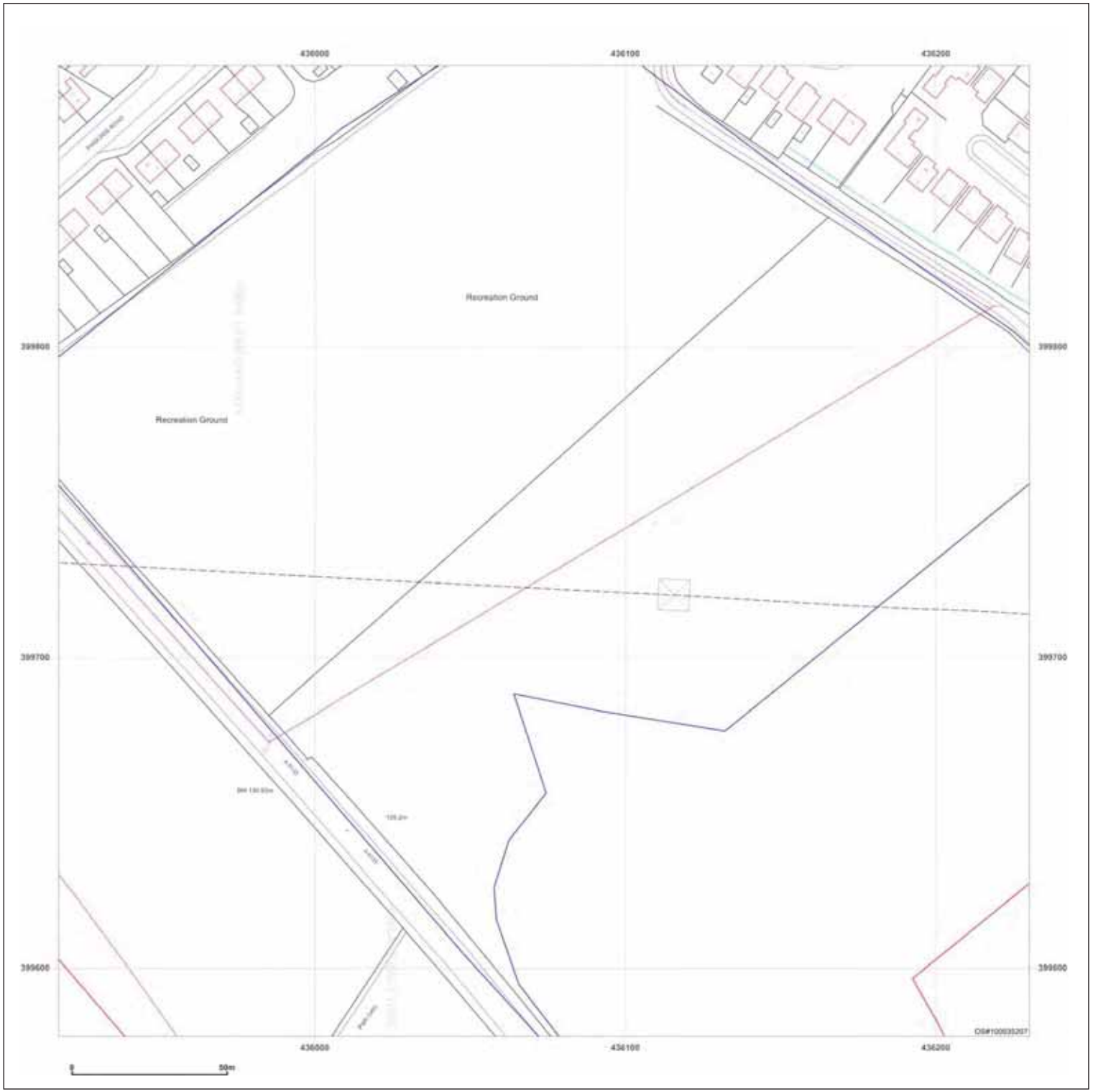

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Site Details:

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Client Ref: EMS_625397_832707
Report Ref: EMS-625397_832707
Grid Ref: 436074, 399734

Map Name: LandLine
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Scale: 1:1,250
Printed at: 1:1,250

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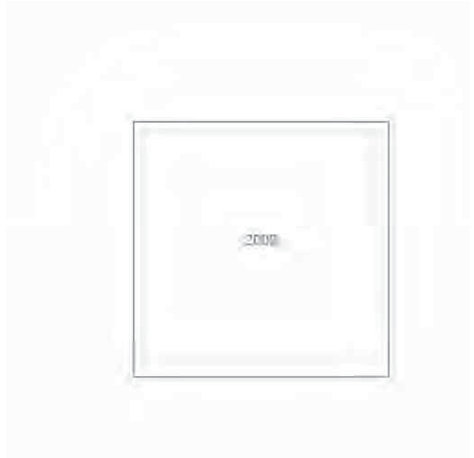

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Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Parkside, Hoyland, Sheffield Road, Hoyland, S74 0AH,

Order Details

Date: 04/08/2020

Your ref: EMS_625397_832708

Our Ref: EMS-625397_832708

Client: emapsite

Site Details

Location: 436069 399771

Area: 5.51 ha

Authority: Barnsley Metropolitan Borough Council

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	1	1	12	49	-
17	1.2	Historical tanks	0	0	0	1	-
17	1.3	Historical energy features	0	0	3	6	-
18	1.4	Historical petrol stations	0	0	0	0	-
18	1.5	Historical garages	0	0	0	6	-
19	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
20	2.1	Historical industrial land uses	1	2	13	65	-
23	2.2	Historical tanks	0	0	0	3	-
24	2.3	Historical energy features	0	0	6	11	-
25	2.4	Historical petrol stations	0	0	0	0	-
25	2.5	Historical garages	0	0	0	7	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
26	3.1	Active or recent landfill	0	0	0	0	-
26	3.2	Historical landfill (BGS records)	0	0	0	0	-
27	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
27	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
27	3.5	Historical waste sites	0	0	0	3	-
28	3.6	Licensed waste sites	0	0	0	0	-
28	3.7	Waste exemptions	0	0	0	0	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
29	4.1	Recent industrial land uses	1	0	4	-	-
30	4.2	Current or recent petrol stations	0	0	0	1	-
30	4.3	Electricity cables	0	0	0	0	-
30	4.4	Gas pipelines	0	0	0	0	-
30	4.5	Sites determined as Contaminated Land	0	0	0	0	-

31	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
31	4.7	Regulated explosive sites	0	0	0	0	-
31	4.8	Hazardous substance storage/usage	0	0	0	0	-
31	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
31	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
32	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	0	1	-
32	4.12	Radioactive Substance Authorisations	0	0	0	0	-
32	4.13	Licensed Discharges to controlled waters	0	0	0	0	-
32	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.15	Pollutant release to public sewer	0	0	0	0	-
33	4.16	List 1 Dangerous Substances	0	0	0	0	-
33	4.17	List 2 Dangerous Substances	0	0	0	0	-
33	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	1	2	-
34	4.19	Pollution inventory substances	0	0	0	0	-
34	4.20	Pollution inventory waste transfers	0	0	0	0	-
34	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
35	5.1	Superficial aquifer	None (within 500m)				
36	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
38	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
39	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
39	5.5	Groundwater vulnerability- local information	None (within 0m)				
40	**5.6**	**Groundwater abstractions**	0	0	0	0	4
42	5.7	Surface water abstractions	0	0	0	0	0
42	5.8	Potable abstractions	0	0	0	0	0
42	5.9	Source Protection Zones	0	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
43	**6.1**	**Water Network (OS MasterMap)**	0	5	6	-	-

44	6.2	Surface water features	0	2	3	-	-
45	6.3	WFD Surface water body catchments	1	-	-	-	-
45	6.4	WFD Surface water bodies	0	0	0	-	-
46	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
47	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
47	7.2	Historical Flood Events	0	0	0	-	-
47	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
48	7.5	Flood Storage Areas	0	0	0	-	-
49	7.6	Flood Zone 2	None (within 50m)				
49	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
50	8.1	Surface water flooding	1 in 30 year, 0.1m - 0.3m (within 50m)

Page	Section	Groundwater flooding	
52	9.1	Groundwater flooding	Negligible (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
53	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
54	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
54	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
54	10.4	Special Protection Areas (SPA)	0	0	0	0	0
54	10.5	National Nature Reserves (NNR)	0	0	0	0	0
55	10.6	Local Nature Reserves (LNR)	0	0	0	0	2
55	10.7	Designated Ancient Woodland	0	0	0	0	5
55	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
56	10.10	Marine Conservation Zones	0	0	0	0	0
56	10.11	Green Belt	0	1	0	0	7
57	10.12	Proposed Ramsar sites	0	0	0	0	0

57	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
57	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
57	10.15	Nitrate Sensitive Areas	0	0	0	0	0
58	**10.16**	**Nitrate Vulnerable Zones**	1	0	0	0	3
59	10.17	SSSI Impact Risk Zones	0	-	-	-	-
59	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
60	11.1	World Heritage Sites	0	0	0	-	-
60	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
60	11.3	National Parks	0	0	0	-	-
60	11.4	Listed Buildings	0	0	0	-	-
61	11.5	Conservation Areas	0	0	0	-	-
61	11.6	Scheduled Ancient Monuments	0	0	0	-	-
61	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
62	**12.1**	**Agricultural Land Classification**	Urban (within 250m)				
63	12.2	Open Access Land	0	0	0	-	-
63	12.3	Tree Felling Licences	0	0	0	-	-
63	**12.4**	**Environmental Stewardship Schemes**	0	0	2	-	-
64	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
65	13.1	Priority Habitat Inventory	0	0	0	-	-
65	13.2	Habitat Networks	0	0	0	-	-
65	13.3	Open Mosaic Habitat	0	0	0	-	-
65	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
66	**14.1**	**10k Availability**	Identified (within 500m)				
67	**14.2**	**Artificial and made ground (10k)**	1	0	2	4	-
69	14.3	Superficial geology (10k)	0	0	0	0	-

69	14.4	Landslip (10k)	0	0	0	0	-
70	14.5	Bedrock geology (10k)	2	5	7	16	-
72	14.6	Bedrock faults and other linear features (10k)	6	3	9	13	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
74	15.1	50k Availability	Identified (within 500m)				
75	15.2	Artificial and made ground (50k)	1	0	1	3	-
76	15.3	Artificial ground permeability (50k)	1	0	-	-	-
77	15.4	Superficial geology (50k)	0	0	0	0	-
77	15.5	Superficial permeability (50k)	None (within 50m)				
77	15.6	Landslip (50k)	0	0	0	0	-
77	15.7	Landslip permeability (50k)	None (within 50m)				
78	15.8	Bedrock geology (50k)	2	4	4	5	-
79	15.9	Bedrock permeability (50k)	Identified (within 50m)				
80	15.10	Bedrock faults and other linear features (50k)	5	3	5	10	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
82	16.1	BGS Boreholes	0	1	24	-	-
Page	Section	Natural ground subsidence					
84	17.1	Shrink swell clays	Very low (within 50m)				
86	17.2	Running sands	Very low (within 50m)				
88	17.3	Compressible deposits	Moderate (within 50m)				
90	17.4	Collapsible deposits	Very low (within 50m)				
91	17.5	Landslides	Very low (within 50m)				
92	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
93	18.1	Natural cavities	0	0	0	0	-
94	18.2	BritPits	0	0	5	19	-
98	18.3	Surface ground workings	1	2	13	-	-
99	18.4	Underground workings	0	1	7	9	70
102	18.5	Historical Mineral Planning Areas	0	0	0	0	-

102	**18.6**	**Non-coal mining**	1	0	1	0	3
103	**18.7**	**Mining cavities**	0	0	0	0	1
103	18.8	JPB mining areas	None (within 0m)				
104	**18.9**	**Coal mining**	Identified (within 0m)				
104	18.10	Brine areas	None (within 0m)				
104	18.11	Gypsum areas	None (within 0m)				
104	18.12	Tin mining	None (within 0m)				
104	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
105	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
107	**20.1**	**BGS Estimated Background Soil Chemistry**	8	6	-	-	-
108	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
108	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
109	21.1	Underground railways (London)	0	0	0	-	-
109	21.2	Underground railways (Non-London)	0	0	0	-	-
110	21.3	Railway tunnels	0	0	0	-	-
110	21.4	Historical railway and tunnel features	0	0	0	-	-
110	21.5	Royal Mail tunnels	0	0	0	-	-
110	21.6	Historical railways	0	0	0	-	-
110	21.7	Railways	0	0	0	-	-
111	21.8	Crossrail 1	0	0	0	0	-
111	21.9	Crossrail 2	0	0	0	0	-
111	**21.10**	**HS2**	2	0	0	1	-

Recent aerial photograph

Capture Date: 30/06/2018

Site Area: 5.51ha

Recent site history - 2013 aerial photograph

Capture Date: 07/06/2013

Site Area: 5.51ha

Recent site history - 2012 aerial photograph

Capture Date: 28/05/2012

Site Area: 5.51ha

Recent site history - 2009 aerial photograph

Capture Date: 11/09/2009

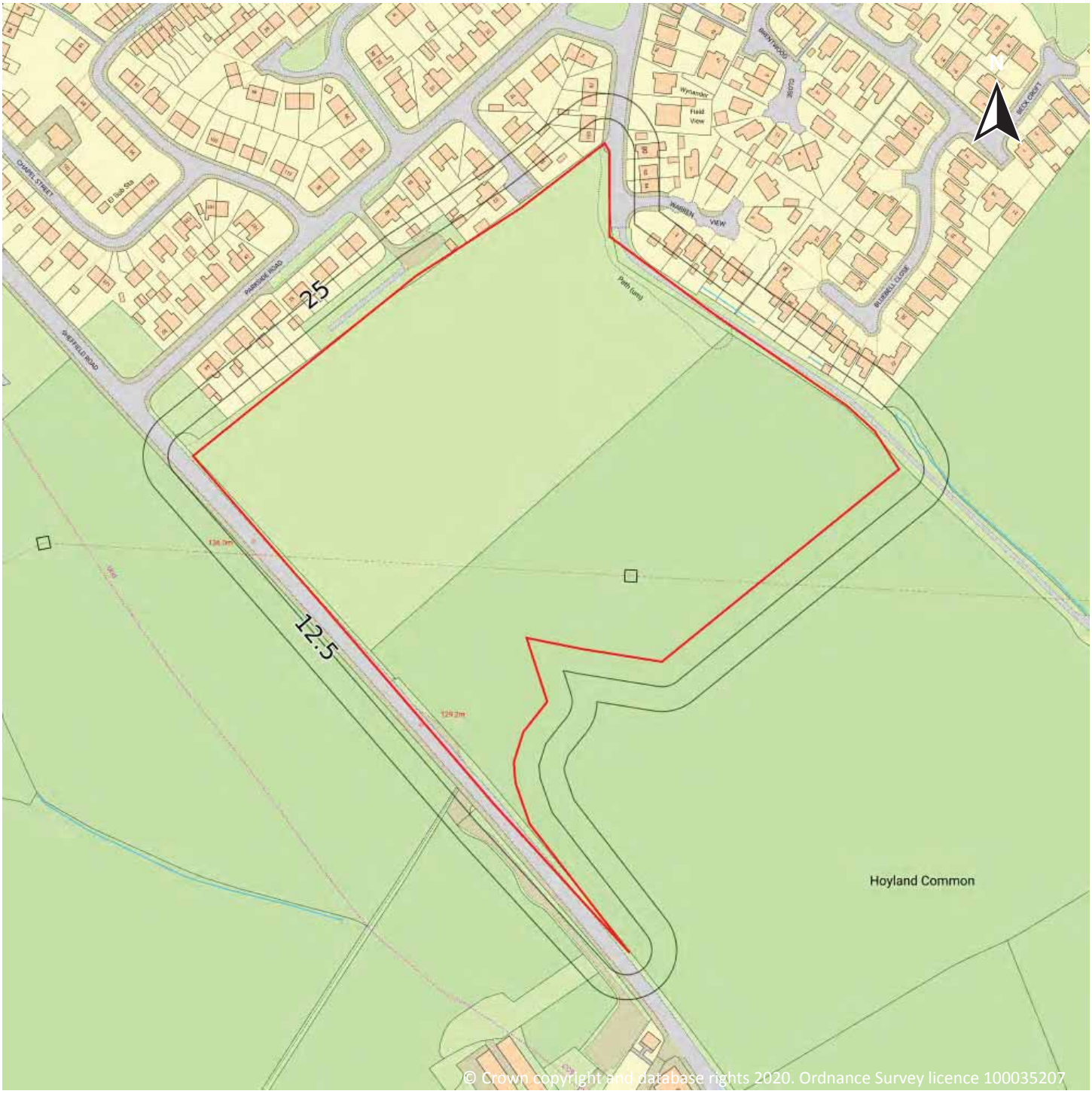
Site Area: 5.51ha

Recent site history - 1999 aerial photograph

Capture Date: 17/11/1999

Site Area: 5.51ha

OS MasterMap site plan



Site Area: 5.51ha

1 Past land use

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	63

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	**On site**	**Opencast Mining**	**1951**	**1572172**

ID	Location	Land use	Dates present	Group ID
A	46m SW	Old Ironstone Pits	1948 - 1951	1691769
B	54m SW	Unspecified Heap	1891	1569089
B	54m SW	Old Ironstone Pits	1903	1739481
B	54m SW	Old Ironstone Pits	1938	1742910
A	100m SW	Old Ironstone Pits	1938	1676592
A	104m SW	Unspecified Heap	1891	1569090
A	104m SW	Old Ironstone Pits	1903	1617324
A	112m SW	Old Ironstone Pits	1938	1630777
D	158m SW	Unspecified Heap	1891	1569088
D	158m SW	Old Ironstone Pits	1938	1641336
D	158m SW	Old Ironstone Pits	1903	1683358
E	233m SE	Unspecified Heap	1938	1666118
E	238m SE	Unspecified Heap	1948	1705348
F	255m S	Unspecified Heaps	1948 - 1951	1692598
F	260m S	Unspecified Heaps	1965 - 1991	1681494
F	261m S	Unspecified Heaps	1891	1658028
F	261m S	Unspecified Heaps	1903	1663676
F	261m S	Unspecified Heaps	1938	1729687
F	288m S	Unspecified Heaps	1951	1653247
F	288m S	Unspecified Heaps	1965 - 1991	1742259
F	288m S	Unspecified Heaps	1948	1623772
F	288m S	Unspecified Heaps	1948	1703318
F	294m S	Unspecified Heaps	1903	1670194
F	294m S	Unspecified Heaps	1891	1673767
F	294m S	Unspecified Heaps	1938	1732671
H	345m S	Unspecified Heap	1965 - 1991	1678147
3	346m S	Colliery	1891	1644531
4	350m SE	Colliery	1903	1715830

ID	Location	Land use	Dates present	Group ID
I	350m SE	Refuse Heap	1938	1651533
I	350m SE	Refuse Heap	1903	1719277
H	352m S	Unspecified Pit	1951	1609978
H	352m S	Unspecified Heap	1903	1648528
H	352m S	Unspecified Heap	1938	1744540
5	353m SE	Colliery	1965	1633319
H	353m S	Unspecified Heap	1948	1665641
I	360m SE	Refuse Heaps	1948	1696476
J	360m NW	Unspecified Depot	1977 - 1987	1504602
I	367m SE	Unspecified Heap	1980	1635561
I	367m SE	Unspecified Heap	1965	1641736
I	367m SE	Unspecified Heap	1991	1675927
I	369m SE	Unspecified Heap	1951	1723867
7	389m SE	Unspecified Disused Tip	1980 - 1991	1651482
8	410m NW	Nursery	1977 - 1987	2366457
9	431m N	Police Station	1977 - 1987	1476443
K	436m S	Refuse Heap	1903	1707261
K	436m S	Refuse Heap	1891	1736195
K	436m S	Unspecified Heaps	1938	1739270
K	438m S	Unspecified Heaps	1951	1706985
K	438m S	Unspecified Heaps	1965	1741090
K	440m S	Unspecified Heaps	1948	1727385
L	447m SE	Brick Works	1903	1620672
L	455m SE	Refuse Heap	1891	1732932
M	455m SE	Coal Pit	1938	1654278
N	459m SE	Unspecified Shaft	1938	1640751
N	459m SE	Unspecified Shaft	1903	1716457
N	462m SE	Unspecified Shaft	1951	1717464

ID	Location	Land use	Dates present	Group ID
N	463m SE	Unspecified Shaft	1948	1622446
N	463m SE	Unspecified Shaft	1948	1653466
M	465m SE	Coal Pit	1948	1704045
N	467m SE	Unspecified Shaft	1965	1658995
N	467m SE	Unspecified Shaft	1980	1717585
12	497m NW	Fire Engine Station	1951	1420985

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**1**

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 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
J	378m NW	Unspecified Tank	1976 - 1993	244662

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**9**

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 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
C	73m NE	Electricity Substation	1967 - 1996	303100

ID	Location	Land use	Dates present	Group ID
C	73m NE	Electricity Substation	1968 - 1970	136717
1	123m NW	Electricity Substation	1970 - 1993	151177
2	338m NW	Electricity Substation	1972 - 1993	138988
G	343m NE	Electricity Substation	1970	146793
G	346m NE	Electricity Substation	1996	139883
6	385m NE	Electricity Substation	1996	131146
10	448m NE	Electricity Substation	1996	131145
11	468m NE	Electricity Substation	1979 - 1995	139734

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 un-grouped 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	6

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 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
J	360m NW	Garage	1976 - 1993	46234
J	365m NW	Garage	1955	42740
J	365m NW	Garage	1972	42575

ID	Location	Land use	Dates present	Group ID
J	365m NW	Garage	1955	43739
J	377m NW	Garage	1986	43257
J	379m NW	Garage	1972	43103

This data is sourced from Ordnance Survey / Groundsure.

