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BARNSLEY
Metropolitan Borough Council





Goldthorpe Primary School Goldthorpe

Preliminary Land Contamination and Geotechnical Risk Assessment

On behalf of NPS Barnsley

Report 140215/GIR1
July 2013

Report Issue Record

Project No.:	140215
Project Title:	Goldthorpe Primary School
Site Location:	Central Street, Goldthorpe
Client:	NPS Barnsley
Report Title:	Preliminary Land Contamination and Geotechnical Risk Assessment
Issue Date:	11 July 2013
Report No.:	140215/DSR1
Revision:	-

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Executive Summary

SITE INFORMATION	Client	NPS Barnsley.
	Site	Goldthorpe Primary School.
	Site Location	Off Central Street, Goldthorpe, S63 9JS. NGR 446450, 404517.
	Current Land Use	Derelict – former residential housing currently being demolished to west of site.
	Proposed Development	New Primary School
SITE SETTING	Geology	Ackworth Sandstone Unit of the Middle Coal Measures Formation. No Superficial Deposits underlying the site.
	Hydrogeology	Secondary A Aquifer. The site does not lie within a source protection zone.
	Hydrology	Thurscoe Dyke lies c.390m north. There are no surface water abstractions within 500m of the site.
	Sensitive Land	There is one sensitive land use, an ancient wood, within 1km.
	Site History	Undeveloped until early 1900 when residential housing present on southern portion, the majority of which is now demolished. Northern portion had limited development between 1930s and 1960s.
	Surrounding land use	Principally undeveloped farmland, residential and coal mining. Potential contaminative uses include three collieries, associated spoil heaps, present 350m SE, 500m NW and 600m N (spoil <150m N)
	Topography	Elevations around 55m AOD.
	Site Walkover	No obvious potential sources of contamination were identified during the walkover.
LAND QUALITY	Human Health	No unacceptable risks to human health identified.
	Controlled Waters	No unacceptable risks to controlled waters identified.
	Ground Gas	No radon protection measures required. Colliery spoil heap 140m north may have the potential for gas generation.
GEOTECHNICAL	Foundations & floors	Due to the presence of former buildings and infilled basements over much of the site there is the potential that shallow spread foundations and ground bearing slabs will not be suitable. It is likely that the construction will require piled foundations and suspended floor slabs. No heave precautions likely to be required.
	Mining	The site is stable from deep coal mining subsidence.
	Natural cavities	None expected.
	Other	-

1 Introduction

It is proposed to construct a new primary school with associated infrastructure at a site in Goldthorpe, near Barnsley. The proposed school site is located off Central Street, Goldthorpe, as shown on Figure 1.

The site is currently being developed for outline planning by NPS Barnsley. The layout of the proposed school site has yet to be determined.

This Preliminary Land Contamination and Geotechnical Risk Assessment Report has been prepared by Robson Liddle Limited (RLL), Consulting Engineers on the behalf of NPS Barnsley.

1.1 Project requirements and Scope of Works

The objectives of the Phase I report are to:

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

The overall objective of the Phase I assessment is to identify the environmental and historical setting of the site including potential sources of contamination from previous and present site activities that may pose a risk to future users of the site, and identify preliminary geotechnical risks.

1.2 Information Sources

During the production of this report the following researches have been undertaken:

- A review of information included within an EnviroInsight report prepared by Groundsure (Report Number GS-92607 dated 5 July 2013);
- A review of Historic Ordnance Survey maps;
- A review of British Geological Survey Maps;
- Information on the British Geological Survey website (<http://www.bgs.ac.uk/opengeoscience/>); and
- Information included on the Environment Agency website (www.environment-agency.gov.uk).

1.3 Previous Investigations

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

2 Site Setting

The site is located to the north east of Goldthorpe town centre and occupies an area of approximately 2.4ha. The site is centred on National Grid Reference 446440 404535 and lies at elevation of approximately 55m AOD. At the time of reporting, the site principally comprised unused brownfield land with a few remaining residential properties present to the west which are understood to be demolished shortly. Access to the site is gained from Doncaster Road to the south. The site location is shown on Figure 1 and site boundary on Figure 2; the properties still present are outlined in red.

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

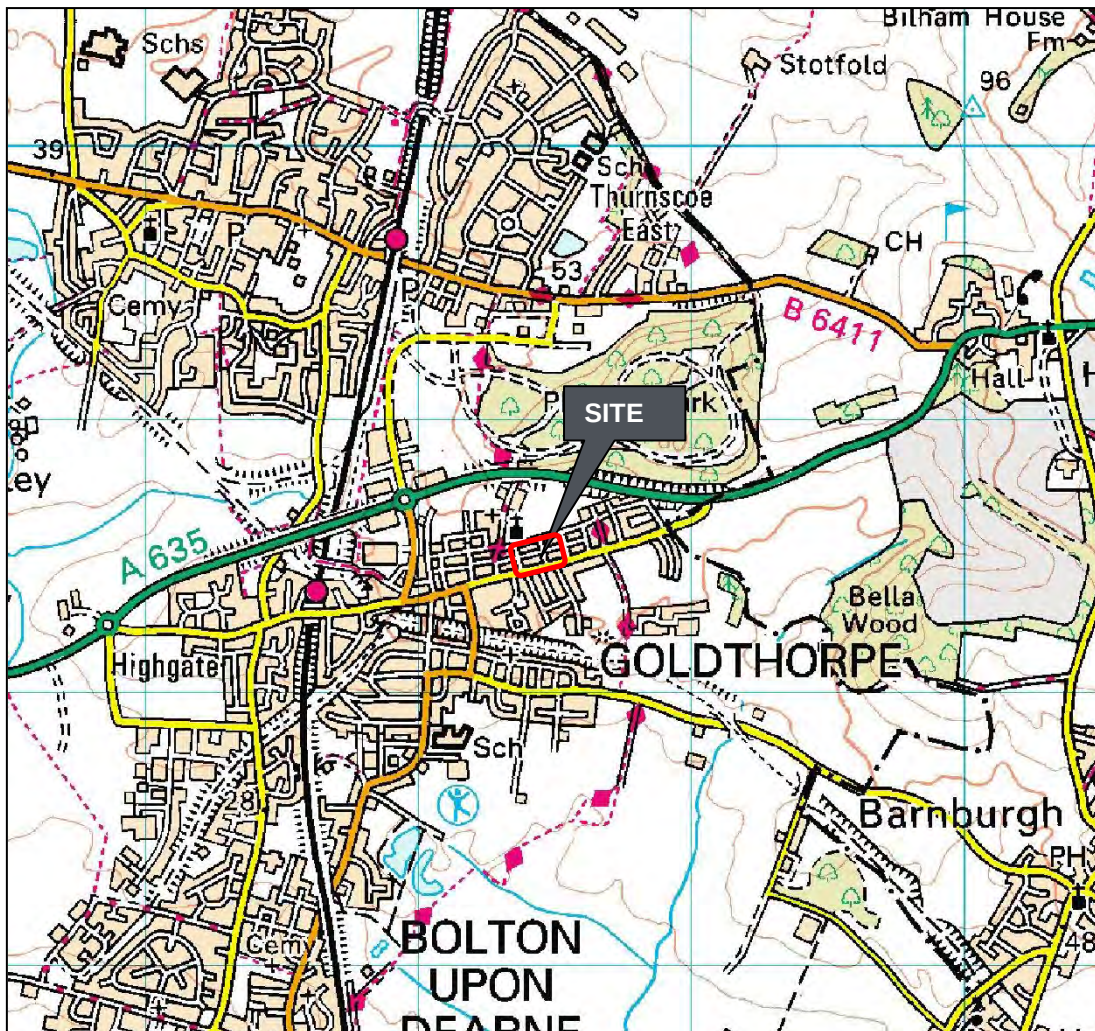


Figure 1 Site Location Plan

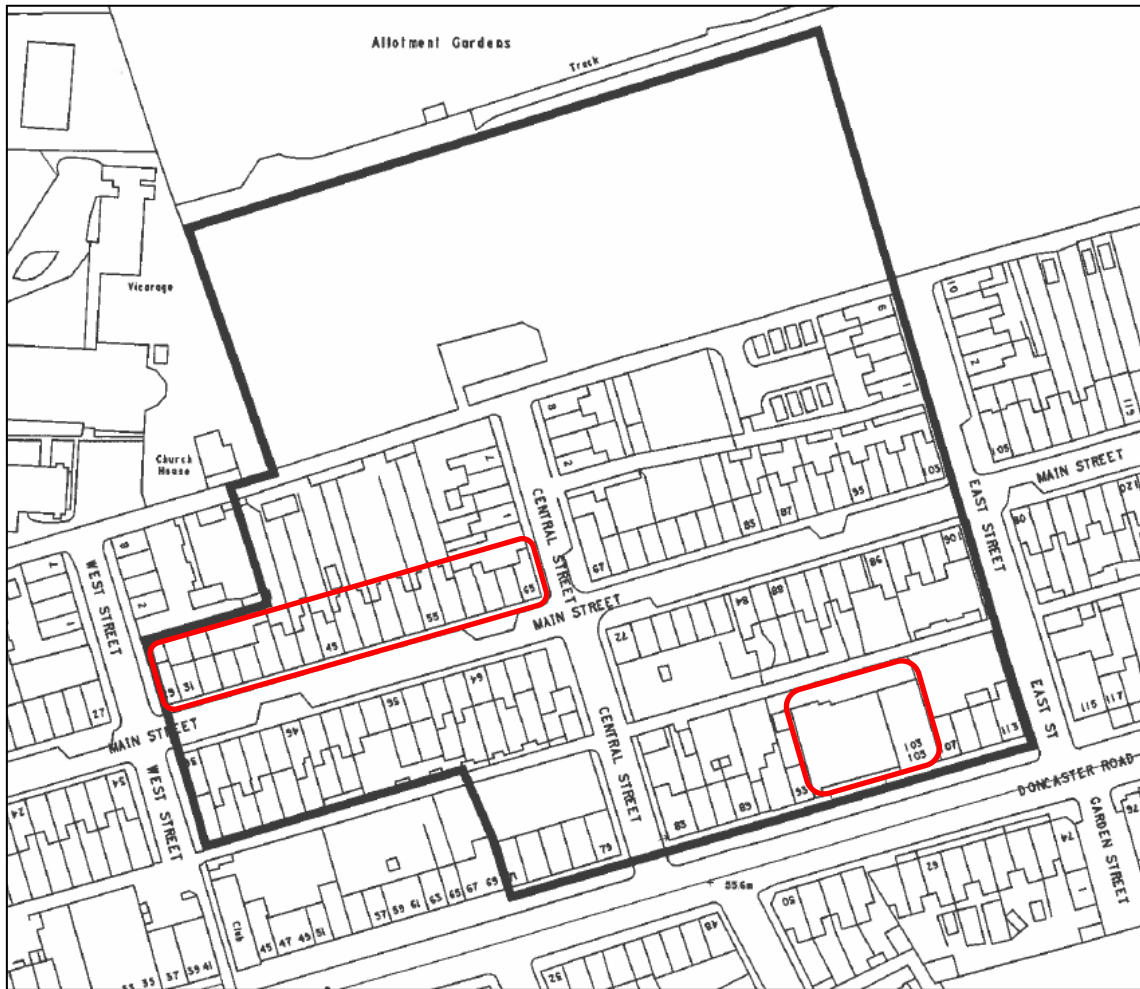


Figure 2 Site Plan

2.1 Geological Setting

The 1:50,000 scale British Geological Survey geological map (Sheet 87 Barnsley) indicates the site to be underlain by the Ackworth Rock (Sandstone). There are no superficial deposits underlying the site.

The Ackworth Rock is a sandstone unit of the Ackworth Member which comprises grey mudstones, siltstone and sandstone with thin coals.

The Groundsure report indicates that there is one fault located approximately 170m north of the site. The fault trends north west to east.

A BGS borehole (SE40SE-100) located approximately 550m south west of the site records Made Ground comprising colliery waste, weathered mudstone and coal fragments to 4.2m below ground level (bgl) overlying highly weathered light brown fine

grained sandstone with thin grey siltstone laminations. This borehole lies within the area identified on historical mapping as a spoil heap associated with Highgate Colliery.

2.2 Soil Geochemistry

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

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

Table 1: Summary of BGS Estimated Soil Geochemistry

Determinant	Concentration Range (mg/kg)
Arsenic	15 – 25
Cadmium	<1.8
Chromium	60 – 90
Lead	<150
Nickel	15 – 30

2.3 Hydrogeology

The Environment Agency classifies the bedrock geology at the site to be a Secondary A Aquifer.

Secondary A Aquifer are described as “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.

There is no information available on the site with respect to the depth to the groundwater. The BGS borehole located 550m south west of the site remained dry to 6.0m bgl during drilling.

The site does not lie within a Source Protection Zone and there are no groundwater abstraction points within 1km of the site.

The site is considered to be of medium sensitivity with respect to groundwater.

2.4 Hydrology

The closest surface water feature is Thurscoe Dyke which lies approximately 390m north of the site at its nearest point. Thurscoe Dyke is not assessed by the Environment Agency under the current River Management Plans.

Historical River Quality data provided by Groundsure indicates that between 2005 and 2009 the biological grade of the river was D (Fair).

There are no surface water abstractions recorded within 500m of the site.

The site is considered to be of low sensitivity with respect surface water.

2.5 Sensitive Land Uses and Designated Areas

The site lies within a Nitrate Vulnerable Zone.

There is one sensitive land use within 1km of the site, an Ancient Woodland, Bella Wood, is present approximately 940m east of the site.

2.6 Land Use History

The historical land uses of the site and its surrounding area have been established from superseded editions of Ordnance Survey maps. Copies of the Ordnance Survey Maps, procured from Landmark Information Group are included in Appendix A. The findings are detailed in Table 2.

Table 2: Summary of Historical Maps

Date	On Site	Offsite
1850	The site comprises undeveloped farmland.	The area typically comprises agricultural land. Residential properties comprising Goldthorpe Land Ends are present c.190m west. Goldthorpe village is present c.250m south west.
1892	The site remains unchanged	A railway line running N-S is present c.700m west
1904-1906	Residential development comprising Central Street, Main Street and Doncaster Road is now present in the southern portion of the site. The northern portion of the site is marked as Allotment Gardens.	Significant development has occurred with the town of Goldthorpe now present. A building marked 'Institute' is present to the west of the site. A well is marked c.20m south of the site. A railway line is marked as 'under construction' c. 300m south. Hickleton Main Colliery is present c.600m N. Two brickworks are present 610m N and 1km SW.

Date	On Site	Offsite
1929-1932	There are no significant changes to the site. A building marked 'institute' is present in the northern Portion of the site.	The railway has now been constructed. Some further development of Goldthorpe has occurred. The 'Institute' site has been redeveloped and now comprises a church, vicarage and hall. A tank (water tower) is present 250m east. Goldthorpe Colliery is present c.350m SE. Highgate Colliery is present c.500m NW.
1948-1951	There are no significant changes to the site.	There is little change in the immediate surrounding area on the 1948 map. A quarry (or clay pit) area is present c.1km SE. The 1951 map shows spoil (refuse) heaps present to the west of Goldthorpe colliery and to the south of Hickleton colliery (c.250m N).
1961-1966	Further development (presumed residential) of the former allotments has occurred. The institute is now marked as a Billiards Hall.	The spoil heap to the north has expanded and covers the area currently known as Phoenix Park. It lies within 140m of the site. Two areas of spoil area present to the west associated with Highgate colliery. The brickworks to the SW is now marked as tip and the quarry has been formed into two ponds.
1973-1974	Limited mapping. A garage is marked in the south east corner of the site.	Limited mapping. The spoil heaps at Goldthorpe Colliery are marked as disused. The area to the east of Goldthorpe colliery is marked as 'active workings'.
1979-1986	The southern portion of the site remains unchanged. The buildings in the northern portion have been removed.	The area marked active workings is now covered by a spoil heap.
1993-1995	The site remains unchanged.	Limited mapping. The A 636 is now present approx. 120m north of the site.
2002	The site remains unchanged.	Hickleton, Goldthorpe and Highfield Collieries are no longer marked and the spoil heaps are marked as disused. A new business park is present over part of Hickleton Colliery and Highfield colliery has also been redeveloped.
2012	The northern portion of the site remains unchanged. Some of the residential properties in the southern portion have already been demolished.	The spoil heap to the north has been redeveloped as Phoenix Park. The railway to the south is marked as dismantled.

On site

The site was undeveloped until residential properties forming Goldthorpe were constructed in the early 1900s in the southern portion of the site. This portion of the site remained principally residential until present day with the exception of a garage present to the south east of the site from the early 1970s.

The northern portion of the site was agricultural land / allotments until the late 1930s when an institute was constructed and the 1960s when further buildings (assumed residential) were constructed. All of the buildings on this area were demolished by the late 1970s.

Information on Demolition of Properties on site

A rolling programme of demolition has been on-going in the southern portion of the site since 2010 and is due to be completed by August 2013. The roads and infrastructure has been left intact with services capped at the boundary of the individual properties. Barnsley Metropolitan Borough Council (BMBC) has confirmed that the following properties had basements:

- 83 Doncaster Road.
- 67, 70, 72 and 103 Main Street.
- 9 Central Street

Demolition of 95 - 101 Doncaster Road and 25 - 65 Main Street is to start shortly.

BMBC has indicated that the demolition strategy has been to keep any basement wall which was retaining highway or services and the remainder of the basement structure to be removed and the void backfilled with demolition rubble. The specification for the works indicates:

“On completion, all foundations, hard surfaces, drives, fences, walls and any other structures within the site boundary shall be demolished or taken out completely and removed to tip. Cellars are to be excavated out completely and then backfilled with demolition rubble (free from timber, metal or other deleterious matter) and properly consolidated in layers not exceeding 300mm using an approved roller.”

Off Site

The surrounding land use was typically undeveloped farmland until the early 1900s when Goldthorpe was developed. The main industrial usage of the town was mining with limited industry present including:

- Hickleton Main Colliery present c. 600m north plus the associated spoil heap which lies 140m north of the site at its closest point.

- Goldthorpe Colliery is present c.350m south east with associated spoil heaps.
- Highgate Colliery is present c.500m NW.
- Two brickworks are present 610m north and 1km south west.
- A clay pit / quarry is present 1km south west
- Railway lines are present 300m south and 700m west.

2.7 Landfills, Mineral Extraction and Quarrying

There are no operation landfill sites within 1km of the site. There are no recorded former landfill sites within 500m of the site; however there are five historical landfill sites. A summary of the sites is given in Table 3.

Table 3: Summary of Landfill Sites

Site name and Address	Approx. Distance and Direction from Site	Licence Active	Waste Types Received
Railway cutting, off Highfield Ave, Goldthorpe	520m South West	1985 – 1986	Inert, Commercial, Liquid Sludge
Brickworks Quarry, Thurnscoe	780m N	No details	Household.
Marsh Tip, Goldthorpe	890m S	1976 – 1979	Inert, Industrial, Commercial, Household, liquid Sludge
Lidget Lane, Thurscoe	950m North East	No Details	No Details
Barnburgh Road, Goldthorpe	950m South	1976	Difficult Landfill, no known restrictions on waste source

On the basis of the underlying geology and the distance from the site, none of the landfills listed above are considered likely to present a risk to the site from gas or leachate migration.

2.8 Statutory Authority Records

A desk study of public registers encompassing relevant information with regard to the history and current status of the site and its surroundings have been carried out. The Groundsure EnviroInsight report is included in Appendix B.

The findings of the statutory registers are provided in Table 4.

Table 4: Findings of the Statutory Registers

Register of Information	Records
Contaminated Land Register Entries	None within 500m
Licensed Discharge Consents	None within 250m – one revoked licence for trade discharge from process lagoon at Hickleton Colliery c.430m north west.
Enforcement and Prohibition Notice	None within 500m
Integrated Pollution Prevention and Control	None within 500m
Local Authority Pollution Prevention and Control	None within 500m
Pollution Incidents to Controlled Water	1 incidents within 250m; c.95m S Category 3 minor to land; household waste.
Registered Radioactive Substances	None within 1km
Control of Major Accident Hazard Sites (COMAH)	None within 500m
Explosive Site	None within 1km
Notification of Installations Handling Hazardous Substances	None within 500m
Planning Hazardous Substance Consents	None within 500m
BGS Mineral Site	Five within 500m
Registered Landfill site / BGS landfill Site	None within 500m
Historic (Local Authority) Landfill site	None within 500m.
Licensed Waste Management Facility	None within 500m
Registered Waste Transfer, Treatment or Disposal Site	None within 500m
Contemporary Trade Directories	Ten within 250; closest active is c.20m south for vehicle parts and accessories.
Fuel Stations	None within 500m.

The statutory registers and database searches record that there are no discharge consents within 250m of the site; however one revoked licence for trade discharge from the process lagoon at Hickleton Colliery was identified approximately 430m north west. The discharges are all located more than 250m from the site; therefore it is unlikely that they will have had an adverse impact on the site.

There is only one pollution incident within 500m of the site. It is a Category 3 minor incident, located 95m south of the site and relates to household rubbish. Given the nature of the incident and the distance it is unlikely that they will have had an adverse impact on the site.

There are ten trade directories within 250m of the site. Given the activities recorded for the trade directories and the distances involved, it is unlikely that they will have had an adverse impact on the site. There are no fuel stations within 500m of the site.

2.9 Coal Mining

Historical mapping and the Groundsure GeoInsight report confirm the presence of three collieries with associated shafts and spoil heaps present within 1km of the site. Hickleton Colliery (located approximately 600m north) is noted to be abandoned due to mine methane.