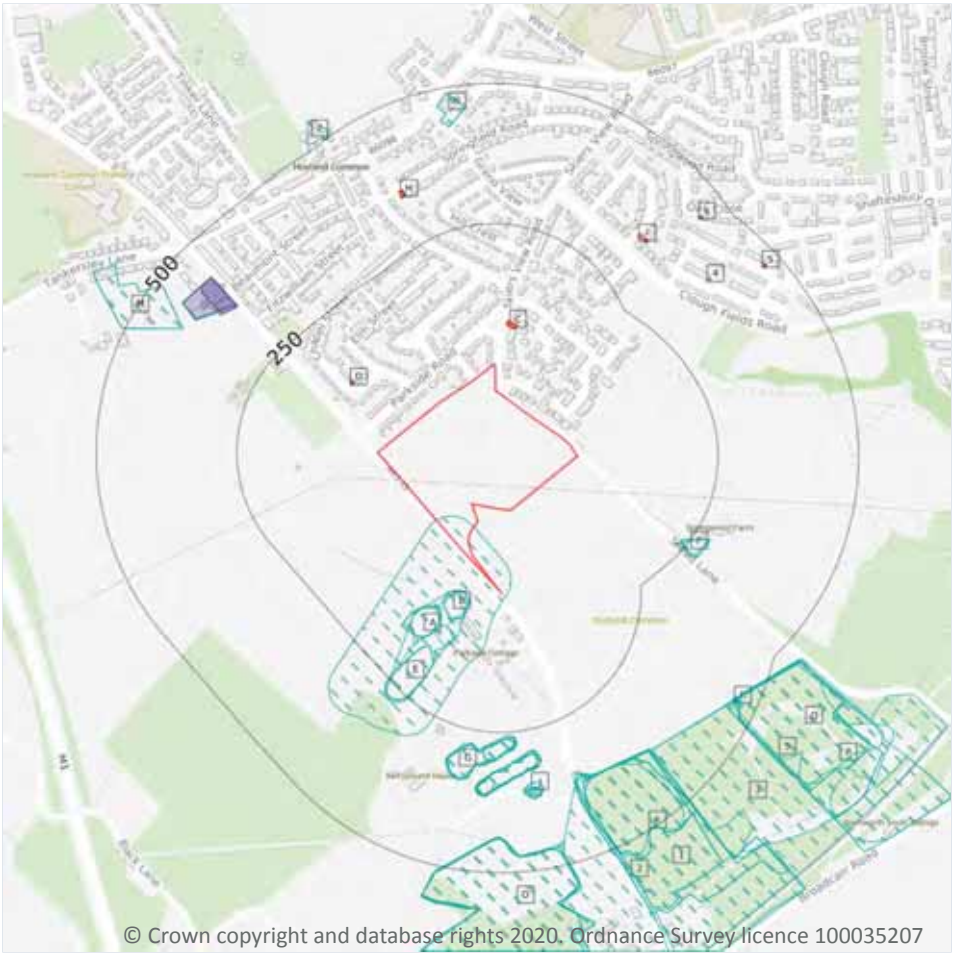
1.6 Historical military land

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



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	81

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 20**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Opencast Mining**	**1951**	**1572172**
A	46m SW	Old Ironstone Pits	1951	1691769
A	48m SW	Old Ironstone Pits	1948	1691769

ID	Location	Land Use	Date	Group ID
B	54m SW	Old Ironstone Pits	1938	1742910
B	54m SW	Old Ironstone Pits	1903	1739481
B	54m SW	Unspecified Heap	1891	1569089
A	100m SW	Old Ironstone Pits	1938	1676592
A	104m SW	Old Ironstone Pits	1903	1617324
A	104m SW	Unspecified Heap	1891	1569090
A	112m SW	Old Ironstone Pits	1938	1630777
E	158m SW	Old Ironstone Pits	1938	1641336
E	158m SW	Old Ironstone Pits	1903	1683358
E	158m SW	Unspecified Heap	1891	1569088
F	233m SE	Unspecified Heap	1938	1666118
F	238m SE	Unspecified Heap	1948	1705348
F	238m SE	Unspecified Heap	1948	1705348
G	255m S	Unspecified Heaps	1951	1692598
G	260m S	Unspecified Heaps	1948	1692598
G	260m S	Unspecified Heaps	1948	1692598
G	260m S	Unspecified Heaps	1991	1681494
G	260m S	Unspecified Heaps	1980	1681494
G	260m S	Unspecified Heaps	1965	1681494
G	261m S	Unspecified Heaps	1938	1729687
G	261m S	Unspecified Heaps	1903	1663676
G	261m S	Unspecified Heaps	1891	1658028
G	288m S	Unspecified Heaps	1991	1742259
G	288m S	Unspecified Heaps	1980	1742259
G	288m S	Unspecified Heaps	1965	1742259
G	288m S	Unspecified Heaps	1951	1653247
G	288m S	Unspecified Heaps	1948	1623772
G	288m S	Unspecified Heaps	1948	1703318

ID	Location	Land Use	Date	Group ID
G	294m S	Unspecified Heaps	1938	1732671
G	294m S	Unspecified Heaps	1903	1670194
G	294m S	Unspecified Heaps	1891	1673767
J	345m S	Unspecified Heap	1991	1678147
J	345m S	Unspecified Heap	1980	1678147
J	345m S	Unspecified Heap	1965	1678147
1	346m S	Colliery	1891	1644531
2	350m SE	Colliery	1903	1715830
K	350m SE	Refuse Heap	1938	1651533
K	350m SE	Refuse Heap	1903	1719277
J	352m S	Unspecified Pit	1951	1609978
J	352m S	Unspecified Heap	1938	1744540
J	352m S	Unspecified Heap	1903	1648528
3	353m SE	Colliery	1965	1633319
J	353m S	Unspecified Heap	1948	1665641
J	353m S	Unspecified Heap	1948	1665641
K	360m SE	Refuse Heaps	1948	1696476
K	360m SE	Refuse Heaps	1948	1696476
L	360m NW	Unspecified Depot	1977	1504602
L	360m NW	Unspecified Depot	1987	1504602
K	367m SE	Unspecified Heap	1991	1675927
K	367m SE	Unspecified Heap	1980	1635561
K	367m SE	Unspecified Heap	1965	1641736
K	369m SE	Unspecified Heap	1951	1723867
5	389m SE	Unspecified Disused Tip	1991	1651482
M	410m NW	Nursery	1977	2366457
M	410m NW	Nursery	1987	2366457
N	431m N	Police Station	1977	1476443

ID	Location	Land Use	Date	Group ID
N	431m N	Police Station	1987	1476443
O	436m S	Unspecified Heaps	1938	1739270
O	436m S	Refuse Heap	1903	1707261
O	436m S	Refuse Heap	1891	1736195
O	438m S	Unspecified Heaps	1965	1741090
O	438m S	Unspecified Heaps	1951	1706985
O	440m S	Unspecified Heaps	1948	1727385
O	440m S	Unspecified Heaps	1948	1727385
P	447m SE	Brick Works	1903	1620672
Q	453m SE	Unspecified Disused Tip	1980	1651482
P	455m SE	Refuse Heap	1891	1732932
Q	455m SE	Coal Pit	1938	1654278
R	459m SE	Unspecified Shaft	1938	1640751
R	459m SE	Unspecified Shaft	1903	1716457
R	462m SE	Unspecified Shaft	1951	1717464
R	463m SE	Unspecified Shaft	1948	1653466
R	463m SE	Unspecified Shaft	1948	1622446
Q	465m SE	Coal Pit	1948	1704045
Q	465m SE	Coal Pit	1948	1704045
R	467m SE	Unspecified Shaft	1980	1717585
R	467m SE	Unspecified Shaft	1965	1658995
7	497m NW	Fire Engine Station	1951	1420985

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**3**

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 20**

ID	Location	Land Use	Date	Group ID
L	378m NW	Unspecified Tank	1976	244662
L	378m NW	Unspecified Tank	1993	244662
L	379m NW	Unspecified Tank	1986	244662

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 20**

ID	Location	Land Use	Date	Group ID
C	73m NE	Electricity Substation	1967	303100
C	73m NE	Electricity Substation	1996	303100
C	73m NE	Electricity Substation	1968	136717
C	73m NE	Electricity Substation	1970	136717
D	123m NW	Electricity Substation	1970	151177
D	123m NW	Electricity Substation	1993	151177
H	338m NW	Electricity Substation	1972	138988
H	339m NW	Electricity Substation	1976	138988
H	339m NW	Electricity Substation	1993	138988
H	339m NW	Electricity Substation	1986	138988
I	343m NE	Electricity Substation	1970	146793
I	346m NE	Electricity Substation	1996	139883
4	385m NE	Electricity Substation	1996	131146
6	448m NE	Electricity Substation	1996	131145
S	468m NE	Electricity Substation	1979	139734
S	468m NE	Electricity Substation	1995	139734

ID	Location	Land Use	Date	Group ID
S	468m NE	Electricity Substation	1995	139734

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	7

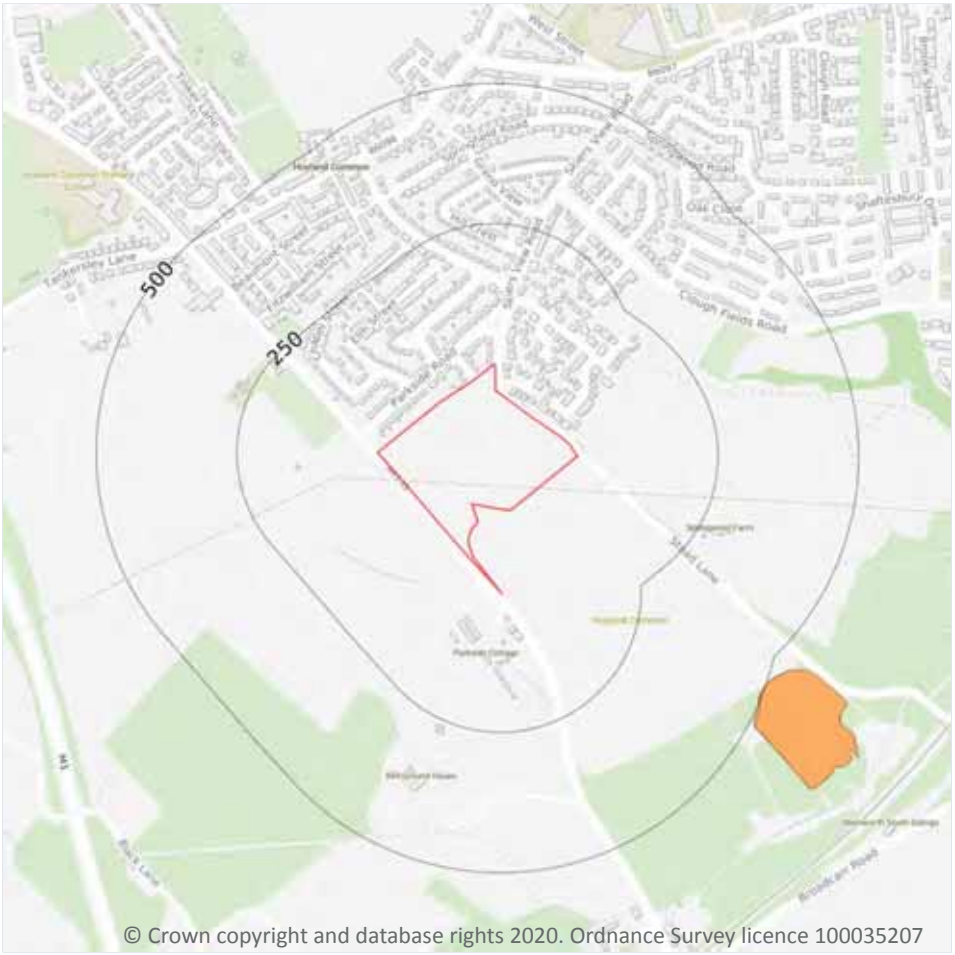
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 20**

ID	Location	Land Use	Date	Group ID
L	360m NW	Garage	1976	46234
L	360m NW	Garage	1993	46234
L	365m NW	Garage	1955	42740
L	365m NW	Garage	1972	42575
L	365m NW	Garage	1955	43739
L	377m NW	Garage	1986	43257
L	379m NW	Garage	1972	43103

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical waste sites

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	0

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.

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

3.5 Historical waste sites

Records within 500m	3

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 26**

ID	Location	Address	Further Details	Date
A	495m E	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	1978
A	495m E	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	1978
A	496m E	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	1956

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

3.6 Licensed waste sites

Records within 500m	0

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

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

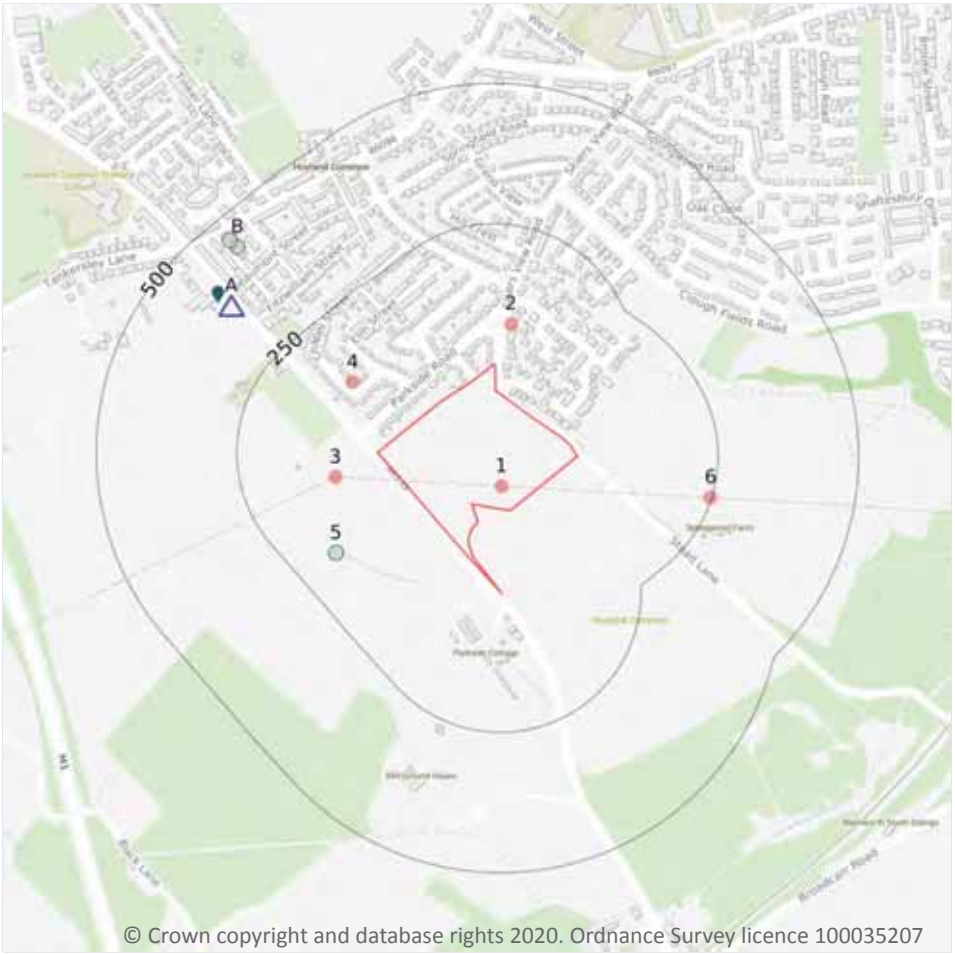
3.7 Waste exemptions

Records within 500m	0

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.

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)

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	**5**

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Pylon**	**South Yorkshire, S74**	**Electrical Features**	**Infrastructure and Facilities**
2	78m N	Electricity Sub Station	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities
3	87m SW	Pylon	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
4	125m NW	Electricity Sub Station	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities
6	248m E	Pylon	South Yorkshire, S74	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 29**

ID	Location	Company	Address	LPG	Status
A	369m NW	SHELL	Sheffield Road, Hoyland Common, Barnsley, South Yorkshire, S74 0DP	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	1

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 29**

ID	Location	Address	Details	
A	401m NW	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	0

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

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

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

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	3

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 29**

ID	Location	Details	
5	173m SW	Incident Date: 07/07/2003 Incident Identification: 171550 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	441m NW	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)

ID	Location	Details	
B	459m NW	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)

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

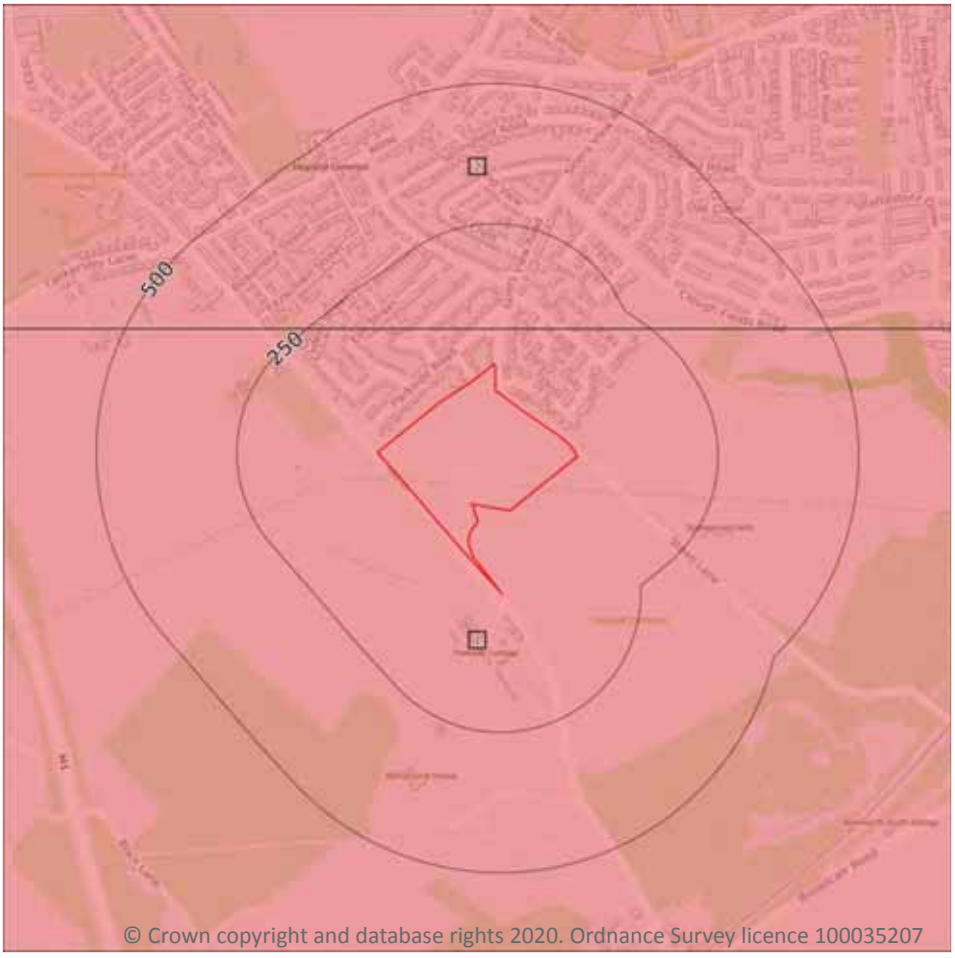
5.1 Superficial aquifer

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	2

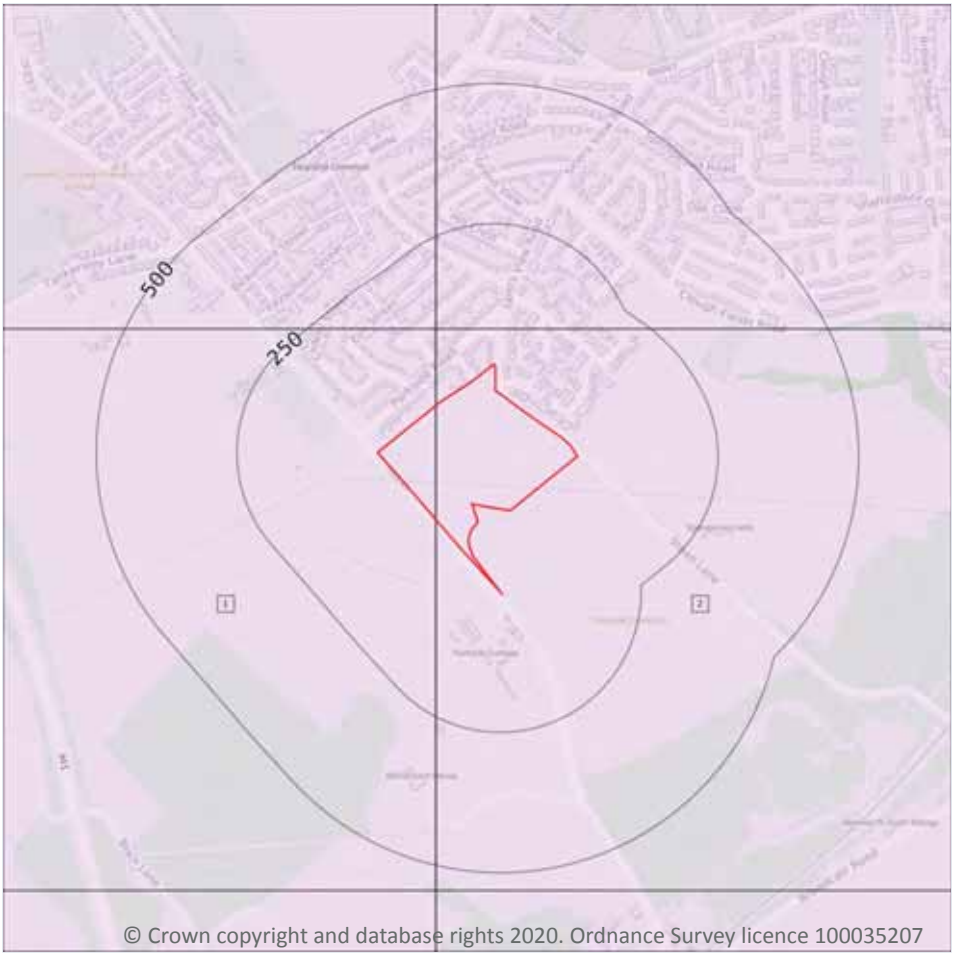
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 36**

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	63m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

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 38**

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
2	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

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.

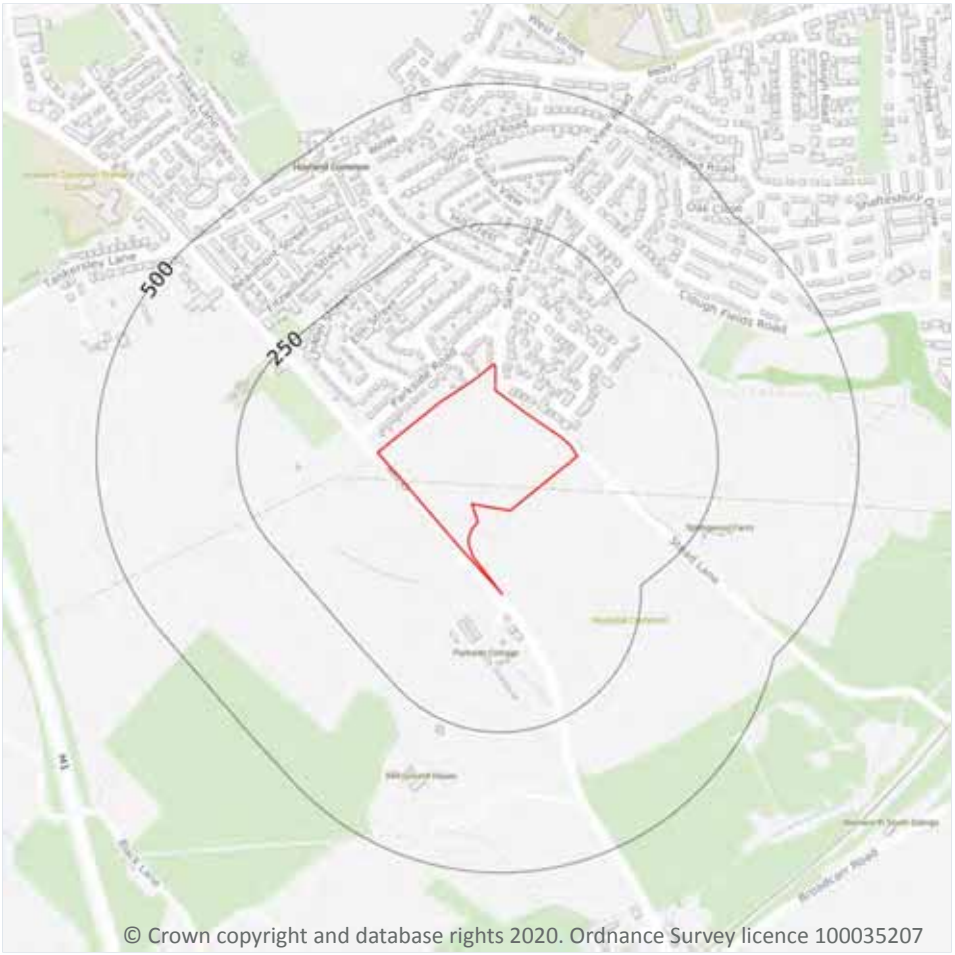
5.5 Groundwater vulnerability- local information

Records on site	0

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

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 40**

ID	Location	Details	
-	929m SW	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: -
-	929m SW	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: -
-	1006m SW	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: -
-	1010m SW	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: -

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.

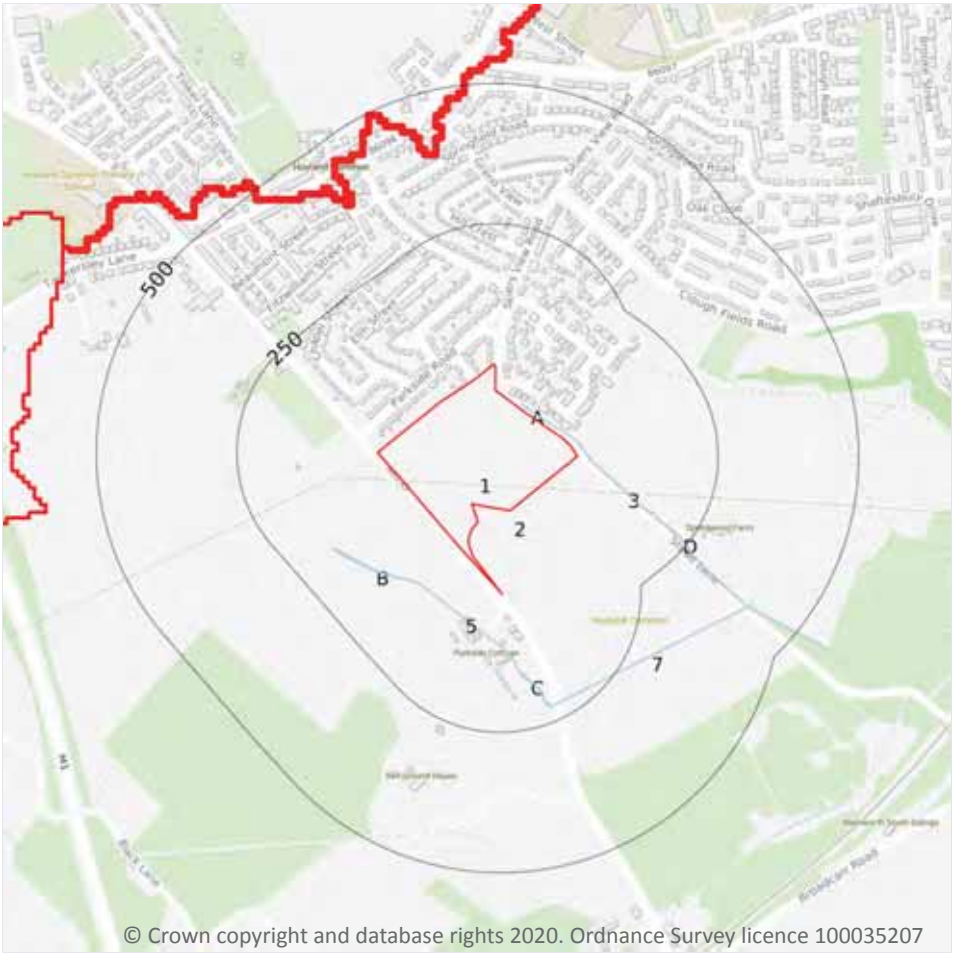
5.10 Source Protection Zones (confined aquifer)

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	**11**

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 43**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	7m 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	8m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
A	9m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	9m NE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
3	13m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	76m SW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
B	96m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	107m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	222m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	233m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	238m SE	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**5**

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 43**

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 43**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Knoll Beck from Source to River Dearne**	**GB104027057470**	**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 43**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2109m E	River	Knoll Beck from Source to River Dearne	GB104027057470	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 43**

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

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.

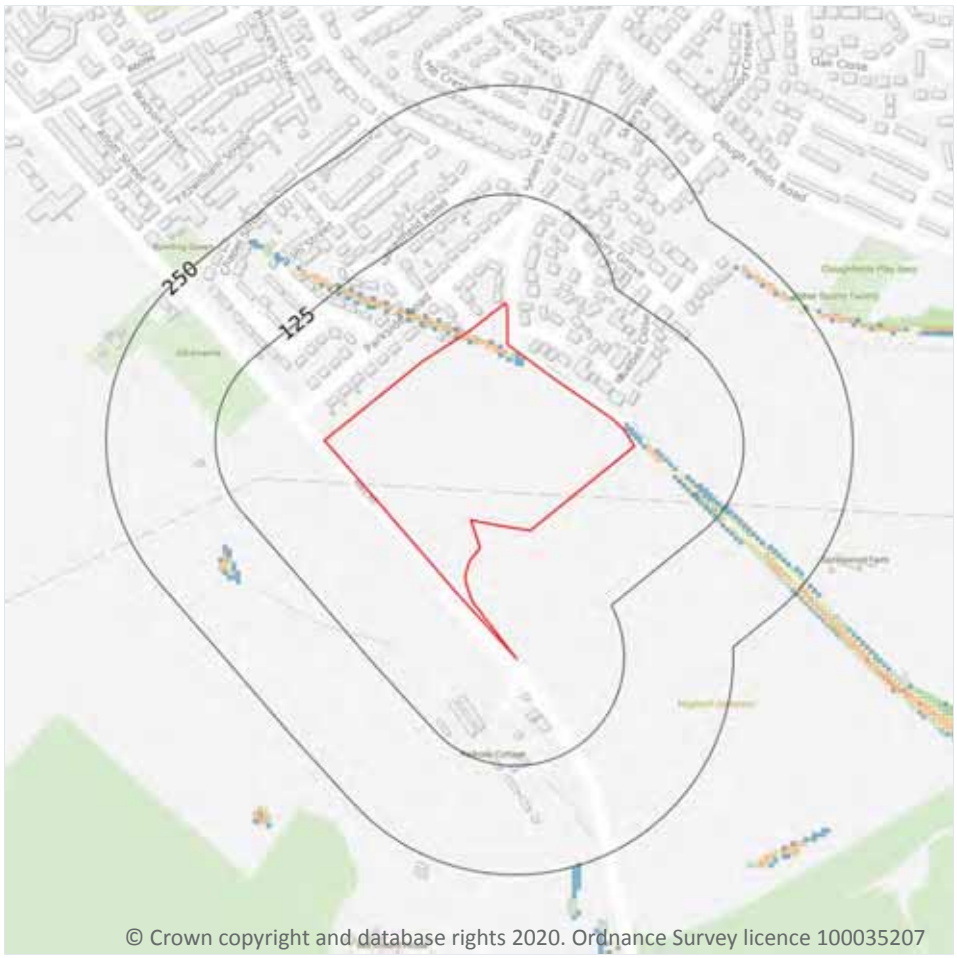
7.7 Flood Zone 3

Records within 50m	0

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



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.1m - 0.3m**

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.

Features are displayed on the Surface water flooding map on **page 50**

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	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

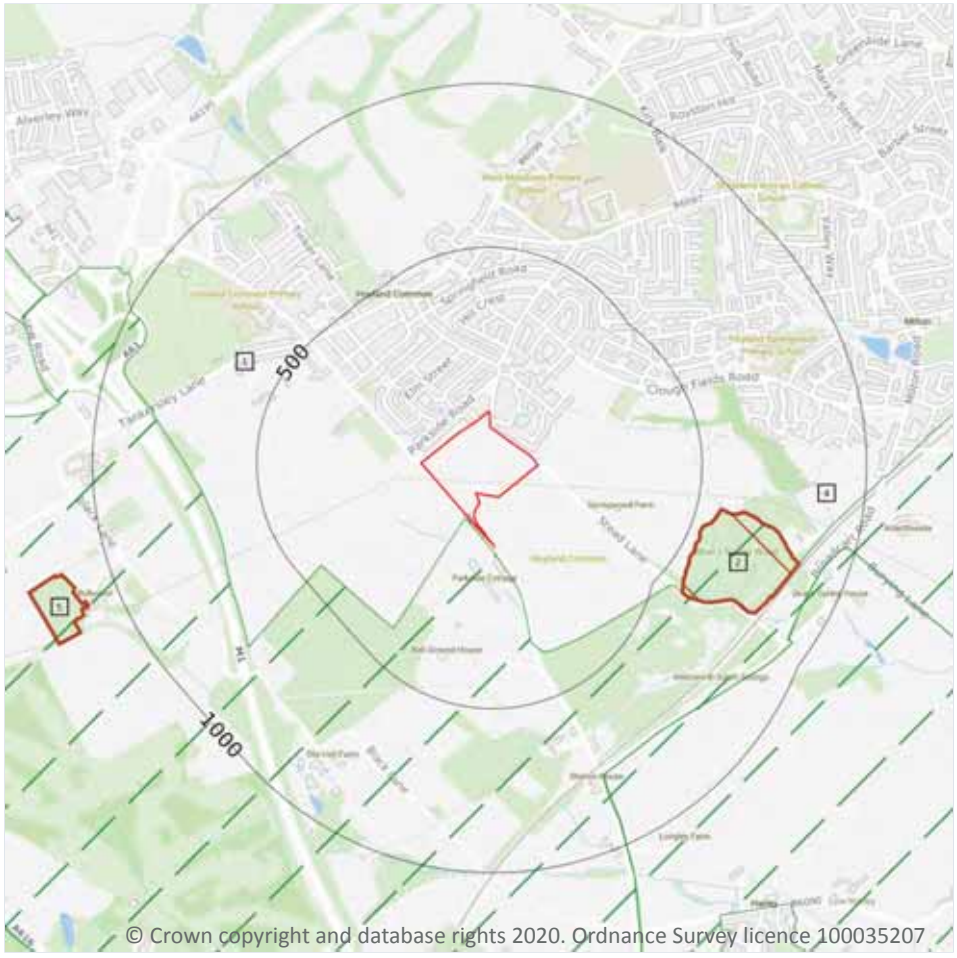
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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 52**

This data is sourced from Ambiental 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	2

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 53**

ID	Location	Name	Data source
-	1533m W	Potter Holes Plantation	Natural England
-	1697m E	Elsecar Reservoir	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	5

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 53**

ID	Location	Name	Woodland Type
2	534m SE	SKIERS SPRING WOOD	Ancient & Semi-Natural Woodland
5	1101m SW	BULL WOOD	Ancient & Semi-Natural Woodland
-	1632m NW	SHORT WOOD	Ancient & Semi-Natural Woodland
-	1815m SW	THORNCLIFFE WOOD	Ancient & Semi-Natural Woodland
-	1850m S	BARLEY HOLE SPRINGS E.	Ancient Replanted 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	8

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

Features are displayed on the Environmental designations map on **page 53**

ID	Location	Name	Local Authority name
1	9m SW	South and West Yorkshire	Barnsley
3	761m SE	South and West Yorkshire	Rotherham
4	882m E	South and West Yorkshire	Barnsley
6	1529m S	South and West Yorkshire	Sheffield
-	1703m W	South and West Yorkshire	Barnsley
-	1703m W	South and West Yorkshire	Barnsley
-	1703m W	South and West Yorkshire	Barnsley
-	1704m W	South and West Yorkshire	Barnsley

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**
1488m S	Blackburn Brook from Source to River Don NVZ	Surface Water	S261	Existing
1804m NW	River Dearne NVZ	Surface Water	S278	Existing
1910m SW	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.

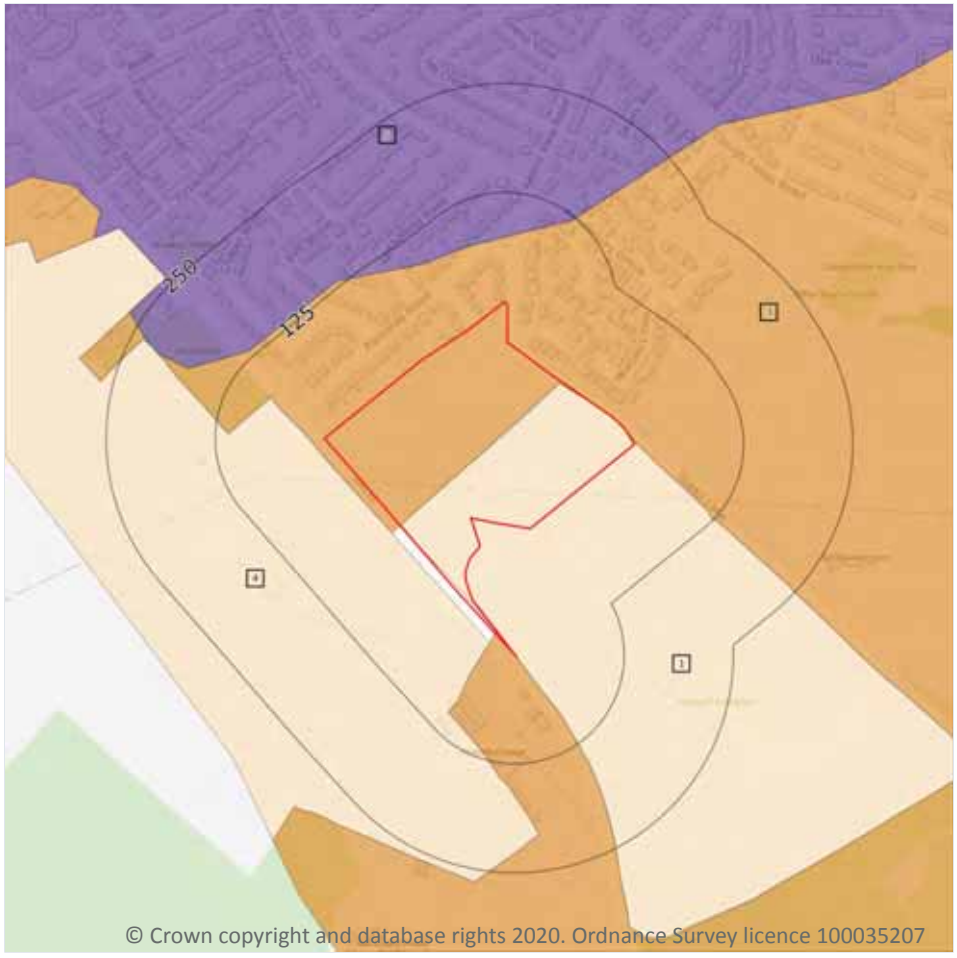
11.7 Registered Parks and Gardens

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

12.1 Agricultural Land Classification

Records within 250m	4

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 62**

ID	Location	Classification	Description
1	On site	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.**

ID	Location	Classification	Description
3	**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.**
4	11m 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.
5	72m N	Urban	-

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	**2**

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

Location	Reference	Scheme	Start Date	End date
88m W	AG00329213	Entry Level plus Higher Level Stewardship	01/07/2011	30/06/2021
133m S	AG00329213	Entry Level plus Higher Level Stewardship	01/07/2011	30/06/2021

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.