The Groundsure report states that the site is within an area affected by coal mining where the risk from shallow mine working is Low to Moderate.

A SYMAS report has been obtained for the site and is include as Appendix C. This confirms:

- The site is underlain by the Ackworth Rock (Sandstone) which may be fissured both naturally and mining induced.
- Deep mining operations have taken place beneath and adjacent to the site in five coal seams at depths of 65m to 675m, the latest being the Newhill Seam (295m depth, 1.45m thick) in 1977.
- The site is stable from deep coal mining subsidence.

3 Site Reconnaissance

A site walkover was undertaken on 8th July 2012 by RLL.

The site is topographically flat and open. The majority of the site comprises unused brownfield land. Residential properties which would have formed the northern side of Main Street are still present to the west of Central Street. The properties are boarded up and due to be demolished shortly. Some of the buildings were missing roofs and all appear to be in a poor state of repair. No access to the buildings was available at the time of the walkover.

Two buildings are also present to the south east of the site facing onto Doncaster Road. They appear to have housed takeaway restaurants. These buildings were noted in the 1973/74 mapping to comprise a garage. No access to the buildings was available at the time of the walkover.

The northern portion of the site is currently fenced off. The western side of this portion of land appears to be used for grazing horses. The central area appears to have formerly housed a playground which has been removed. The reminder appears to comprise an open area of grass.

No obvious potential sources of contamination were noted during the site walkover. A selection of photographs identifying key features of the site taken during the walkover are included as Appendix D.

3.1 Current Land-Use

The site is currently derelict. The remaining buildings have been boarded up and demolition notice has been given.

3.2 Surrounding Land-Use

The site is bounded to the north by allotment gardens with Phoenix Park beyond. To the west, south and east there are residential and commercial properties which comprise the town centre of Goldthorpe.

4 Contamination Risk Assessment

4.1 Legislative Background

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

The control of development and land use in the future is the responsibility of the planning system. A fundamental principle of sustainable development is that the condition of land, its use and its development should be protected from potential hazards. Planning Policy Statement (PPS) 23 *Planning and Pollution Control* details the process by which Local Planning Authorities should take decisions on applications in relation to development on land affected by contamination.

Part 2A

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

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

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

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

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

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

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

PPS 23

PPS 23 states that 'it remains the responsibility of the land owner/developer to identify land affected by contamination and to ensure that remediation is undertaken to secure a safe development'.

Where development is proposed, the developer is responsible for ensuring that the development is safe and suitable for the proposed end use for which it is intended. In particular, the developer should carry out an adequate investigation to inform a risk assessment to determine:

- Whether the land in question is already affected by contamination;
- Whether the proposed development will create new pollutant linkages (e.g. pathways by which existing contamination might reach existing or proposed receptors and whether it will introduce new vulnerable receptors); and
- Whether mitigation action is needed to break those linkages, avoid the introduction of new ones and deal with unacceptable risks to enable safe development and future occupancy of the site and neighbouring land.

As with the Part 2A regime, PPS 23 states that the assessment of land affected by contamination requires a risk assessment that identifies sources, pathways and

receptors. PPS 23 also states that it is necessary to develop a conceptual site model (CSM), which identifies plausible pollutant linkages as a basis for assessing the risks and appraising the options for remediation.

The range of sensitive receptors which require consideration is wider under the planning regime than under Part 2A and includes for example, general fauna and flora, landscape and amenity. However, it is considered that the risks should be assessed and acted upon in accordance with Part 2A principles.

4.2 Preliminary Conceptual Site Model

Following a review of the desk based geo-environmental information on the site and a site reconnaissance, a preliminary CSM has been formulated to identify potential sources of contamination, likely receptors and potential pathways on and in the immediate vicinity of the site.

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

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

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

For the purposes of this report, the following receptors are assumed:

- Human health: Pupils and staff will occupy the site part time and not be expected to be exposed directly to soils within the site. Construction workers would be directly exposed to soils, however this would only be short term.
- Groundwater: The underlying aquifer is Secondary A and is considered moderate sensitivity (see Section 2.3).
- Surface Water: Nearest surface water is greater than 300m from the site and is considered low sensitivity (see Section 2.4).

No specific point sources of soil contamination have been identified on site; however it is noted that 95-101 Doncaster Road operated as a garage. Whilst some industrial processes have taken place within the vicinity of the site, the site has been occupied by residential properties since at least 1902, and is unlikely to have been subject to tipping of waste materials from nearby works and factories. Demolition rubble has been used to infill the former basement areas during the demolition works.

The history of the site suggests that the site appears to have operated principally as residential, with limited commercial buildings (garage to south east) present. There is likely to be some Made Ground associated with the construction of the buildings, and in particular the recent demolition of the buildings and their basements, however gross soil contamination is unlikely to be present.

The British geological Survey estimated soil arsenic concentration is stated as 15-25mg/kg, which is below the published Soil Guideline Value (SGV) of 32mg/kg (for residential end use, the most conservative). On this basis, the estimated soil arsenic concentration is not considered to present a significant risk to human health.

4.3 Preliminary Risk Assessment

A preliminary risk assessment was undertaken based on a qualitative assessment of the likely presence of a pollutant linkage. A pollutant linkage is the relationship between a source (or contaminant), a pathway and a target (or receptor). Unless all three elements of a pollutant linkage are present, a significant risk is not considered to exist. The approach adopted is to screen each site based on assigning a simple low, medium or high category. If a high category is assigned, further evaluation is undertaken if this could be urgent (high-urgent) or non-urgent (high). The preliminary risk assessment is shown in Table 5.

5 Ground Gas Assessment

No current or historical landfills are known to exist within 250m of the site. However, a colliery spoil heap is present just over 140m north of the site which could be potential sources of ground gas. No organic soils, evidence of buried biodegradable materials or other were identified on or in the vicinity of the site.

The risks associated with the ground gases methane (CH₄) and carbon dioxide (CO₂) are assessed using BS 8485:2007 (Code of practice for the characterisation and remediation from ground gas in affected developments) and guidelines from CIRIA 665 (Wilson et al 2007) and the NHBC (Boyle and Witherington 2007).

Current UK best practice guidance suggests that the ground gas assessment and characterisation for a site is dealt with separately for different types of development. In the above guidance:

- ‘Situation A’ covers all forms of development (residential and industrial/commercial developments), other than low rise residential development; and
- ‘Situation B’ is defined as the specific development of low-rise (one to three storeys in height) housing with beam and block floors, vented sub-floor void and gardens.

Based on our understanding of the likely redevelopment of the site, Situation A would be appropriate.

One of the assumptions in using the above guidance is that the worst-case ground gas regime has been identified on the site, for either CH₄ or CO₂, at the worst-case temporal conditions that the site may be expected to encounter (such as immediately following rapid changes in atmospheric pressure or prolonged rainfall). The idealised frequency of monitoring is suggested in CIRIA 665 Tables 5.5a and 5.5b. These tables are adapted from Wilson and Haines (2005) Table 3 which gives examples of ground conditions with the various gas generation potentials, ranging from inert Made Ground (very low potential) to post 1960s domestic landfill (very high potential).

It is judged from the available evidence that the gas generation potential at the site is low (spoil heap and deep mining) and the sensitivity of the development is moderate (primary school). Consequently, an appropriate minimum monitoring regime is 6

readings over 3 months, provided other monitoring requirements are also met, such as prevailing atmospheric pressure conditions (for example, BS 8485:2007 suggests monitoring shall include a period of falling atmospheric pressure).

5.1 Radon

The Groundsure report states that the site is in an area where the estimated probability of is less than 1% of homes being above the action level of 200Bqm^{-3} . Therefore no radon protective measures are necessary in the construction of new developments or extensions.

Table 5 Site Conceptual Model

Potential Source and Pollutant	Pathway	Receptor	Potential Pollutant Linkage?	Probability of exposure, consequence and magnitude of risk.
Geochemistry of underlying soils and made ground at the site. Potential migrated contamination from nearby historic industrial processes, however considered unlikely to have occurred.	Dermal contact, soil ingestion and dust inhalation.	Human Health – existing and future users of the site e.g. pupils, staff and visitors. Construction workers.	Yes – but limited due to absence of on-site sources of contamination.	Probability: Low Consequence: Medium Magnitude: Low Risk
	Vapour inhalation.	Human Health – existing and future users of the site e.g. pupils, staff and visitors. Construction workers.	Yes – but limited due to absence of on-site sources of contamination.	Probability: Low Consequence: Low Magnitude: Low Risk
	Leaching, percolation and run-off.	Controlled Waters – groundwater (Secondary A Aquifer) and surface water (River Lemon) in hydraulic connectivity.	Yes – but limited due to absence of on-site sources of contamination and low permeability of underlying strata.	Probability: Low Consequence: Low Magnitude: Low Risk
	Direct contact and/or leaching (inc sulphate, pH) .	Property – On site buildings and/or structures impacted by ground conditions	Unlikely – limited due to absence of on-site sources of contamination.	Probability: Low Consequence: Low Magnitude: Low Risk
	Plant uptake.	Ecology - existing trees and landscaping on site.	Yes – but limited due to absence of on-site sources of contamination. No protected ecosystems on or in the vicinity of the site.	Probability: Low Consequence: Low Magnitude: Low Risk
Potential Geochemistry of underlying groundwater.	Leaching, percolation and run-off.	Controlled Waters – groundwater (Secondary A Aquifer) and surface water (River Lemon) in hydraulic connectivity.	Yes – but limited due to absence of any known on-site sources of contamination and limited off site sources in immediate vicinity of the site.	Probability: Low Consequence: Low Magnitude: Low Risk
Radon and Ground Gas.	Permeation through ground floor.	Human Health – existing and future users of the site e.g. pupils, staff and visitors.	Yes, deep mining in the area and colliery spoil present to the north of the site may be a source of ground gas. No radon protection measures required.	Probability: Low Consequence: Medium Magnitude: Low Risk
No potential sources of other ground gas generation have been identified.	Permeation through ground and intrusion into buildings and structures on site.	Human Health – existing and future users of the site e.g. pupils, staff and visitors.	Possible – but limited due to absence of any potential sources of ground gases within or near the site.	Probability: Low Consequence: Medium Magnitude: Low Risk

6 Geotechnical Assessment

The published geological information indicates that the site is underlain by Ackworth Rock Formation. The Ackworth Rock is a sandstone unit of the Ackworth Member which comprises grey mudstones, siltstones and sandstones with thin coals.

The Groundsure report indicates that there is one fault located approximately 170m north of the site. The fault trends north west to east

No superficial deposits are present locally in the vicinity of the site.

A borehole record obtained from the BGS for a 6.0m deep cable percussion borehole located at NGR 4595 0433 approximately 550m south west of the site recorded Made Ground comprising colliery waste, weathered mudstone and coal fragments to 4.2m below ground level (bgl) overlying highly weathered light brown fine grained sandstone. This borehole lies within the area identified on historical mapping as a spoil heap associated with Highgate Colliery.

An assessment of potential geotechnical risks based on the information from the Groundsure Report and available geological information is presented in the following sections. The risks are summarised in Table 6. The Groundsure Report is reproduced in Appendix B.

6.1 Deep Made Ground

It is likely that some Made Ground would be present, resulting from the development of the site. It is understood that the residential dwellings off Doncaster Road, Central Street and Main Street all had basements.

The demolition strategy for the site was to keep any basement walls which may have been retaining existing infrastructure and remove the remainder of the basements. The voids were backfilled with demolition rubble. No records are currently available to confirm which walls have been left in situ and where the basements have been removed and infilled. The nature of the infill material is also unknown.

6.2 Buried Structures

Former foundations should have been removed however, some of the basements associated with the previous development of the site prior to current layout may be present as indicated in Section 6.1.

6.3 Compressible Soils

The Groundsure report states that the Compressible Ground Stability hazard at the site is “Negligible”. Based on the anticipated geology, compressible soils are not anticipated.

6.4 Shrinking / Swelling Clay

The Groundsure report states that the Shrinking or Swelling Clay Ground Stability hazard at the site is “Very Low”. Based on the anticipated ground conditions, shrinkable soils are not expected.

6.5 Collapsible soils

The Groundsure report states that the Collapsible Ground Stability hazard at the site is “Very Low”. Based on the anticipated ground conditions, collapsible soils are not expected; however the nature of the Made Ground used to infill the basements during demolition is unknown and needs to be determined.

6.6 Aggressive Ground Conditions for Concrete

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

6.7 Running Sands / Excavation Instability

The Groundsure report states that the Running Sand Ground Stability hazard at the site is “Negligible”. Based on the anticipated ground conditions unconsolidated Made Ground may be present, therefore instability of excavations may be a risk in some areas.

6.8 Groundwater

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

6.9 Slope Stability

The Groundsure report states that the Landslide Ground Stability hazard at the site is “Very Low”.

6.10 Underground Mining

The Groundsure report states that the site is within an area affected by coal mining where the risk from shallow mine working is Low to Moderate. The site is highly unlikely to be within a Non Coal Mining Area.

Historical mapping and the Groundsure GeolInsight report confirm the presence of three collieries with associated shafts present within 1km of the site.

A SYMAS report has been obtained for the site and is include as Appendix C. This confirms:

- The site is underlain by the Ackworth Rock (Sandstone) which may be fissured both naturally and mining induced.
- Deep mining operations have taken place beneath and adjacent to the site in five coal seams at depths of 65m to 675m, the latest being the Newhill Seam (295m depth, 1.45m thick) in 1977.
- The site is stable from deep coal mining subsidence.

6.11 Solution Features / Natural Cavities

The site is expected to be underlain by sandstone of the Ackworth Rock which is not prone to dissolution. The Groundsure report states that the hazard from Soluble Rocks at the site is “Null-Negligible” and does not record any natural cavities within the vicinity of the site.

7 Conclusions and Recommendations

A preliminary risk assessment was undertaken based on a qualitative assessment of the likely presence of a pollutant linkage.

Limited potential onsite contamination sources were noted during desk study works, however extensive coal mining has occurred in the surrounding area. The potential for contamination to be present at the site is considered to be low however given the sensitive nature of the new development (primary school) it would be prudent to prove the absence of any contamination.

No current or historical landfills are known to exist within 250m of the site. However, coal mining has occurred extensively in the area and a colliery spoil heap is present just over 140m north of the site which could be potential sources of ground gas. It is therefore recommended that any site investigation include for monitoring of ground gases.

It is understood that the former residential houses contained basements which may have only been partially removed during the demolition works. Deep, variable Made Ground is likely to be present over much of the site. The depth and nature of this stratum will need to be proven during by intrusive investigation. The potential for geotechnical hazards are summarised in Table 6.

Table 6: Summary of Geotechnical Hazards.

Potential Geological Hazard	Impact on proposed development	Likelihood of presence	Risk
Deep Made Ground up to 3.0m	High	Likely	Medium
Buried structures	Moderate	Possible	Medium
Compressible ground	Moderate	Unlikely	Low
Shrinking / swelling clay	Moderate	Unlikely	Low
Collapsible ground	High	Possible	Medium
Aggressive ground conditions for concrete	Low	Unlikely	Low
Running sands / excavation instability	Moderate	Unlikely	Low
High water table / groundwater inflows.	High	Unlikely	Low
Slope stability	Moderate	Unlikely	Low
Underground mining	High	Possible	Low
Ground dissolution / natural cavities	High	Unlikely	Low

The aim of this report was to assess the potential geotechnical and geo-environmental issues at the proposed development site. Only limited potential sources of contamination have been identified from the Preliminary Risk Assessment on or in the immediate vicinity of the site. To enable the knowledge of the contaminating potential and land quality of this site to be developed further a Phase II Site Investigation would be required.

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

8 Limitations and Uncertainties

8.1 General

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

The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true representative data with respect to site conditions. The information reported herein is based on the interpretation of data collected during the site investigation, pertaining specifically to the soil samples retained from the identified locations. Should additional information become available that may influence the opinions expressed in this report, Robson Liddle reserves the right to review such information and, if warranted, to alter the opinions accordingly.

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

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

Robson Liddle disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

8.2 Site Specific

No access to the buildings was available during the site walkover.

9 General Notes

This report will be prepared for the exclusive use of the client named in the document and copyright will subsist with Robson Liddle Limited. Prior written permission must be obtained to reproduce all or part of the report. It will be prepared on the understanding that you will disclose its contents to parties directly involved in the current investigation, preparation and development of the site. Further copies may be obtained with the client's written permission from Robson Liddle Limited with whom a master copy of the document will be retained.

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

The report will be based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. There may be special conditions, appertaining to the site, however, which may not be revealed by the investigation, and which may not be taken into account in the report.

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

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

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

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

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

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

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

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

Appendix A

Historical Maps

Site Details:

CENTRAL STREET,
GOLDTHORPE, S63 9JS

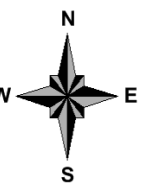
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Map Name: National Grid

Map date: 2012

Scale: 1:10,000

Printed at: 1:10,000

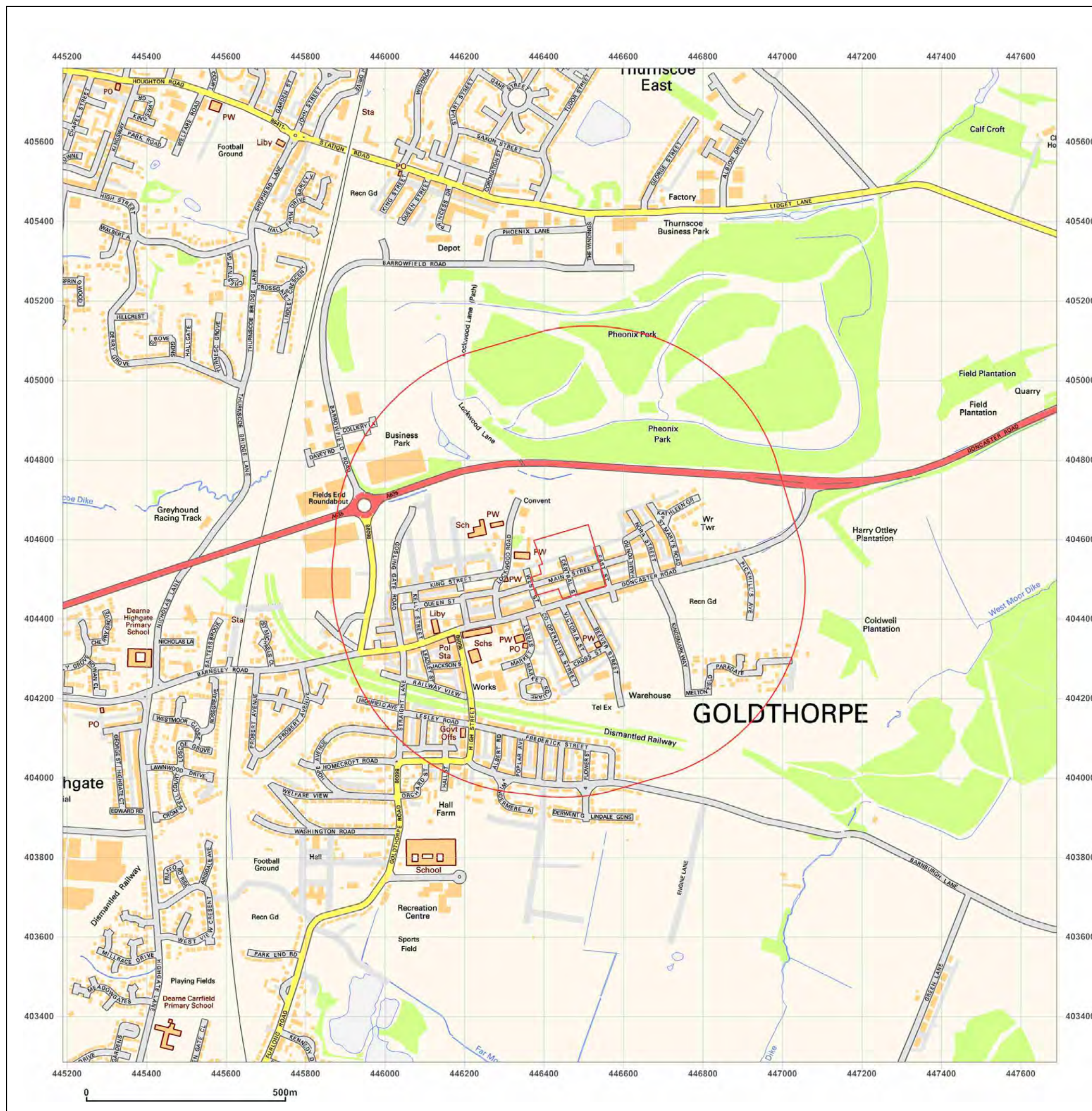


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GOLDTHORPE, S63 9JS

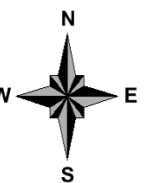
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Printed at: 1:10,000