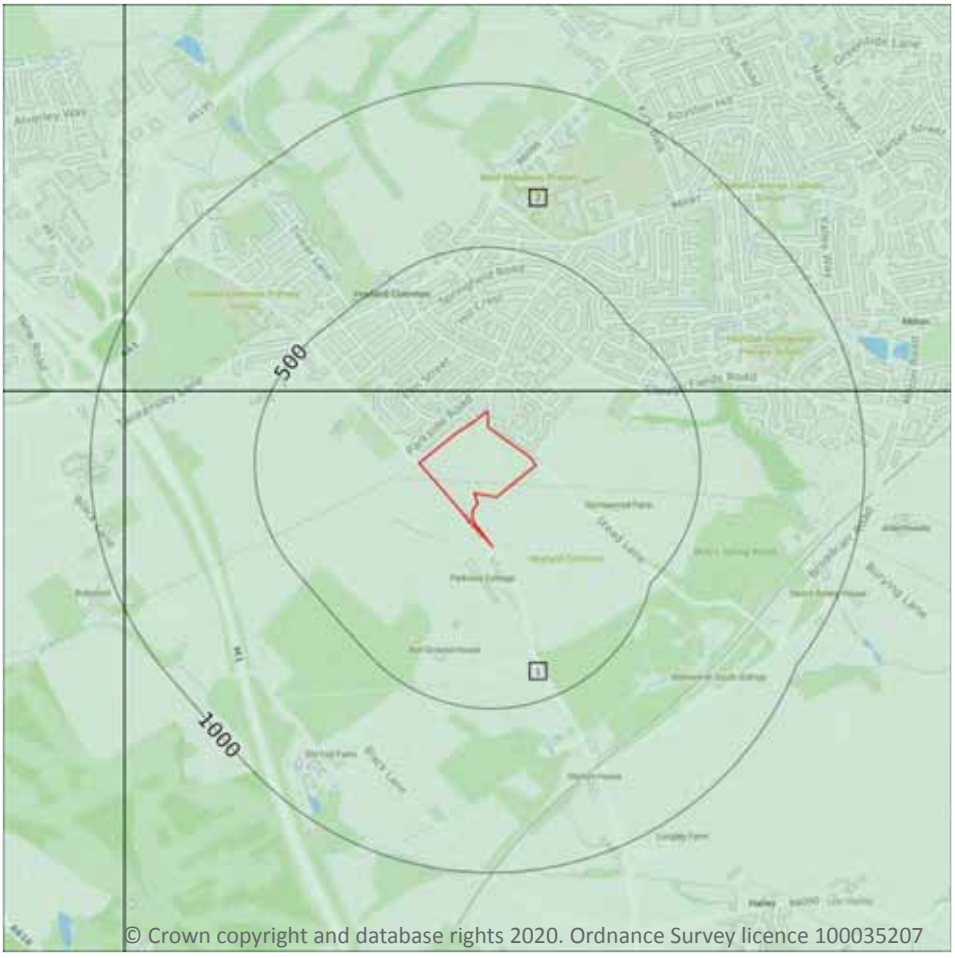
13.4 Limestone Pavement Orders

Records within 250m	0

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



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

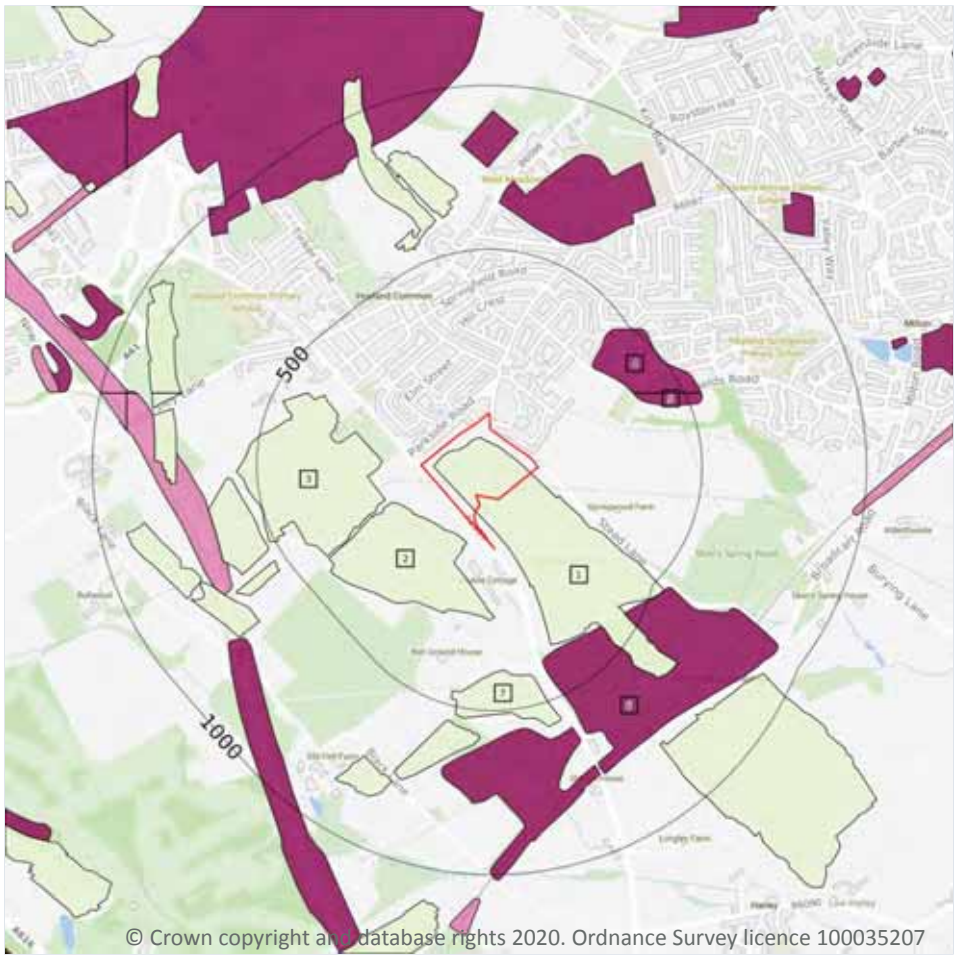
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 66**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SK39NE**
2	63m N	Full	Full	Full	Full	SE30SE

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 **7**

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 67**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WMGR-ARTDP**	**Infilled Ground**	**Artificial Deposit**
2	51m SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	119m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	334m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	367m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	368m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	379m S	WMGR-ARTDP	Infilled Ground	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.

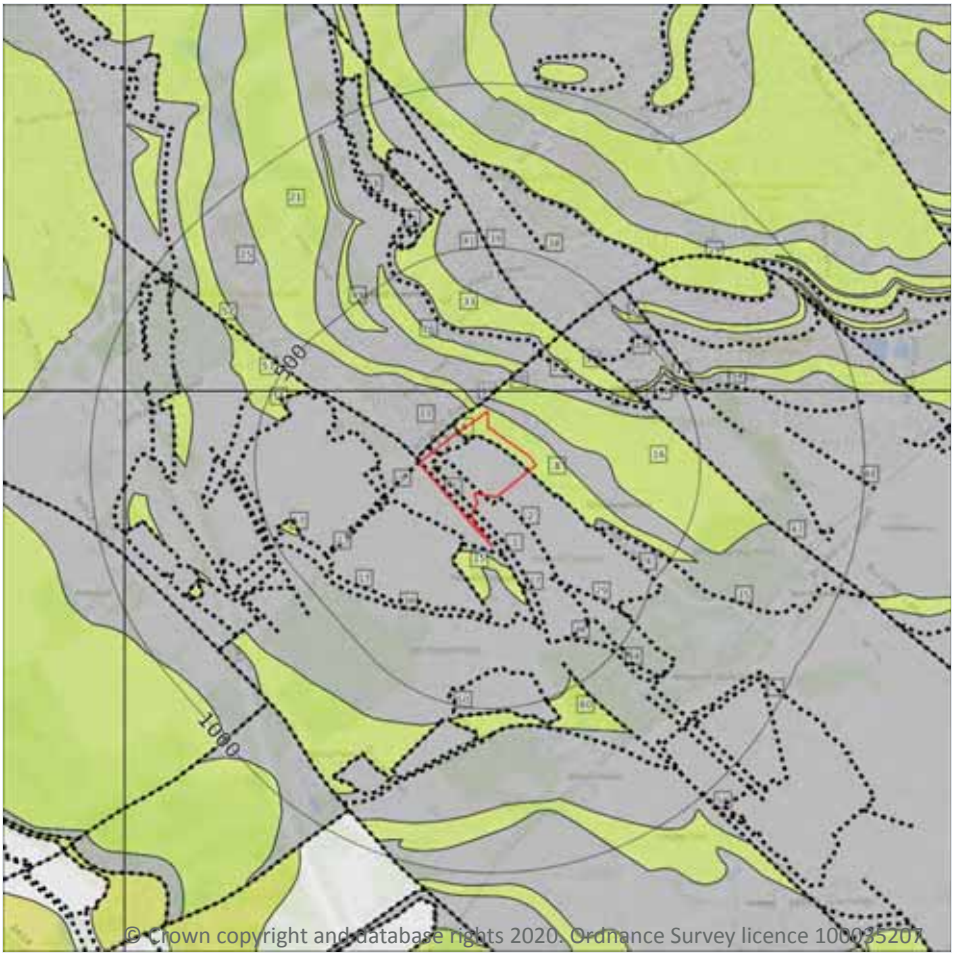
14.4 Landslip (10k)

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	30

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 70**

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

ID	Location	LEX Code	Description	Rock age
11	16m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
13	30m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14	31m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	37m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
16	41m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
18	63m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
20	68m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
21	92m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
22	119m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25	124m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
26	142m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
28	204m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
33	252m N	BNR-SDST	Barnsley Rock - Sandstone	Duckmantian Sub-age
34	259m NE	BNR-SDST	Barnsley Rock - Sandstone	Duckmantian Sub-age
37	310m NE	BNR-SDST	Barnsley Rock - Sandstone	Duckmantian Sub-age
38	324m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
40	326m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
41	332m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
45	369m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
46	371m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
48	372m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
49	377m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
53	387m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
54	396m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
55	410m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
57	421m SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
60	461m SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
61	490m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian 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	**31**

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 70**

ID	Location	Category	Description
2	**On site**	**ROCK**	**Coal seam, observed**
3	**On site**	**ROCK**	**Coal seam, observed**
4	**On site**	**ROCK**	**Coal seam, observed**
5	**On site**	**ROCK**	**Coal seam, inferred**
6	**On site**	**ROCK**	**Coal seam, inferred**
7	**On site**	**FAULT**	**Normal fault, inferred**

ID	Location	Category	Description
9	3m NW	FAULT	Normal fault, inferred
10	16m NW	FAULT	Normal fault, inferred
12	20m S	ROCK	Coal seam, inferred
17	51m SW	ROCK	Coal seam, observed
19	68m N	FAULT	Normal fault, inferred
23	119m W	ROCK	Coal seam, observed
24	123m W	ROCK	Coal seam, inferred
27	159m SE	ROCK	Coal seam, observed
29	207m SE	FAULT	Normal fault, inferred
30	224m S	ROCK	Coal seam, inferred
31	230m N	ROCK	Coal seam, inferred
32	233m NE	ROCK	Coal seam, inferred
35	280m SE	ROCK	Coal seam, inferred
36	281m NE	ROCK	Coal seam, inferred
39	324m NE	FAULT	Normal fault, inferred
42	346m SE	ROCK	Coal seam, observed
43	354m NE	ROCK	Coal seam, inferred
44	365m SE	ROCK	Coal seam, inferred
47	371m NE	FAULT	Normal fault, inferred
50	379m S	ROCK	Coal seam, observed
51	384m NE	ROCK	Coal seam, inferred
52	387m NW	FAULT	Normal fault, inferred
56	410m NW	ROCK	Coal seam, observed
58	421m SE	FAULT	Normal fault, inferred
59	440m NE	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

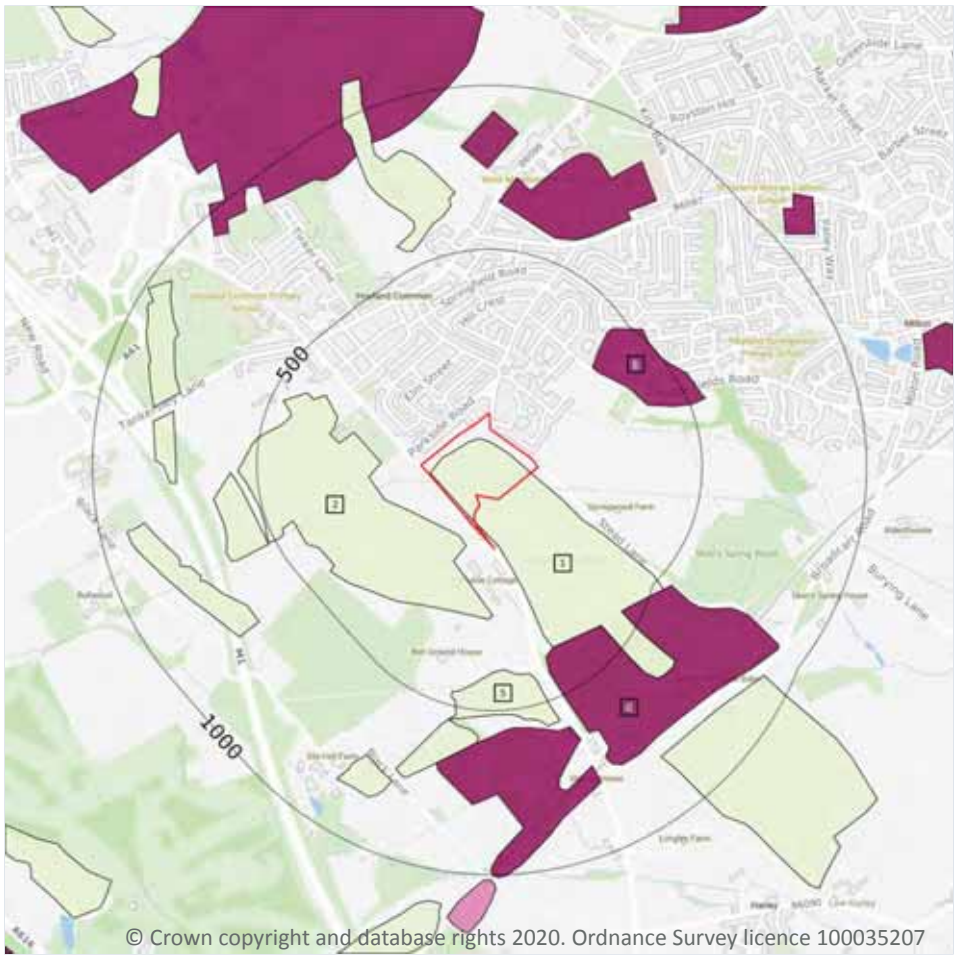
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 74**

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	**5**

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 75**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WMGR-ARTDP**	**INFILLED GROUND**	**ARTIFICIAL DEPOSIT**
2	53m SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	332m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	358m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	376m S	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
On site	**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.

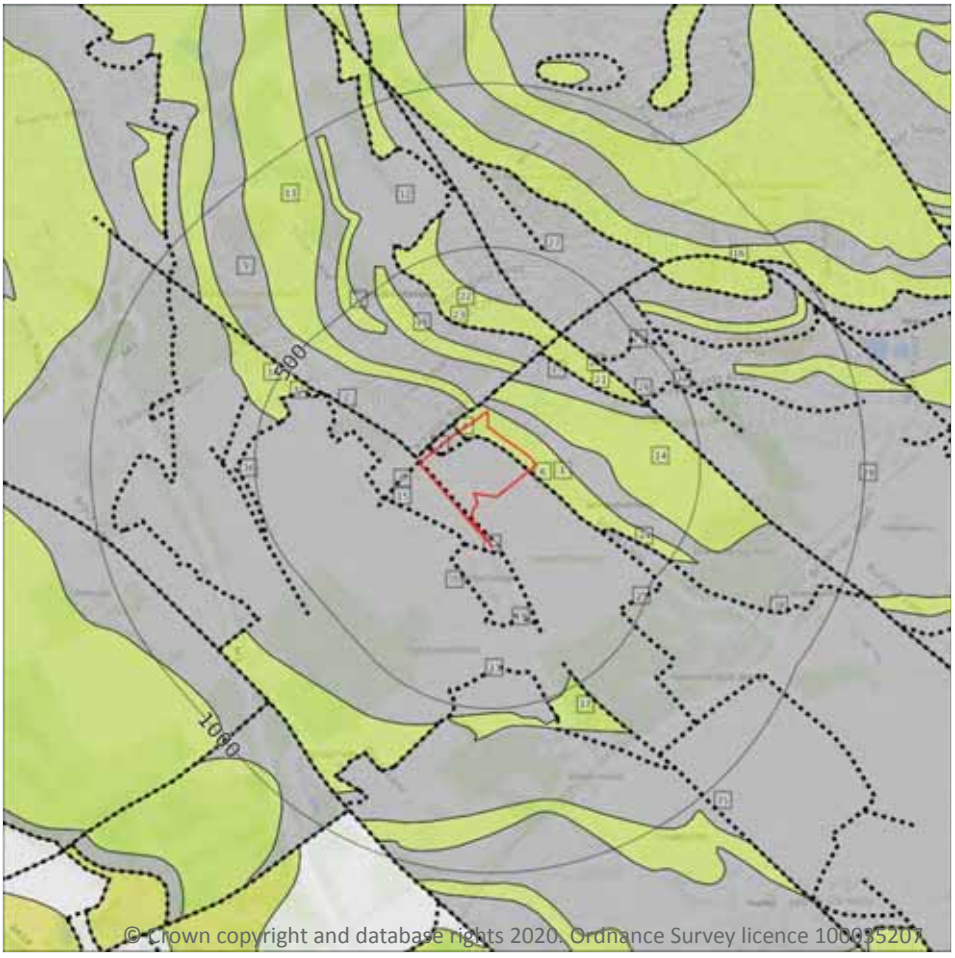
15.7 Landslip permeability (50k)

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	15

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 78**

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

ID	Location	LEX Code	Description	Rock age
9	16m NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	30m NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	30m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
14	41m N	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
17	119m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	135m N	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
20	243m NE	BNR-SDST	BARNSLEY ROCK - SANDSTONE	WESTPHALIAN
22	246m N	BNR-SDST	BARNSLEY ROCK - SANDSTONE	WESTPHALIAN
27	324m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
28	326m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
30	360m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
32	373m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
37	462m SE	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	**3**

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**	**High**	**Moderate**
On site	**Fracture**	**Moderate**	**Low**

Location	Flow type	Maximum permeability	Minimum permeability
41m E	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**23**

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 78**

ID	Location	Category	Description
2	**On site**	**FAULT**	**Fault, inferred**
3	**On site**	**ROCK**	**Coal seam, inferred**
4	**On site**	**ROCK**	**Coal seam, inferred**
5	**On site**	**ROCK**	**Coal seam, inferred**
6	**On site**	**ROCK**	**Coal seam, inferred**
8	3m NW	FAULT	Fault, inferred
10	16m NW	FAULT	Fault, inferred
11	21m S	ROCK	Coal seam, inferred
15	53m SW	ROCK	Coal seam, inferred
16	58m N	FAULT	Fault, inferred
19	222m S	ROCK	Coal seam, inferred
21	243m NE	ROCK	Coal seam, inferred
23	246m N	ROCK	Coal seam, inferred
24	286m SE	ROCK	Coal seam, inferred
25	286m SE	ROCK	Coal seam, inferred
26	324m NE	FAULT	Fault, inferred
29	354m NE	ROCK	Coal seam, inferred
31	360m NW	ROCK	Coal seam, inferred
33	376m S	ROCK	Coal seam, inferred

ID	Location	Category	Description
34	384m NE	ROCK	Coal seam, inferred
35	421m SE	FAULT	Fault, inferred
36	439m W	ROCK	Coal seam, inferred
38	495m SE	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	25

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.

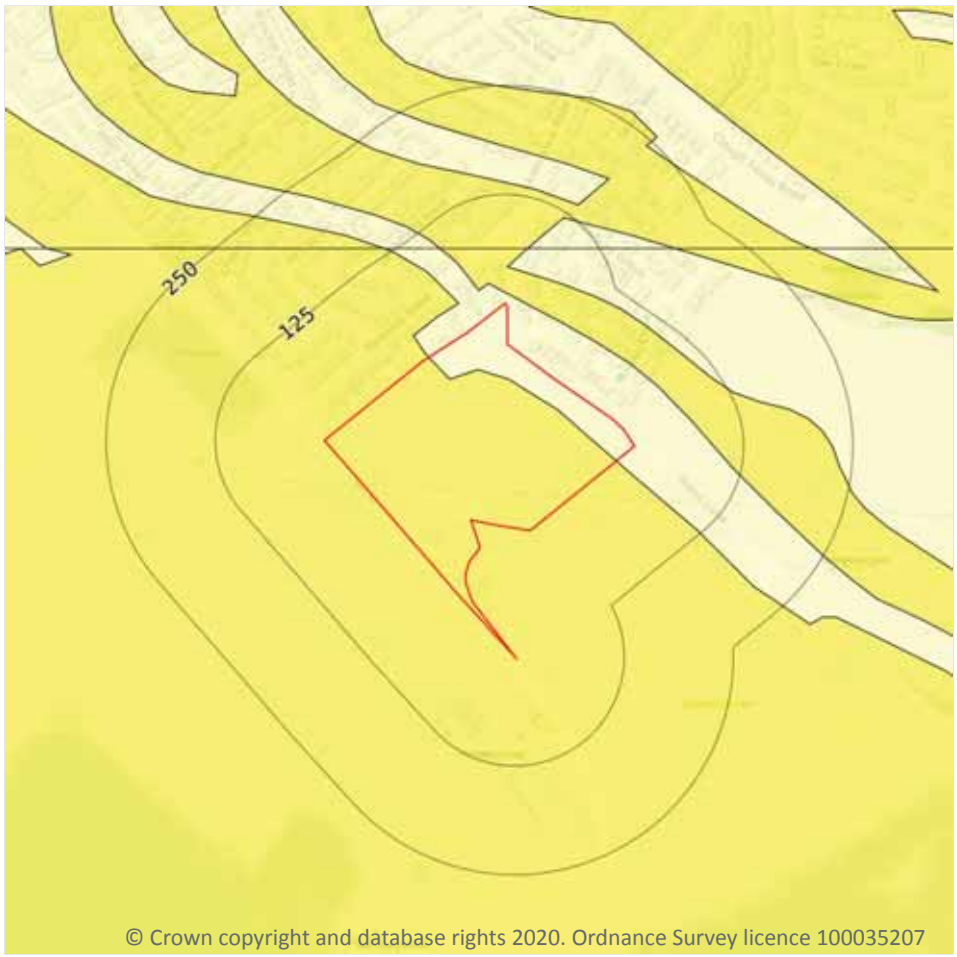
Features are displayed on the Boreholes map on **page 82**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	25m SW	436039 399578	HOYLAND COMMON BARNSLEY BH0-8	-	Y	N/A
2	51m W	435845 399777	HOYLAND COMMON BARNSLEY BH0-18	-	Y	N/A
3	53m SW	436033 399542	HOYLAND COMMON BARNSLEY BH0-7	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	58m SW	435989 399584	HOYLAND COMMON BARNSLEY BH0-9	-	Y	N/A
5	69m SW	435934 399631	HOYLAND COMMON BARNSLEY BH0-11	-	Y	N/A
6	73m SW	436040 399505	HOYLAND COMMON BARNSLEY BH0-6	-	Y	N/A
7	82m SW	435897 399654	HOYLAND COMMON BARNSLEY BH0-13	-	Y	N/A
8	84m SW	435942 399599	HOYLAND COMMON BARNSLEY BH0-10	-	Y	N/A
9	85m W	435817 399811	HOYLAND COMMON BARNSLEY BH0-21	-	Y	N/A
10	90m W	435808 399765	HOYLAND COMMON BARNSLEY BH0-19	-	Y	N/A
A	96m SW	435866 399668	HOYLAND COMMON BARNSLEY BH0-15	-	Y	N/A
11	97m SW	435902 399625	HOYLAND COMMON BARNSLEY BH0-12	-	Y	N/A
12	102m SW	436014 399491	HOYLAND COMMON BARNSLEY BH0-5	-	Y	N/A
13	102m SE	436180 399453	HOYLAND COMMON BARNSLEY BH0-54	-	Y	N/A
A	104m SW	435871 399650	HOYLAND COMMON BARNSLEY BH0-14	-	Y	N/A
14	113m SW	435812 399704	HOYLAND COMMON BARNSLEY BH0-17	-	Y	N/A
15	115m SW	436029 399455	HOYLAND COMMON BARNSLEY BH0-4	-	Y	N/A
16	129m SW	435823 399668	HOYLAND COMMON BARNSLEY BH0-16	-	Y	N/A
17	135m S	436069 399405	HOYLAND COMMON BARNSLEY BH0-3	-	Y	N/A
18	138m W	435759 399766	HOYLAND COMMON BARNSLEY BH0-21A	-	Y	N/A
19	149m SW	435760 399720	HOYLAND COMMON BARNSLEY BH0-20	-	Y	N/A
20	154m SE	436205 399407	HOYLAND COMMON BARNSLEY BH0-55	-	Y	N/A
21	168m S	436085 399366	HOYLAND COMMON BARNSLEY BH0-2	-	Y	N/A
22	173m SE	436378 399655	HOYLAND COMMON BARNSLEY BH0-62	-	Y	N/A
23	198m S	436124 399334	HOYLAND COMMON BARNSLEY BH0-1	-	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