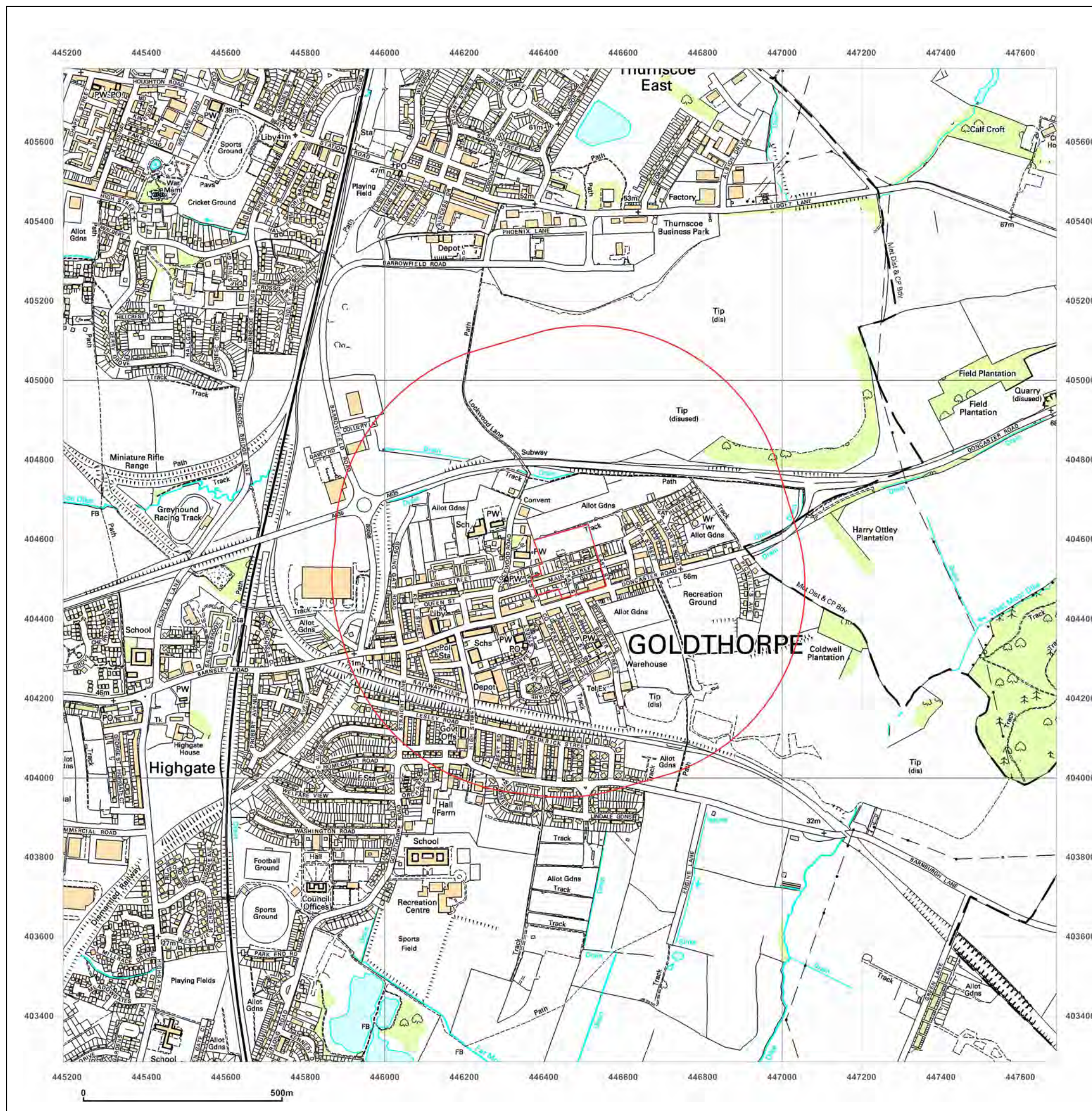


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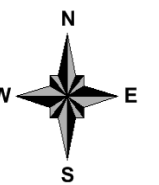
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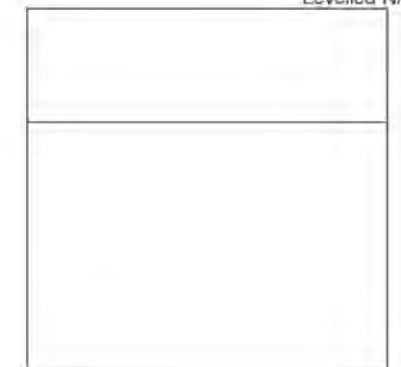
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Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1989
Revised 1991
Edition N/A
Copyright N/A
Levelled N/A

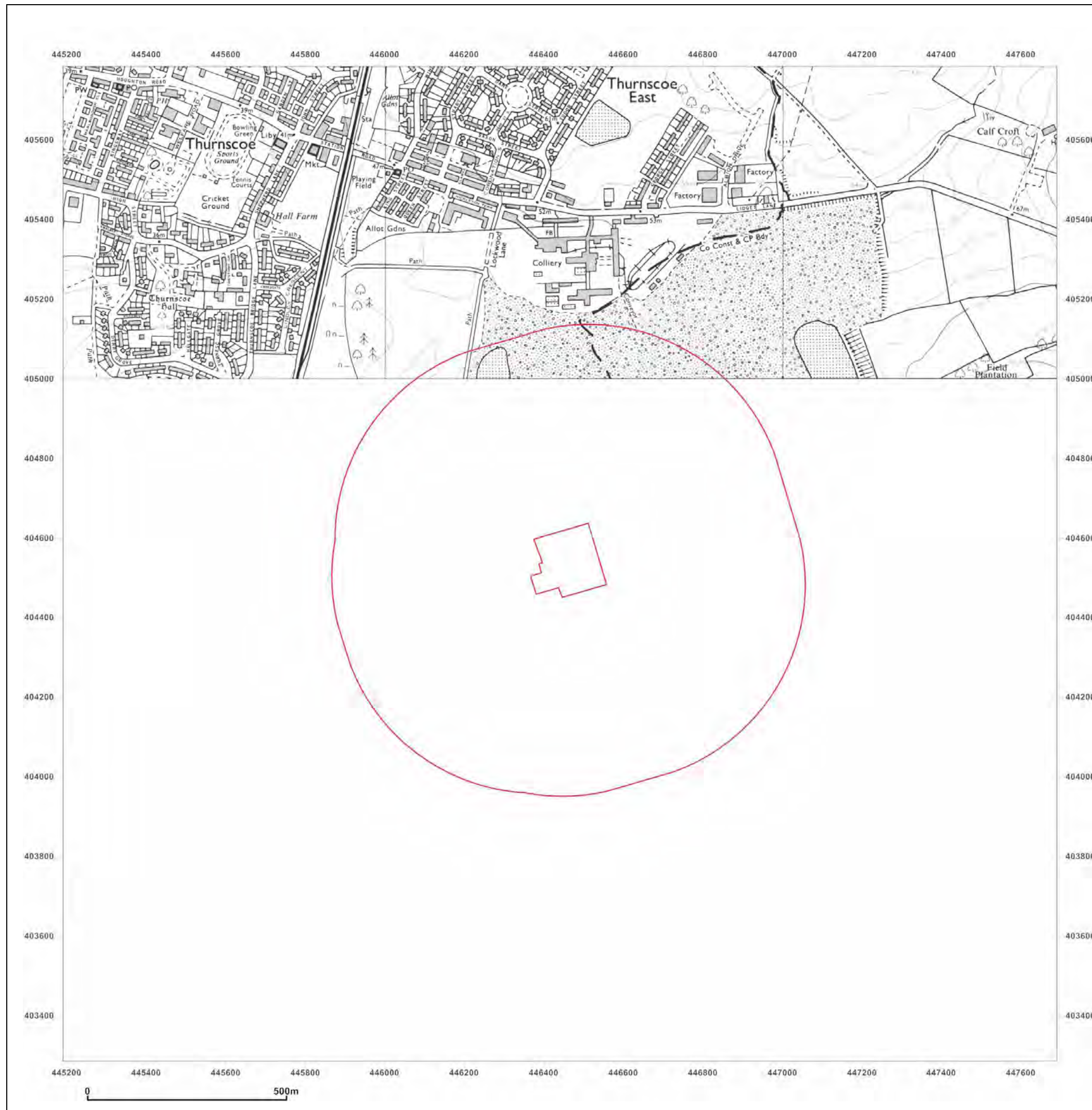


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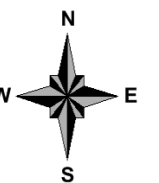
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Map Name: National Grid

Map date: 1982-1986

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1985
Revised 1986
Edition N/A
Copyright N/A
Levelled N/A

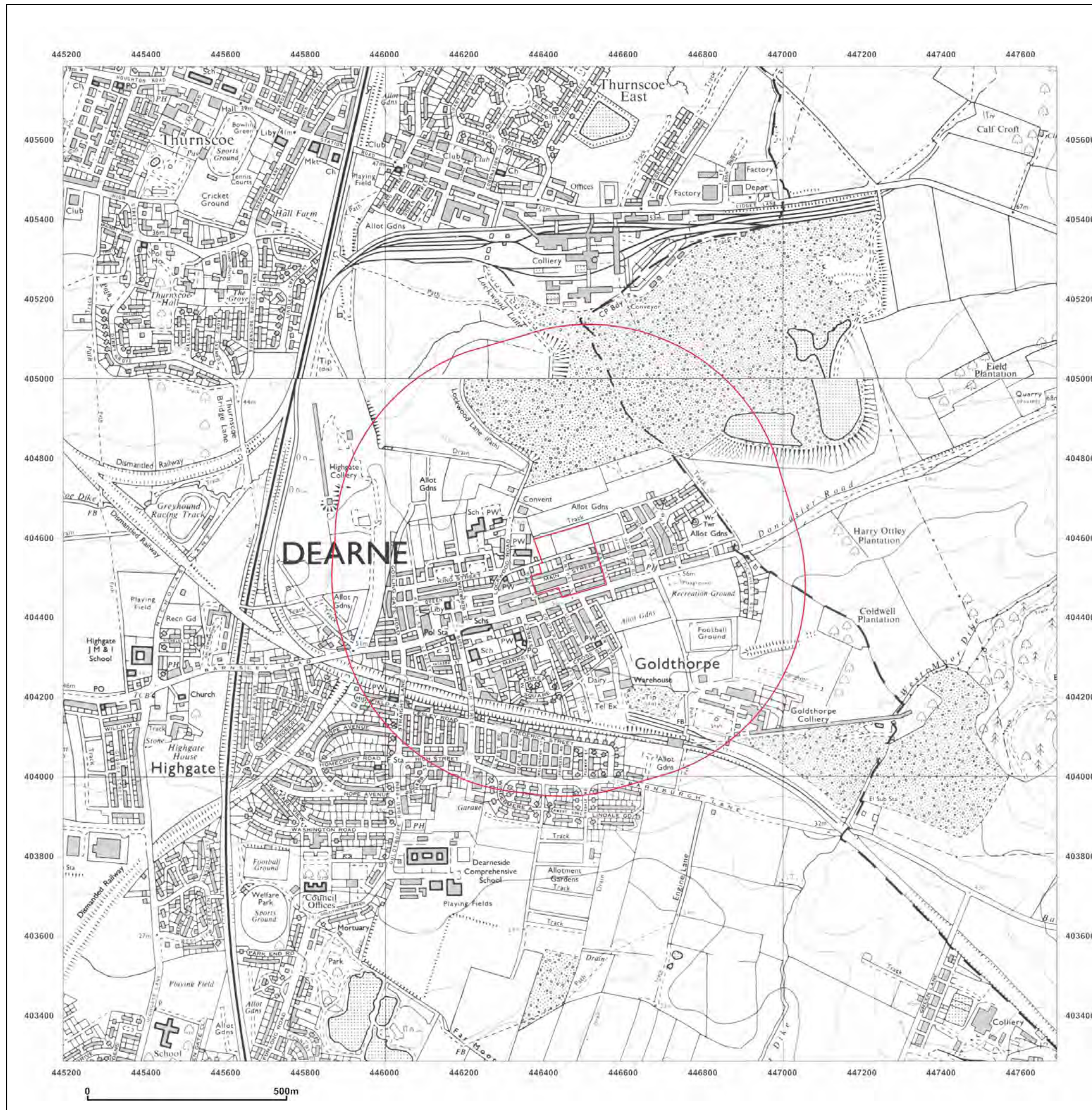


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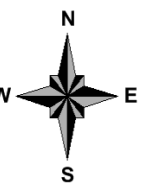
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Map Name: National Grid

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Printed at: 1:10,000



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

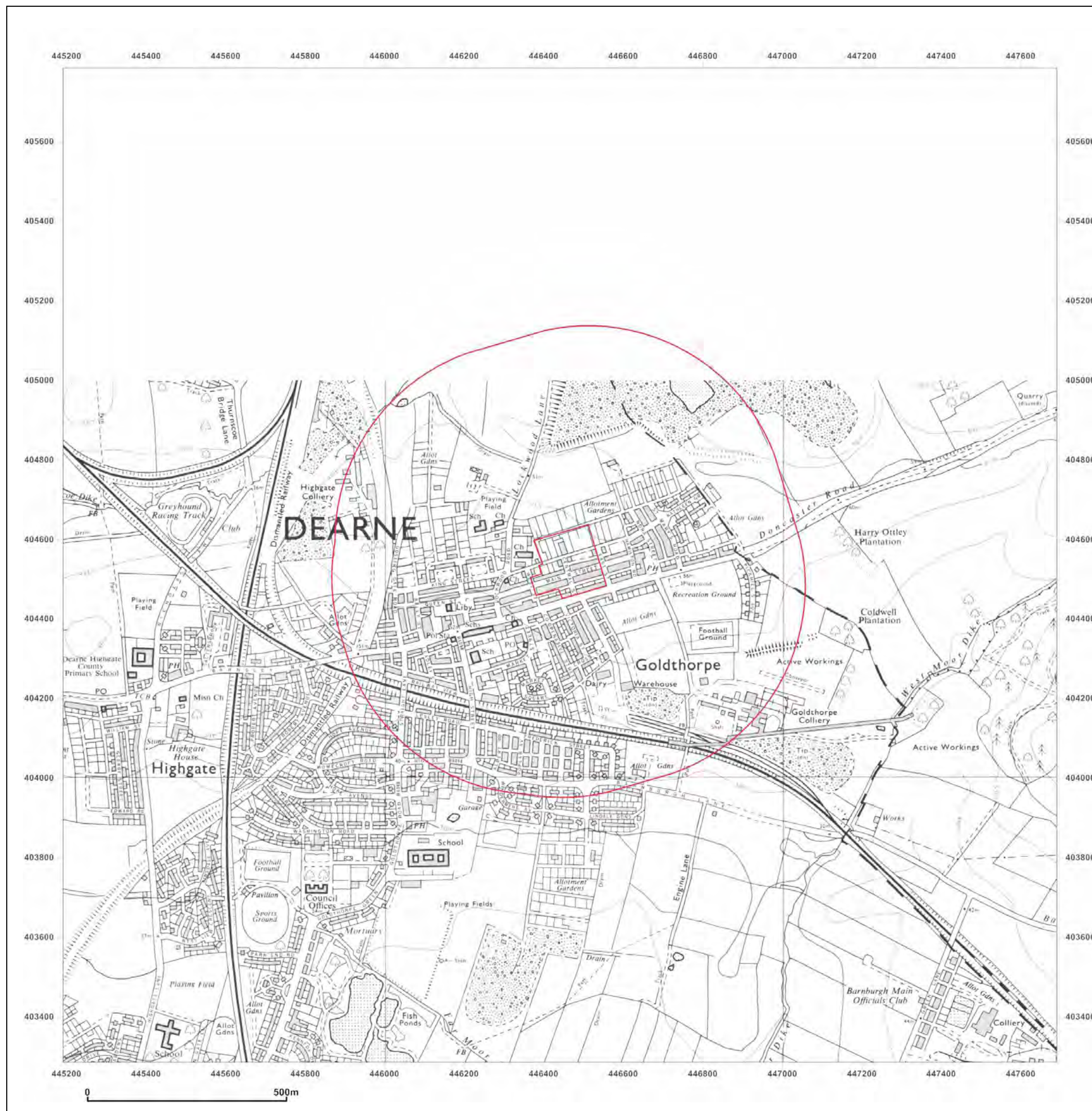


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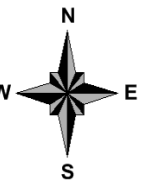
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Map Name: Provisional

Map date: 1966

Scale: 1:10,560

Printed at: 1:10,560



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

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

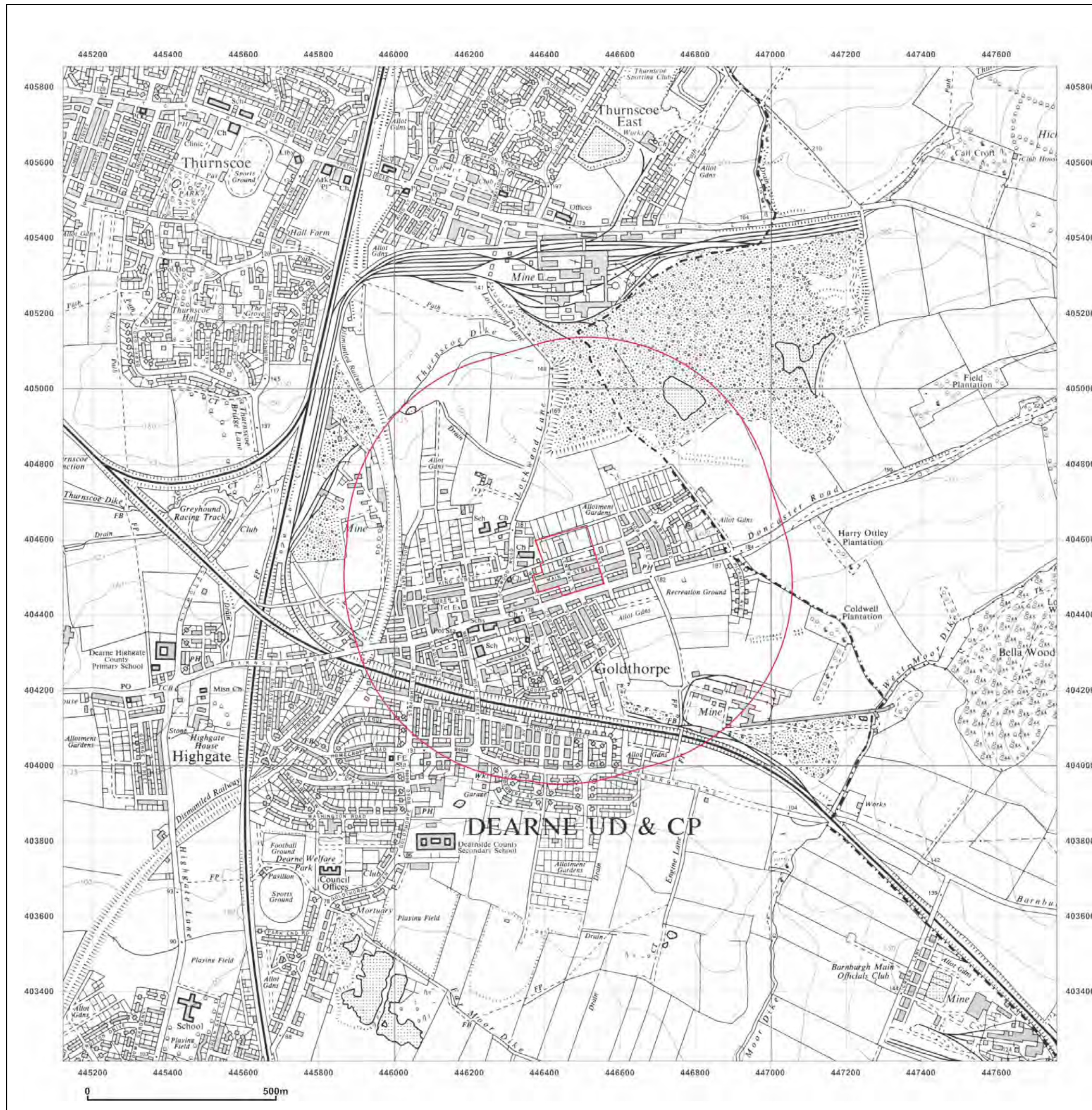


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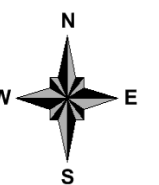
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Map Name: Provisional

Map date: 1951

Scale: 1:10,560

Printed at: 1:10,560



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

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

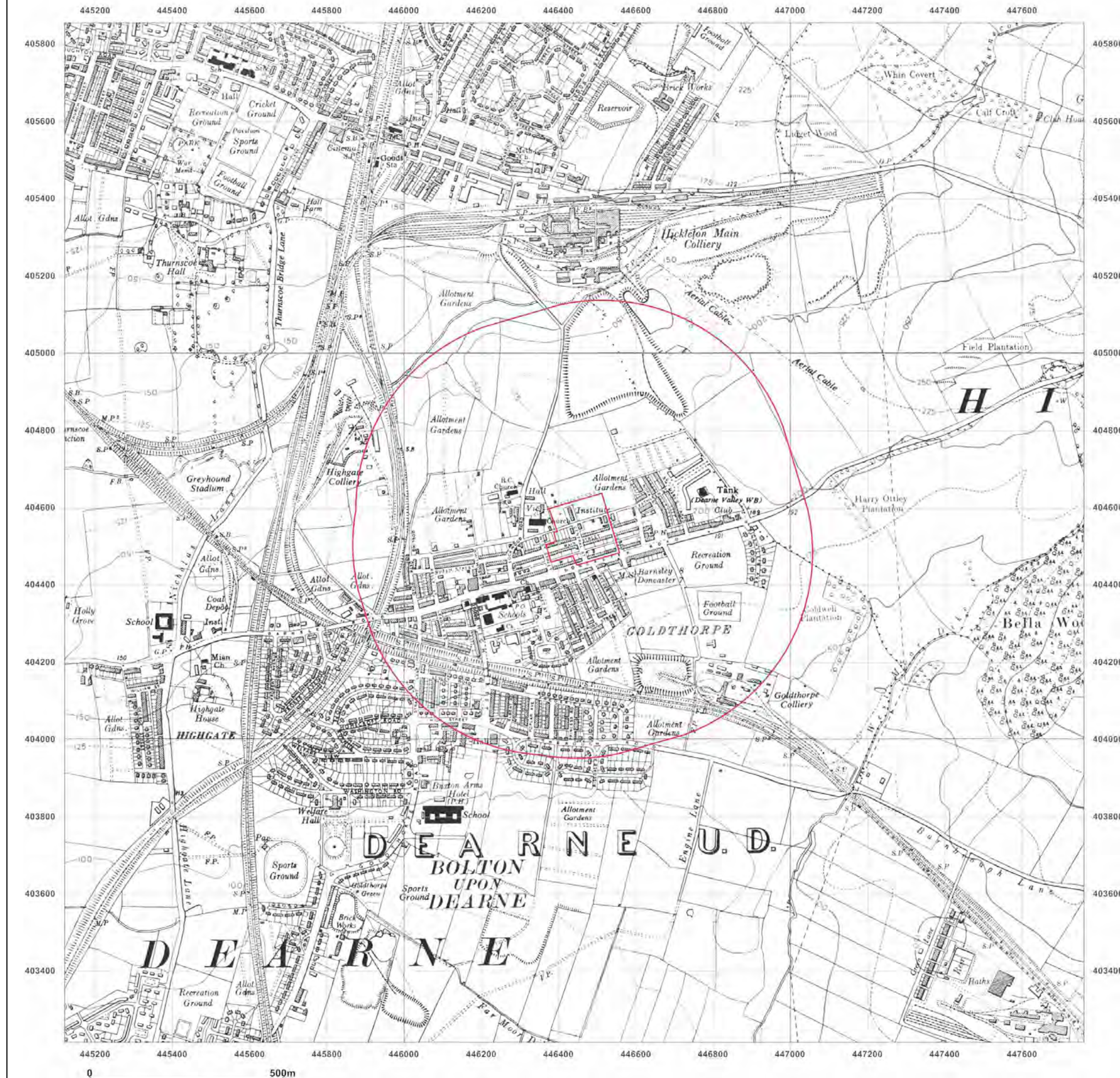


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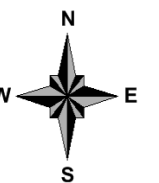
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Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



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

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

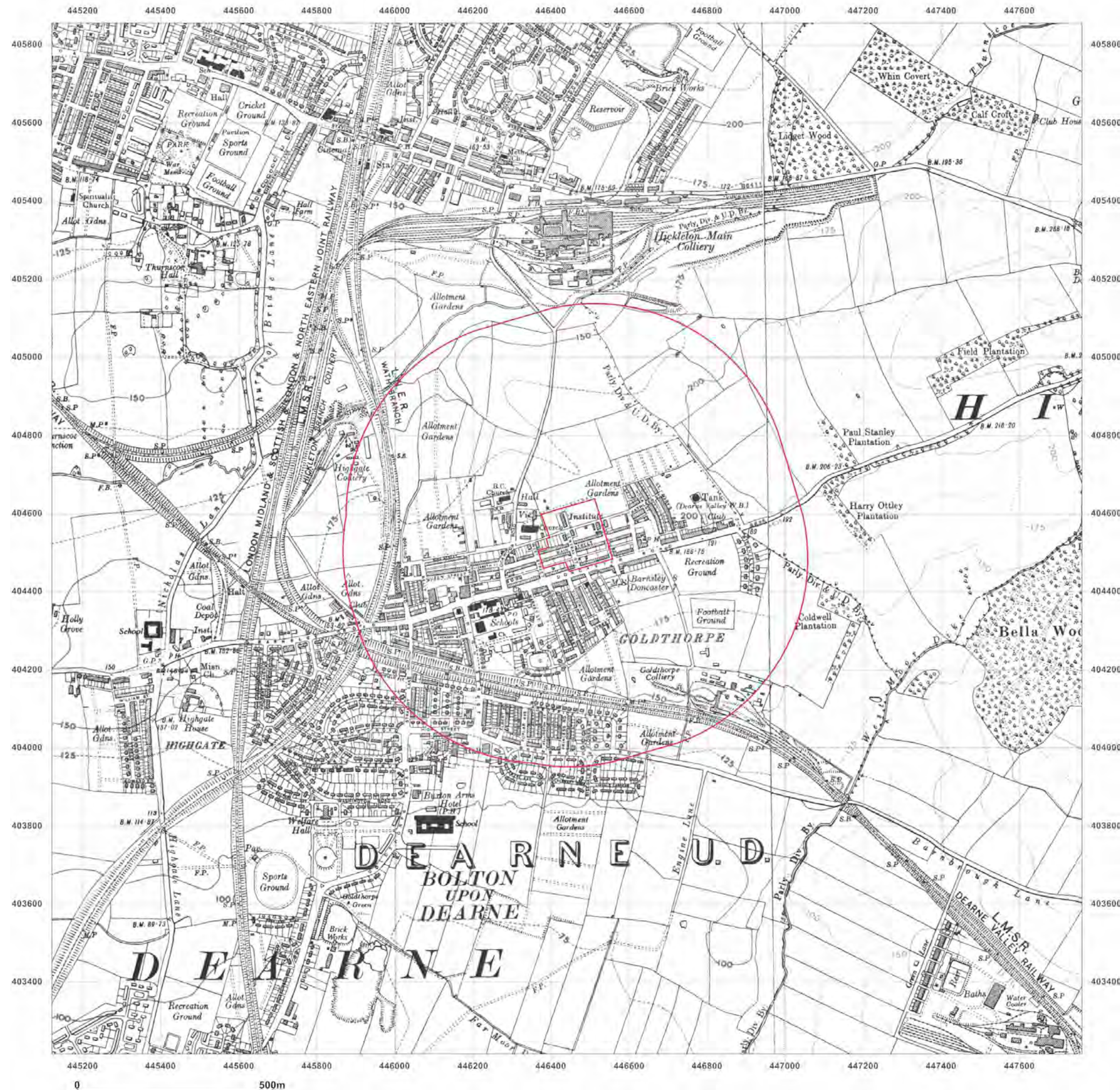


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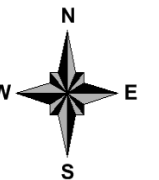
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Map Name: County Series

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Printed at: 1:10,560



Surveyed 1850
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

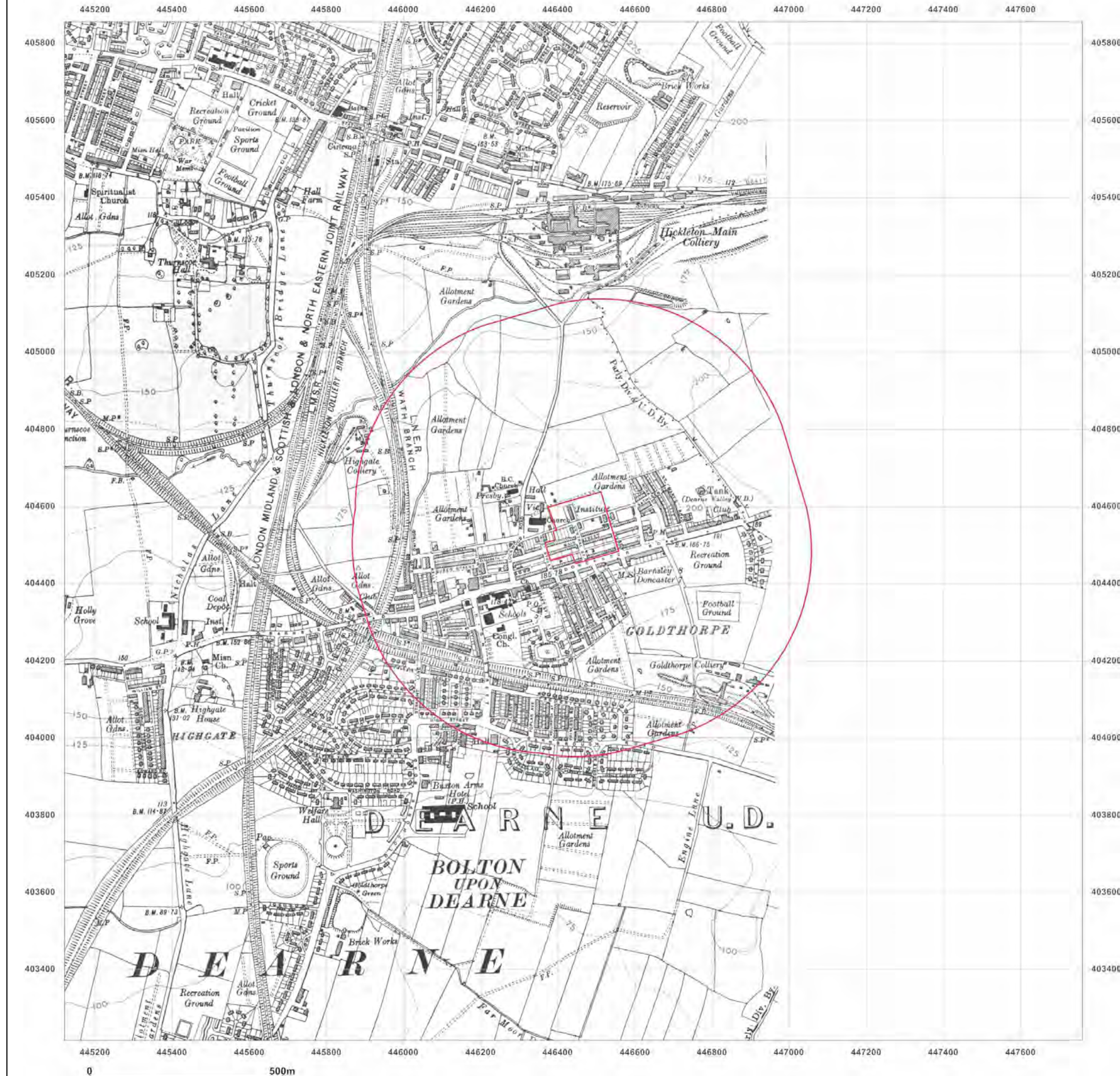


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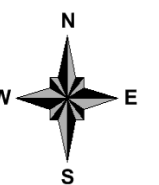
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Map Name: County Series

Map date: 1929-1932

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1850
Revised 1932
Edition 1932
Copyright N/A
Levelled N/A

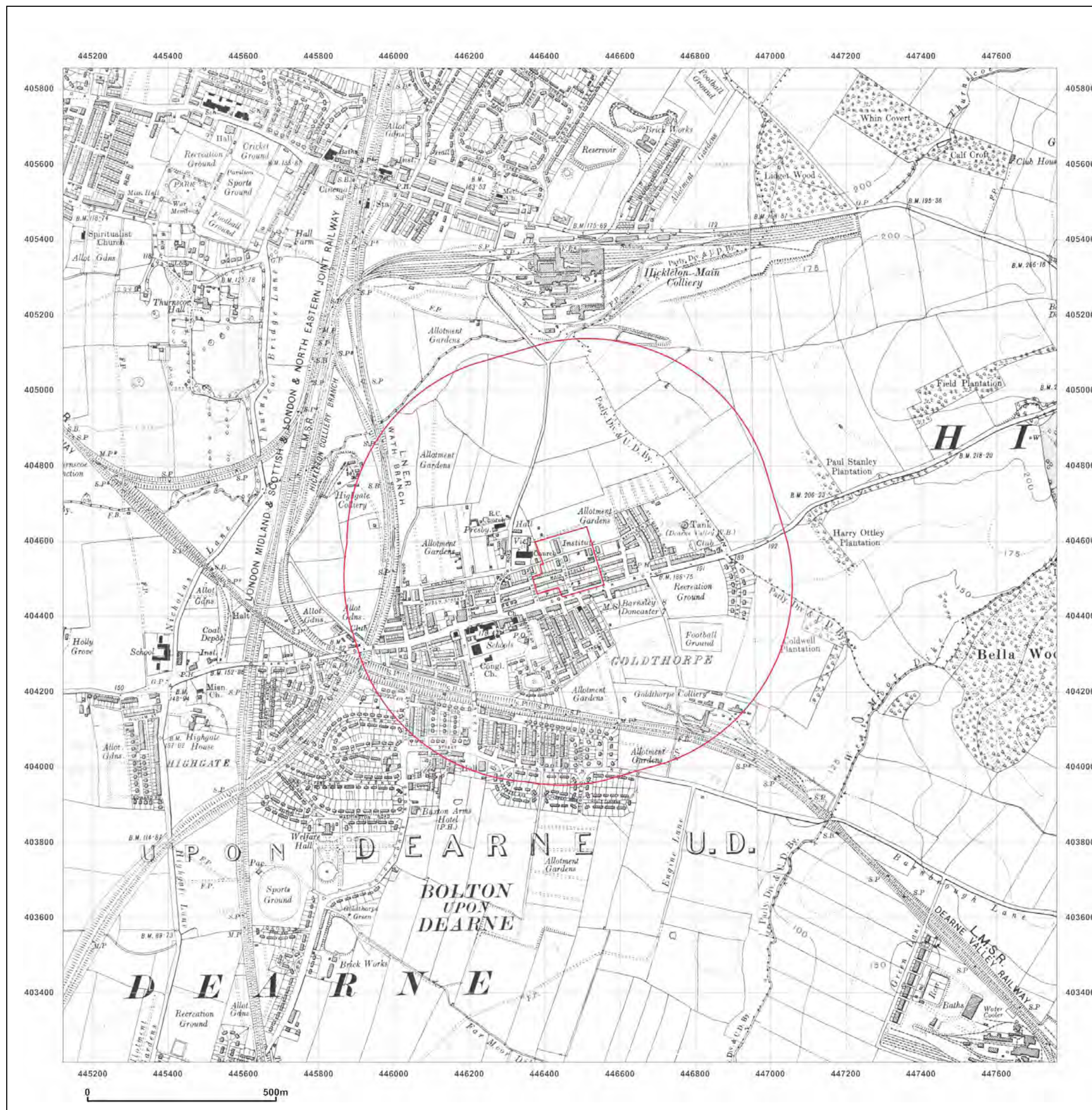


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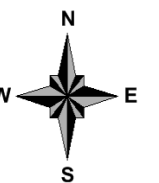
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Map Name: County Series

Map date: 1904

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1891
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

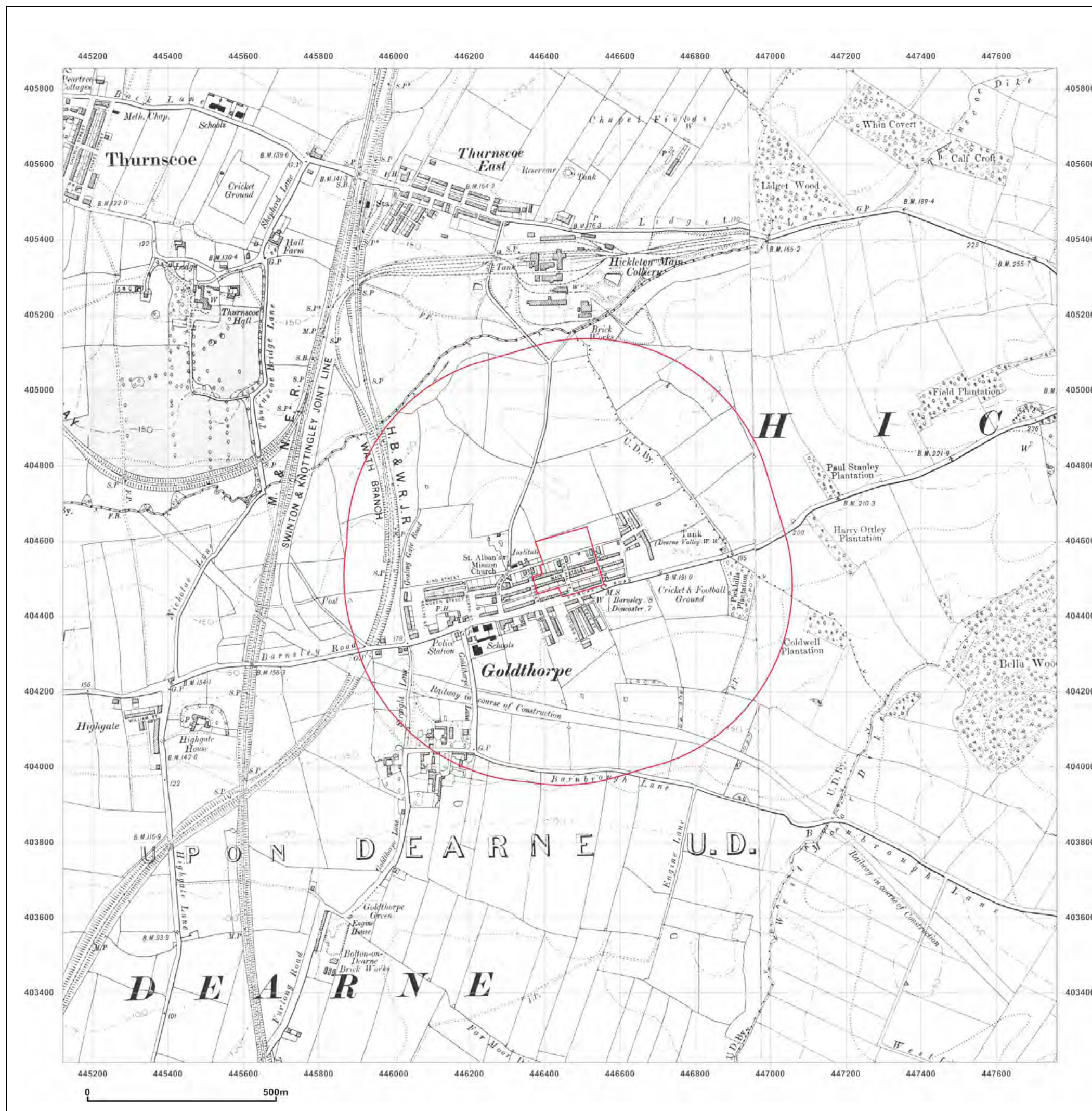


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Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: County Series

Map date: 1890

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Printed at: 1:10,560



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

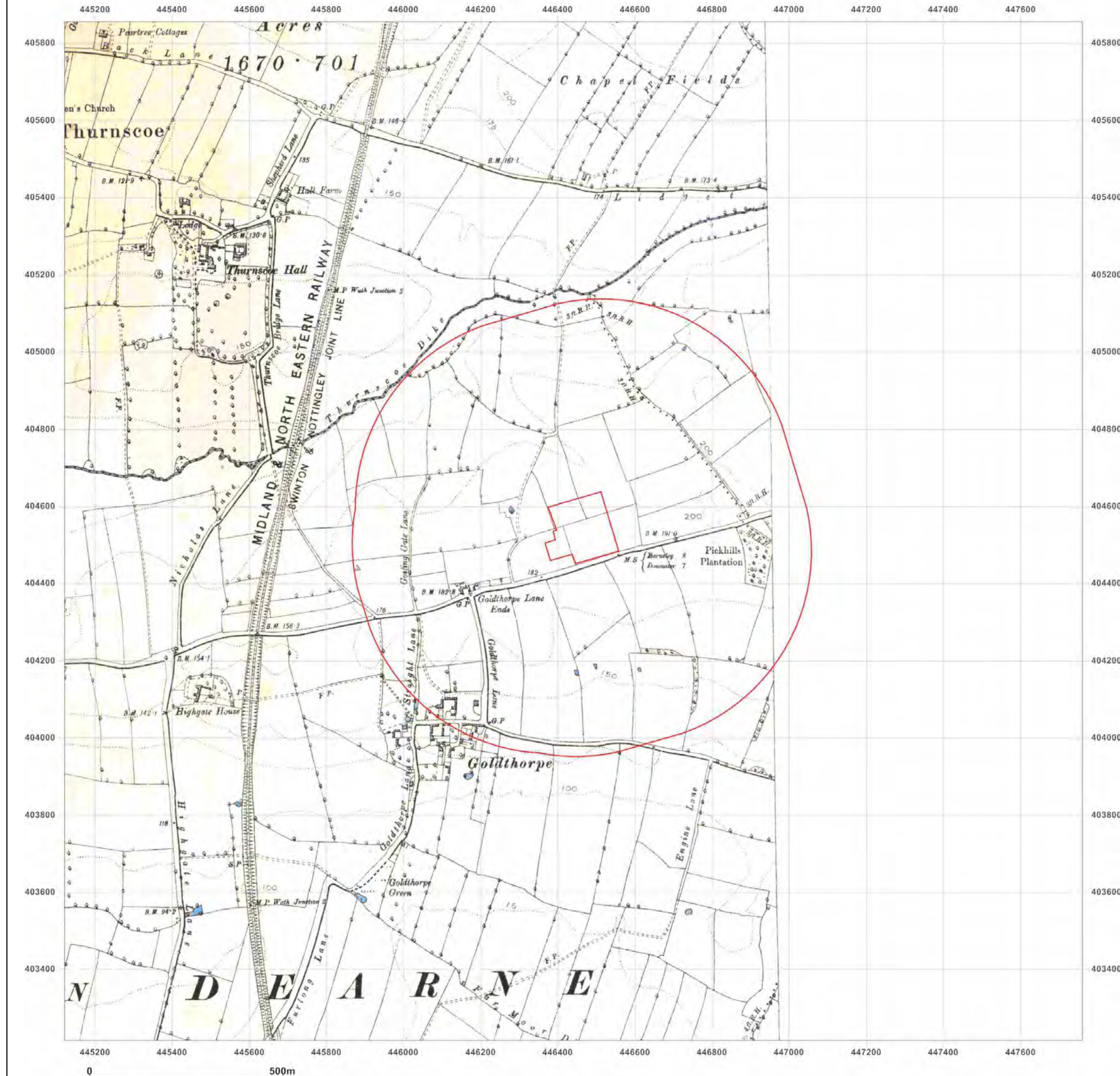


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Site Details:

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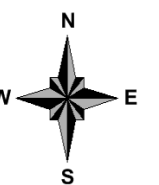
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Map Name: County Series

Map date: 1850

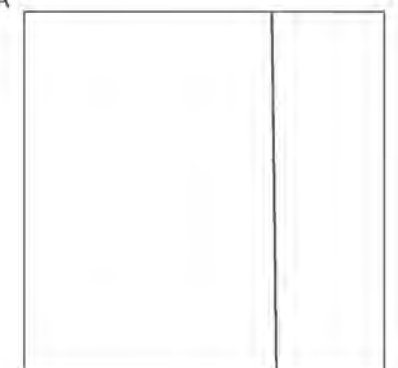
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
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Edition N/A
Copyright N/A
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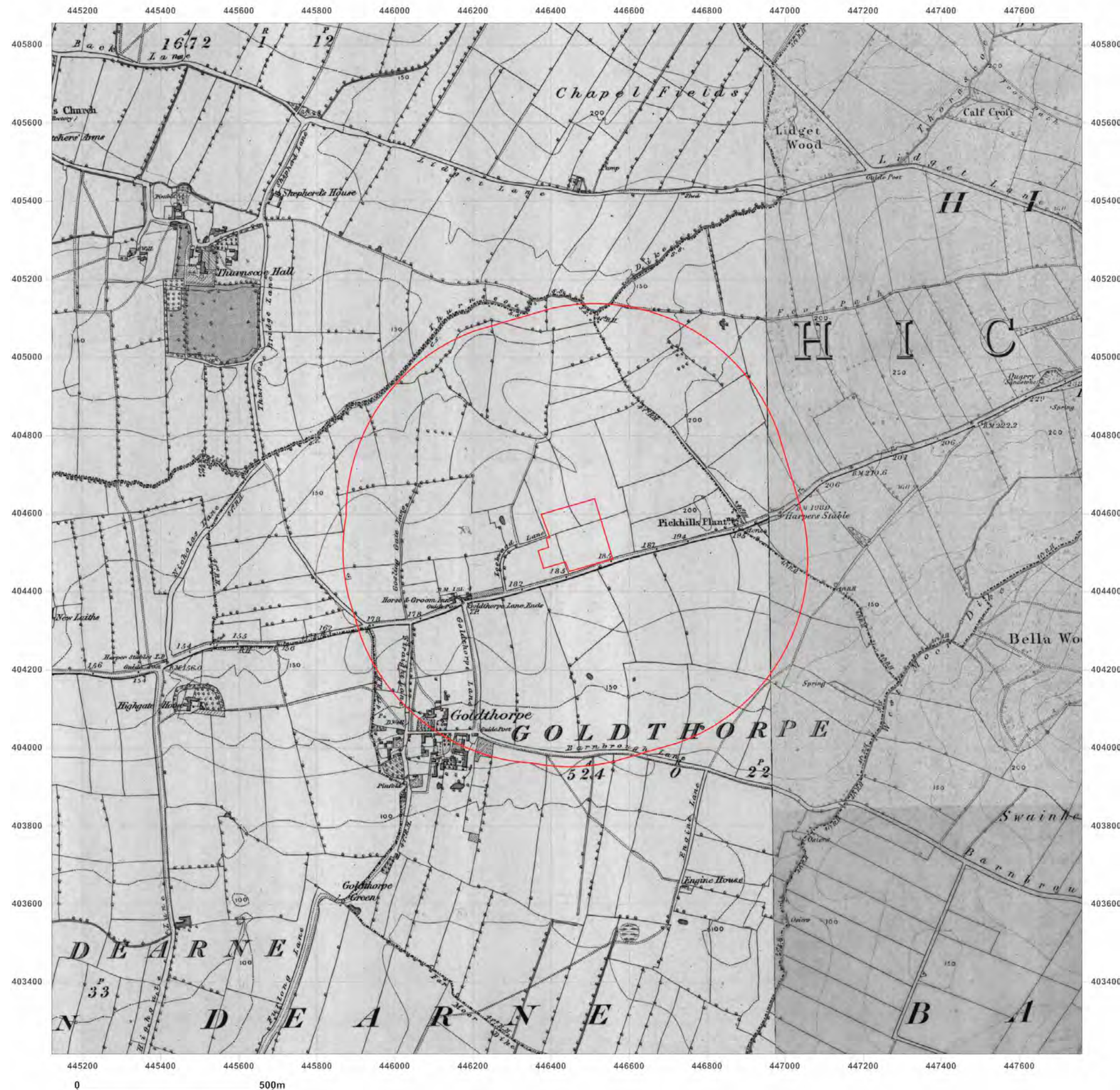


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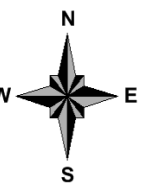
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Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: MasterMap

Map date: 2012

Scale: 1:1,250

Printed at: 1:2,500



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Site Details:

CENTRAL STREET,
GOLDTHORPE, S63 9JS

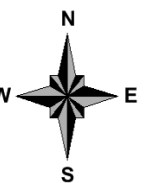
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Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1994-1995

Scale: 1:1,250

Printed at: 1:2,500



Surveyed N/A Revised N/A Edition N/A Copyright 1995 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A
	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A



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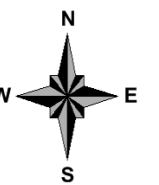
Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1995

Scale: 1:1,250

Printed at: 1:2,500



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Edition N/A
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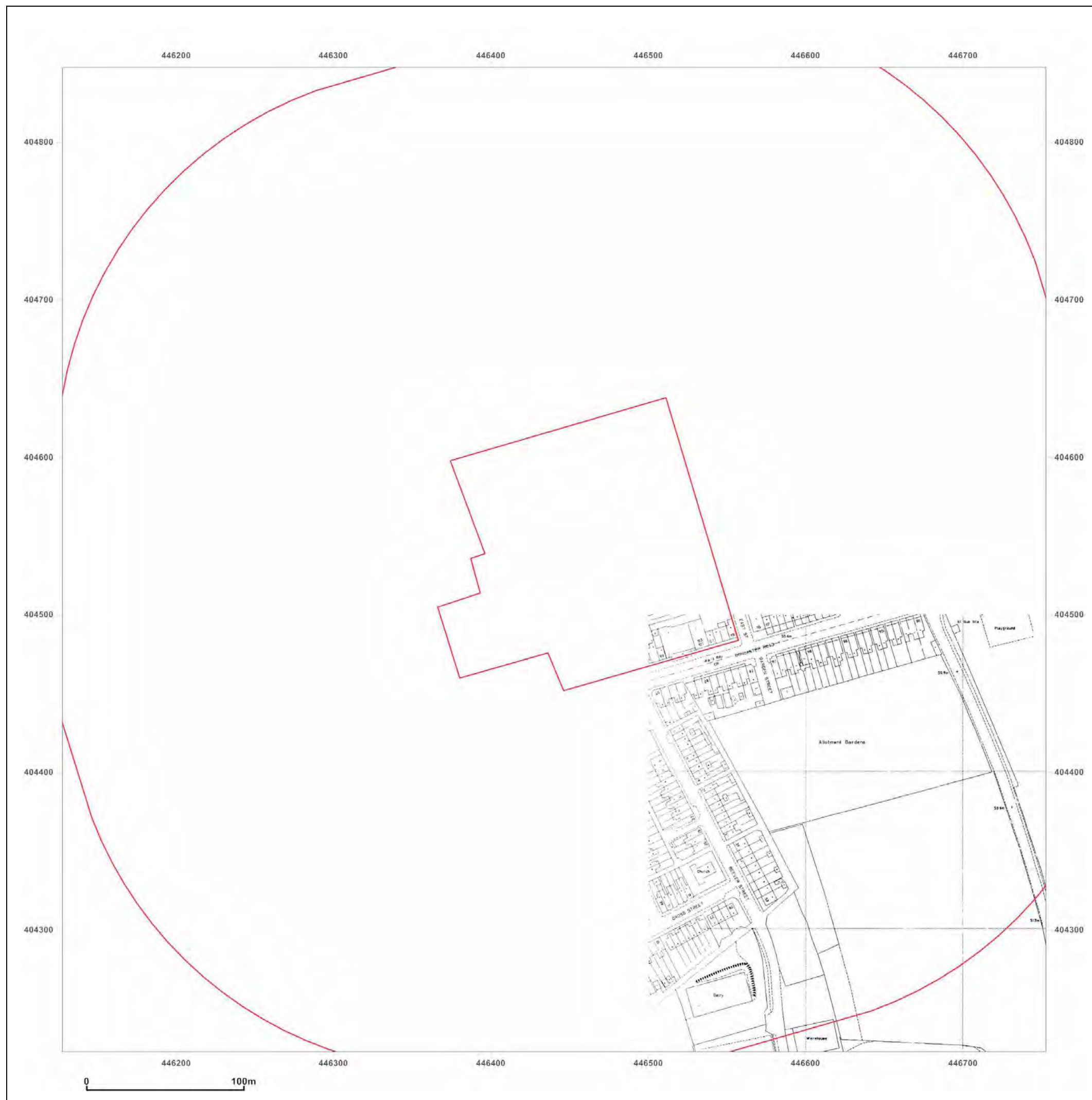


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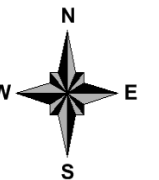
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Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1993-1994

Scale: 1:1,250

Printed at: 1:2,500



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Surveyed N/A Revised N/A Edition N/A Copyright 1994 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A



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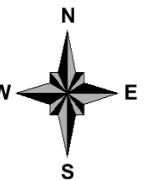
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Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1979-1983

Scale: 1:1,250

Printed at: 1:2,500



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Surveyed N/A Revised N/A Edition N/A Copyright 1979 Levelled 1984	



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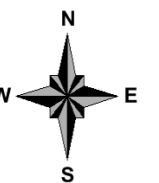
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Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1973

Scale: 1:1,250

Printed at: 1:2,500



Surveyed 1961
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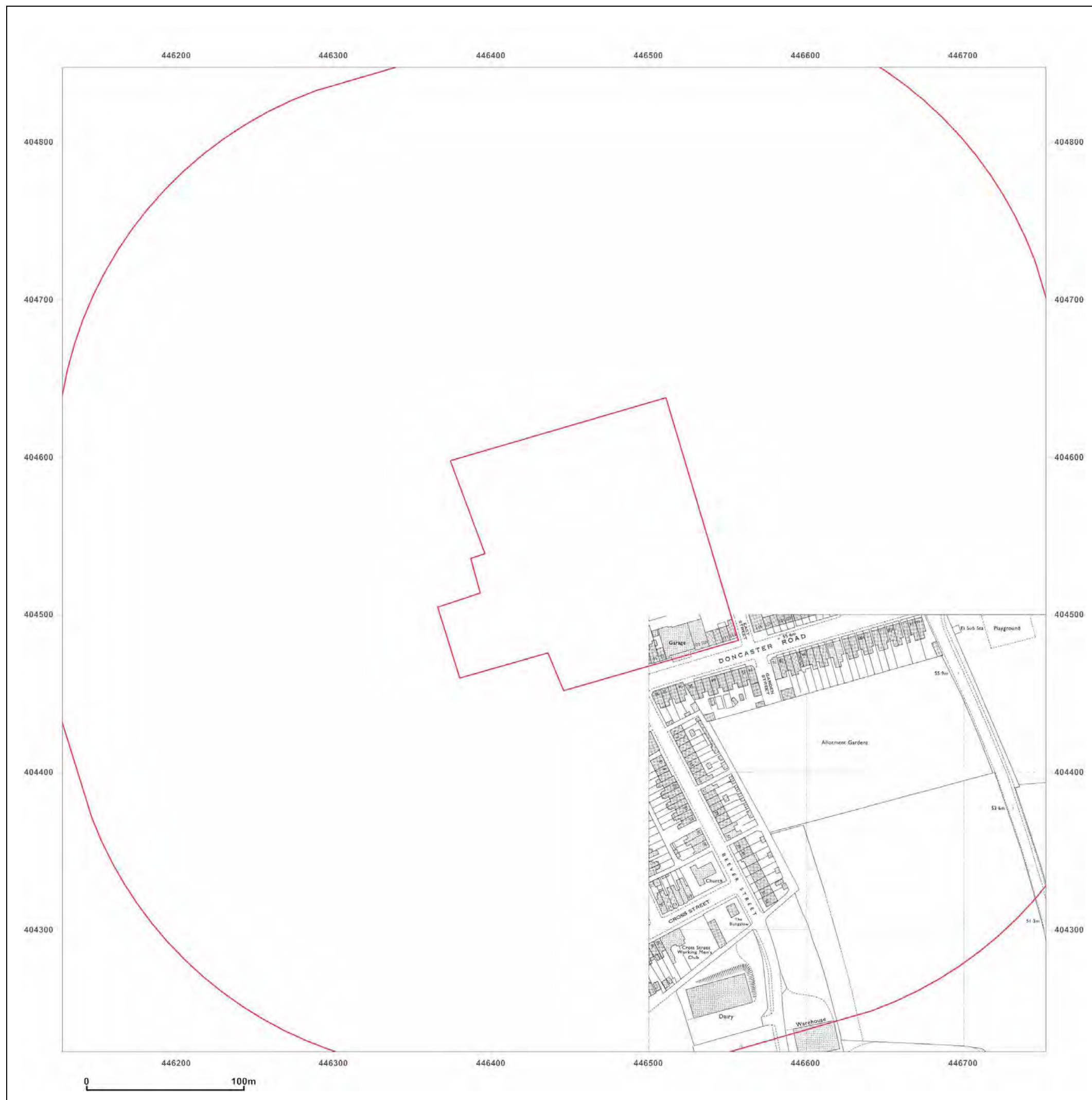


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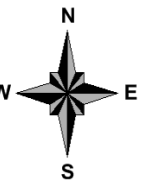
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Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1962

Scale: 1:1,250

Printed at: 1:2,500



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Surveyed 1961 Revised 1961 Edition N/A Copyright 1962 Levelled 1959	Surveyed 1961 Revised 1961 Edition N/A Copyright 1962 Levelled 1959



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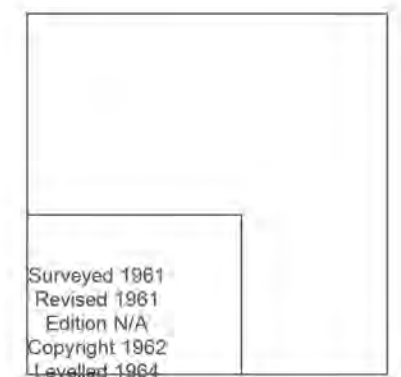
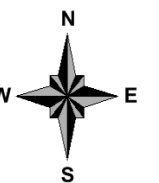
Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1962

Scale: 1:1,250

Printed at: 1:2,500

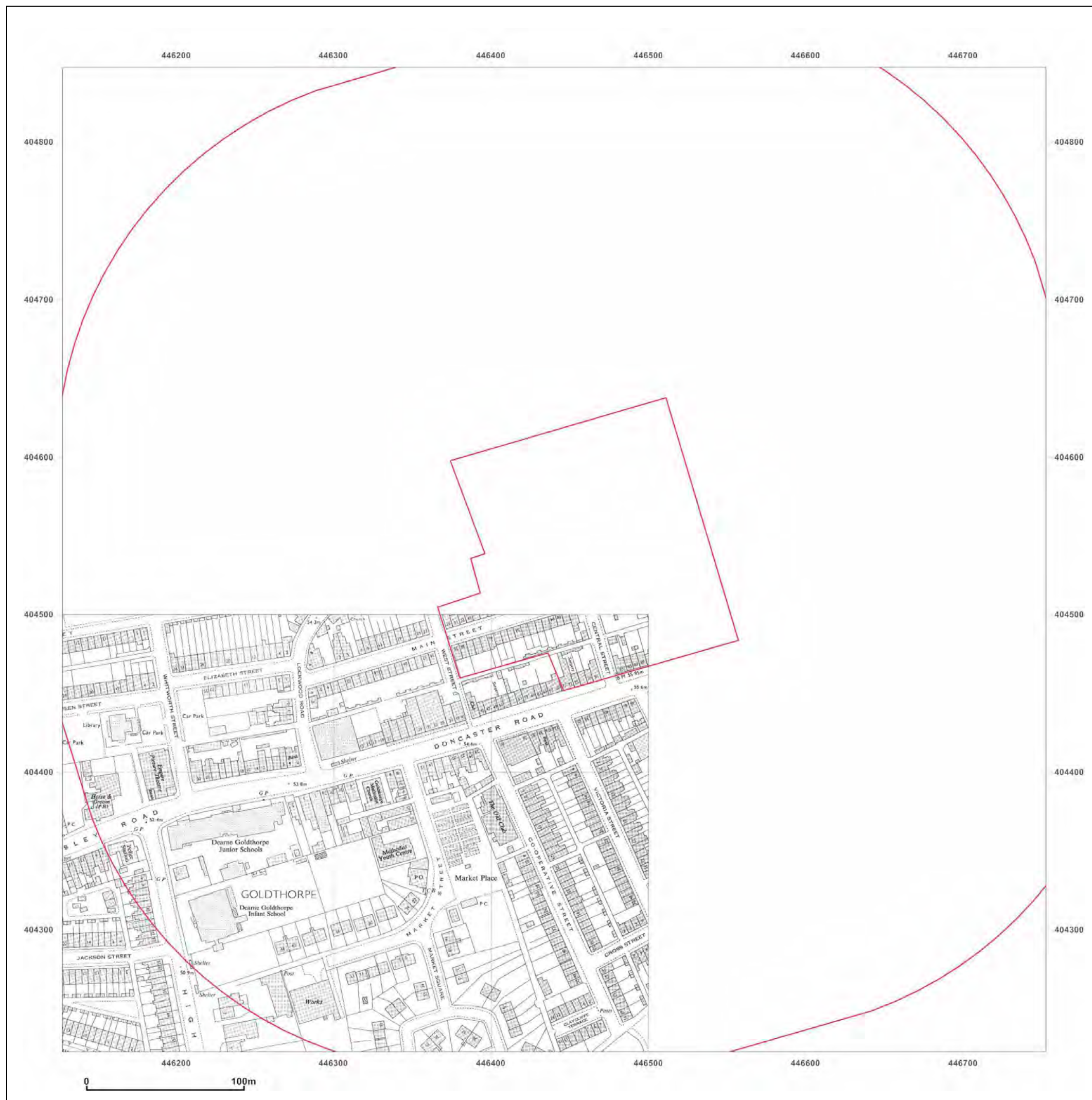


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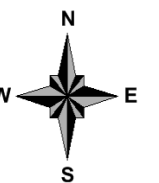
Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: National Grid

Map date: 1961

Scale: 1:2,500

Printed at: 1:2,500



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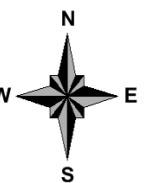
Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: County Series

Map date: 1930

Scale: 1:2,500

Printed at: 1:2,500



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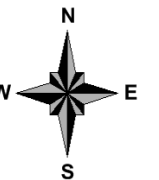
Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: County Series

Map date: 1906

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Surveyed 1906
Revised 1906
Edition N/A
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Levelled N/A



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Site Details:

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Client Ref: 140215
Report Ref: GS-972606
Grid Ref: 446440, 404535

Map Name: County Series

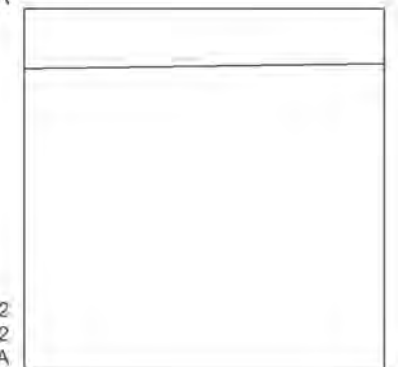
Map date: 1892

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

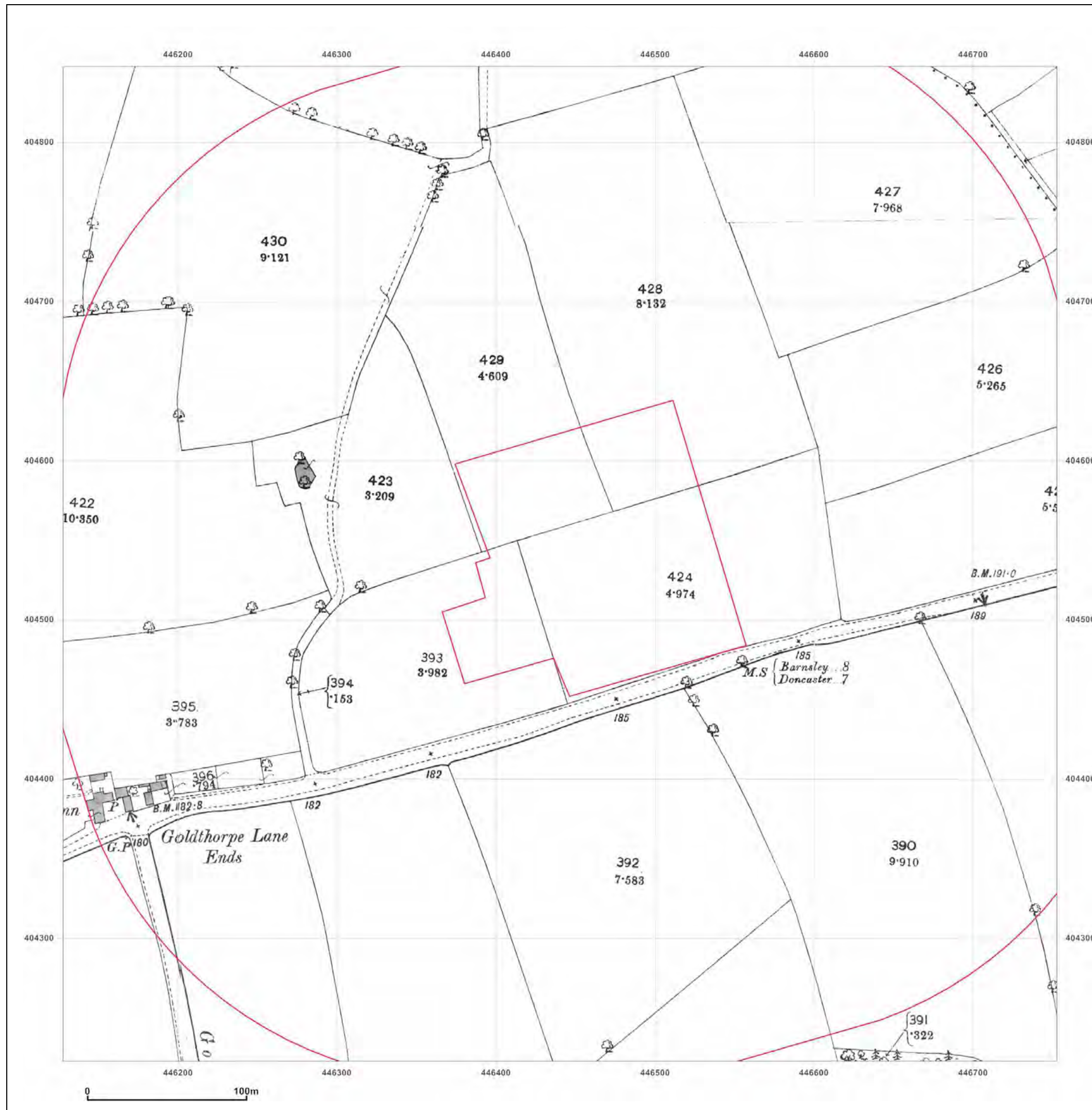


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Appendix B

Groundsure Reports



Robson Liddle
NAVIGATION HOUSE N P S NORTH
EAST LTD, WHISTLER DRIVE,
CASTLEFORD , WF10 5HX

GroundSure Reference:	GS-972607
Your Reference:	140215
Report Date:	5 Jul 2013
Report Delivery Method:	xml
Client Email:	catherineriley@robsonliddle.com

GroundSure EnviroInsight

Address: CENTRAL STREET, GOLDTHORPE, S63 9JS

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the GroundSure EnviroInsight as requested

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

Yours faithfully,

A handwritten signature in black ink, appearing to be "C. Riley", followed by a small circle and a comma.