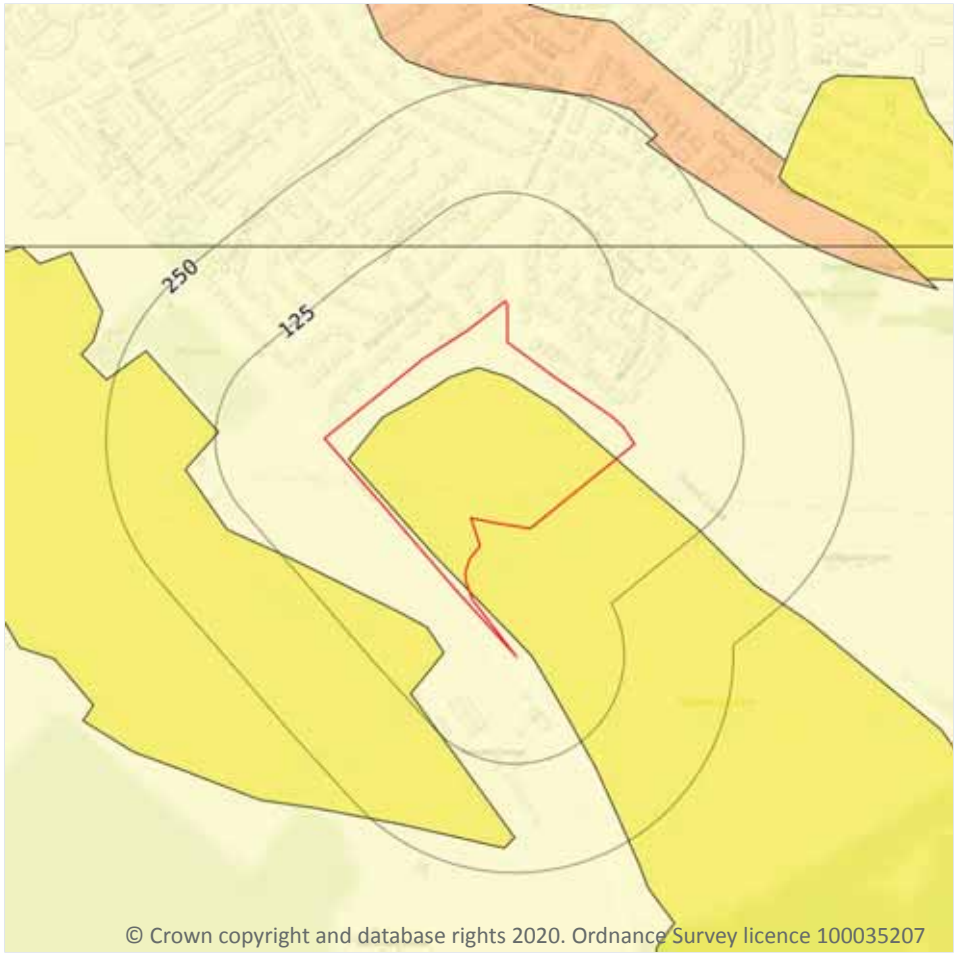
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 84**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**
On site	**Very low**	**Ground conditions predominantly low plasticity.**
41m N	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.

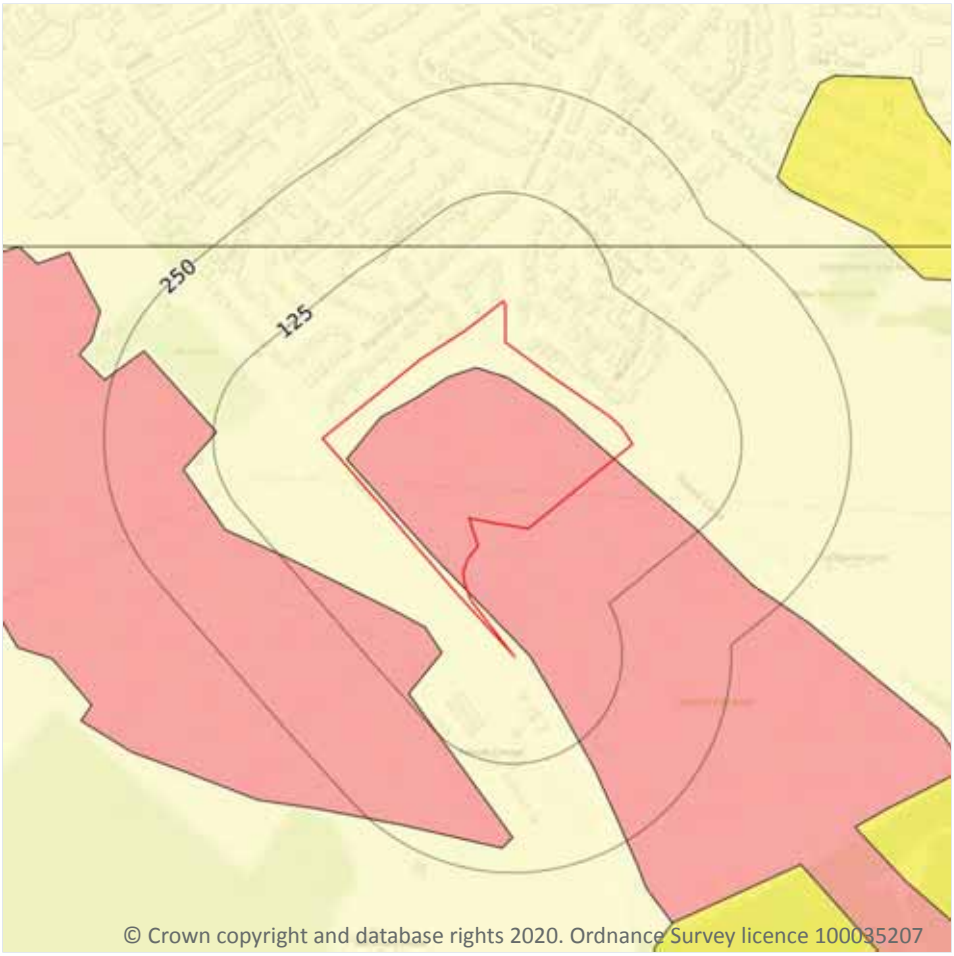
Features are displayed on the Natural ground subsidence - Running sands map on **page 86**

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
On site	**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

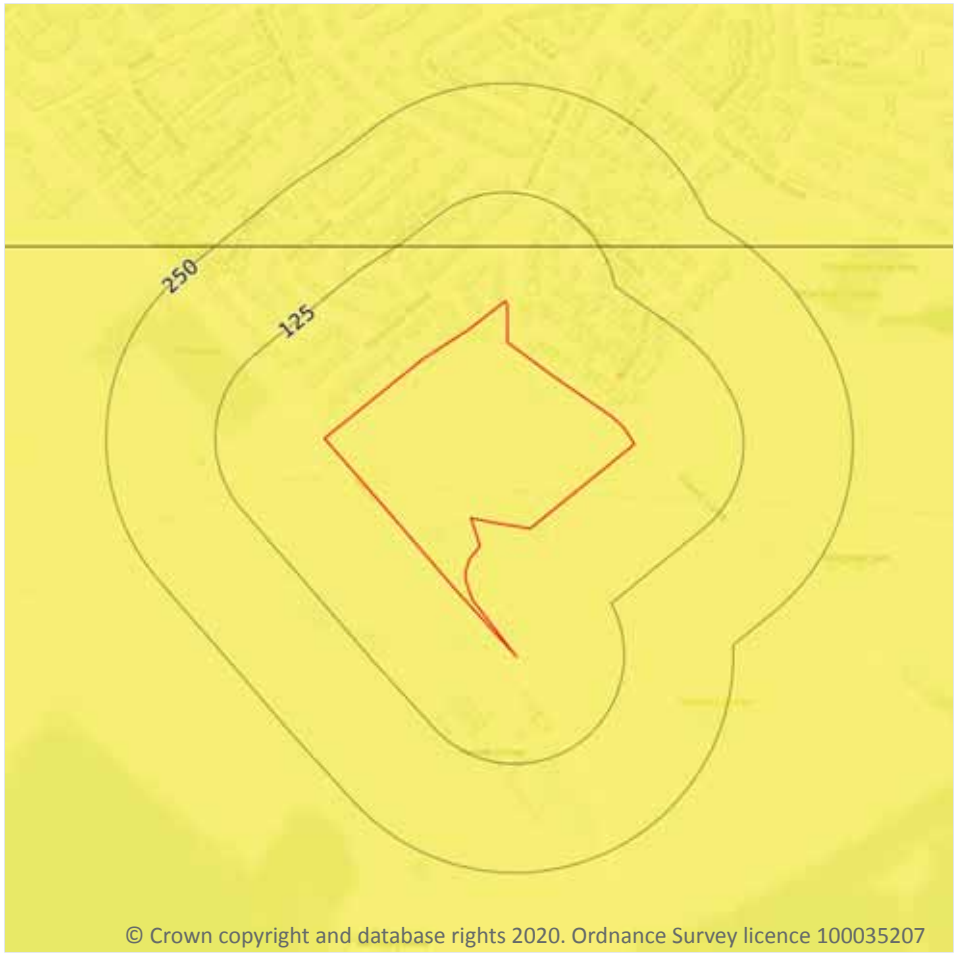
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 88**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
On site	**Moderate**	**Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.**

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**

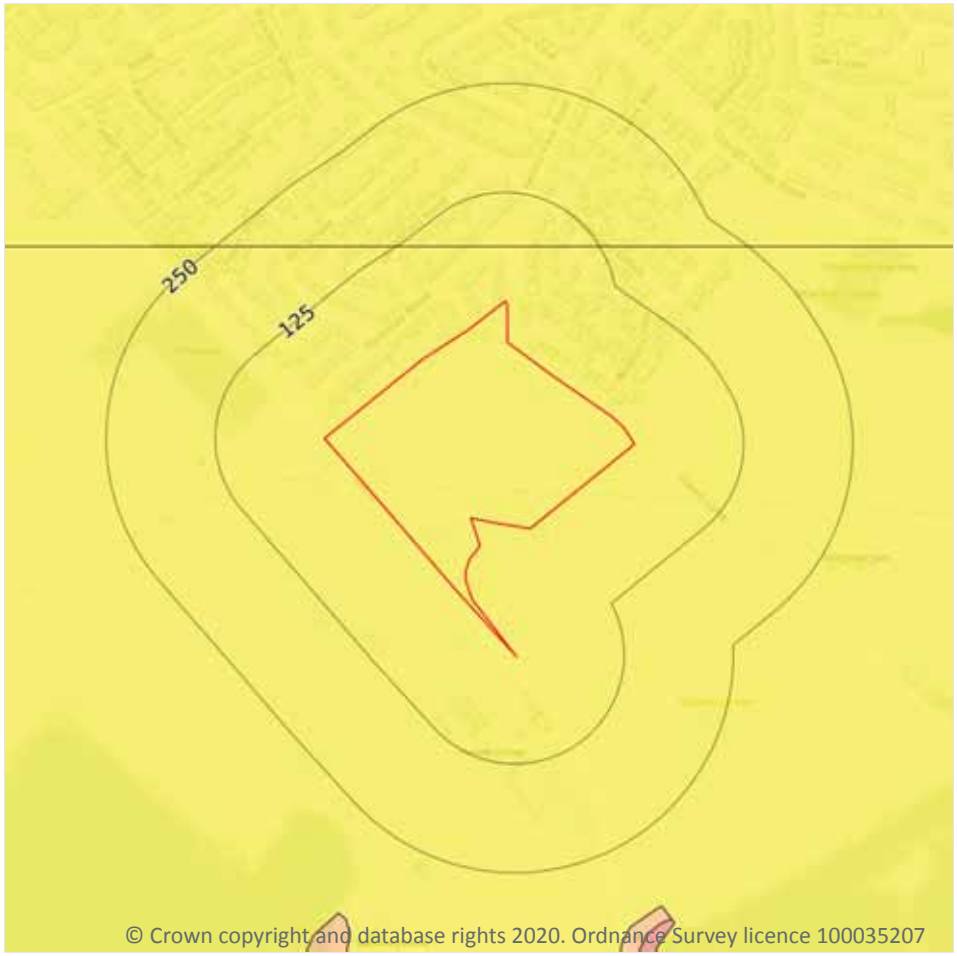
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 90**

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

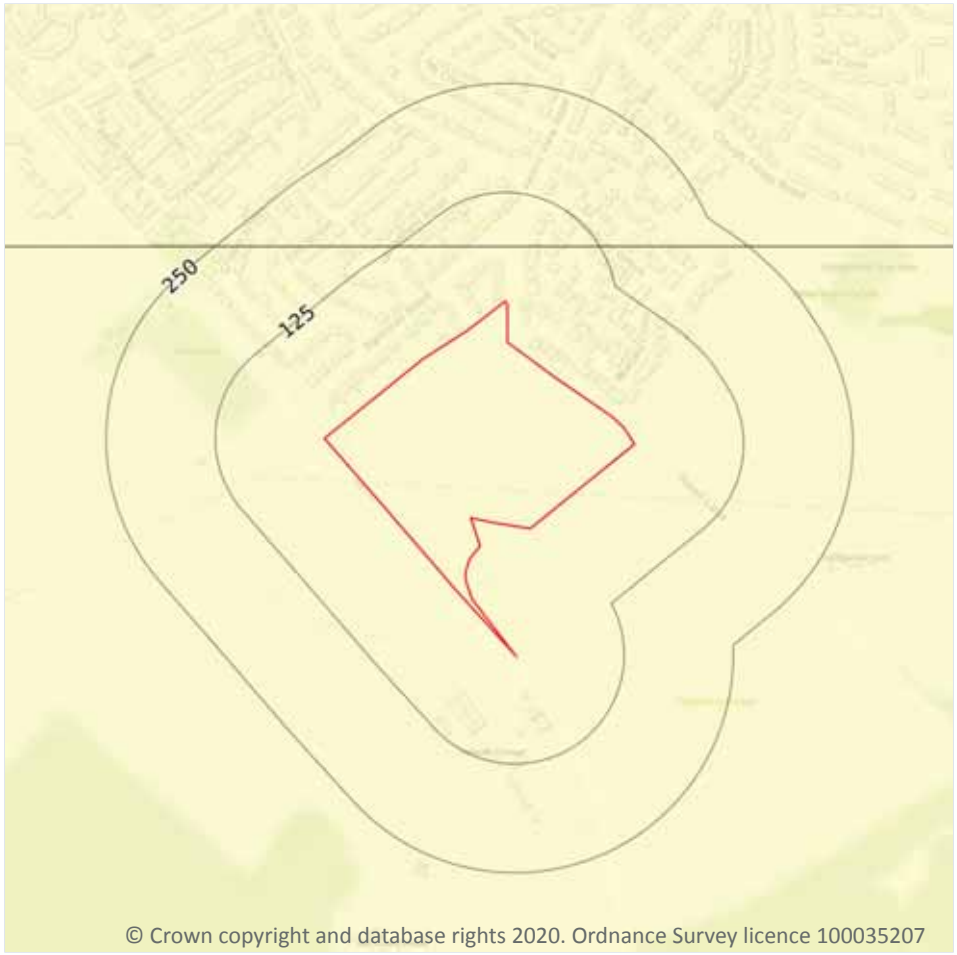
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 91**

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**

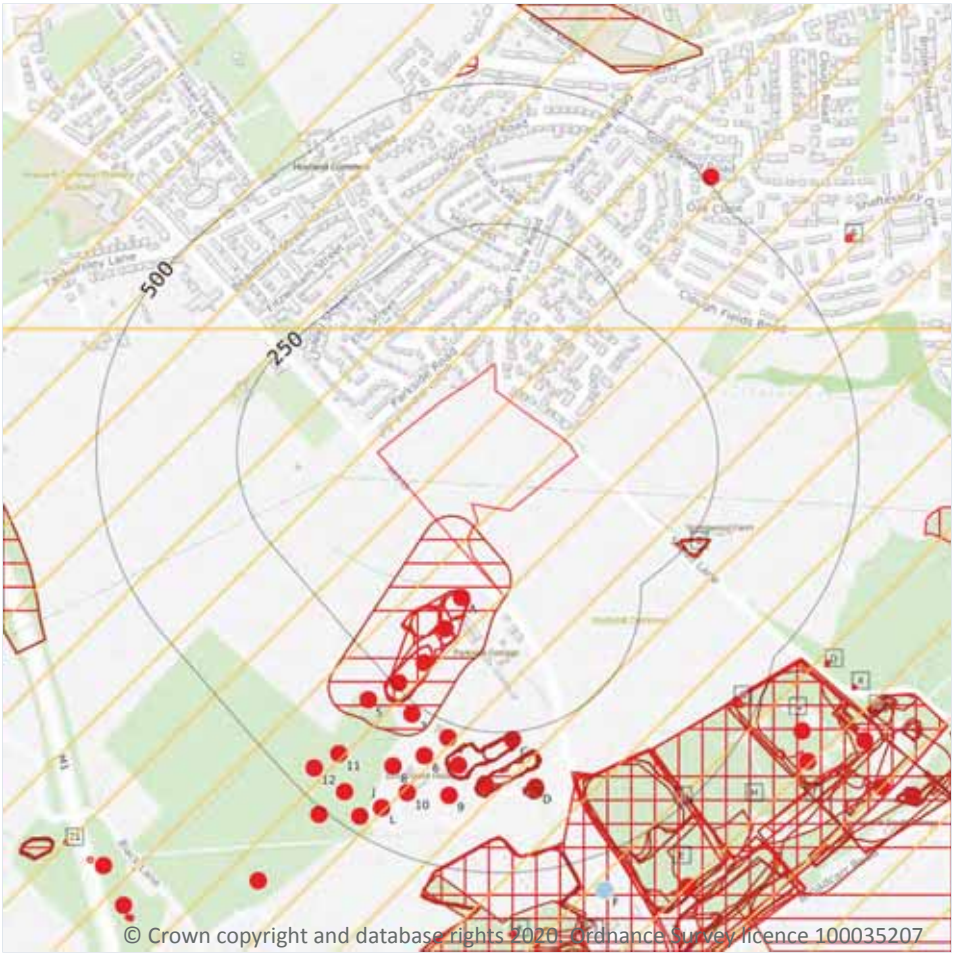
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 92**

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	24

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 93**

ID	Location	Details	Description
A	57m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
A	116m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
A	124m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
A	184m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
A	242m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
C	263m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
3	268m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
4	275m S	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
C	275m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
C	300m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
5	303m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
C	316m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
6	321m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
C	342m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
D	353m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
8	364m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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	372m S	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
10	394m SW	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
11	407m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
J	409m SW	Name: Swallow Wood Mine Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
L	437m SW	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
J	451m SW	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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
12	456m SW	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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	470m SW	Name: Bell Ground Ironstone Pits Address: HOYLAND, South Yorkshire Commodity: Ironstone Status: 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)	Type: Ceased 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 **16**

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 93**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Opencast Mining**	**1951**	**1:10560**
A	46m SW	Old Ironstone Pits	1951	1:10560
A	48m SW	Old Ironstone Pits	1948	1:10560
A	54m SW	Unspecified Heap	1891	1:10560
A	54m SW	Old Ironstone Pits	1938	1:10560
A	54m SW	Old Ironstone Pits	1903	1:10560
A	100m SW	Old Ironstone Pits	1938	1:10560
A	104m SW	Unspecified Heap	1891	1:10560
A	104m SW	Old Ironstone Pits	1903	1:10560
A	112m SW	Old Ironstone Pits	1938	1:10560
A	158m SW	Unspecified Heap	1891	1:10560
A	158m SW	Old Ironstone Pits	1938	1:10560
A	158m SW	Old Ironstone Pits	1903	1:10560
B	233m SE	Unspecified Heap	1938	1:10560
B	238m SE	Unspecified Heap	1948	1:10560
B	238m SE	Unspecified Heap	1948	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	**87**

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 93**

ID	Location	Land Use	Year of mapping	Mapping scale
A	46m SW	Old Ironstone Pits	1951	1:10560
A	54m SW	Old Ironstone Pits	1938	1:10560
A	54m SW	Old Ironstone Pits	1903	1:10560
A	100m SW	Old Ironstone Pits	1938	1:10560
A	104m SW	Old Ironstone Pits	1903	1:10560
A	112m SW	Old Ironstone Pits	1938	1:10560
A	158m SW	Old Ironstone Pits	1938	1:10560
A	158m SW	Old Ironstone Pits	1903	1:10560
E	346m S	Colliery	1891	1:10560
7	350m SE	Colliery	1903	1:10560
H	353m SE	Colliery	1965	1:10560
N	455m SE	Coal Pit	1938	1:10560
O	459m SE	Unspecified Shaft	1938	1:10560
O	459m SE	Unspecified Shaft	1903	1:10560
O	462m SE	Unspecified Shaft	1951	1:10560
O	467m SE	Unspecified Shaft	1980	1:10000
O	467m SE	Unspecified Shaft	1965	1:10560
Q	575m SE	Unspecified Shafts	1938	1:10560
Q	575m SE	Unspecified Shafts	1903	1:10560
Q	575m SE	Unspecified Shafts	1951	1:10560
K	605m S	Disused Air Shaft	1991	1:10000
K	605m S	Disused Air Shaft	1980	1:10000

ID	Location	Land Use	Year of mapping	Mapping scale
K	605m S	Disused Air Shaft	1965	1:10560
K	606m S	Air Shaft	1938	1:10560
K	606m S	Air Shaft	1903	1:10560
K	606m S	Air Shaft	1951	1:10560
S	611m NE	Air Shaft	1903	1:10560
S	611m NE	Air Shaft	1938	1:10560
E	613m SE	Unspecified Old Shaft	1938	1:10560
E	614m SE	Unspecified Disused Shaft	1991	1:10000
E	614m SE	Unspecified Disused Shaft	1980	1:10000
E	614m SE	Unspecified Disused Shaft	1965	1:10560
E	614m SE	Unspecified Old Shaft	1951	1:10560
S	618m NE	Air Shaft	1951	1:10560
T	629m SE	Coal Pit	1951	1:10560
V	631m E	Coal Pit	1951	1:10560
X	638m SE	Unspecified Shafts	1951	1:10560
X	639m SE	Unspecified Shafts	1938	1:10560
X	639m SE	Unspecified Shafts	1903	1:10560
E	657m SE	Unspecified Shaft	1951	1:10560
E	664m SE	Unspecified Shaft	1938	1:10560
-	687m S	Disused Air Shaft	1991	1:10000
-	687m S	Disused Air Shaft	1980	1:10000
-	687m S	Disused Air Shaft	1965	1:10560
U	687m SE	Unspecified Shafts	1951	1:10560
-	731m E	Drift	1938	1:10560
-	734m S	Disused Air Shaft	1991	1:10000
-	734m S	Disused Air Shaft	1980	1:10000
-	734m S	Disused Air Shaft	1965	1:10560
-	734m E	Drift	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	734m S	Air Shaft	1951	1:10560
-	735m S	Air Shaft	1938	1:10560
-	735m S	Air Shaft	1903	1:10560
-	807m S	Unspecified Old Shafts	1938	1:10560
-	814m S	Old Ironstone Pits	1938	1:10560
-	827m E	Coal Pit	1938	1:10560
-	831m S	Unspecified Disused Shaft	1991	1:10000
-	831m S	Unspecified Disused Shaft	1980	1:10000
-	831m S	Unspecified Disused Shaft	1965	1:10560
-	832m S	Unspecified Old Shaft	1951	1:10560
-	833m S	Unspecified Old Shaft	1938	1:10560
-	836m S	Unspecified Old Shaft	1903	1:10560
AE	844m SW	Air Shaft	1965	1:10560
AE	856m SW	Air Shaft	1938	1:10560
21	871m SW	Air Shaft	1951	1:10560
AF	872m SW	Unspecified Disused Shaft	1991	1:10000
AF	872m SW	Unspecified Disused Shaft	1980	1:10000
AF	872m SW	Unspecified Disused Shaft	1965	1:10560
AF	875m SW	Unspecified Old Shaft	1938	1:10560
-	890m S	Old Ironstone Pits	1938	1:10560
-	891m S	Old Ironstone Pits	1903	1:10560
-	921m SW	Unspecified Disused Shaft	1991	1:10000
-	923m SW	Unspecified Old Shafts	1938	1:10560
-	923m SW	Unspecified Old Shafts	1903	1:10560
-	923m SW	Unspecified Disused Shaft	1980	1:10000
-	923m SW	Unspecified Disused Shaft	1965	1:10560
-	957m SW	Old Ironstone Pits	1903	1:10560
-	957m SW	Unspecified Old Shafts	1951	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
-	960m SW	Unspecified Old Shafts	1938	1:10560
-	960m SW	Unspecified Old Shafts	1903	1:10560
-	973m SW	Old Ironstone Pits	1903	1:10560
-	973m SW	Old Ironstone Pits	1903	1:10560
-	985m SW	Old Ironstone Pits	1903	1:10560
-	986m E	Air Shaft	1938	1:10560
-	986m E	Air Shaft	1903	1:10560
-	989m E	Air Shaft	1951	1:10560
-	990m E	Air Shaft	1965	1:10560

This is 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	**5**

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 93**

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**

ID	Location	Name	Commodity	Class	Likelihood
2	63m N	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
-	896m 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
-	908m SW	Sheffield Area	Vein Mineral/Iron ore	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
-	923m 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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	**1**

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 93**

ID	Location	Mine Address	Mineral	Data source	Publisher
F	563m S	Skiers Spring, Hoyland, South Yorkshire	Magnatite, Marcasite, Siderite, Ironstone	LISTING OF NEW MINERAL RECORDS OFFICE CATALOGUE.	UNPUBLISHED/DRAFT

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.

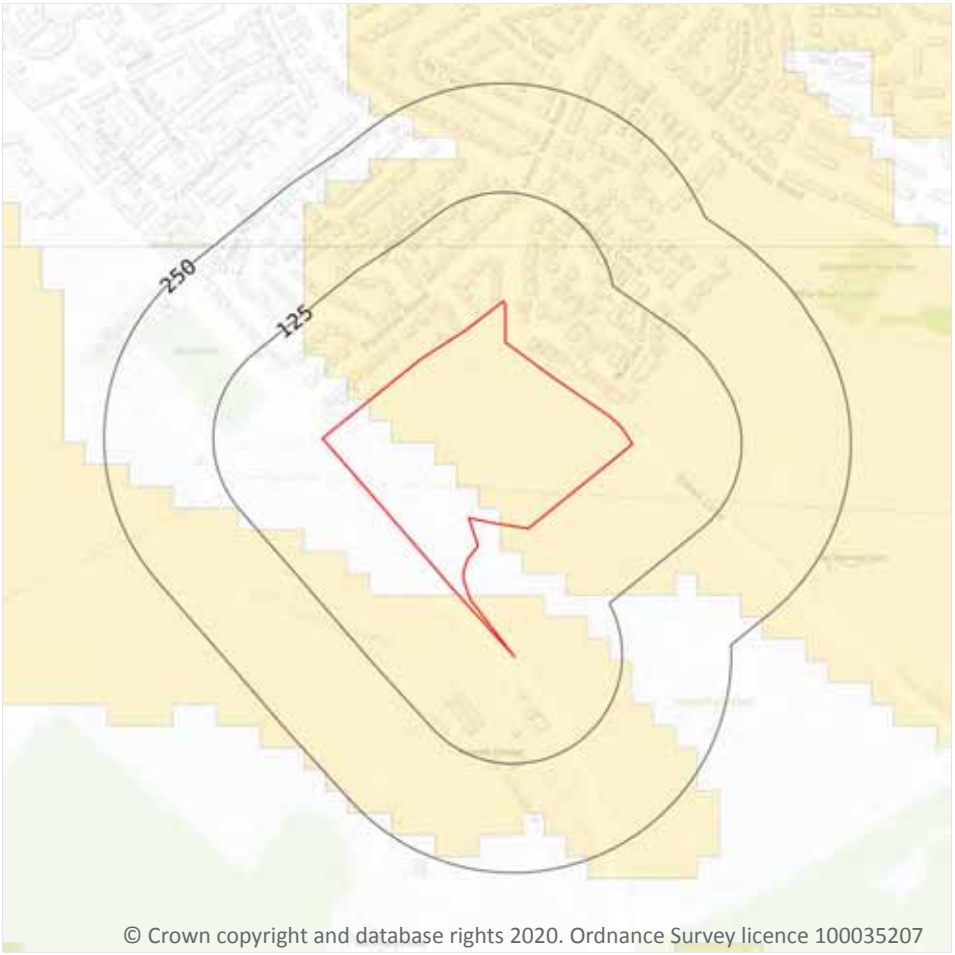
18.13 Clay mining

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



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

19.1 Radon

Records on site	2

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 105**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**
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	14

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 km^2. 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 km^2; 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**
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**
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**
1m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
1m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
8m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
32m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
36m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m S	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 km^2).

This data is sourced from the British Geological Survey.

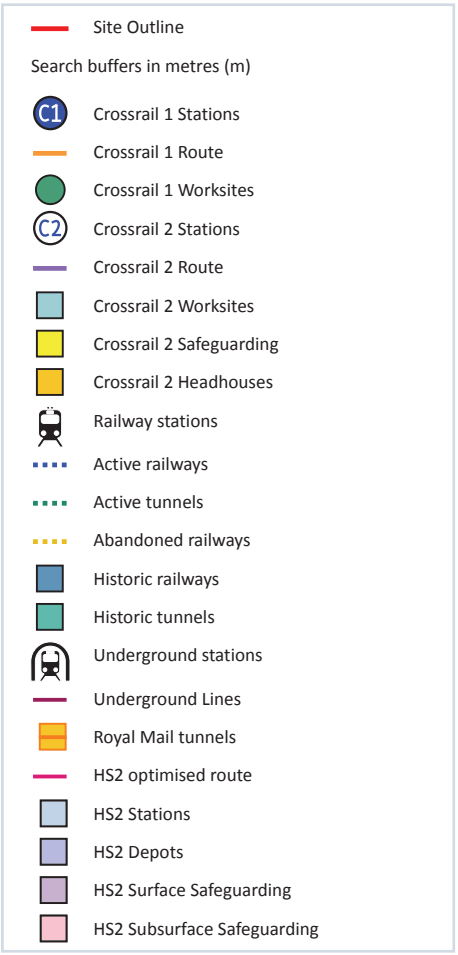
20.3 BGS Measured Urban Soil Chemistry

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 km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects



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	0

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.

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	3

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.

Features are displayed on the Railway infrastructure and projects map on **page 109**

Location	Track Type	Speed (mph)	Speed (km/h)	Status
On site	**Surface Running Track**	**224mph**	**360kph**	**Original consultation route**
On site	**Tunnel**	**224mph**	**360kph**	**Original consultation route**
436m S	Surface Running Track	224mph	360kph	Original consultation route

This data is sourced from HS2 ltd.

Data providers

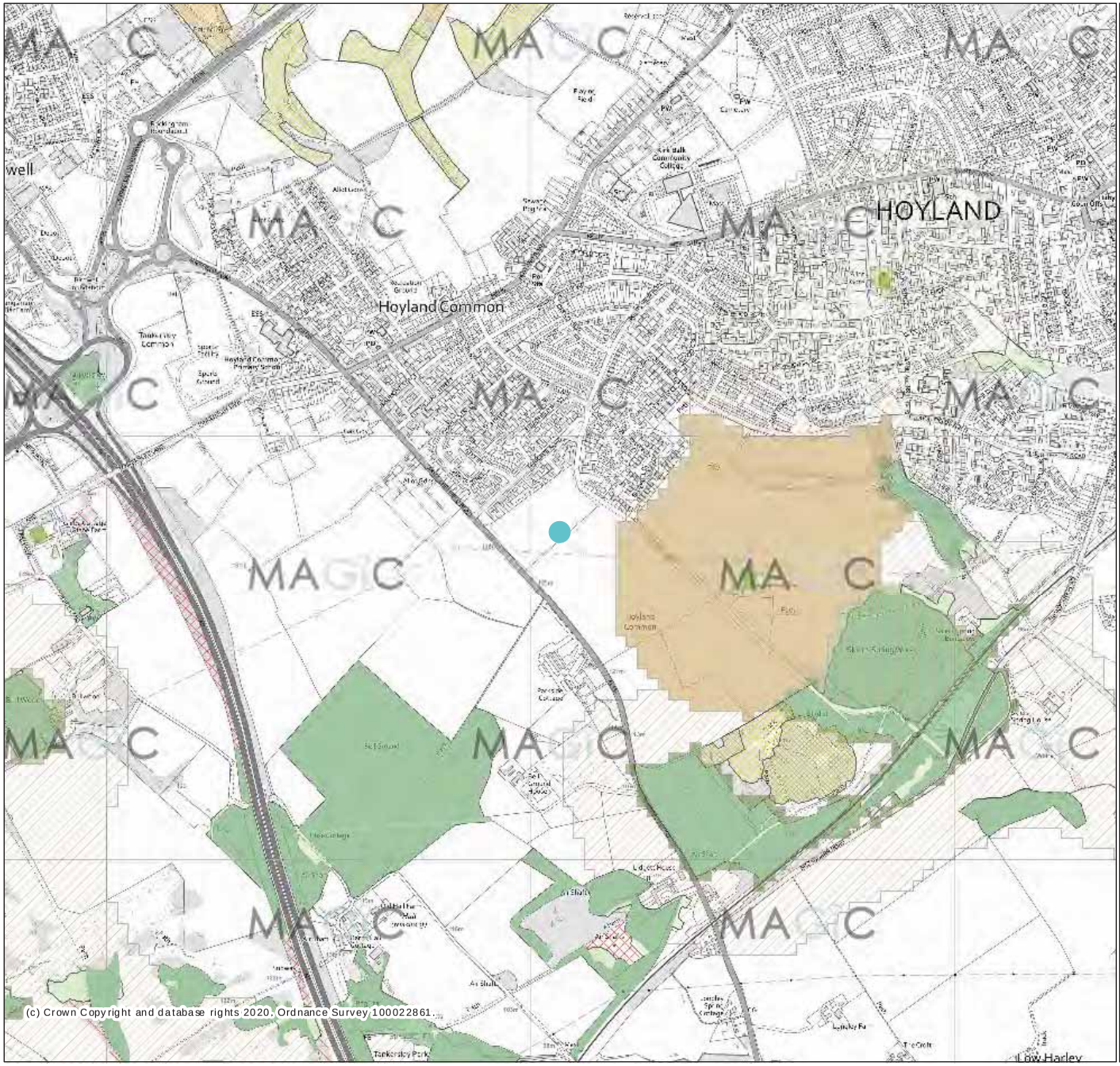
Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-jan-2020/.

MAGIC

AG3080D-20 Habitats



Legend

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland
- Priority Habitat Inventory - Deciduous Woodland (England)
- Forestry Commission Legal Boundary (England)

National Forest Inventory (GB)

- Assumed woodland
- Broadleaved
- Cloud \ shadow
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees

- Priority Habitat Inventory - Traditional Orchards (England)
- Woodpasture and Parkland BAP Priority Habitat (England)

National Habitat Network All Habitats Combined (England)

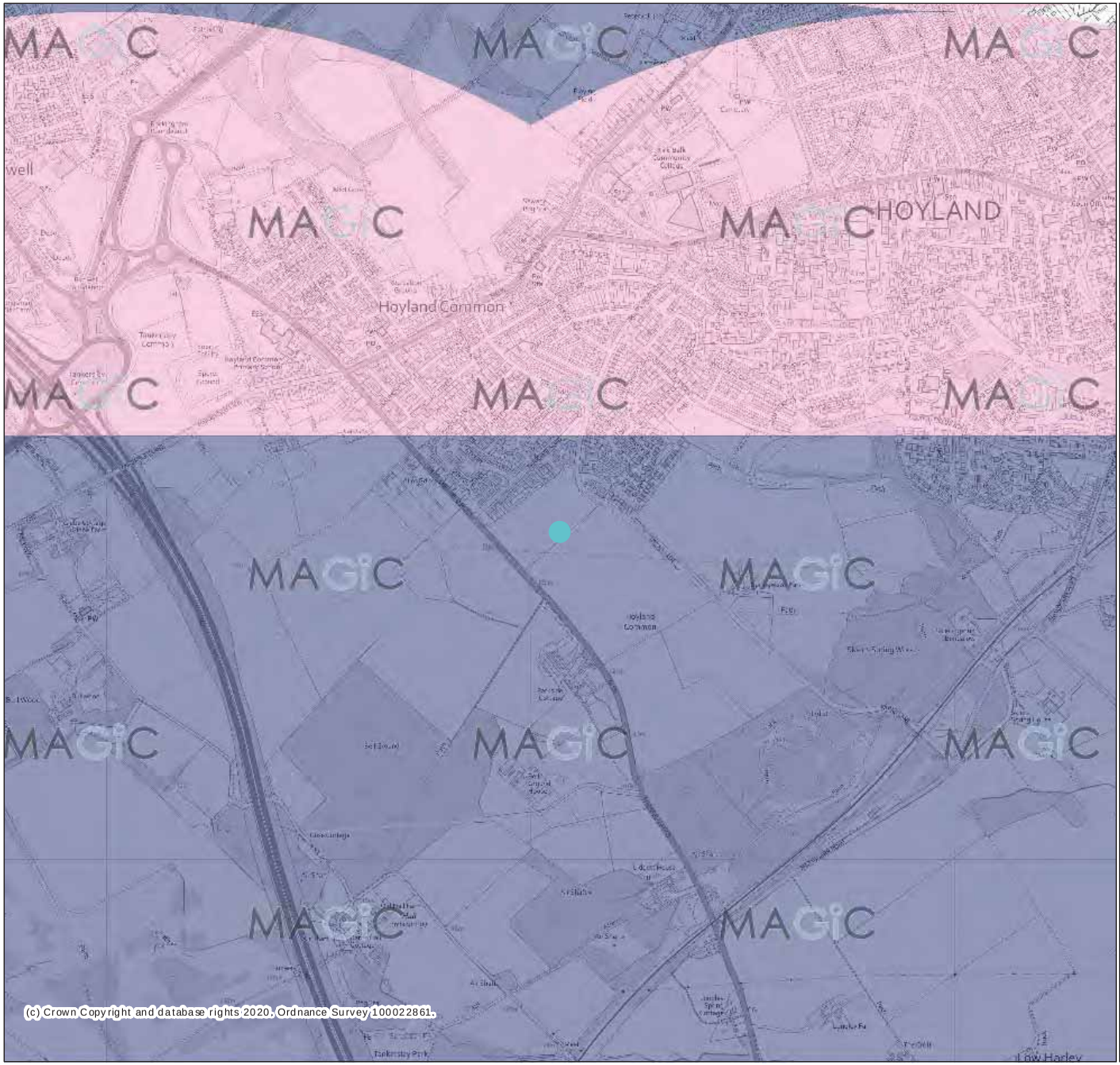
- Ancient woodland
- Blanket bog
- Coastal saltmarsh
- Coastal sand dunes
- Coastal vegetated shingle
- Lakes
- Limestone pavement
- Lowland calcareous grassland
- Lowland dry acid grassland
- Lowland fens
- Lowland heathland
- Lowland meadows
- Lowland raised bog
- Maritime cliff & slope
- Purple moor grass & rush pastures
- Reedbeds
- Rivers
- Traditional orchard
- Upland calcareous grassland
- Upland flushes fens & swamps
- Upland hay meadow
- Upland heathland
- Wood pasture and parkland
- PHI_Other
- Additional land within SSSIs
- Habitat Restoration-Creation
- Restorable Habitat
- Fragmentation Action Zone
- Network Enhancement Zone 1
- Network Enhancement Zone 2
- Network Expansion Zone

Projection = OSGB36
xmin = 434100
ymin = 398800
xmax = 438100
ymax = 400800

0 0.2 0.4
km

MAGIC

AG3080D-20 Species



Legend

- Priority Species for CS Targeting - Brown Hairstreak
- Priority Species for CS Targeting - Corn Bunting
- Priority Species for CS Targeting - Curlew
- Priority Species for CS Targeting - Lapwing
- Priority Species for CS Targeting - Redshank
- Priority Species for CS Targeting - Snipe
- Upland Breeding Bird Areas for CS (England)

Arable Assemblage Farmland Birds (England)

- 3
- 4
- 5
- 6

Grassland Assemblage Farmland Birds (England)

- 2
- 3
- 4
- 5
- Black Grouse (England)
- Cirl Bunting (England)
- Corn Bunting (England)
- Curlew (England)
- Grey Partridge (England)
- Lapwing (England)
- Redshank (England)
- Snipe (England)
- Stone Curlew (England)
- Tree Sparrow (England)
- Turtle Dove (England)
- Twite (England)
- Yellow Wagtail (England)

Projection = OSGB36
xmin = 434100
ymin = 398800
xmax = 438100
ymax = 400800

0 0.2 0.4
km

Map produced by MAGIC on 10 August, 2020.