Managing Director
Groundsure Limited

Enc.
GroundSure EnviroInsight

GroundSure EnviroInsight

Address: CENTRAL STREET, GOLDTHORPE, S63 9JS

Date: 5 Jul 2013

GroundSure Reference: GS-972607

Your Reference: 140215

Client: Robson Liddle



Brought to you by GroundSure

Aerial Photograph of Study Site



Aerial photography supplied by Getmapping PLC.
© Copyright Getmapping PLC 2003. All Rights Reserved.

Site Name: CENTRAL STREET, GOLDTHORPE, S63 9JS
Grid Reference: 446440,404535
Size of Site: 2.38 ha

Report Reference: [GS-972607](#)

If you would like any further assistance regarding this report then please contact
GroundSure on (T) 08444 159 000, email: info@4c.groundsure.com

Overview of Findings

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

Report Section	Number of records found within (X) m of the study site boundary					
1. Environmental Permits, Incidents and Registers	on-site	0-50	51-250	251-500	501-1000	1000-1500
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations						
Records of historic IPC Authorisations	0	0	0	0	-	-
Records of Part A(1) and IPPC Authorised Activities	0	0	0	0	-	-
Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0	-	-
Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0	-	-
Records of List 1 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of List 2 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of Part A(2) and Part B Activities and Enforcements	1	0	0	4	-	-
Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0	-	-
Records of Licensed Discharge Consents	0	0	0	1	-	-
Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0	-	-
1.2 Records of COMAH and NIHHS sites	0	0	0	0	-	-
1.3 Environment Agency Recorded Pollution Incidents						
National Incidents Recording System, List 2	0	0	1	-	-	-
National Incidents Recording System, List 1	0	0	0	-	-	-
1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990	0	0	0	0	-	-
2. Landfill and Other Waste Sites	on-site	0-50	51-250	251-500	501-1000	1000-1500
2.1 Landfill Sites						
Environment Agency Registered Landfill Sites	0	0	0	0	0	-
Landfill Data – Operational Landfill Sites	0	0	0	0	0	-
Environment Agency Historic Landfill Sites	0	0	0	0	4	2
Landfill Data – Non-Operational Landfill Sites	0	0	0	0	2	-
BGS/DoE Landfill Site Survey	0	0	0	0	1	1
GroundSure Local Authority Landfill Sites Data	0	0	0	0	3	0
2.2 Landfill and Other Waste Sites Findings						
Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Environment Agency Licensed Waste Sites	0	0	0	0	10	3

3. Current Land Uses	on-site	0-50	51-250	251-500	501-1000	1000-1500
3.1 Current Industrial Sites Data	0	1	9	-	-	-
3.2 Records of Petrol and Fuel Sites	0	0	0	0	-	-
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0	-	-

4. Geology	Description
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? *	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site? *	No
4.3 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	

Source: Scale: 1:50,000 BGS Sheet 087

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

5. Hydrogeology and Hydrology	on-site	0-50	51-250	251-500	501-1000	1001-2000
5.1 Are there any records of Productive Strata in the Superficial Geology within 500m of the study site?				Yes		
5.2 Are there any records of Productive Strata in the Bedrock Geology within 500m of the study site?				Yes		
5.3 Groundwater Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	3
5.4 Surface Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	0
5.5 Potable Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	0	0
5.6 Are there any Source Protection Zones within 500m of the study site?					No	
5.7 River Quality						
Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	Yes	Yes	Yes
5.8 Detailed River Network entries within 500m of the site	0	0	1	6	-	-
5.9 Surface water features within 250m of the study site	No	No	Yes	-	-	-

6. Flooding	
6.1 Are there any Environment Agency indicative Zone 2 floodplains within 250m of the study site?	No
6.2 Are there any Environment Agency indicative Zone 3 floodplains within 250m of the study site?	No
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Low
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

7. Designated Environmentally Sensitive Sites	on-site	0-50	51-250	251-500	501-1000	1001-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0

7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.3 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
7.4 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.5 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.6 Records of Ramsar sites	0	0	0	0	0	0
7.7 Records of World Heritage Sites	0	0	0	0	0	0
7.8 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.9 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.10 Records of National Parks	0	0	0	0	0	0
7.11 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.12 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
7.13 Records of Ancient Woodlands	0	0	0	0	1	1

8. Natural Hazards

8.1 What is the maximum risk of natural ground subsidence? Very Low

9. Mining

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

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site? Low-Moderate

9.3 Are there any brine affected areas within 75m of the study site? No

Using this Report

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

1. Environmental Permits, Incidents and Registers

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

2. Landfills and Other Waste Sites

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

3. Current Land Uses

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

4. Geology

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

5. Hydrogeology and Hydrology

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

6. Flooding

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

7. Designated Environmentally Sensitive Sites

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

8. Natural Hazards

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

9. Mining

Provides information on areas of coal and shallow mining.

10. Contacts

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

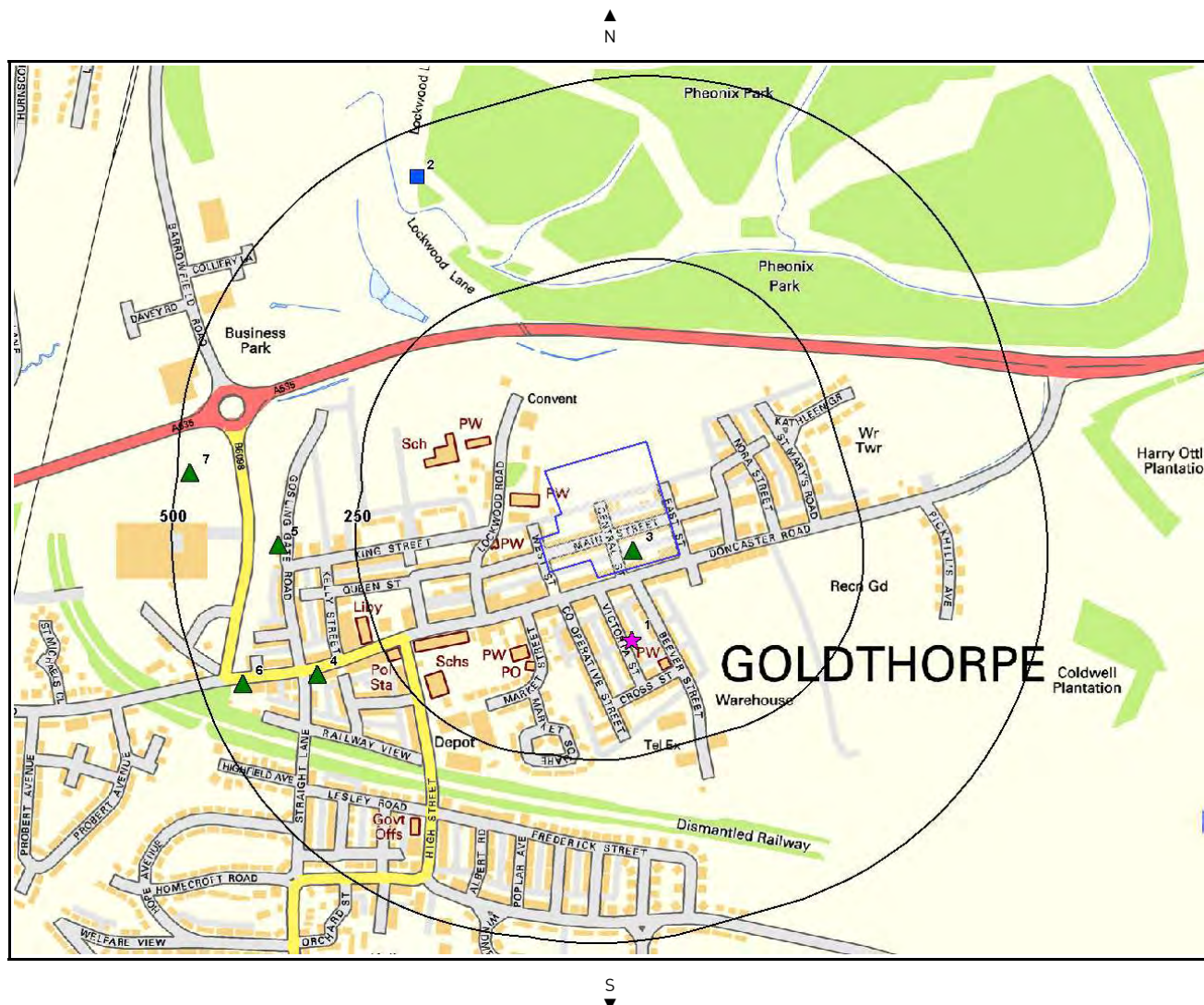
Note: Maps

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

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

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

1. Environmental Permits, Incidents and Registers Map



Authorisations, Incidents and Registers Legend



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

1.Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

Records of historic IPC Authorisations within 500m of the study site: **0**

Database searched and no data found.

Records of Part A(1) and IPPC Authorised Activities within 500m of the study site: **0**

Database searched and no data found.

Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: **0**

Database searched and no data found.

Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: **0**

Database searched and no data found.

Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: **0**

Database searched and no data found.

Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: **0**

Database searched and no data found.

Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: **5**

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

ID	Distance	Direction	NGR	Details	
3	0.0	On Site	446494, 404484	Address: Launderama, High Street,goldthorpe,rotherham, S63 9HJ Process: Dry Cleaners Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
4	347.0	SW	446065, 404315	Address: Clean 'N' Mend, 47 Barnsley Road, Goldthorpe Rotherham, S63 9LT Process: Dry Cleaning Process Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

Report Reference: GS-972607

5	355.0	W	446012, 404492	Address: BH MOTORS, Gosling gate road, goldthorpe Rotherham, S63 9LU Process: WASTE OIL BURNER <0.4 MW Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
6	445.0	W	445964, 404302	Address: H & A Motors, 98 Barnsley Road, goldthorpe, Barnsley, S63 9AA Process: Waste Oil Burner Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
7	484.0	W	445891, 404590	Address: Hunningley Lane MOT, Hunningley Lane, Stairfoot, Barnsley, S70 3DT Process: Waste Oil Burner <0.4MW Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

Records of Category 3 or 4 Radioactive Substance Licences within 500m of the study site: 0

Database searched and no data found.

Records of Licensed Discharge Consents within 500m of the study site: 1

The following Licensed Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details
2	438.0	NW	446200, 405000	Address: Hickleton Colliery (ncb) Outlet No., 7-settlement Lagoon Effluent Type: Trade Discharges - Process Effluent - Not Water Company Permit Number: 3517 Permit Version: 1 Receiving Water: Trib Of Thurnscoe Dike Status: Revoked - Unspecified Issue date: 10/2/1981 Effective Date: 10/2/1981 Revocation Date: 9/8/1995

Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 0

Database searched and no data found.

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

Records of National Incidents Recording System, List 2 within 250m of the study site: 1

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

ID	Distance	Direction	NGR	Details
1	95.0	S	446490, 404366	Incident Date: 18/07/2003 Incident Identification: 174891 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)

Records of National Incidents Recording System, List 1 within 250m of the study site: 0

Report Reference: GS-972607

Database searched and no data found.

1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990

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

0

Database searched and no data found.

2. Landfill and Other Waste Sites Map

NW

▲
N

NE

◀W

▶E



SW

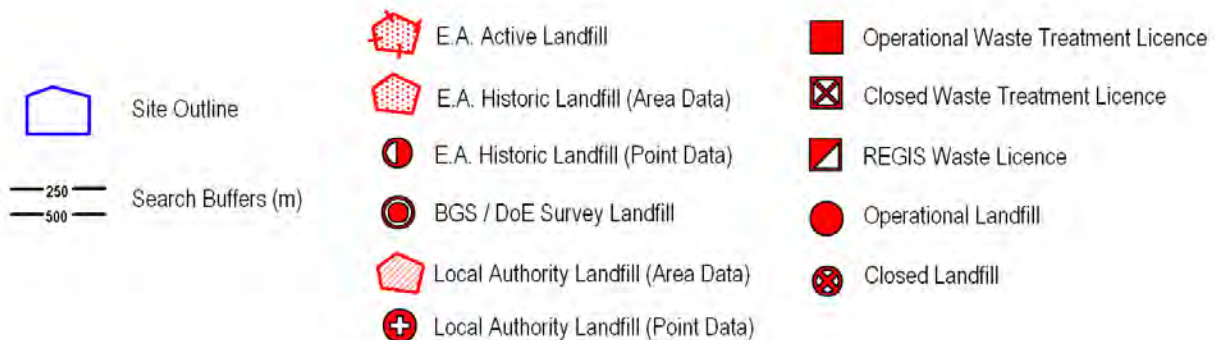
▼
S

SE

Landfill & Other Waste Sites Legend

Mapping sourced from
Ordnance Survey

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2. Landfill and Other Waste Sites

2.1 Landfill Sites

Records from Environment Agency landfill data within 1000m of the study site: **0**

Database searched and no data found.

Records of operational landfill sites sourced from Landmark within 1000m of the study site: **0**

Database searched and no data found.

Records of Environment Agency historic landfill sites within 1500m of the study site: **6**

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

ID	Distance	Direction	NGR	Details
6	518.0	SW	445800, 404200	Site Address: Railway Cutting, Off Highfield Avenue, Goldthorpe Waste Licence: Yes Site Reference: 20B474(13), WD20 B474, 4400/B474 Waste Type: Inert, Commercial, Liquid sludge Regis Reference: - Licence Issue: 17-May-1985 Licence Surrendered: 17-Nov-1986 Licence Hold Address: Amenities and Recreation Department, 50 Huddersfield Road, Barnsley Operator: Barnsley Metropolitan Borough Council
Not shown	788.0	N	446700, 405700	Site Address: Brickworks Quarry, Thurnscoe, Near Dearne, South Yorkshire Waste Licence: - Site Reference: 4400/(137), (137)B Waste Type: Household Regis Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Deane Urban District Council
Not shown	887.0	S	446300, 403400	Site Address: Marsh Tip, Goldthorpe, Rotherham, South Yorkshire Waste Licence: Yes Site Reference: 4400/B3, 2B3(5), WD2 B3 Waste Type: Inert, Industrial, Commercial, Household, Liquid sludge Regis Reference: - Licence Issue: 03-Nov-1976 Licence Surrendered: 31-Dec-1979 Licence Hold Address: - Operator: Deane Urban District Council
Not shown	953.0	NE	447000, 405500	Site Address: Lidget Lane, Thurnscoe, Near Dearne, South Yorkshire Waste Licence: - Site Reference: (102)D, 4400/(102), (132)B, 4400/0396 Waste Type: - Regis Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1272.0	E	447800, 404400	Site Address: Hickleton Park - Barnburgh Park Quarry No.2, Hickleton Park, Hickleton Waste Licence: Yes Site Reference: WD20 D45, 4400/D442, WD20 D442, WD20 D44 Waste Type: Inert, Commercial Regis Reference: - Licence Issue: 14-Nov-1984 Licence Surrendered: 29-Apr-1994 Licence Hold Address: Hickleton House, Manor Farm, Barnburgh, Doncaster Operator: -
Not shown	1487.0	SE	447700, 403200	Site Address: Hollow Gate Bridge, Church Lane, Barnsley Waste Licence: Yes Site Reference: 4400/(39)D, WD20/B581, WD20/D370, 4400/0501, WD20 B350, WD20 581 Waste Type: - Regis Reference: - Licence Issue: 29-Oct-1976 Licence Surrendered: Licence Hold Address: - Operator: W F Grumett

Records of non-operational landfill sites sourced from Landmark within 1000m of the study site: **2**

Report Reference: GS-972607

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

ID	Distance	Direction	NGR	Details
1	601.0	W	445800, 404300	Site Address: Railway Cutting at Highfield Avenue, Goldthorpe, ROTHERHAM, South Yorkshire, Landfill Licence: 37AASFAL Agency Reference: Waste Type: Putrescible Waste Description: Putrescible Landfill Known Restrictions: No known restriction on source of waste Record Date: 01-May-1985 Transfer Date: Modification Date: Status: Licence lapsed/cancelled/defunct/not applicable/surrendered Category: LANDFILL Regulator: EA - North East Region - Ridings Area (Rotherham) Size: Medium (< 75,000 tonnes/year)
Not shown	953.0	S	446400, 403500	Site Address: Barnburgh Road, Goldthorpe, ROTHERHAM, South Yorkshire, Landfill Licence: 37AASUAL Agency Reference: Waste Type: Difficult Waste Description: Difficult Landfill Known Restrictions: No known restriction on source of waste Record Date: 01-Nov-1976 Transfer Date: Modification Date: Status: Licence lapsed/cancelled/defunct/not applicable/surrendered Category: LANDFILL Regulator: EA - North East Region - Ridings Area (Rotherham) Size: Undefined

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

2

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

ID	Distance	Direction	NGR	Details
Not shown	963.0	S	446300.0, 403500.0	Address: Marsh Tip, Goldthorpe, Rotherham, S Yorks BGS Number: 1547.0 Risk: No risk to aquifer Waste Type: N/A
Not shown	1276.0	N	446700.0, 405900.0	Address: Brickworks Quarry, Thurnscoe, nr Dearne, S. Yorks BGS Number: 87.0 Risk: Risk to minor aquifer Waste Type: N/A

Records of Local Authority landfill sites within 1500m of the study site:

3

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

ID	Distance	Direction	Site Address	Source	Data Type
Not shown	743.0	W	Public Refuse Tip	1995 mapping	Polygon
Not shown	888.0	S	Refuse Tip	1976 mapping	Polygon
Not shown	954.0	S	Refuse Tip	1976 mapping	Polygon

2.2 Other Waste Sites

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

0

Database searched and no data found.

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

0

Database searched and no data found.