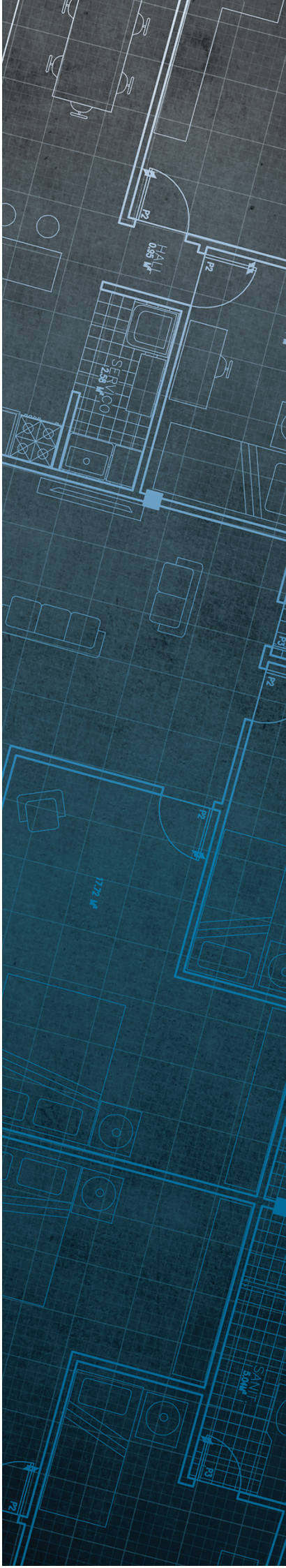
The Coal Authority

Consultants

Coal Mining Report

Parkside, Hoyland
Sheffield Road
Hoyland Common
South Yorkshire
S74 0AL

Date of enquiry:	4 August 2020
Date enquiry received:	4 August 2020
Issue date:	4 August 2020
Our reference:	51002292341001
Your reference:	15879



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

Applied Geology Ltd

Enquiry address

Parkside, Hoyland
Sheffield Road
Hoyland Common
South Yorkshire
S74 0AL

Approximate position of property

How to contact us

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Mansfield
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NG18 4RG

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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
SKIERS SPRING	SWALLOW WOOD	Coal	4IVL	38	Beneath Property	2.7	East	106	1956
LIDGETT	LIDGETT	Coal	6IYY	86	South-West	3.0	South-East	80	1899
LIDGETT	LIDGETT	Coal	4IVR	87	South-West	1.5	North-West	70	1883
LIDGETT	LIDGETT	Coal	4IVS	91	Beneath Property	3.8	North-East	70	1892
unnamed	LIDGETT	Coal	6IYZ	94	Beneath Property	3.2	North-East	75	1906
unnamed	LIDGETT	Coal	6IZ0	95	North-West	3.2	North-East	75	1907
unnamed	LIDGETT	Coal	5NM7	100	North	0.0	East	75	1907
TANKERSLEY	TANKERSLEY	Ironstone	A0GN	137	Beneath Property			152	1879
unnamed	TOP FENTON	Coal	6IZ7	183	Beneath Property	3.6	North-East	91	1930
ROCKINGHAM	LOW FENTON	Coal	6XRH	184	Beneath Property	4.1	North-East	130	1950
SKIERS SPRING	LOW FENTON	Coal	4IW1	191	Beneath Property	3.0	North-East	106	1972
SKIERS SPRING	TOP FENTON	Coal	4IVW	192	Beneath Property	0.9	East	91	1936
ROCKINGHAM	TOP FENTON	Coal	6IZ6	200	South-West	3.5	East	97	1927
unnamed	PARKGATE	Coal	6XRE	203	Beneath Property	4.0	North-East	140	1910
SKIERS SPRING	TOP FENTON	Coal	4IVX	206	Beneath Property	1.4	North-East	90	1926
unnamed	TOP FENTON	Coal	64RH	206	North-West	3.5	North-East	109	1923
unnamed	LOW FENTON	Coal	5NMC	209	North	3.2	North-East	104	1949
unnamed	TOP FENTON	Coal	5OUD	210	North	3.2	North-East	104	1924
ROCKINGHAM	LOW FENTON	Coal	64RK	210	North-West	3.4	North-East	137	1943
SKIERS SPRING	PARKGATE	Coal	4RRP	216	Beneath Property	1.9	East	145	1911
unnamed	PARKGATE	Coal	6XRD	217	South-West	3.5	East	145	1875
ROCKINGHAM / HARLEY	PARKGATE	Coal	4OWH	226	North	3.0	North-East	168	1898

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
unnamed	MIDDLETON MAIN	Coal	661X	228	Beneath Property	4.1	North-East	76	1898
unnamed	PARKGATE	Coal	64PM	229	North-West	2.3	East	152	1900
ROCKINGHAM	MIDDLETON MAIN	Coal	4IW3	233	Beneath Property	2.9	North-East	76	1915
unnamed	MIDDLETON MAIN	Coal	661W	240	Beneath Property	1.9	East	76	1899
unnamed	MIDDLETON MAIN	Coal	661Y	243	South-West	0.7	South-East	65	1913
unnamed	MIDDLETON MAIN	Coal	661Z	246	South-West	3.9	East	76	1910
unnamed	MIDDLETON MAIN	Coal	64RT	253	North-West	3.7	North-East	102	1904
ROCKINGHAM	THORNCLIFFE	Coal	5OUK	254	North	2.8	North-East	64	1908
unnamed	SILKSTONE	Coal	6IZF	292	Beneath Property	3.4	East	180	1900
unnamed	SILKSTONE	Coal	6IZE	305	South-West	3.5	East	180	1900
SKIERS SPRING	SILKSTONE	Coal	4RRR	306	Beneath Property	1.6	North-East	86	1904
UNAMED	SILKSTONE	Coal	64SB	307	North-West	3.5	North-East	180	1917
ROCKINGHAM	SILKSTONE	Coal	4OWA	320	North	2.7	East	86	1891
WHARNCLIFFE	WHINMOOR	Coal	6XM2	355	South-West	2.9	East	100	1948

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	436399-018	436037 399508	has been filled and mounded to an unknown specification	Coal	
Shaft	436399-044	436012 399543		Coal	

Abandoned mine plan catalogue numbers

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

M796	NE433	NE814
NE855	SY28	SY5
NE853	2250	OM1137

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
DUNSIL	Coal	Yes	Within	N/A	131
UNNAMED 6	Coal	Yes	Within	N/A	138

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property 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 August 2020
Issued to	APPLIED GEOLOGY LTD UNIT 23 ABBEY PARK STARETON KENILWORTH WARWICKSHIRE CV8 2LY
Property search for	PARKSIDE, HOYLAND SHEFFIELD ROAD HOYLAND COMMON SOUTH YORKSHIRE S74 0AL
Reference number	51002292341001
Date of issue	04 August 2020
Cost	£112.13
VAT @ 20%	£22.43
Total received	£134.56
VAT registration	598 5850 68

The Coal Authority

Summary of findings

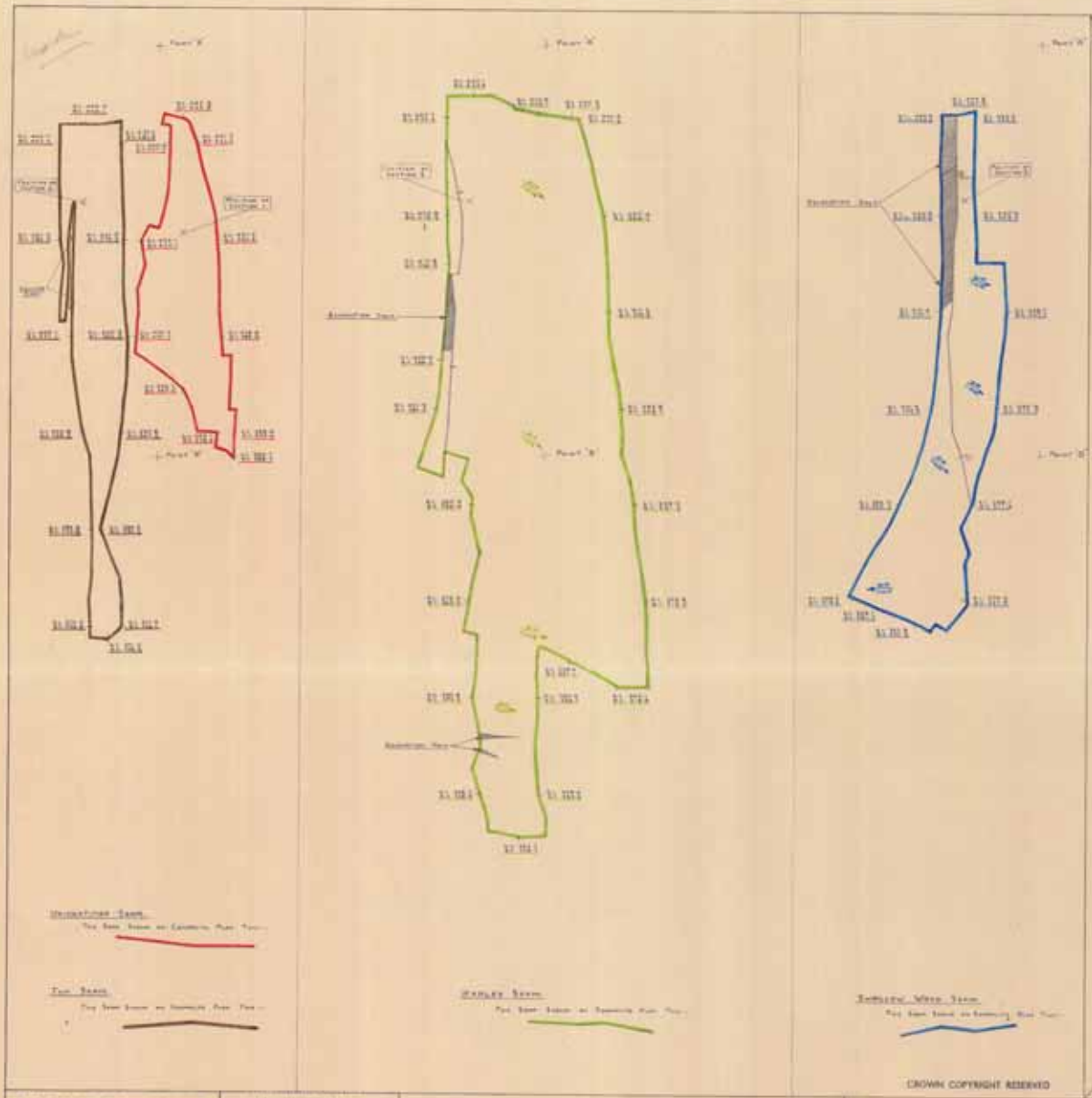
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown
- Disused mine shaft
- Outcrop (Conjectured)
- Geological faults
- Unlicensed opencast site

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

N.E.419



LEGEND

LOCATION

1:2500 SCALE ORDNANCE SHEET REFERENCE
DATE OF ORDNANCE SHEET
NAME OF SITE
LOCATION OF SITE
COUNTY
PARISH

VERTICAL SECTION THROUGH ALL SEAMS

VERTICAL SCALE ... TO 1 INCH

SPECIAL REMARKS
(+ HEADINGS & STENTS)

QUANTITIES WORKED

TOTAL AREA REQUISITIONED ACRES SHEWN
TOTAL AREA WORKED EXCLUDING BATTERY ACRES
TOTAL COAL RECOVERED FROM ABOVE TONS

NAMES OF SEAMS WORKED FOR ABOVE TONNAGE
(SEAM NAMES FROM LEFT TO RIGHT IN ORDINATE DESCENDING ORDER)

AREA OF COAL SEAM WORKED COLOUR EDGED
(SEAMS COLOURED FROM LEFT TO RIGHT IN GEOLOGICAL DESCENDING ORDER)
TOTAL OLD WORKING VOIDS IN COAL SEAM IN CUBIC YDS

AREA OF SEAM WHERE OLD WORKING VOIDS WERE LOCATED

DIP AND DIRECTION OF EACH SEAM SHEWN

REDUCED LEVELS TO ORDNANCE DATUM SHEWN (PROVING LEVEL / BOTTOM OF COAL)
(EFFECTIVE TO)

FAULTS SHEWN WITH THROW IN FEET OR DOWNTHROW SIDE

GENERAL DESCRIPTION

TYPE OF LAND

NATURE OF OVERBURDEN

NATURE OF COAL

SPECIAL REMARKS

For Details see Sheet No. 2

OPERATIONAL DATA

DATE REQUISITIONED
COMMENCEMENT OF COALING
COMPLETION OF COALING
COMPLETION OF RESOILING
SITE HANDED BACK TO AGRICULTURE
FINAL DEREQUISITION OF SITE

COPIES TO	DATE	INITIALS
Mining Records (1)		
H.Q. Surveyor (1)		
Divisional Surveyor (1)		

Unidentified Seam.
The Seam shown on Colliery Plan Thus:-

Two Foot.
The Seam shown on Colliery Plan Thus:-

Crawley Seam.
The Seam shown on Colliery Plan Thus:-

Sandstone Weed Seam.
The Seam shown on Colliery Plan Thus:-

NATIONAL COAL BOARD
OPENCAST EXECUTIVE
55/57 JERMYN STREET
LONDON, S.W.1

LAND SURVEY BRANCH
DRAWN BY:
DATE:
CHECKED BY:
DATE:
SCALE 1: 2500

NAME OF ZONE
OR CONTRACT

NAME OF SITE **STEAD LANE**

SITE REFERENCE NUMBER
030530
OPERATIONAL CONTRACT NUMBER
OE/CON/2817

SHEET 2 OF 2.
DRAWING NUMBER
OE/COMP/03/160

OE/CS3/T1

The Coal Authority

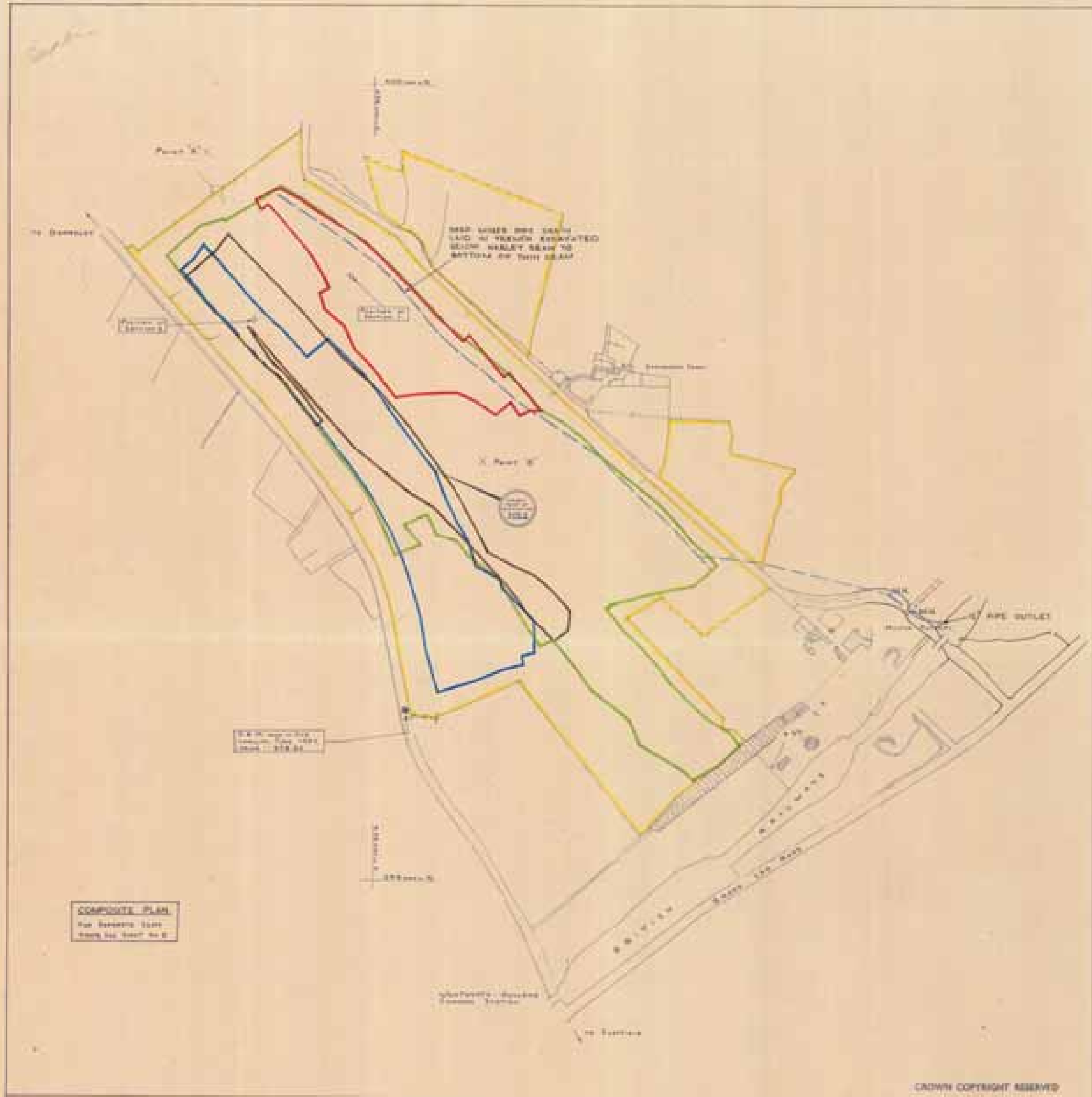
Catalogue No.: NE419 Sheet Info: 1 OF 5

Date: 11/08/2020

Scale: 1 TO 2500

Andrew Holmes - The Coal Authority,200 Lichfield Lane,Mansfield,Notts,NG18 4RG,England

NE. 419.



LEGEND

LOCATION

1:2500 SCALE ORDNANCE SHEET REFERENCE	[illegible]
DATE OF ORDNANCE SHEET	[illegible]
NAME OF SITE	STEAD LANE
LOCATION OF SITE	[illegible]
COUNTY	YORKSHIRE
PARISH	[illegible]

QUANTITIES WORKED

TOTAL AREA REQUISITIONED [illegible] ACRES SHEWN

TOTAL AREA WORKED EXCLUDING BATTERS [illegible] ACRES

TOTAL COAL RECOVERED FROM ABOVE [illegible] TONS

NAMES OF SEAMS WORKED FOR ABOVE TONNAGE (SEAMS NAMED FROM LEFT TO RIGHT IN GEOLOGICAL DESCENDING ORDER)	[illegible]	[illegible]	[illegible]	[illegible]		
AREA OF COAL SEAM WORKED COLOUR EDGED (SEAMS COLOURED FROM LEFT TO RIGHT IN GEOLOGICAL DESCENDING ORDER)						
TOTAL OLD WORKING VOIDS IN COAL SEAM IN CUBIC YDS.						
AREA OF SEAM WHERE OLD WORKING VOIDS WERE LOCATED						
DIP AND DIRECTION OF EACH SEAM SHEWN						
REDUCED LEVELS TO ORDNANCE DATUM SHEWN GROUND LEVEL / BOTTOM OF COAL (RELATIVE TO NEWLYN)	[illegible]	[illegible]	[illegible]	[illegible]		
FAULTS SHEWN WITH THROW IN FEET ON DOWNTHROW SIDE						

DEEP MINE PROTECTION DRAIN SHEWN THUS

GENERAL DESCRIPTION

TYPE OF LAND [illegible]

NATURE OF OVERBURDEN [illegible]

NATURE OF COAL [illegible]

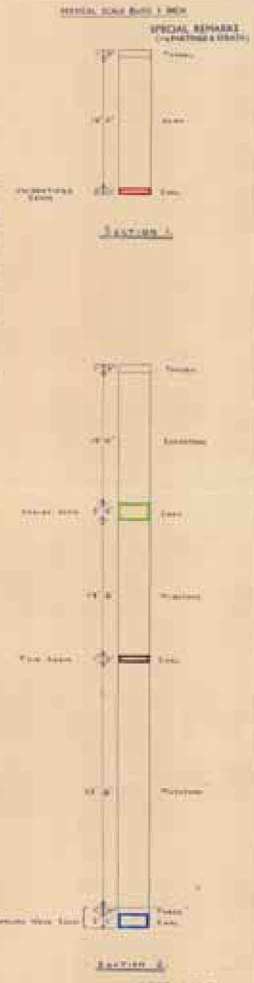
SPECIAL REMARKS [illegible]

OPERATIONAL DATA

DATE REQUISITIONED	[illegible]
COMMENCEMENT OF COALING	[illegible]
COMPLETION OF COALING	[illegible]
COMPLETION OF RESOILING	[illegible]
SITE HANDED BACK TO AGRICULTURE	[illegible]
FINAL DEREQUISITION OF SITE	[illegible]

COPIES TO	DATE	INITIALS
[illegible]		
[illegible]		
[illegible]		

VERTICAL SECTION THROUGH ALL SEAMS



SHEET 1 OF 2

NATIONAL COAL BOARD OPENCAST EXECUTIVE 55/67 JERMYN STREET LONDON, S.W.1.	LAND SURVEY BRANCH DRAWN BY: DATE: CHECKED BY: DATE: SCALE 1:2500	NAME OF ZONE OR CONTRACT	NAME OF SITE STEAD LANE	SITE REFERENCE NUMBER 030530 / OPERATIONAL CONTRACT NUMBER OE/CON/2817	DRAWING NUMBER OE/COMP/03/160