Records of Environment Agency licensed waste sites within 1500m of the study site:

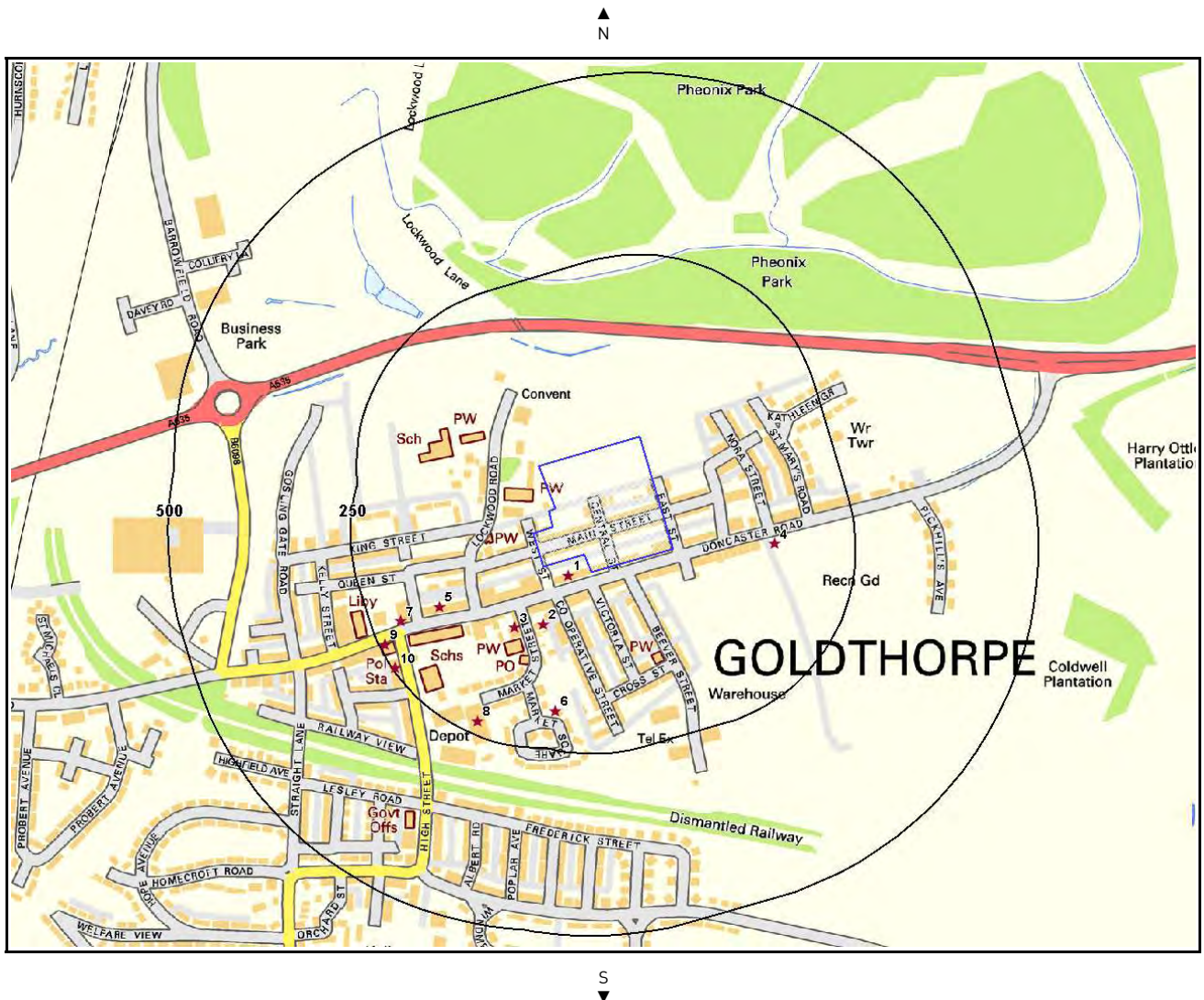
13

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

ID	Distance	Direction	NGR	Details	
12	541.0	S	446200, 403950	Site Address: Hope Street, Low Valley, Barnsley, South Yorkshire, S73 0HX Type: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Regis Licence Number: RJM001 EPR reference: EA/EPR/RP3390ZN/S002 Operator: R & J M Shaw Waste Disposal Waste Management licence No: 60561 Annual Tonnage: 21656.0	Issue Date: 13/03/1985 Effective Date: - Modified: - Surrendered Date: 05/07/2004 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: R & J M Shaw Correspondence Address: -, -
Not shown	767.0	W	445600, 404550	Site Address: Nicholas Lane, Thurnscoe, Barnsley, S Yorks Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Regis Licence Number: REG004 EPR reference: - Operator: Regional Waste Recycling Plc Waste Management licence No: 60610 Annual Tonnage: 5000.0	Issue Date: 14/06/1993 Effective Date: 08/12/2006 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Goldthorpe Civic Amenity Site Correspondence Address: -, 2 Cecil Court, 49-55, London Road, Enfield, Middlesex, EN2 6DE
Not shown	767.0	W	445600, 404550	Site Address: Nicholas Lane, Thurnscoe, Barnsley, S Yorks Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Regis Licence Number: BDR014 EPR reference: - Operator: South Herts Waste Management Ltd Waste Management licence No: 60610 Annual Tonnage: 0.0	Issue Date: 14/06/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Goldthorpe Civic Amenity Site Correspondence Address: -, 48, Cardigan Road, Stanion, Northants, NN14 1BY
Not shown	767.0	W	445600, 404550	Site Address: Goldthorpe H W R C, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS Type: Household Waste Amenity Site Size: < 25000 tonnes Regis Licence Number: WAS066 EPR reference: EA/EPR/DP3990SU/V002 Operator: F C C Recycling (U K) Limited Waste Management licence No: 60610 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: 24/09/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Goldthorpe Household Waste Recycling Centre Correspondence Address: -, -
Not shown	767.0	W	445600, 404550	Site Address: Goldthorpe Hwrc Site, Nicholas Lane, Thurnscoe, Barnsley, South Yorkshire, S63 9AS Type: Household Waste Amenity Site Size: < 25000 tonnes Regis Licence Number: WAS066 EPR reference: EA/EPR/DP3990SU/T001 Operator: Waste Recycling Ltd Waste Management licence No: 60610 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Goldthorpe Hwrc Site Correspondence Address: -, -
Not shown	767.0	W	445600, 404550	Site Address: Goldthorpe Hwrc Site, Nicholas Lane, Thurnscoe, Barnsley, South Yorkshire, S63 9AS Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Regis Licence Number: WAS066 EPR reference: EA/EPR/DP3990SU/T001 Operator: Waste Recycling Ltd Waste Management licence No: 60610 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Goldthorpe Hwrc Site Correspondence Address: -, Ground Floor West, 900, Pavilion Drive, Northampton Business Park, Northampton, NN4 7RG
Not shown	880.0	W	445500, 404700	Site Address: Rear Of Greyhound Stadium, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Regis Licence Number: WAL004 EPR reference: EA/EPR/DP3190ZD/V002 Operator: Wallis James Waste Management licence No: 60583 Annual Tonnage: 2500.0	Issue Date: 15/06/1989 Effective Date: 15/06/2004 Modified: 26/07/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Goldthorpe Materials Recycling Facility Correspondence Address: -, -

Not shown	880.0	W	445500, 404700	Site Address: Rear Of Greyhound Stadium, Nicholas Lane, Goldthorpe, Barnsley, S Yorks Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Regis Licence Number: JON001 EPR reference: - Operator: Jones Barry Waste Management licence No: 60583 Annual Tonnage: 0.0	Issue Date: 15/06/1989 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Barry Jones Correspondence Address: -, 52, Wingfield Road, Athersley South, Barnsley, S Yorks, S71 3PR
Not shown	957.0	S	446350, 403500	Site Address: Barnburgh Lane, Goldthorpe, Barnsley, S Yorks Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Regis Licence Number: SED001 EPR reference: - Operator: Sedgwick F Waste Management licence No: 60611 Annual Tonnage: 0.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: F. Sedgwick Correspondence Address: -, 8, Stuart Street, Thurnscoe, Barnsley, S Yorks, S63 0EF
Not shown	957.0	S	446350, 403500	Site Address: Land At Marsh Tip, Barnburgh Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9EU Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Regis Licence Number: SED001 EPR reference: EA/EPR/JP3690ZC/A001 Operator: Sedgwick Mr F Waste Management licence No: 60611 Annual Tonnage: 4999.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: F. Sedgwick Correspondence Address: -, -
Not shown	1038.0	N	446900, 405600	Site Address: Lidget Lane Ind Est, Albion Drive, Thurnscoe, Rotherham, South Yorkshire, S63 0BA Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Regis Licence Number: JEW001 EPR reference: EA/EPR/AP3990ZT/V002 Operator: J Edwards Waste Management Ltd Waste Management licence No: 60551 Annual Tonnage: 4999.0	Issue Date: 17/10/1994 Effective Date: 02/02/2007 Modified: 11/12/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: J Edwards Waste Management Ltd Correspondence Address: -, -
Not shown	1038.0	N	446900, 405600	Site Address: Lidget Lane Ind Est, Albion Drive, Thurnscoe, Rotherham, S Yorks, S63 0BA Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Regis Licence Number: RYD001 EPR reference: - Operator: R G Wastecare Limited Waste Management licence No: 60551 Annual Tonnage: 0.0	Issue Date: 17/10/1994 Effective Date: - Modified: 05/04/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Ryder & Green Correspondence Address: -, Lidget Lane Ind Est, Albion Drive, Thurnscoe, Rotherham, S Yorks, S63 0BA
Not shown	1420.0	NW	445267, 405488	Site Address: 84, High Street, Thurnscoe, Rotherham, South Yorkshire, S63 0QH Type: ELV Facility Size: < 25000 tonnes Regis Licence Number: 000186 EPR reference: EA/EPR/KP3492ZZ/S002 Operator: Mrs Stephanie Anne Speight Waste Management licence No: 65316 Annual Tonnage: 2499.0	Issue Date: 11/08/2004 Effective Date: - Modified: - Surrendered Date: 15/07/2005 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Kls Motorbike Dismantlers Correspondence Address: -, -

3. Current Land Use Map



Current Land Use Legend



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3. Current Land Uses

3.1 Current Industrial Data

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

10

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

ID	Distance	Direction	Company	Address	Activity	Category
1	21.0	S	Autocare	55-57, Doncaster Road, Goldthorpe, Rotherham, S63 9HJ	Vehicle Parts and Accessories	Motoring
2	80.0	S	Electricity Sub Station	S63	Electrical Features	Infrastructure and Facilities
3	93.0	SW	Tony Casagrande Hydraulic Sytems	10A, Market Street, Goldthorpe, Rotherham, S63 9HA	Industrial Repairs and Servicing	Repair and Servicing
4	139.0	E	Electricity Sub Station	S63	Electrical Features	Infrastructure and Facilities
5	153.0	W	Rhapsody Textiles	20-22, Barnsley Road, Goldthorpe, Rotherham, S63 9NF	Beds and Bedding	Consumer Products
6	197.0	S	Overton Site Services Ltd	3, Market Square, Goldthorpe, Rotherham, S63 9HD	Civil Engineers	Engineering Services
7	210.0	W	Fantazia Decorations the Balloon Lady	36, Barnsley Road, Goldthorpe, Rotherham, S63 9NE	Giftware	Consumer Products
8	232.0	SW	Works	S63	Unspecified Works Or Factories	Industrial Features
9	243.0	SW	Goldthorpe Police Station	Goldthorpe Police Station, Barnsley Road, Goldthorpe, Rotherham, S63 9LS	Police Stations	Central and Local Government
10	247.0	SW	Studio Signs	10-12, High Street, Goldthorpe, Rotherham, S63 9LR	Signs	Industrial Products

3.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site:

0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

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

4.2 Superficial Ground and Drift Geology

Database searched and no data found.

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

4.3 Bedrock and Solid Geology

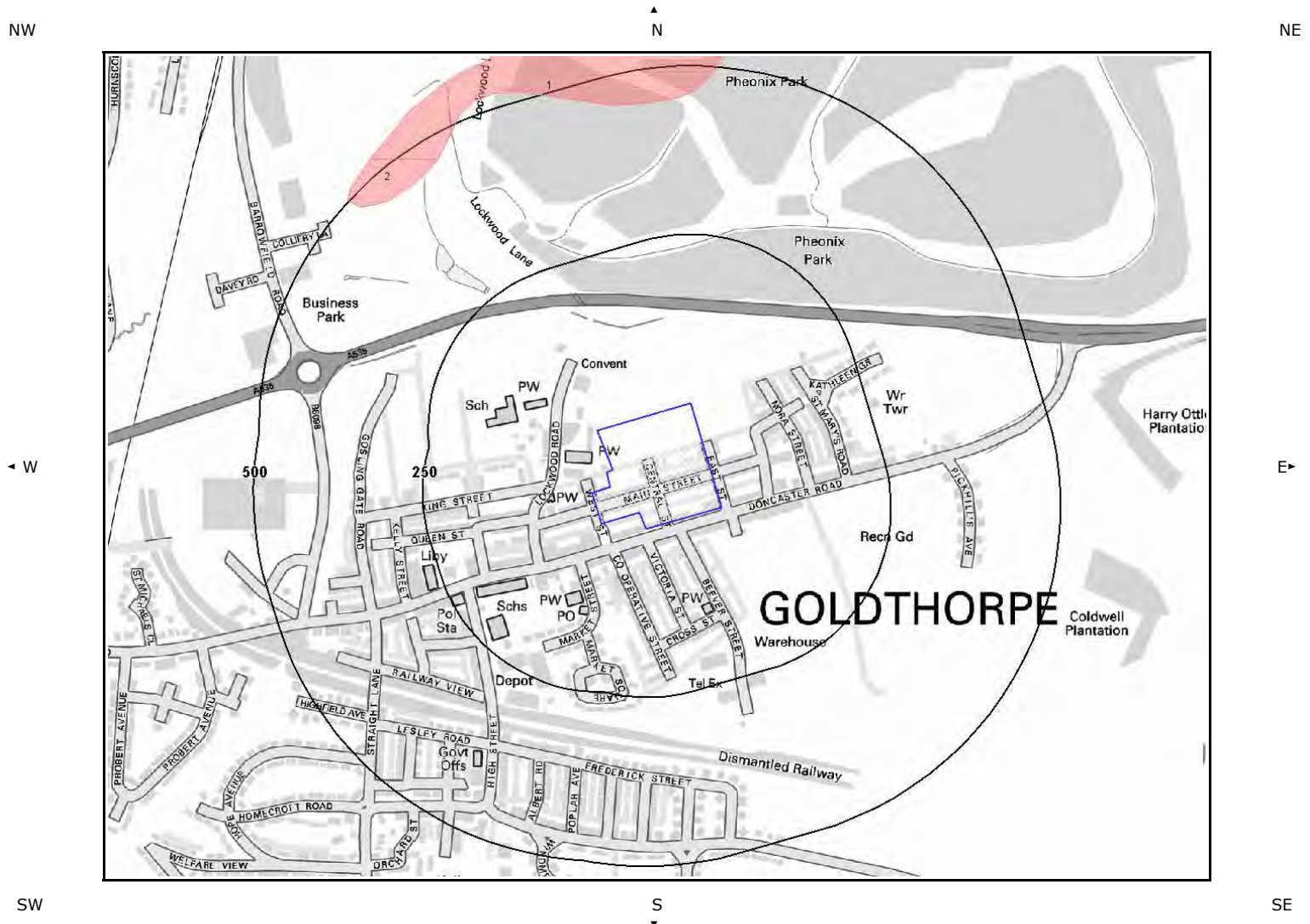
The database has been searched on site, including a 50m buffer.

LEX Code	Description	Rock Type
AR-SDST	ACKWORTH ROCK	SANDSTONE
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

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

For more detailed geological and ground stability data please refer to the "GroundSure GeoInsight". Available from our website.

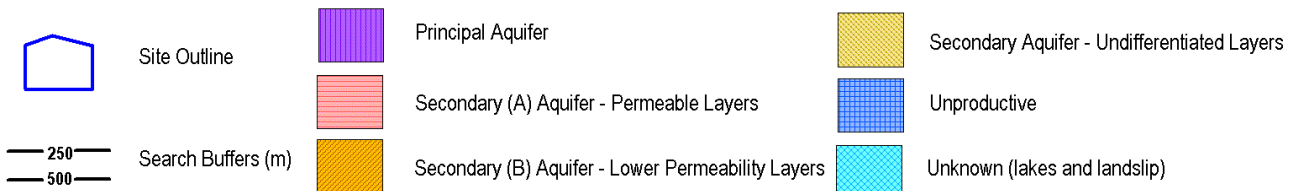
5a. Hydrogeology - Aquifer Within Superficial Geology



Aquifer Within Superficial Geology Legend



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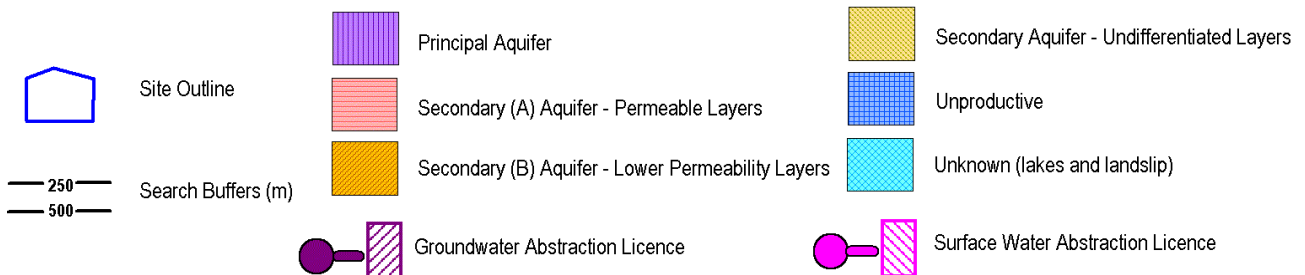
5b. Hydrogeology - Aquifer Within Bedrock Geology and Abstraction Licenses



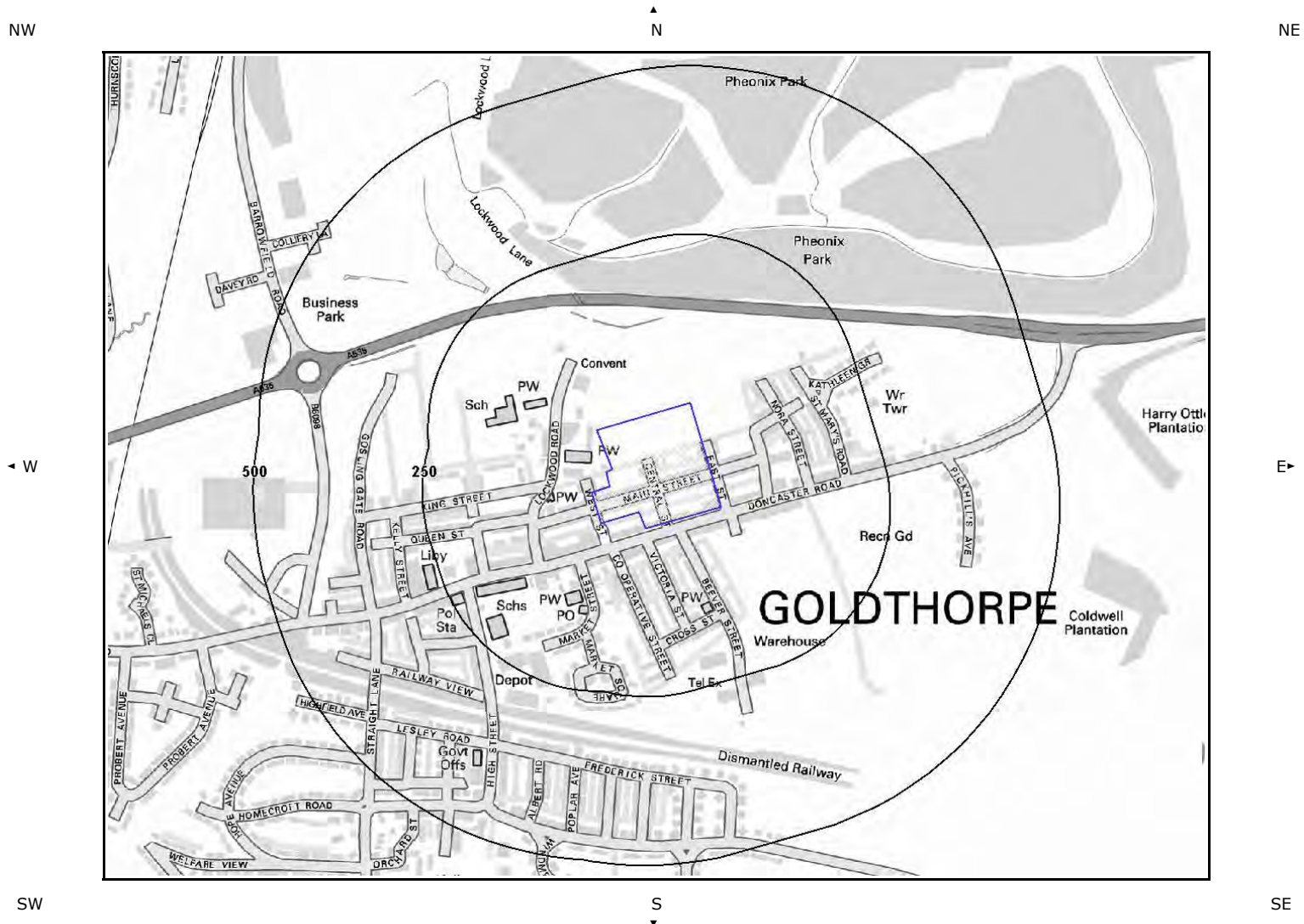
Aquifer Within Bedrock Geology Legend



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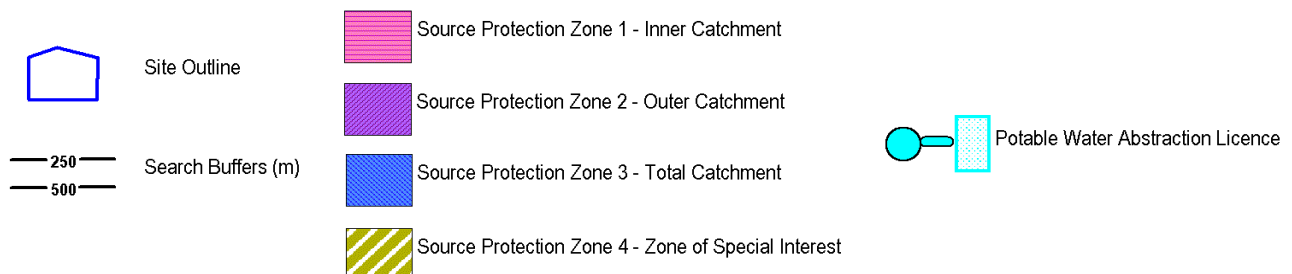
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



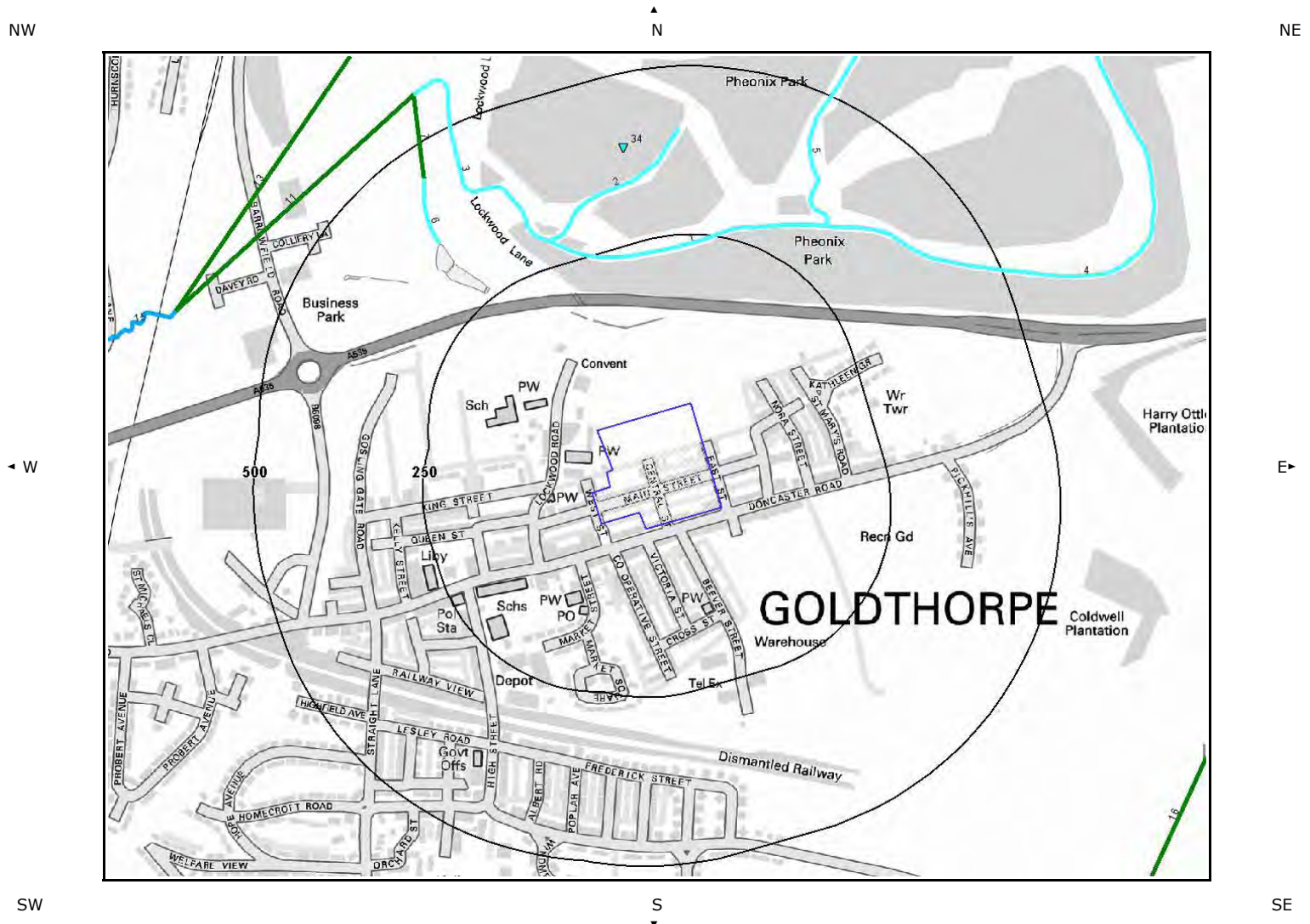
SPZ and Potable Water Abstraction Licenses
Legend



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5d. Hydrology – Detailed River Network and River Quality



Hydrology Legend



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5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

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

Yes

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

The following aquifer records are shown on the Aquifer within Superficial Geology Map (5a):

ID	Distance [m]	Direction	Designation	Description
1	449.0	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
2	455.0	NW	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

5.2 Aquifer within Bedrock Deposits

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

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

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance [m]	Direction	Designation	Description
1	0.0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	362.0	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

5.3 Groundwater Abstraction Licences

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

Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance	Direction	NGR	Details
----	----------	-----------	-----	---------

Not shown	1453.0	NE	Licence No: 2/27/08/113 Details: Spray Irrigation - Direct Direct Source: Groundwaters Point: Borehole - Coal Measures - Hickleton Doncaster Data Type: Point	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 06721 Original Start Date: 20/6/1996 Expiry Date: 31/12/2005 Issue No: 100 Version Start Date: 20/6/1996 Version End Date:
Not shown	1453.0	NE	Licence No: 2/27/08/113 Details: Spray Irrigation - Direct Direct Source: Groundwaters Point: Borehole Data Type: Point	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 6721 Original Start Date: 20/6/1996 Expiry Date: 31/12/2005 Issue No: 100 Version Start Date: 20/6/1996 Version End Date:
Not shown	1468.0	NE	Licence No: 2/27/08/139 Details: Spray Irrigation - Direct Direct Source: Groundwaters Point: Borehole-coal Measures-hickleton- doncaster Data Type: Point	Annual Volume (m ³): 4400 Max Daily Volume (m ³): 47 Original Application No: 8167 Original Start Date: 1/1/2006 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2006 Version End Date:

5.4 Surface Water Abstraction Licences

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

No

Database searched and no data found.

5.5 Potable Water Abstraction Licences

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

No

Database searched and no data found.

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

5.7 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

Yes

Biological Quality:

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

The following Biological Quality records are shown on the Hydrology Map (5d):

Report Reference: [GS-972607](#)

ID	Distance [m]	Direction	NGR	River Details	Biological Quality Grade				
					2005	2006	2007	2008	2009
34	392.0	N	446412, 405017	River Name: Ings/carr/thurnscoe Dikes Reach: Hickleton Main Collihoughton Beck End/Start of Stretch: Start of Stretch NGR	D	D	D	D	D
Not shown	852.0	SE	447276, 404027	River Name: West Moor Dike Reach: Hickleton Goldthorpe Pit End/Start of Stretch: End of Stretch NGR	C	C	C	C	C
Not shown	852.0	SE	447276, 404027	River Name: West Moor Dike Reach: Goldthorpe Pit River Dearne End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C
Not shown	1248.0	E	447804, 404521	River Name: West Moor Dike Reach: Hickleton Goldthorpe Pit End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C

Chemical Quality:

Database searched and no data found.

5.8 Detailed River Network

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

Yes

The following Detailed River Network records are represented on the Hydrology Map (5d):

ID	Distance	Direction	Details	
1	231.0	N	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
2	290.0	N	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
3	292.0	N	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
4	328.0	NE	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
5	328.0	NE	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
6	362.0	NW	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
7	452.0	NW	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Extended Culvert (greater than 50m) Catchment: - Drain: YES Main River Status: Currently Undefined

5.9 Surface Water Features

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

Yes

The following surface water records are not represented on mapping:

Distance to Surface Water (m)	on-site	0-50	51-250
Surface water features within 250m of the study site	No	No	Yes

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6. Environment Agency Flood Map

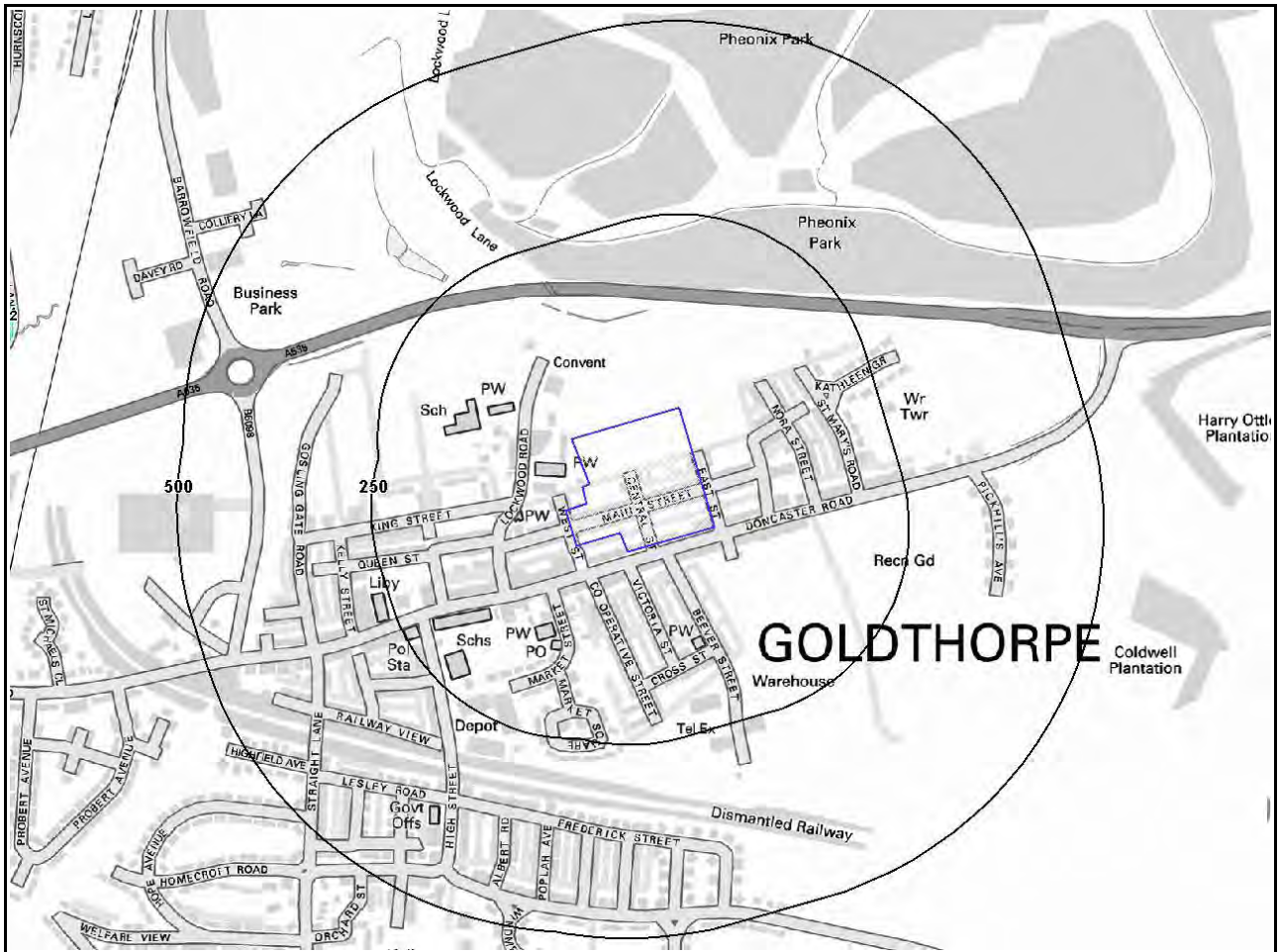
NW

▲
N

NE

◀W

▶E



SW

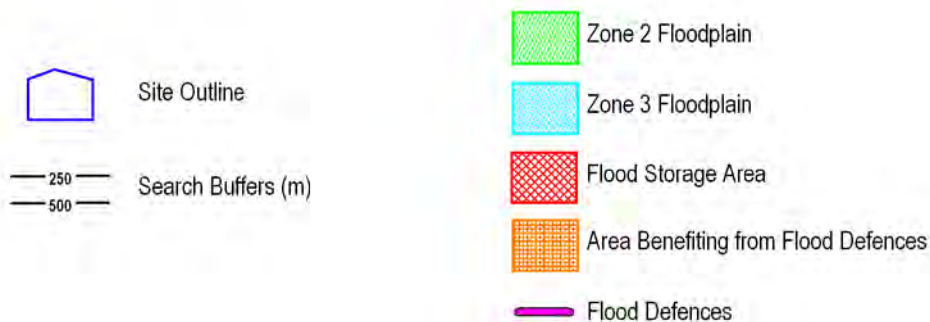
▼
S

SE

Environment Agency Flood Legend



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6. Flooding

6.1 Zone 2 Flooding

Zone 2 floodplain estimates the annual probability of flooding as one in one thousand (0.1%) or greater from rivers and the sea but less than 1% from rivers or 0.5% from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 2 floodplain? **No**

Database searched and no data found.

6.2 Zone 3 Flooding

Zone 3 estimates the annual probability of flooding as one in one hundred (1%) or greater from rivers and a one in two hundred (0.5%) or greater from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 3 floodplain? **No**

Database searched and no data found.

6.3 Flood Defences

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

6.4 Areas benefiting from Flood Defences

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

6.5 Areas used for Flood Storage

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

6.6 Groundwater Flooding Susceptibility Areas

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

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

6.7 Groundwater Flooding Confidence Areas

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

Low

Notes:

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

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

7.Designated Environmentally Sensitive Sites Map

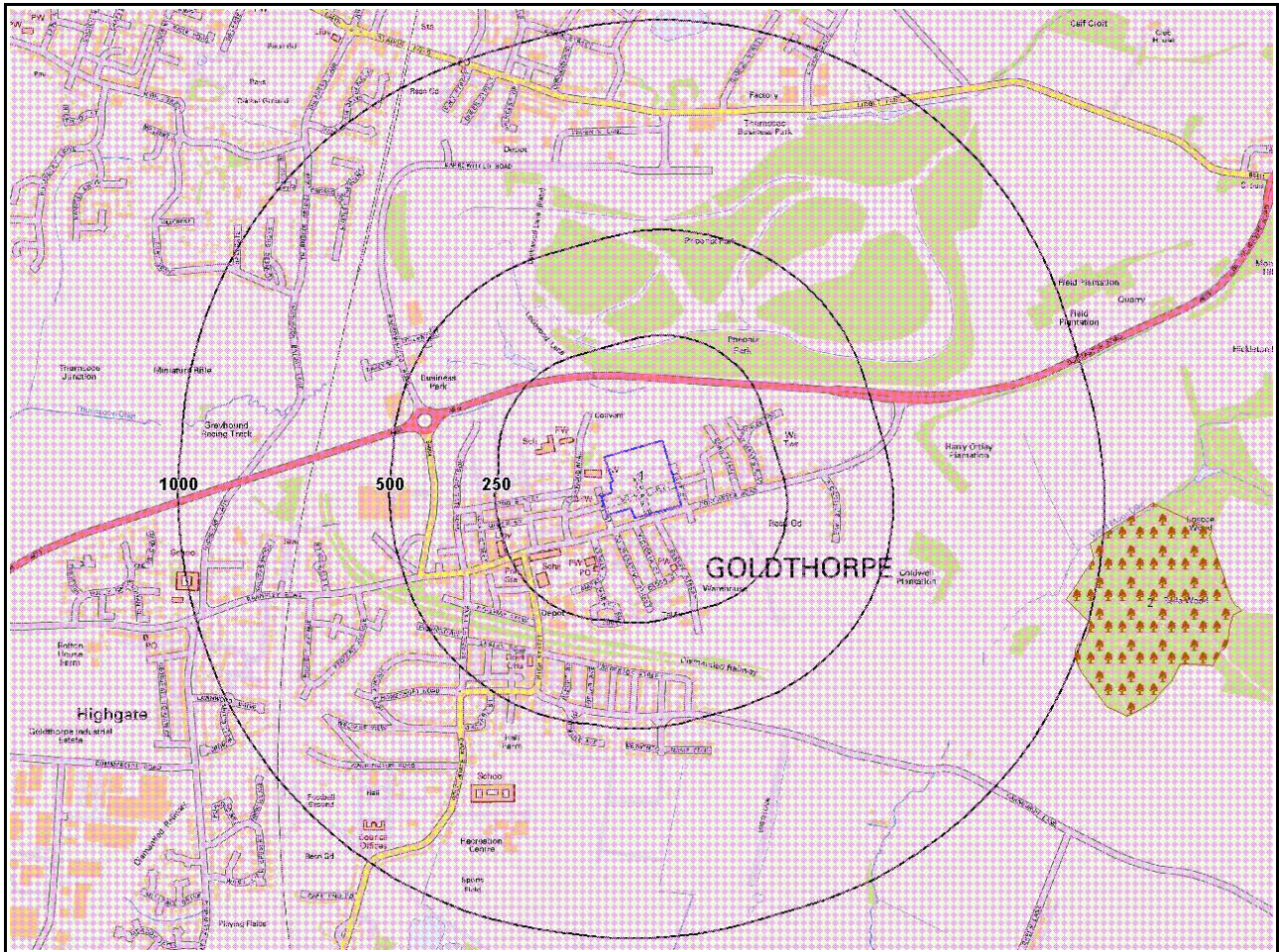
NW



NE

W

E



SW



SE

Designated Environmentally Sensitive Sites Legend



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7. Designated Environmentally Sensitive Sites

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

Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: **0**

Database searched and no data found.

Records of National Nature Reserves (NNR) within 2000m of the study site: **0**

Database searched and no data found.

Records of Special Areas of Conservation (SAC) within 2000m of the study site: **0**

Database searched and no data found.

Records of Special Protection Areas (SPA) within 2000m of the study site: **0**

Database searched and no data found.

Records of Ramsar sites within 2000m of the study site: **0**

Database searched and no data found.

Records of Local Nature Reserves (LNR) within 2000m of the study site: **0**

Database searched and no data found.

Records of World Heritage Sites within 2000m of the study site: **0**

Database searched and no data found.

Records of Environmentally Sensitive Areas within 2000m of the study site: **0**

Database searched and no data found.

Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: **0**

Database searched and no data found.

Records of National Parks (NP) within 2000m of the study site: **0**

Database searched and no data found.

Records of Nitrate Sensitive Areas within 2000m of the study site: 0

Database searched and no data found.

Records of Nitrate Vulnerable Zones within 2000m of the study site: 1

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

ID	Distance	Direction	NVZ Type	Data Source
1	0.0	On Site	NVZ Area	DEFRA

Records of Ancient Woodland within 2000m of the study site: 2

The following Ancient Woodland records are supplied by English Nature/Scottish Natural Heritage/Countryside Council for Wales and are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	Ancient Woodland Name	Type
2	937.0	E	BELLA WOOD	Ancient Replanted Woodland
Not shown	1920.0	NE	HICKLETON SPRING	Ancient Replanted Woodland

8. Natural Hazards Findings

8.1 Detailed BGS GeoSure Data

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

8.1.1 Shrink Swell

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

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

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

8.1.2 Landslides

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

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

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

8.1.3 Soluble Rocks

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

Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

8.1.4 Compressible Ground

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

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

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

8.1.5 Collapsible Rocks

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

Very Low

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

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

8.1.6 Running Sand

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

Negligible

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

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

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

9. Mining

9.1 Coal Mining

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

Yes

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

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

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*?

Low-Moderate

*Please note this data is searched with a 150m buffer.

9.3 Brine Affected Areas

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

No

Guidance: No Guidance Required.

10. Contacts

GroundSure Helpline

Telephone: 08444 159 000
 info@4c.groundsure.com



British Geological Survey (England & Wales)

Kingsley Dunham Centre
 Keyworth, Nottingham NG12 5GG
 Tel: 0115 936 3143. Fax: 0115 936 3276. Email:
 enquiries@bgs.ac.uk
 Web: www.bgs.ac.uk
 BGS Geological Hazards Reports and general geological
 enquiries



Environment Agency

National Customer Contact Centre
 PO Box 544
 Rotherham
 S60 1BY
 Tel: 08708 506 506
 Web: www.environment-agency.gov.uk
 Email: enquiries@environment-agency.gov.uk



Health Protection Agency

Chilton, Didcot, Oxon, OX11 0RQ
 Tel: 01235 822622 www.hpa.org.uk/radiation
 Radon measures and general radon information and
 guidance



The Coal Authority

200 Lichfield Lane, Mansfield, Notts NG18 4RG
 Tel: 0845 762 6848
 DX 716176 Mansfield 5
 Web: www.groundstability.com



Ordnance Survey

Romsey Road
 Southampton SO16 4GU
 Tel: 08456 050505



Local Authority

Authority: Barnsley Metropolitan Borough Council
 Phone: 01226 770770
 Web: www.barnsley.gov.uk/index.asp
 Address: Town Hall, Barnsley, South Yorkshire, S70 2TA

Get Mapping PLC

Virginia Villas, High Street, Hartley Witney, Hampshire RG27
 8NW
 Tel: 01252 845444



Acknowledgements

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

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

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with GroundSure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to GroundSure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028.

"GroundSure Materials" means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

"Services" means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure's acceptance of an Order shall be binding only when made in writing and signed by GroundSure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of GroundSure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that

contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;
- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of GroundSure's internet ordering service.

7.5 GroundSure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure's right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in GroundSure's possession or control; and

(ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract. 11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of GroundSure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond GroundSure's reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant

party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

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