Catalogue No.: NE419 Sheet Info: 2 OF 5	
Date: 11/08/2020	Scale: 1 TO 2500
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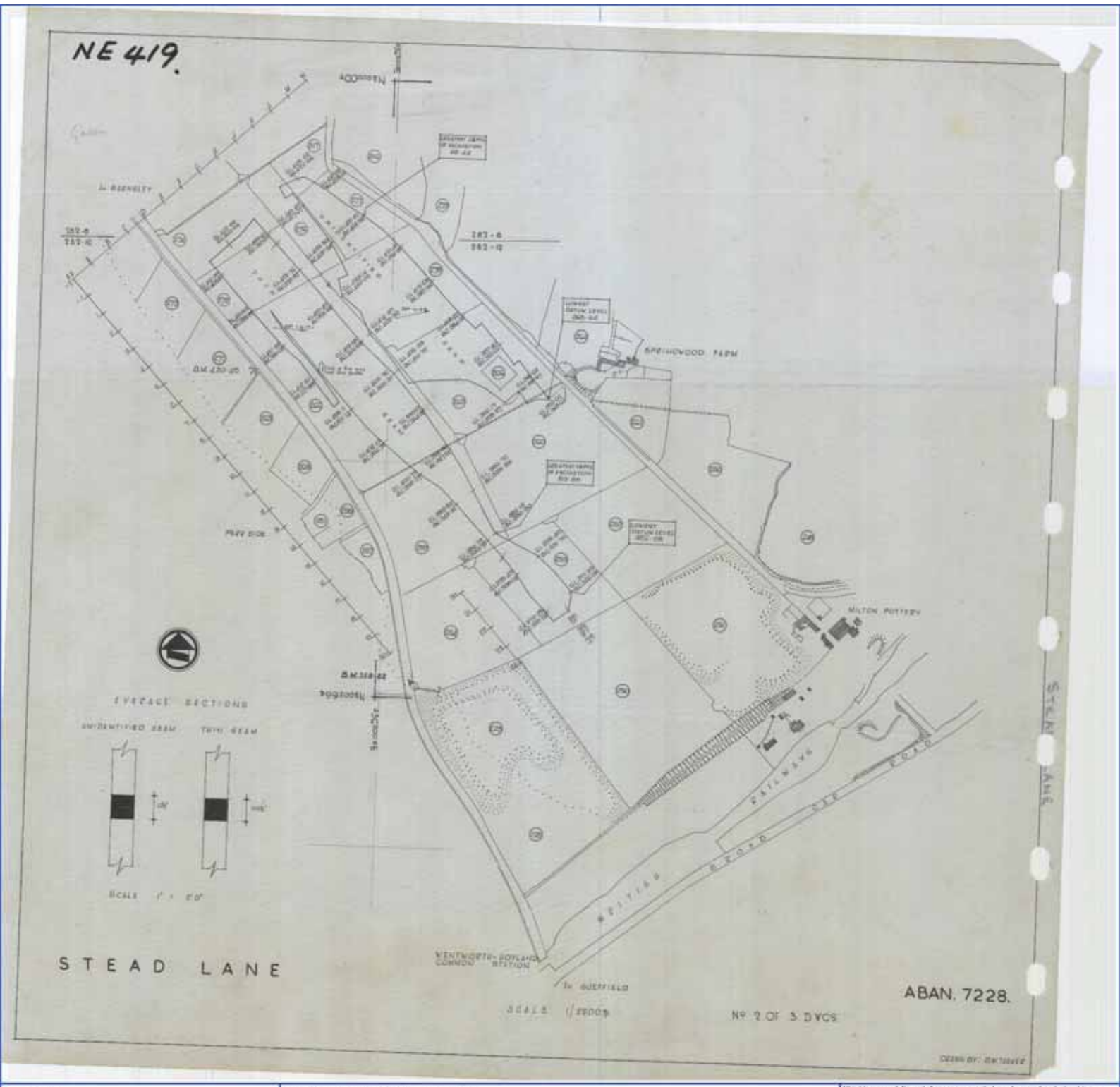

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Catalogue No.: NE419 Sheet Info: 3 OF 5	
Date: 11/06/2020	Scale: 1 TO 2500
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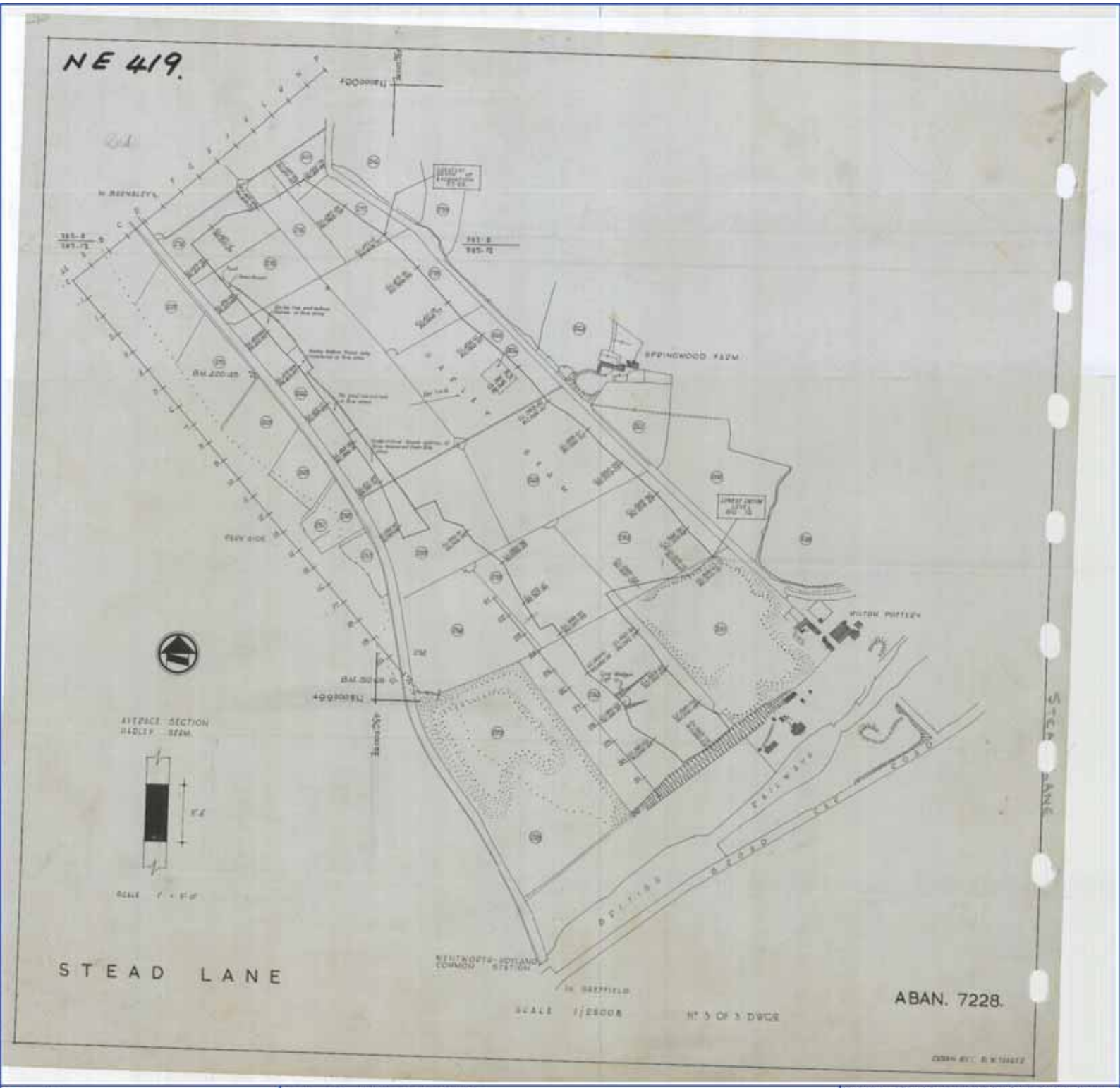

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Date: 11/08/2020	Scale: 1 TO 2500
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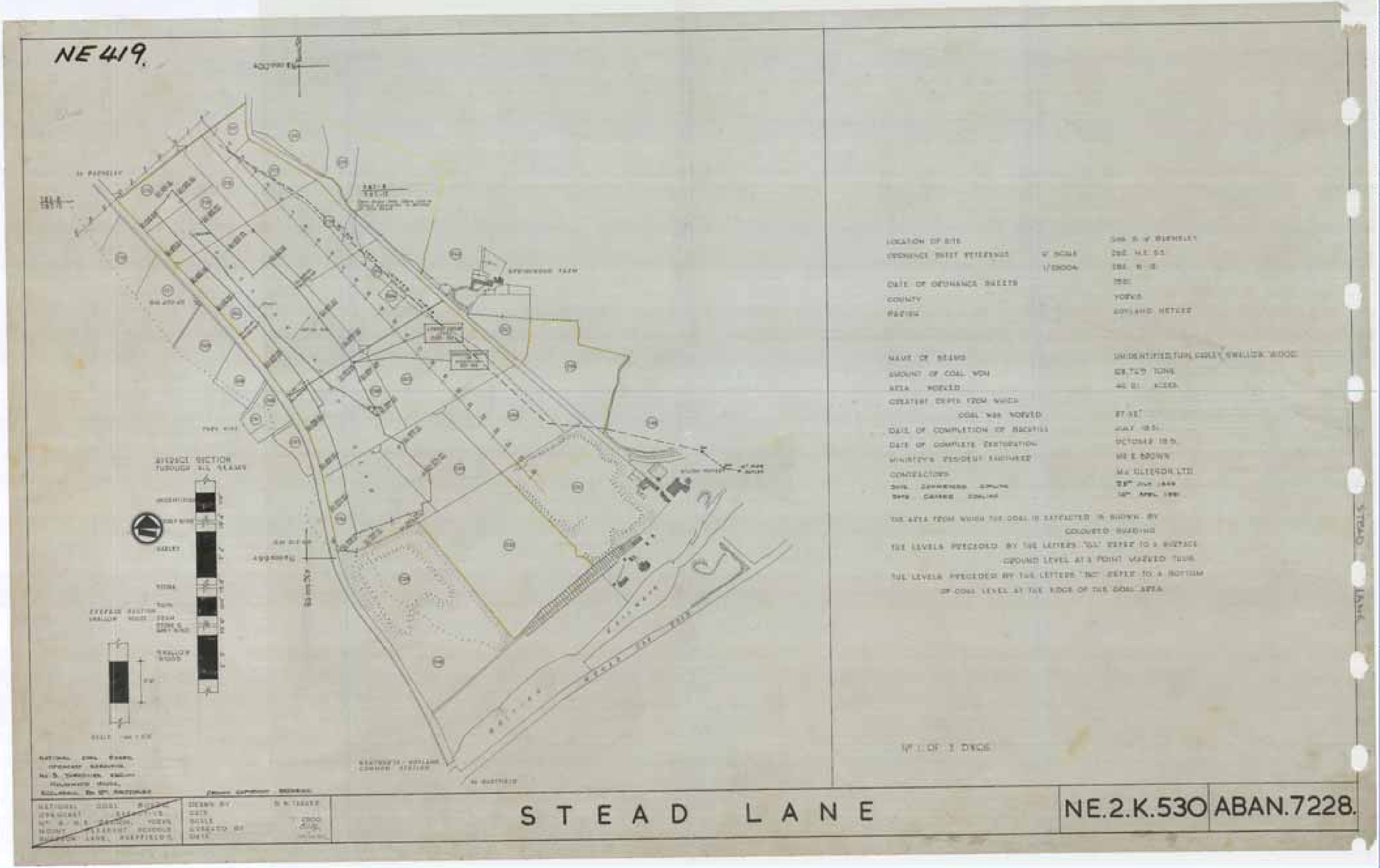


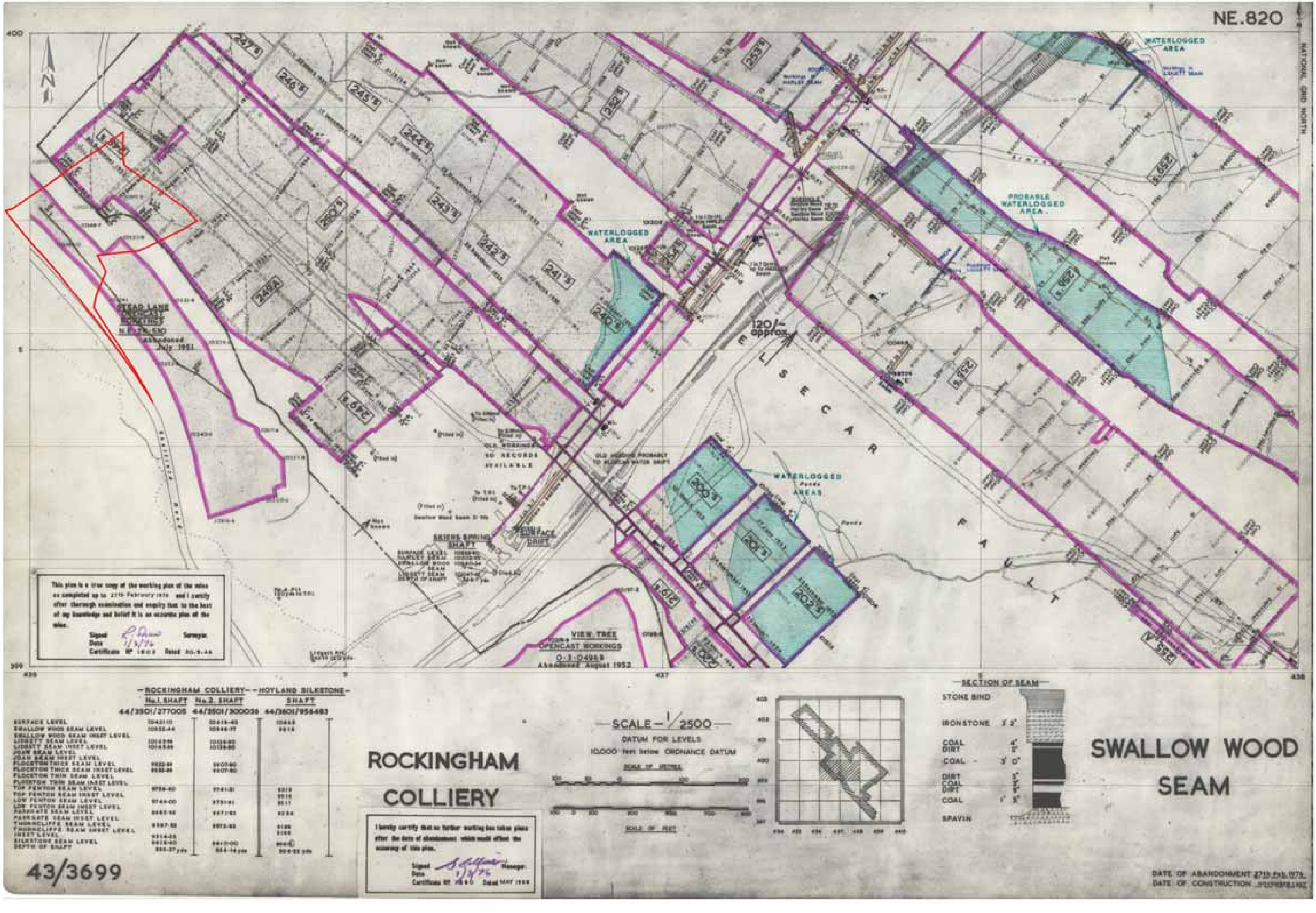
NE419.
LOCATION OF SITE
ORDNANCE SHEET REFERENCE
DATE OF ORDNANCE SHEETS
COUNTY
YORKS
NAME OF SEAMS
AMOUNT OF COAL WON
AREA WORKED
GREATEST DEPTH FROM WHICH COAL WAS WORKED
DATE OF COMPLETION OF BACKFILL
DATE OF COMPLETE RESTORATION
MINISTRY'S RESIDENT ENGINEER
CONTRACTORS
MR E BROWN
THE AREA FROM WHICH THE COAL IS EXTRACTED IS SHOWN BY COLOURED SHADING
THE LEVELS PRECEDED BY THE LETTERS "GL" REFER TO A SURFACE GROUND LEVEL AT A POINT MARKED THUS
THE LEVELS PRECEDED BY THE LETTERS "BC" REFER TO A BOTTOM OF COAL LEVEL AT THE EDGE OF THE COAL AREA
STEAD LANE
NATIONAL COAL BOARD
NE.2.K.530
ABAN.7228.

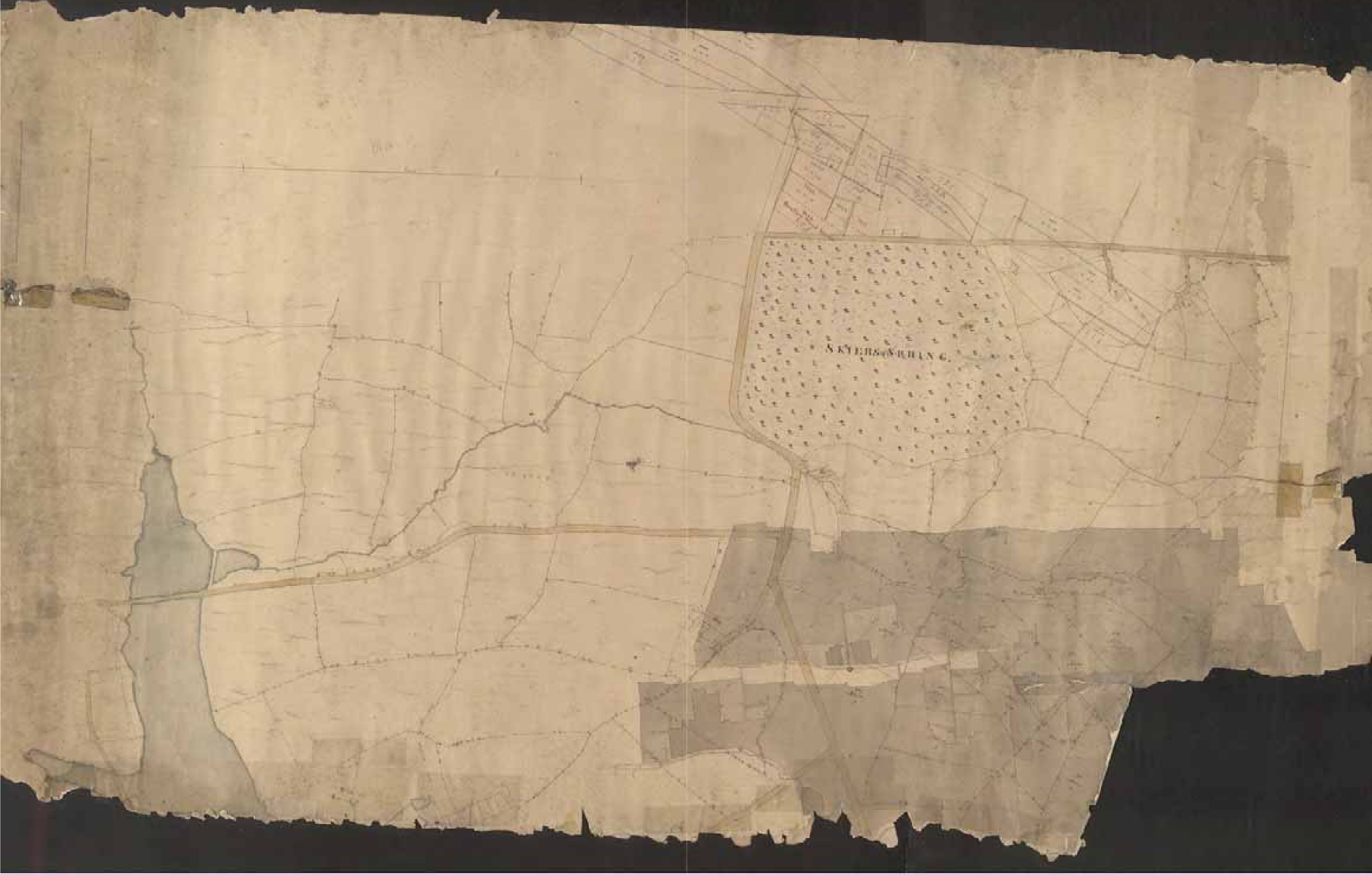
The Coal Authority

Catalogue No : NE419 Sheet Info: 5 OF 5

Date: 11/08/2020

Scale: 1 TO 2500


NE.820
NATIONAL GRID NORTH
WATERLOGGED AREA
PROBABLE WATERLOGGED AREA
WATERLOGGED AREAS
ELSECAR FAULT
120/- approx
OLD WORKINGS NO RECORDS AVAILABLE
SKIERS SPRING SHAFT
SURFACE DRIFT
VIEW TREE OPENCAST WORKINGS
Abandoned August 1952
STEAD LANE OPENCAST WORKINGS
Abandoned July 1951
247's
246's
245's
244's
243's
242's
241's
240's
250's
249A
249's
253's
252's
254's
255's
256's
258's
259's
200's
201's
202's
219's
220's
-ROCKINGHAM COLLIERY- -HOYLAND SILKSTONE-
No.1 SHAFT
No.2 SHAFT
SHAFT
44/3501/277005
44/3501/300036
44/3601/956483
ROCKINGHAM COLLIERY
-SCALE-1/2500-
DATUM FOR LEVELS
10,000 feet below ORDNANCE DATUM
SCALE OF METRES
SCALE OF FEET
-SECTION OF SEAM-
STONE BIND
IRONSTONE 3' 2"
COAL
DIRT
COAL 3' 0"
DIRT
COAL
DIRT
COAL
SPAVIN
SWALLOW WOOD SEAM
43/3699
DATE OF ABANDONMENT 27th Feb 1976
DATE OF CONSTRUCTION



Catalogue No.: MT86 Sheet Info:

Date: 20/08/2020 | Scale: 33 YARDS TO 1 INCH (1 TO 1188)

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